

VOLUME 3

# Water Resources Law

THE REPORT OF THE PRESIDENT'S

WATER RESOURCES POLICY COMMISSION

VOLUME 3

Water  
Resources  
Law

THE REPORT OF THE PRESIDENT'S

WATER RESOURCES POLICY COMMISSION

1950

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*Volume 2: Ten Rivers in America's Future*

*Volume 3: Water-Resources Law*

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THE PRESIDENT'S  
WATER RESOURCES POLICY COMMISSION  
718 EIGHTEENTH STREET, N.W.  
WASHINGTON 25, D. C.

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December 1, 1950.

Mr. Morris L. Cooke,  
Chairman, The President's Water  
Resources Policy Commission,  
Washington 25, D. C.

Dear Mr. Chairman:

There is submitted herewith a survey of federal legislation concerning water resources, entitled "Water-Resources Law." This survey summarizes materials assembled during a comprehensive study and review of all existing water-resources legislation, a study and review undertaken pursuant to the President's letter to you of January 3, 1950. There is a very large amount of relevant legislation, a century's accumulation governing and affecting the activities of many federal agencies.

In the main, the survey groups laws on the basis of the functional purpose served. Thus, after a preliminary examination of certain constitutional considerations, attention is given to statutes relating to navigation, flood control, irrigation, power, other public purposes, and related land uses. These groupings are followed by an examination of the trends in the different statutes moving toward comprehensive development. Finally, the different bodies of law are laid side-by-side and comparatively summarized.

Obviously, such a process makes for unavoidable duplication. But this organizational treatment seems best adapted to a review of the evolutionary development of the several bodies of law relating to the single subject of water resources.



It may also be noted that each chapter excepting the last concludes with a summary. A brief summary of the entire survey is printed as chapter 19 of volume 1 of the Commission's report. Also included as an appendix to volume 3 are independently prepared summaries of the water-law doctrines of the seventeen Western States.


In addition to acting as legal consultants to the Commission and its Staff, the following participated directly in the preparation of the survey:

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I take this opportunity to express to the legal staff my deep gratitude for their unfailing cooperation, and also my thanks to the numerous individuals in the various agencies who generously aided by consultation and otherwise.

Your legal staff joins in expressing our appreciation for the privilege of working with the Commission, and of undertaking this assignment in the public service.

Yours very sincerely,



Bernard A. Foster, Jr.,  
General Counsel.

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# Introduction

The breadth of the Commission's assignment is measured by the direction that it study and make recommendations to the President respecting federal responsibility for and participation in the:<sup>1</sup>

development, utilization, and conservation of water resources, including related land uses and other public purposes to the extent that they are directly concerned with water resources.

A comprehensive study of existing legislation is necessary to fulfillment of that assignment.<sup>2</sup> While we shall summarize here the study of that legislation, we shall not narrow its scope. Water and land are interdependent, and man depends upon both, his efforts to derive benefits from them being as old as history. Moreover, a clear understanding of these efforts necessitates consideration of governmental aids and controls. Thus, our survey of the legal aspects of the relevant responsibilities assumed by the United States, summary though it may be, reflects important developments in the growth of the Nation.

<sup>1</sup> Ex. O. No. 10095, January 3, 1950, 15 F. R. 17.

<sup>2</sup> In his letter of January 3, 1950 to the Chairman, The President's Water Resources Policy Commission, the President said, "It is essential in my judgment that a comprehensive study and review be made of all existing water resources legislation and policies and that recommendations be made in the full knowledge of national needs and objectives."

The President also said, "As you know, the Commission on the Organization of the Executive Branch of the Government has made a detailed and comprehensive study of the organizational issues involved in the water resources field. \* \* \* While problems of organization are closely related to the development of consistent policies in the field of water resources, I am requesting your Commission to confine its recommendations to the questions of policy set forth in the Executive order together with related legislation." Accordingly, this survey will not include organizational matters, as such.

The central fact revealed is the lack of a unified federal policy respecting the development, utilization, and conservation of water resources, including related uses of land. From a pyramiding of statutes for over 100 years, several policies have evolved. Each addition has usually dealt with the most pressing need current at the time. Despite some harmonizing influences of the trend toward multiple-purpose projects, and despite the unifying influences of the swing in recent years toward comprehensive development, federal law concerning water resources is today a unit in name only. For the components have frequently been unmatched in the process of legislating separately for different "primary" purposes while treating other purposes as incidental or complementary.

To portray this legislative evolution, we shall first refer to the sources of federal authority and then survey on a functional basis the more significant laws as they deal with navigation, flood control, irrigation, power, other public purposes, and related land uses. Separate attention will be required for those legislative provisions trending toward comprehensive development of river systems and their watersheds. Notwithstanding that trend, however, repeated instances of lack of statutory coordination lead finally to a comparative summary of the differing legislative requirements which vary with the type of project or with the agency made responsible.

In thus surveying existing law, we shall see that—

The powers of the Federal Government are limited to those delegated by the Constitution. But their character and scope have facilitated their ready adaptation to the demands of our geography and growth as the Federal Government has assumed varied and increasing responsibilities and participation respecting water-resource activities.

The availability of water has vitally influenced the Nation's growth. Thus, cities sought and flourished on the best coastal harbors. Later, our rivers became a principal means and chart for westward expansion. And as interstate highways of commerce, they were subject to federal control under the grant of power to regulate commerce among the states.

Relying on that power, the Federal Government early under-

took responsibility for the control, improvement, and protection of navigable waters. Similarly but later, responsibility for control of floods on a national scale was assumed. Making clearer the adequacy of federal power to discharge these functions, the courts sustained assertions of federal authority in the upper nonnavigable reaches of navigable waterways to protect the navigable capacity of navigable waters and to protect interstate commerce from flood damage.

In the West, where great areas of public-domain lands are located, the aridity frequently prevailing led to invocation of federal proprietary power to enable federal undertaking of irrigation responsibility. But while limited to the West, irrigation benefits from federal projects have not been confined to public lands.

In addition, federal authority has been exercised to license nonfederal development of power on lands and in waters subject to the jurisdiction of Congress, and it has been increasingly employed to enable federal development of hydroelectric power as a part of navigation, flood-control, and irrigation projects. And power has given impetus to the growth of multiple-purpose projects.

Under existing legislation, many such projects comprehend activities serving other public purposes, such as drainage, water supply, fish and wildlife preservation, recreation, sediment control, and salinity control. Still other related public purposes receiving legislative attention include shore protection, pollution control and abatement, and collection of basic data.

In addition, from the numerous laws implementing federal participation in the promotion of proper use of land, we must select and examine those significantly related to development, utilization, and conservation of water resources. For the interrelationships among land and water resources are expressly recognized in many statutes. Other statutes, while not expressly aimed at land and water as inseparable resources, are nevertheless adaptable to serving both.

While many of the foregoing statutes have emphasized various primary and complementary purposes, the natural unity between a river system and its watershed has been accorded



increasing legislative recognition during the last 50 years. A number of such statutes variously employ the term "comprehensive development," and it may fairly be said that these move generally toward a definition of that term as basin-wide development for optimum beneficial uses of a river system and its watershed.

On the other hand, when existing laws are laid side-by-side and their varying provisions serving like purposes are comparatively analyzed, lack of coordination is often disclosed. For the steps taken to permit construction of multiple-purpose projects have not harmonized the underlying bodies of law which remain largely articulated separately with the principal water-resource purposes. That comparative summary will show a composite of these differing and sometimes conflicting statutory provisions which apply to present-day development.

# Constitutional Considerations

This Constitution, and the Laws of the United States which shall be made in Pursuance thereof; and all Treaties made, or which shall be made, under the Authority of the United States, shall be the supreme Law of the Land; and the Judges in every State shall be bound thereby, any Thing in the Constitution or Laws of any State to the Contrary notwithstanding.<sup>1</sup>

So provides the Constitution of the United States. Or as the Supreme Court of the United States has said, "The Constitution is the supreme law of the land ordained and established by the people."<sup>2</sup> Under it, the authority of the Federal Government is limited to those powers expressly delegated and such as may reasonably be implied from those granted.<sup>3</sup> All other powers are reserved to the states or the people.<sup>4</sup> Hence, as the Court observed long ago: <sup>5</sup>

In America, the powers of sovereignty are divided between the government of the Union, and those of the states. They are each sovereign, with respect to the objects committed to it, and neither sovereign, with respect to the objects committed to the other.

Regardless of the character of federal undertakings respecting water and land resources, therefore, enabling authority must

<sup>1</sup> U. S. CONST., Art. VI, cl. 2.

<sup>2</sup> *United States v. Butler*, 297 U. S. 1, 62 (1936).

<sup>3</sup> 297 U. S. at 63; see Cooley's CONSTITUTIONAL LIMITATIONS, vol. 1, p. 11 (8th ed., Carrington, 1927).

<sup>4</sup> U. S. CONST., Amend. 10; *Martin v. Hunter's Lessee*, 1 Wheat. 304, 325-326 (U. S. 1816).

<sup>5</sup> *McCulloch v. Maryland*, 4 Wheat. 316, 410 (U. S. 1819).

be found among the constitutional powers conferred by the people. This points to the desirability of considering the nature of these powers as a background for and as related to our survey of legislation. To this end, we shall preliminarily note generally the character of federal powers, and then more specifically discuss certain enumerated powers respecting commerce, property, war, treaties, and general welfare. Thereafter, we shall refer to the doctrine of equitable apportionment as developed by the Supreme Court in deciding water controversies between states. And finally, we shall consider certain interstate compacts, the validity of which depends upon conformance with express constitutional requirements.

### Generally

It has long been established that the Government of the United States is paramount in its sphere of delegated authority. As the Supreme Court said in 1819: \*

If any one proposition could command the universal assent of mankind, we might expect it would be this—that the government of the Union, though limited in its powers, is supreme within its sphere of action.

That statement in *M'Culloch v. Maryland* is accompanied by others making it clear that this supremacy is such as "to remove all obstacles to its action within its own sphere, and so to modify every power vested in subordinate governments, as to

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\* 4 Wheat. at 405. Since Congress may validly authorize federal construction, or license nonfederal construction, of projects in waters under its jurisdiction, no interference with the sovereignty of the state results when it does so. *United States v. Appalachian Electric Power Co.*, 311 U. S. 377, 427-428 (1940), reh. den., 312 U. S. 712 (1941); *Oklahoma v. Atkinson*, 313 U. S. 508, 534-535 (1941). Any state rights under a judicial apportionment among states of unappropriated waters in an interstate navigable stream are subordinate to and dependent upon the superior federal right of control for navigation improvement. *Arizona v. California*, 298 U. S. 558, 571 (1936). "Whenever the constitutional powers of the federal government and those of the state come into conflict, the latter must yield." *Florida v. Mellon*, 273 U. S. 12, 17 (1927). See also *First Iowa Hydro-Electric Cooperative v. Federal Power Commission*, 328 U. S. 152, 181 (1946).

exempt its own operations from their own influence.”<sup>7</sup> In addition, the Court asserted that:<sup>8</sup>

No trace is to be found in the constitution, of an intention to create a dependence of the government of the Union on those of the states, for the execution of the great powers assigned to it. Its means are adequate to its ends; and on those means alone was it expected to rely for the accomplishment of its ends.

It may also be noted that the powers of the Federal Government are exercised by three branches, the legislative, the executive, and the judicial.<sup>9</sup> “The first was to pass laws, the second, to approve and execute them, and the third, to expound and

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<sup>7</sup> 4 Wheat. at 427. For example, while validly exercising its commerce power in the construction of a river development, the “United States may perform its functions without conforming to the police regulations of a State” which require that plans be submitted to a state official for approval. *Arizona v. California*, 283 U. S. 423, 451 (1931). Similarly, when deer were killed at the instance of the Secretary of Agriculture to prevent overgrazing in a national forest, state game laws to the contrary notwithstanding, the Supreme Court said that, “the power of the United States to thus protect its lands and property does not admit of doubt.” *Hunt v. United States*, 278 U. S. 96, 100 (1928).

Nor may the United States be subjected to legal proceedings without its consent. *The Siren*, 7 Wall. 152, 154 (U. S. 1868). This immunity “extends to suits of every class.” *Ill. Cent. R. R. Co. v. Public Utilities Commission*, 245 U. S. 493, 505 (1918). And any waiver must be strictly interpreted, “since it is a relinquishment of sovereign immunity.” *United States v. Sherwood*, 312 U. S. 584, 590 (1914). Likewise, properties of the United States are not subject to state or local taxes or special assessments. *Mullen Benevolent Corp. v. United States*, 290 U. S. 89, 94 (1933).

Otherwise, as the Supreme Court said in *M’Culloch v. Maryland*, to impose upon the United States “the necessity of resorting to means which it cannot control, which another government may furnish or withhold, would render its course precarious, the result of its measures uncertain, and create a dependence on other governments, which might disappoint its most important designs, and is incompatible with the language of the constitution.” 4 Wheat. at 424.

<sup>8</sup> 4 Wheat. at 424.

<sup>9</sup> The Constitution provides that: “All legislative Powers herein granted shall be vested in a Congress of the United States” (Art. I, § 1). “The executive Power shall be vested in a President of the United States of America” (Art. II, § 1). “The judicial Power of the United States shall be vested in one supreme Court, and in such inferior Courts as the Congress may from time to time ordain and establish” (Art. III, § 1).

enforce them.”<sup>10</sup> And though the Constitution nowhere declares expressly that these three branches of the Government shall be separate and independent, it remains true, as a general rule, that the powers confided by the Constitution to one branch cannot be exercised by another.<sup>11</sup> Nor is Congress “permitted to abdicate, or to transfer to others, the essential legislative functions with which it is thus vested.”<sup>12</sup>

Before turning to a more detailed consideration of the relevant powers delegated to the Federal Government, we should point out that Congress is expressly empowered to make all laws “necessary and proper” for carrying into execution its expressly delegated powers and “all other Powers” vested by the Constitution in the Federal Government.<sup>13</sup> Nor should we forget, in examining the constitutional powers entrusted to the Federal Government by the people, that the instrument was intended to “endure through a long lapse of ages.”<sup>14</sup> It was this charter of government which the people of the United States established in order:<sup>15</sup>

to form a more perfect Union, establish Justice, insure domestic Tranquility, provide for the common defence, promote the general Welfare, and secure the Blessings of Liberty to ourselves and our Posterity \* \* \*.

## Commerce Power

At the outset, it should be remembered that waterways provided a principal means for conducting commerce in our early history. Indeed, the need for central control of commerce among the colonies was an important factor leading to the

<sup>10</sup> *Martin v. Hunter's Lessee*, 1 Wheat. 304, 329 (U. S. 1816).

<sup>11</sup> *Ex parte Grossman*, 267 U. S. 87, 119 (1925); *Kilbourn v. Thompson*, 103 U. S. 168, 191 (1880).

<sup>12</sup> *Panama Refining Co. v. Ryan*, 293 U. S. 388, 421 (1935). For example, the Supreme Court has said that “Congress cannot transfer its legislative power to the States—by nature this is non-delegable.” *Knickerbocker Ice Co. v. Stewart*, 253 U. S. 149, 164 (1920).

<sup>13</sup> U. S. CONST., Art. I, § 8, cl. 18.

<sup>14</sup> *Martin v. Hunter's Lessee*, 1 Wheat. 304, 326 (U. S. 1816).

<sup>15</sup> U. S. CONST., Preamble.

calling of the Constitutional Convention.<sup>16</sup> And when the Constitution was established, an express power was delegated to the Congress:<sup>17</sup>

To regulate Commerce with foreign Nations, and among the several States, and with the Indian Tribes.

NAVIGATION CONTROL.—The importance of inland waterways for navigation use and the wisdom of their improvement had already been recognized.<sup>18</sup> Later, the westward growth of the Nation and the corresponding need for water transportation inspired demands for improvement of waterways, among other internal improvements.<sup>19</sup> But the Congress did not immediately employ the utility of its commerce power for this purpose.

Instead, and strangely enough in retrospect, a political controversy arose over the Federal Government's authority under the spending power to make internal improvements. Although agreeing that it should assume responsibility for navigation improvements, some early statesmen believed that the Government lacked constitutional power to undertake them, and suggested authorization by constitutional amendment.<sup>20</sup> On the other hand, as we shall later see, contemporary treaties and statutes sought federal assurance of the status of navigable waters as "public highways."<sup>21</sup>

Recognition of the adaptability of federal commerce power was not long delayed, however. With the steamboat came efforts toward monopoly of steamboat transportation. The legislature of New York enacted statutes for the purpose of

<sup>16</sup> 1 Elliot, *DERATES ON THE FEDERAL CONSTITUTION*, 106-119 (2d ed. 1836).

<sup>17</sup> U. S. CONST., Art. I, § 8, cl. 3.

<sup>18</sup> See, e. g., Marshall, *LIFE OF WASHINGTON*, p. 11 (1807).

<sup>19</sup> Bogart and Kemmerer, *ECONOMIC HISTORY OF THE AMERICAN PEOPLE*, pp. 311-315 (1942); MacGill, *HISTORY OF TRANSPORTATION IN THE UNITED STATES BEFORE 1860*, pp. 131-136 (1917); 3 McMaster, *A HISTORY OF THE PEOPLE OF THE UNITED STATES*, 465-478 (1892).

<sup>20</sup> For views of Jefferson, Madison and Monroe, see 1 Richardson, *MESSAGES AND PAPERS OF THE PRESIDENTS*, 409-410, 456, 497, 567-568, 584; 2 *id.* 8, 17-18, 144-183, 216 (1896). See also *United States v. Gerlach Live Stock Co.*, 339 U. S. 725, 738 (1950).

<sup>21</sup> See *infra*, pp. 74-75.

granting to Fulton and Livingston the exclusive right of navigation by steamboat of all the waters within the State. Other coastal states also passed laws purporting to grant exclusive rights for use of navigable waters to private interests.<sup>22</sup> Ensuing conflicts among the states so hampered the flow of interstate commerce as nearly to precipitate civil war.<sup>23</sup>

But these threats of steamboat monopoly were short-lived, for the Supreme Court of the United States soon called a halt to such attempts at legislative encroachment by the states upon the recent exclusive grant of commerce power to the Congress. A conflict arose between Thomas Gibbons, holding a federal license to engage in coastal trade, and Aaron Ogden, claiming as assignee of the exclusive rights of Fulton and Livingston to navigation between Elizabethtown and New York, under their grant of authority by New York. Ogden succeeded in having Gibbons enjoined from navigating waters within the territory of New York, and the decree was affirmed by the highest court of law and equity in New York.<sup>24</sup> When the case reached the Supreme Court of the United States, the lower court was reversed in 1824, and Mr. Chief Justice Marshall handed down the most famous of all opinions on the Commerce Clause, *Gibbons v. Ogden*, saying: <sup>25</sup>

The power of congress \* \* \* comprehends navigation within the limits of every State in the Union, so far as that navigation may be, in any manner, connected with "commerce with foreign nations, or among the several States, or with the Indian tribes."

In harmony with this holding, the Court in 1851 rejected a similar effort to justify construction of a bridge under state law over the Ohio River obstructing navigation, where such

<sup>22</sup> 4 Beveridge, *LIFE OF JOHN MARSHALL*, 414 (1919).

<sup>23</sup> 1 Warren, *THE SUPREME COURT IN UNITED STATES HISTORY*, 598 (rev. ed. 1937).

<sup>24</sup> *Gibbons v. Ogden*, 17 Johns. 488 (N. Y. 1820).

<sup>25</sup> 9 Wheat. 1, 197 (U. S. 1824). See also 4 Beveridge, *LIFE OF JOHN MARSHALL*, 418 (1919); 2 Warren, *THE SUPREME COURT IN UNITED STATES HISTORY*, 76 (1924). For an earlier decision by Marshall foreshadowing the *Gibbons* opinion, see *The Wilson v. United States*, 30 Fed. Cas. No. 17,846 (C. C. D. Va. 1820).

legislation conflicted with legislation by Congress regulating commerce among the states carried on upon the River.<sup>26</sup> In 1865, the Court further expounded the navigation scope of that power over commerce in *Gilman v. Philadelphia*, saying:<sup>27</sup>

Commerce includes navigation. The power to regulate commerce comprehends the control for that purpose, and to the extent necessary, of all the navigable waters of the United States which are accessible from a State other than those in which they lie. For this purpose they are the public property of the nation, and subject to all the requisite legislation by Congress. This necessarily includes the power to keep them open and free from any obstruction to their navigation, interposed by the States or otherwise; to remove such obstructions when they exist; and to provide, by such sanctions as they may deem proper, against the occurrence of the evil and for the punishment of offenders. For these purposes, Congress possesses all the powers which existed in the States before the adoption of the national Constitution, and which have always existed in the Parliament in England.

Such a view required a conclusion that federal power over navigable waters may not be limited even by a compact between states made prior to their adoption of the Federal Constitution, as the Court held a few years later in *South Carolina v. Georgia*.<sup>28</sup> The exercise of federal commerce authority to protect navigation, including the prevention of interference with and obstructions to navigation—even those created under prior state or federal sanction—was repeatedly sustained.<sup>29</sup> Corre-

<sup>26</sup> *Pennsylvania v. Wheeling & Belmont Bridge Co.*, 13 How. 518, 565-566 (U. S. 1851).

<sup>27</sup> 3 Wall. 713, 724-725 (U. S. 1865).

<sup>28</sup> 93 U. S. 4, 8 (1876).

<sup>29</sup> See, e. g., *Bridge Co. v. United States*, 105 U. S. 470 (1881). *United States v. Rio Grande Irrigation Co.*, 174 U. S. 690 (1899); *United States v. Bellingham Bay Boom Co.*, 176 U. S. 211 (1900); *Union Bridge Co. v. United States*, 204 U. S. 364 (1907); *Monongahela Bridge Co. v. United States*, 216 U. S. 177 (1910); *Hannibal Bridge Co. v. United States*, 221 U. S. 194 (1911);



spondingly, exercise of that power in the construction of navigable channels and the Panama Canal was upheld.<sup>30</sup>

On the other hand, repeated decisions made it clear that the states have proprietary control over navigable waters and their beds, subject to rights conferred upon the Federal Government by the Constitution.<sup>31</sup> Accordingly, whether title to the beds of navigable rivers is in the state or in the owners of the riparian lands depends upon state law.<sup>32</sup>

**WATERS UNDER THE COMMERCE JURISDICTION OF CONGRESS.**—It thus becomes important to consider judicial criteria for determining what constitutes waters subject to the jurisdiction of Congress under the Commerce Clause, since resolution of many conflicts between federal rights and state or private rights depends on that determination.

*Navigable Waters of the United States.*—The scope of navigation control under the commerce power, it was early established, brings within the jurisdiction of Congress "all navigable

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*Philadelphia Co. v. Stimson*, 223 U. S. 605 (1912); *Louisville Bridge Co. v. United States*, 242 U. S. 409 (1917); *Economy Light Co. v. United States*, 256 U. S. 113 (1921).

<sup>30</sup> *Wisconsin v. Duluth*, 96 U. S. 379 (1877); *Wilson v. Shaw*, 204 U. S. 24 (1907).

<sup>31</sup> See, e. g., *Martin v. Waddell*, 16 Pet. 367, 410 (U. S. 1842); *Pollard's Lessee v. Hagan*, 3 How. 212, 229-230 (U. S. 1885); *Smith v. State of Maryland*, 18 How. 71, 74-75 (U. S. 1855); *Mumford v. Wardwell*, 6 Wall. 423, 436 (U. S. 1867); *Barney v. Keokuk*, 94 U. S. 324, 338 (1876); *Packer v. Bird*, 137 U. S. 661, 667 (1891); *Hardin v. Jordan*, 140 U. S. 371, 381-382 (1891); *Illinois Central R. R. Co. v. Illinois*, 146 U. S. 387, 435-437 (1892); *Shively v. Bowlby*, 152 U. S. 1, 57-58 (1894); *Mobile Transportation Co. v. Mobile*, 187 U. S. 479, 491 (1903); *McGilera v. Ross*, 215 U. S. 70, 79-80 (1909); *Scott v. Lattig*, 227 U. S. 229, 242-243 (1913); *Oklahoma v. Texas*, 258 U. S. 574, 583 (1922); *United States v. Holt State Bank*, 270 U. S. 49, 54-55 (1926); *Massachusetts v. New York*, 271 U. S. 65, 89 (1926); *United States v. Utah*, 283 U. S. 64, 75 (1931); *United States v. Oregon*, 295 U. S. 1, 14 (1935); *United States v. Arizona*, 295 U. S. 174, 183 (1935); *Ashwander v. Tennessee Valley Authority*, 297 U. S. 288, 337-338 (1936); *James v. Dravo Contracting Co.*, 302 U. S. 134, 140-141 (1937); *United States v. Appalachian Electric Power Co.*, 311 U. S. 377, 423-424 (1940); reh. den., 312 U. S. 712 (1941); *United States v. California*, 332 U. S. 19, 30-31 (1947), decree expanded, 332 U. S. 804 (1947).

<sup>32</sup> See, e. g., *United States v. Chandler-Dunbar Co.*, 229 U. S. 53, 60 (1913).

waters of the United States." Especial significance attaches here to the Supreme Court's classic definition in the case of *The Daniel Ball*:<sup>28</sup>

Those rivers must be regarded as public navigable rivers in law which are navigable in fact. And they are navigable in fact when they are used, or are susceptible of being used, in their ordinary condition, as highways for commerce, over which trade and travel are or may be conducted in the customary modes of trade and travel on water. And they constitute navigable waters of the United States within the meaning of the acts of Congress, in contradistinction from the navigable waters of the States, when they form in their ordinary condition by themselves, or by uniting with other waters, a continued highway over which commerce is or may be carried on with other States or foreign countries in the customary modes in which such commerce is conducted by water.

Under that definition, since those waterways which are navigable in fact are navigable in law, actual use most clearly demonstrates navigability. If the actual navigation consists of transportation of persons or property in interstate commerce, the waterway is a navigable water of the United States.

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<sup>28</sup> 10 Wall. 557, 563 (U. S. 1870). In this connection, it should be noted that the only definition of navigable waters prescribed by Congress appears in the Federal Power Act. Act of June 10, 1920, § 3, 41 Stat. 1063, as amended, 16 U. S. C. 796(8). In large measure a combination of definitions appearing in opinions of the Supreme Court from time to time, the Act's definition is: "'navigable waters' means those parts of streams or other bodies of water over which Congress has jurisdiction under its authority to regulate commerce with foreign nations and among the several States, and which either in their natural or improved condition notwithstanding interruptions between the navigable parts of such streams or waters by falls, shallows, or rapids compelling land carriage, are used or suitable for use for the transportation of persons or property in interstate or foreign commerce, including therein all such interrupting falls, shallows, or rapids, together with such other parts of streams as shall have been authorized by Congress for improvement by the United States or shall have been recommended to Congress for such improvement after investigation under its authority."

But such actual use need not be continuous,<sup>34</sup> and past as well as present use will serve to establish a waterway's status.<sup>35</sup> And the present lack of water traffic is not decisive, for "When once found to be navigable, a waterway remains so."<sup>36</sup>

Status as a navigable water may be shown by actual use by any kind of a vessel.<sup>37</sup> Necessarily, account must also be taken of use even for the rafting or floating of logs.<sup>38</sup> While the waterway must afford a channel for useful commerce, limited navigation use in relation to trade and travel in the vicinity is sufficient.<sup>39</sup> However, the use need not be commercially important.<sup>40</sup> Hence, use by personal or private boats may demonstrate the availability of the waterway for the simpler types of commercial navigation.<sup>41</sup>

<sup>34</sup> *United States v. Utah*, 283 U. S. 64, 87 (1931); *Arizona v. California*, 283 U. S. 423, 452-454 (1931); *United States v. Appalachian Electric Power Co.*, 311 U. S. 377, 409 (1940), reh. den., 312 U. S. 712 (1941).

<sup>35</sup> *Economy Light Co. v. United States*, 256 U. S. 113, 118, 123-124 (1921); *Arizona v. California*, 283 U. S. 423, 453-454 (1931).

<sup>36</sup> *United States v. Appalachian Electric Power Co.*, 311 U. S. 377, 408 (1940), reh. den., 312 U. S. 712 (1941); *Economy Light Co. v. United States*, 256 U. S. 113, 118, 124 (1921); *Arizona v. California*, 283 U. S. 423, 453-454 (1931); *Oklahoma v. Atkinson*, 313 U. S. 508, 523 (1941).

<sup>37</sup> "Vessels of any kind that can float upon the water, whether propelled by animal power, by the wind, or by the agency of steam, are, or may become, the mode by which a vast commerce can be conducted, and it would be a mischievous rule that would exclude either in determining the navigability of a river." *The Montello*, 20 Wall. 430, 442 (U. S. 1874). See also *The Montana Power Co. v. Federal Power Commission*, Case No. 10200, C. A. D. C., decided October 4, 1950.

<sup>38</sup> In legal principle, logging and rafting seem indistinguishable from transportation by boats in determining navigability. *The Montello*, 20 Wall. 430, 441 (U. S. 1874); *St. Anthony Falls Water Power Co. v. St. Paul Water Commissioners*, 168 U. S. 349, 359 (1897); *United States v. Appalachian Electric Power Co.*, 311 U. S. 377, 405-406 (1940), reh. den., 312 U. S. 712 (1941); *Wisconsin Public Service Corp. v. Federal Power Commission*, 147 F. 2d 743, 747 (C. A. 7, 1945), cert. den., 325 U. S. 880 (1945). Cf. *United States v. Rio Grande Irrigation Co.*, 174 U. S. 690, 698 (1899).

<sup>39</sup> *United States v. Holt State Bank*, 270 U. S. 49, 56-57 (1926). Cf. *Oklahoma v. Texas*, 258 U. S. 574, 591 (1922); *United States v. Utah*, 283 U. S. 64, 82 (1931).

<sup>40</sup> *United States v. Utah*, 283 U. S. 64, 82 (1931).

<sup>41</sup> *United States v. Appalachian Electric Power Co.*, 311 U. S. 377, 416-417 (1940), reh. den., 312 U. S. 712 (1941).

But actual use is not the only determinant. For regardless of the extent or manner of actual use, those waterways capable or susceptible of use by the public for purposes of interstate transportation and commerce are also navigable waters of the United States.<sup>42</sup> Nor is a waterway, otherwise suitable for navigation, "barred from that classification merely because artificial aids must make the highway suitable for use before commercial navigation may be undertaken."<sup>43</sup> Thus, in determining navigability, "it is proper to consider the feasibility of interstate use after reasonable improvements which might be made."<sup>44</sup> Moreover, doubt has never existed "that the navigability referred to in the cases was navigability despite the obstructions of falls, rapids, sand bars, carries, or shifting currents."<sup>45</sup>

*Other Waters.*—It should not be inferred from what has been said, however, that the applicability of the commerce power to waters is restricted to such as are navigable waters of the United States. For it is settled that federal commerce author-

<sup>42</sup> *The Daniel Ball*, 10 Wall. 557, 563 (U. S. 1870); *The Montello*, 20 Wall. 430, 441-443 (U. S. 1874); *Parker v. Bird*, 137 U. S. 661, 667 (1891); *United States v. Utah*, 283 U. S. 64, 82-83 (1931).

<sup>43</sup> *United States v. Appalachian Electric Power Co.*, 311 U. S. 377, 407 (1940), reh. den., 312 U. S. 712 (1941). For the significance of the adjectives "ordinary" and "natural" as applying to a waterway's condition, see *id.*; *The Daniel Ball*, 10 Wall. 557, 563 (U. S. 1870); *The Montello*, 20 Wall. 430, 441-443 (U. S. 1874); *United States v. Oregon*, 295 U. S. 1, 15 (1935). In *Ashwander v. Tennessee Valley Authority*, 297 U. S. 288, 329 (1936), the Court said, "While, in its present condition, the Tennessee River is not adequately improved for commercial navigation, and traffic is small, we are not at liberty to conclude \* \* \* that the river is not susceptible of development as an important waterway \* \* \*." See also *The Montana Power Co. v. Federal Power Commission*, Case No. 10200, C. A. D. C., decided October 4, 1950.

<sup>44</sup> *United States v. Appalachian Electric Power Co.*, 311 U. S. 377, 409 (1940), reh. den., 312 U. S. 712 (1941). See also *The Montana Power Co. v. Federal Power Commission*, Case No. 10200, C. A. D. C., decided October 4, 1950.

<sup>45</sup> 311 U. S. at 409, citing *The Montello*, 20 Wall. 430, 442-443 (U. S. 1874); *Economy Light Co. v. United States*, 256 U. S. 113, 122 (1921); *United States v. Utah*, 283 U. S. 64, 86 (1931). See also Mr. Justice McLean in *Spooner v. McConnell*, 22 Fed. Cas. 939, 944, No. 13, 245 (C. C. D. Ohio 1838); and *The Montana Power Co. v. Federal Power Commission*, Case No. 10200, C. A. D. C., decided October 4, 1950.

ity may be appropriately invoked both as to the upper non-navigable reaches of a navigable waterway and as to its nonnavigable tributaries, if the navigable capacity of the navigable waterway is affected or if interstate commerce is otherwise affected.

For example, in the 1890 River and Harbor Act, Congress prohibited the creation of obstructions to the navigable capacity of any waters "in respect of which the United States has jurisdiction."<sup>46</sup> In *United States v. Rio Grande Irrigation Co.*, the Supreme Court held this prohibition adequate to sustain an injunction against the proposed construction of an irrigation project in nonnavigable upper reaches of the Rio Grande in New Mexico upon a finding of substantial diminution of navigability downstream.<sup>47</sup> The Court said:<sup>48</sup>

It is not a prohibition of any obstruction to the navigation, but any obstruction to the navigable capacity, and anything, wherever done or however done, within the limits of the jurisdiction of the United States which tends to destroy the navigable capacity of one of the navigable waters of the United States, is within the terms of the prohibition.

Commenting also upon the power of each state to change the common-law rule entitling every riparian owner to the continued natural flow of a stream crossing or bordering his lands and by such change to permit the appropriation of flowing waters for such purposes as the state deems wise, the Court specified two important limitations on such state power:<sup>49</sup>

First, that in the absence of specific authority from Congress a State cannot by its legislation destroy the right of the United States, as the owner of lands bordering on a stream, to the continued flow of its waters; so far at least as may be necessary for the beneficial uses

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<sup>46</sup> Act of September 19, 1890, 26 Stat. 426, 454.

<sup>47</sup> 174 U. S. 690 (1899).

<sup>48</sup> 174 U. S. at 708.

<sup>49</sup> 174 U. S. at 703.

of the government property. Second, that it is limited by the superior power of the General Government to secure the uninterrupted navigability of all navigable streams within the limits of the United States.

A similar example appears in the 1941 *Denison Dam* opinion involving the upper nonnavigable section of the Red River.<sup>50</sup> The Supreme Court having already held that no part of that River in Oklahoma is navigable,<sup>51</sup> the State of Oklahoma sought to enjoin federal construction of a dam in the River at a point in Oklahoma and Texas. But the Court rejected Oklahoma's contention that the authorizing statute was unconstitutional, making it clear that the commerce authority extends to the tributaries of navigable streams, just as control over the nonnavigable reaches of a river may be essential or desirable in the interests of the navigable portions.<sup>52</sup> The Court added that ever since *M'Culloch v. Maryland*<sup>53</sup> it had repeatedly recognized that:<sup>54</sup>

the exercise of the granted power of Congress to regulate interstate commerce may be aided by appropriate and needful control of activities and agencies which, though intrastate, affect that commerce.

It should be noted that in the *Rio Grande* case the threatened effect on the interests of commerce was adverse, a substantial impairment of navigable capacity; whereas in the *Denison Dam* case the effect was beneficial in character, the provision of flood control, power, and navigation improvement. Such a difference is therefore plainly immaterial to the applicability of commerce power.<sup>55</sup>

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<sup>50</sup> *Oklahoma v. Atkinson*, 313 U. S. 508 (1941). In the interim between the *Rio Grande* and *Denison Dam* cases, Mr. Chief Justice Hughes had occasion to recognize the power of Congress to control the nonnavigable reaches of a river to protect and preserve the navigability of navigable portions, in *United States v. Utah*, 283 U. S. 64, 90 (1931).

<sup>51</sup> *Oklahoma v. Texas*, 258 U. S. 574, 591 (1922).

<sup>52</sup> *Oklahoma v. Atkinson*, 313 U. S. 508, 525 (1941).

<sup>53</sup> 4 Wheat. 316 (U. S. 1819).

<sup>54</sup> *Oklahoma v. Atkinson*, 313 U. S. 508, 526 (1941).

<sup>55</sup> In *Georgia Power Co. v. Federal Power Commission*, 152 F. 2d 908 (C. A. 5, 1946), the United States Court of Appeals for the Fifth Circuit held valid

**FLOOD CONTROL.**—In addition to navigation control, the Commerce Clause vests in Congress other authority over waters under its jurisdiction. Thus, the application of recognized engineering principles finds sanction in constitutional doctrine where certain improvements for navigation are allied with control of floods. In his message to Congress on the 1882 Report of the Mississippi River Commission, which recommended improvements for navigation and protection of the valley, President Arthur said, "The constitutionality of a law making appropriations in aid of these objects can not be questioned."<sup>56</sup> And the Supreme Court in 1913 recognized a relationship of flood control to the "plenary power of the United States to legislate for the benefit of navigation."<sup>57</sup>

Similarly, while the point was not directly in issue in the 1940 *New River* case, the Court there stated that flood protection and watershed development are parts of commerce control.<sup>58</sup> The following year, in disposing of a direct attack upon the constitutionality of the statute authorizing construction of the Denison Dam,<sup>59</sup> the Court pointed out that although the development "is a multiple-purpose project, it is basically one for flood control," and recognized it "as part of a comprehensive flood-control program for the Mississippi itself."<sup>60</sup> Negating any suggestion of constitutional impediment to em-

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a requirement of federal license for proposed construction by the company of a hydroelectric power plant at its dam located in nonnavigable waters where operation of the project would adversely affect navigation, noting that exercise of commerce authority is not restricted to an adverse effect on present navigable capacity, but extends to navigable capacity after reasonable improvements which might be made and irrespective of whether the effect is injurious or beneficial. See also *Harris v. Central Nebraska Public Power & Irrigation Dist.*, 29 F. Supp. 425, 429 (D. C. Nebr. 1938); *Grand River Dam Authority v. Going*, 29 F. Supp. 316, 325 (D. C. Okla. 1939).

<sup>56</sup> 8 Richardson, MESSAGES AND PAPERS OF THE PRESIDENTS, 95 (1896). But see the doubts entertained by the National Waterways Commission in 1912, *infra*, n. 55, p. 269.

<sup>57</sup> *Jackson v. United States*, 230 U. S. 1, 23 (1913).

<sup>58</sup> *United States v. Appalachian Electric Power Co.*, 311 U. S. 377, 426 (1940), reh. den., 312 U. S. 712 (1941).

<sup>59</sup> Act of June 23, 1938, § 4, 52 Stat. 1215, 1219.

<sup>60</sup> *Oklahoma v. Atkinson*, 313 U. S. 508, 529, 525 (1941).

ployment of the commerce power for flood-control purposes, the Court said: <sup>61</sup>

But there is no constitutional reason why Congress or the courts should be blind to the engineering prospects of protecting the nation's arteries of commerce through control of the watersheds. There is no constitutional reason why Congress cannot, under the commerce power, treat the watersheds as a key to flood control on navigable streams and their tributaries. Nor is there a constitutional necessity for viewing each reservoir project in isolation from a comprehensive plan covering the entire basin of a particular river.

DEVELOPMENT OF POWER.—Another important purpose served by waters under the jurisdiction of Congress is the development of power. Here too, federal commerce authority may be appropriately invoked. It should be noted that as early as 1879 Congress empowered the Secretary of the Army to lease water power at Moline to a private company.<sup>62</sup>

Also, the Supreme Court in 1891 announced some of the relevant principles in the first *Green Bay* case, holding that if a

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<sup>61</sup> 313 U. S. at 525. The significance of a nonnavigable tributary's contribution to the impact of floods upon commerce is apparent from the following statement by the Court: "The contribution which the Red River makes to disastrous floods in its basin and in the lower Mississippi has long been recognized. Huge crop damage, the loss of buildings, bridges and livestock, pollution of fertile fields, the erosion of rich farm lands, bank cavings, interruption of navigation, injury of port facilities, the creation of sand bars in the channels, interruption or stoppage of interstate transportation by rail, truck and motorcar, disease, pestilence and death, relief of the homeless and destitute—all these are now familiar costs of the floods on the Mississippi. And the history of the Red River valley shows that it has long been plagued by such disasters and burdened by their costs.

"Floods pay no respect to state lines. Their effective control in the Mississippi valley has become increasingly a subject of national concern, in recognition of the fact that single states are impotent to cope with them effectively" (footnotes omitted). 313 U. S. at 520-522.

<sup>62</sup> Act of March 3, 1879, 20 Stat. 377, 387. The first specific authorization for construction of a power project in a navigable stream appeared in the Act of July 5, 1894, 23 Stat. 154. See FIRST ANNUAL REPORT OF THE FEDERAL POWER COMMISSION, p. 48 (1921).



surplus of water is produced by a nonfederal navigation dam authorized under a state law, the state may retain to itself the authority to dispose of the surplus to private parties and thus reimburse itself for the expenses of the improvement.<sup>63</sup> In the second *Green Bay* case in 1898, a lower riparian owner sought an apportionment of the flow of a navigable river for power purposes, objecting to a diversion, through navigation canals and around its properties, of waters not required for navigation; but the Court sustained the diversion as founded on a grant from the United States which had sole control of the use and disposal of water power at the federal navigation dam.<sup>64</sup> Referring to the dominant authority of the Federal Government to erect a navigation dam and avail itself of the incidental water power, the Court there said: <sup>65</sup>

At what points in the dam and canal the water for power may be withdrawn, and the quantity which can be treated as surplus with due regard to navigation, must be determined by the authority which owns and controls that navigation. In such matters there can be no divided empire.

Later, in *United States v. Chandler-Dunbar Co.*, the right of the Federal Government to dispose of the water power at a federal navigation dam was reaffirmed in 1913, the Court saying: <sup>66</sup>

If the primary purpose is legitimate, we can see no sound objection to leasing any excess of power over the needs of the Government.

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<sup>63</sup> *Kaukauna Water Power Co. v. Green Bay & Miss. Canal Co.*, 142 U. S. 254 (1891).

<sup>64</sup> *Green Bay & Miss. Canal Co. v. Patten Paper Co.*, 172 U. S. 58 (1898), reh. den., 173 U. S. 179 (1899).

<sup>65</sup> 172 U. S. at 80. This conclusion was reached despite the statement of the court below that only 1% of the stream was required for navigation, the diversion of the remaining 99% being for the purpose of creating water power. *Green Bay & Miss. Canal Co. v. Kaukauna Water Power Co.*, 90 Wis. 370, 398, 401, 61 N. W. 1121, 1122, 1124 (1895).

<sup>66</sup> 229 U. S. 53, 73 (1913). See also *Waters v. Phillips*, 284 Fed. 237, 239 (C. A. 7, 1922).

And in *Arizona v. California*, sustaining federal construction of the dam, reservoir and power plant in connection with the Boulder Canyon Project, the Court in 1931 said: <sup>67</sup>

the fact that purposes other than navigation will also be served could not invalidate the exercise of the authority conferred, even if those other purposes would not alone have justified an exercise of Congressional power.

Similarly, in its 1936 *Ashwander* opinion, the Court held that the Wilson Dam on the Tennessee River was validly authorized in the exercise of the commerce and war powers, and that: <sup>68</sup>

The power of falling water was an inevitable incident of the construction of the dam. That water power came into the exclusive control of the Federal Government. The mechanical energy was convertible into electric energy, and the water power, the right to convert it into electric energy, and electric energy thus produced, constitute property belonging to the United States.

In 1940, the Court characterized "recovery of the cost of improvements through utilization of power" as a part of commerce control. <sup>69</sup> Likewise, where a multiple-purpose dam is constructed and operated by the Federal Government primarily for flood control, the *Denison Dam* case in 1941 expressly held that exercise of commerce authority for that purpose is not invalidated where generation of power, as a "paying partner," is one of the ends served. <sup>70</sup>

LICENSING NONFEDERAL DEVELOPMENT OF POWER.—Under the Commerce Clause, Congress has also provided in the Federal Power Act for issuance of licenses to nonfederal agencies for development of water power on streams under its jurisdic-

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<sup>67</sup> 283 U. S. 423, 456 (1931).

<sup>68</sup> *Ashwander v. Tennessee Valley Authority*, 297 U. S. 288, 330 (1936).

<sup>69</sup> *United States v. Appalachian Electric Power Co.*, 311 U. S. 377, 426 (1940), reh. den., 312 U. S. 712 (1941).

<sup>70</sup> *Oklahoma v. Atkinson*, 313 U. S. 508, 530-534 (1941).

tion.<sup>71</sup> Having already suggested the constitutional soundness of that system,<sup>72</sup> the Court in the *New River* decision in 1940 specifically upheld its constitutionality and the validity of licenses issued thereunder.<sup>73</sup> Moreover, a private company operating a power development in a navigable water of the United States, constructed prior to passage by Congress of the licensing statute, may be lawfully required thereunder to accept a license with all of its obligations and conditions.<sup>74</sup> Nor is such a company's position different where it claims a preexisting right under state law to use of water for power purposes.<sup>75</sup>

Denying that commerce authority is limited to navigation control, the Supreme Court in the *New River* case observed that the license conditions have a relationship to exercise of commerce power, that the privilege of obstructing navigable waters may be denied or granted on terms, and that it is not material that the exertion of commerce authority is attended by the same incidents which attend the exercise of state police power, saying:<sup>76</sup>

In truth the authority of the United States is the regulation of commerce on its waters. \* \* \* That authority is as broad as the needs of commerce. \* \* \*

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<sup>71</sup> Act of June 10, 1920, 41 Stat. 1063, Act of August 26, 1935, 49 Stat. 838, as amended, 16 U. S. C. 791a-825r.

<sup>72</sup> *New Jersey v. Sargent*, 269 U. S. 328 (1926).

<sup>73</sup> *United States v. Appalachian Electric Power Co.*, 311 U. S. 377 (1940), reh. den., 312 U. S. 712 (1941).

<sup>74</sup> *Pennsylvania Water & Power Co. v. Federal Power Commission*, 123 F. 2d 155 (C. A. D. C. 1941), cert. den., 315 U. S. 806 (1942).

<sup>75</sup> *Niagara Falls Power Co. v. Federal Power Commission*, 137 F. 2d 787 (C. A. 2, 1943), cert. den., reh. den., 320 U. S. 792, 815 (1943).

<sup>76</sup> *United States v. Appalachian Electric Power Co.*, 311 U. S. 377, 426-427 (1940), reh. den., 312 U. S. 712 (1941). In contending that the rights of the United States to use of waters is limited to navigation, the company relied upon certain language used in: *Kansas v. Colorado*, 206 U. S. 46, 85-86 (1907); *Port of Seattle v. Oregon & Washington R. R. Co.*, 255 U. S. 56, 63 (1921); *United States v. River Rouge Co.*, 269 U. S. 411, 419 (1926); *Wisconsin v. Illinois*, 278 U. S. 367, 415 (1929). But the Court expressly denied that the language employed in those opinions supports the view that constitutional power of the United States over its waters is limited to navigation control, asserting that on the contrary its authority is as broad as the needs of commerce. 311 U. S. at 424-426.

The point is that navigable waters are subject to national planning and control in the broad regulation of commerce granted the Federal Government.

Hence, even if the licensee be compelled under the statute at the end of the license period to submit to acquisition of its property at less than fair value, this is no more than the price the licensee must pay for the privilege of maintaining its dam in waters subject to congressional control.<sup>77</sup> Thus, annual charges may be imposed on the licensee.<sup>78</sup> Also valid is the Federal Power Act's grant to a licensee of the right to bring eminent domain proceedings.<sup>79</sup> Likewise valid are the Act's provisions for regulation of licensee's interstate rates.<sup>80</sup> Similarly, in connection with the Act's provision permitting the United States to take over a licensed project at the end of the license period upon a payment based on original cost, it should be noted that a licensee may be lawfully required to reduce its capitalization to the actual legitimate original cost of its project constructed prior to passage of the Act.<sup>81</sup>

**SOME DECISIONS FOR CONGRESS ALONE.**—In the exercise of the commerce power, some decisions are left exclusively to Congress. For example: <sup>82</sup>

It is for Congress alone to decide whether a particular project, by itself or as part of a more comprehensive scheme, will have such a beneficial effect on the arteries of interstate commerce as to warrant it. That determination is legislative in character.

<sup>77</sup> 311 U. S. at 427-428. When a private company is subject to license control by a state, the situation as to acquisition is the same. *Fox River Co. v. Railroad Commission*, 274 U. S. 651 (1927).

<sup>78</sup> 311 U. S. at 427; *Central Nebraska Public Power & Irrigation Dist. v. Federal Power Commission*, 160 F. 2d 782 (C. A. 8, 1947), *cert. den.*, 332 U. S. 765 (1947).

<sup>79</sup> *Missouri v. Union Electric Light & Power Co.*, 42 F. 2d 692 (D. C. Mo. 1930).

<sup>80</sup> *Safe Harbor Water Power Corp. v. Federal Power Commission*, 179 F. 2d 179 (C. A. 3, 1949), *cert. den.*, 339 U. S. 957 (1950).

<sup>81</sup> *Niagara Falls Power Co. v. Federal Power Commission*, 137 F. 2d 787 (C. A. 2, 1943), *cert. den.*, *reh. den.*, 320 U. S. 792, 815 (1943).

<sup>82</sup> *Oklahoma v. Atkinson*, 313 U. S. 508, 527 (1941).

So also is the decision on the necessity for a given improvement of navigable capacity, and the character and extent of it.<sup>82</sup> Likewise as to whether a structure constitutes a hindrance.<sup>83</sup> And the courts may not assume, contrary to a statutory declaration, that Congress has no purpose to aid navigation, or that its real intention is to use the stored waters for other purposes so as to defeat a declared primary navigation purpose.<sup>84</sup>

Nor is the exercise of commerce authority invalidated where Congress elects thereby to serve purposes in addition to navigation, even if such other purposes would not alone justify an exercise of congressional power.<sup>85</sup> Also, there is no constitutional barrier to exercise by Congress of its commerce power to authorize issuance of a license for nonfederal construction of a dam for power only in waters under its jurisdiction.<sup>86</sup> Correspondingly, since there is no "constitutional necessity for viewing each reservoir project in isolation from a comprehensive plan covering the entire basin of a particular river," the decision upon the wisdom, need, and effectiveness of a particular project—such as its flood-control value in a comprehensive plan—is for Congress.<sup>87</sup> In the words of the *Denison Dam* opinion: <sup>88</sup>

To say that no one of those projects could be constitutionally authorized because its separate effect on floods in the Mississippi would be too conjectural would be to deny the actual or potential aggregate benefits of the integrated system as a whole. That reveals the necessity, from the constitutional viewpoint, of leaving to Congress the decision as to what watersheds should be controlled (and what methods should be employed) in order to pro-

<sup>82</sup> *Scranton v. Wheeler*, 179 U. S. 141, 162-163 (1900).

<sup>83</sup> *United States v. Appalachian Electric Power Co.*, 311 U. S. 377, 424 (1940), reh. den., 312 U. S. 712 (1941).

<sup>84</sup> *Arizona v. California*, 283 U. S. 423, 456-457 (1931).

<sup>85</sup> 283 U. S. at 456.

<sup>86</sup> *United States v. Appalachian Electric Power Co.*, 311 U. S. 377, 428 (1940), reh. den., 312 U. S. 712 (1941).

<sup>87</sup> *Oklahoma v. Atkinson*, 313 U. S. 508, 525-527 (1941).

<sup>88</sup> 313 U. S. at 527-528.

tect the various arteries of interstate commerce from the disasters of floods.

By the same tokens, it is for Congress to decide whether a project's benefits to commerce outweigh the costs of the undertaking.<sup>90</sup>

**EFFECT OF EXERCISE OF COMMERCE POWER UPON NONFEDERAL INTERESTS.**—Next, it is important to note the effect of the exercise of commerce authority in relation to state and private interests. As already indicated, a riparian owner may under state law hold title, as between himself and others than the Government, to a part of a navigable stream's bed, since the people became sovereign following the American Revolution and thus held absolute right to navigable waters and the beds under them, subject to those rights granted to the Federal Government in the Constitution.<sup>91</sup> From this latter paramount qualification evolved the general rule that the Government does not have to compensate for destruction of private interests over which, at the point of conflict, it has a superior navigation easement under the Commerce Clause, the exercise of which occasions the damage.<sup>92</sup>

The dominant federal right to improve navigable waters in the interests of navigation "extends to the entire bed of a stream, which includes the lands below ordinary high-water mark. The exercise of the power within these limits is not an invasion of any private property right in such lands for which the United States must make compensation."<sup>93</sup> Thus, destruction of a riparian owner's landing by a navigation improvement inflicts a damage merely incidental to exercise of the dominant servitude and involves no taking of private property for public

<sup>90</sup> 313 U. S. at 528.

<sup>91</sup> See *supra*, p. 12.

<sup>92</sup> *United States v. Chandler-Dunbar Co.*, 229 U. S. 53 (1913); *United States v. Appalachian Electric Power Co.*, 311 U. S. 377 (1940), reh. den., 312 U. S. 712 (1941); *United States v. Commodore Park, Inc.*, 324 U. S. 386 (1945); *United States v. Willow River Power Co.*, 324 U. S. 499 (1945). See also *Arizona v. California*, 298 U. S. 558, 569 (1936).

<sup>93</sup> *United States v. Chicago, M., St. P. & P. R. Co.*, 312 U. S. 592, 597 (1941). See also *Lewis Blue Point Oyster Co. v. Briggs*, 229 U. S. 82, 88 (1913); *Greenleaf Johnson Lumber Co. v. Garrison*, 237 U. S. 251, 263 (1915); *Willink v. United States*, 240 U. S. 572, 580 (1916).

use for which compensation must be made.<sup>94</sup> Indeed, "an owner of land adjacent to navigable waters, whose fast lands are left uninvasioned, has no private riparian rights of access" for which the Government must compensate when destroying that access by an authorized change in the navigable waters.<sup>95</sup>

Similarly, riparian rights of access to navigable waters to do such things as fishing and boating cannot, as against federal control over commerce, be bought and sold.<sup>96</sup> And because of the dominant federal "right to use the bed of the water for every purpose which is in aid of navigation," destruction of oyster beds resulting from a channel improvement is not compensable.<sup>97</sup> Also, compensation will be denied for damage to a structure placed in the bed of a navigable water irrespective of its physical interference with navigation.<sup>98</sup> A "taking" of property does not arise from a requirement for alteration of a bridge obstructing navigation.<sup>99</sup> Even if the obstruction be created with the sanction of a state, the rule remains the same.<sup>100</sup> Federal power to remove obstructions to commerce is "superior to that of the States to provide for the welfare or necessities of their inhabitants."<sup>101</sup>

Holding it "inconceivable" that the "running water in a great navigable stream is capable of private ownership," the

<sup>94</sup> *Gibson v. United States*, 166 U. S. 269, 276 (1897). See also *Scranton v. Wheeler*, 179 U. S. 141, 163-164 (1900); *Stockton v. Baltimore & N. Y. R. Co.*, 32 Fed. 9, 20 (C. C. D. N. J. 1887); *Hawkins Point Light-House Case*, 39 Fed. 77, 87-88 (C. C. D. Md. 1889).

<sup>95</sup> *United States v. Commodore Park, Inc.*, 324 U. S. 386, 391 (1945). The Court also pointed out that the United States has power to block navigation at one point in order to foster it at another. 324 U. S. at 394. Cf. *United States v. River Rouge Co.*, 269 U. S. 411, 417-418 (1926).

<sup>96</sup> 324 U. S. at 391.

<sup>97</sup> *Lewis Blue Point Oyster Co. v. Briggs*, 229 U. S. 82, 87 (1913). In this connection, it should be noted that Congress has recently provided that the Court of Claims shall have jurisdiction to determine claims for damages to oyster growers upon private or leased lands or bottoms, arising from dredging operations in making river and harbor improvements. Act of June 25, 1948, § 1, 62 Stat. 941, 28 U. S. C. 1497.

<sup>98</sup> *United States v. Chicago, M., St. P. & P. R. Co.*, 312 U. S. 592, 599 (1941).

<sup>99</sup> *Hannibal Bridge Co. v. United States*, 221 U. S. 194, 206-207 (1911). Cf. *West Chicago Street R. R. Co. v. Chicago*, 201 U. S. 506, 524 (1906).

<sup>100</sup> *Union Bridge Co. v. United States*, 204 U. S. 364, 401 (1907).

<sup>101</sup> *Sanitary District v. United States*, 266 U. S. 405, 426 (1925).

Supreme Court in 1913 held that a governmental change—primarily for benefit of navigation and incidentally for development of power—in the flow of a navigable stream does not require compensation to a riparian owner for depriving him of the use of the stream for development of power.<sup>102</sup>

However, where a federal navigation improvement in a navigable stream results in the flooding of land in and adjacent to a nonnavigable tributary stream, the owners of the land along and under the bed of the nonnavigable stream are entitled to compensation for the damage to their lands, and compensation is required for the loss of power head at a dam in the nonnavigable tributary caused by a resulting change in the level of the tributary.<sup>103</sup> On the other hand, compensation will be denied for a reduction in power head caused by a federal navigation dam raising the level of a navigable stream into which the private owner drops water from his dam built on a nonnavigable tributary.<sup>104</sup> The difference in results in the two situations, according to a recent explanation by the Court, is that the loss of power head in the former case was done at points beyond the bed of the navigable stream, whereas in the latter it occurred within the bed.<sup>105</sup>

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<sup>102</sup> *United States v. Chandler-Dunbar Co.*, 229 U. S. 53, 69, 73, 76 (1913). See also *United States v. Willow River Power Co.*, 324 U. S. 499, 508-509 (1945); *Continental Land Co. v. United States*, 88 F. 2d 104, 109-110 (C. A. 9, 1937), cert. den., 302 U. S. 715 (1937); *Washington Water Power Co. v. United States*, 135 F. 2d 541, 543 (C. A. 9, 1943), cert. den., 320 U. S. 747 (1943). But cf. *Grand River Dam Authority v. Grand-Hydro*, 335 U. S. 359 (1948). In this connection, see references to legislative action concerning waters in the West, *infra*, pp. 35-50.

<sup>103</sup> *United States v. Cress*, 243 U. S. 316 (1917). See also *Henry Ford & Sons, Inc. v. Little Falls Fibre Co.*, 280 U. S. 360, 377 (1930); *United States v. Chicago, M., St. P. & P. R. Co.*, 312 U. S. 592, 597 (1941); *United States v. Willow River Power Co.*, 324 U. S. 499, 504-507 (1945); *United States v. Kansas City Life Ins. Co.*, 339 U. S. 799, 806-808 (1950).

<sup>104</sup> *United States v. Willow River Power Co.*, 324 U. S. 499 (1945). See also *United States v. Kansas City Life Ins. Co.*, 339 U. S. 799, 805, 807 (1950).

<sup>105</sup> *United States v. Kansas City Life Ins. Co.*, 339 U. S. 799, 807 (1950). But see the views of four dissenting justices advocating overruling of *United States v. Cress*, 243 U. S. 316 (1917), and saying that "It would be incongruous to deny compensation to owners adjacent to navigable rivers and require it for others bordering their tributaries for like injuries caused by the single



Having control over water power inherent in a navigable stream, the United States "is liable to no one for its use or nonuse. The flow of a navigable stream is in no sense private property."<sup>106</sup> Hence, in building a dam in a navigable water, the Federal Government must "pay the fair value, judicially determined, for the fast land; nothing for the water power."<sup>107</sup> Summarizing a number of the foregoing principles in its 1945 *Willow River* opinion, the Supreme Court said:<sup>108</sup>

Rights, property or otherwise, which are absolute against all the world are certainly rare, and water rights are not among them. Whatever rights may be as between equals such as riparian owners, they are not the measure of riparian rights on a navigable stream relative to the function of the Government in improving navigation. Where these interests conflict they are not to be reconciled as between equals, but the private interest must give way to a superior right, or perhaps it would be more accurate to say that as against the Government such private interest is not a right at all.

Denial of compensation for deprivation of riparian interests in the foregoing cases has borne some relation to control of

act of lifting the river's mean level to the high-water mark." 339 U. S. at 812, 815.

<sup>106</sup> *United States v. Appalachian Electric Power Co.*, 311 U. S. 377, 424 (1940), reh. den., 312 U. S. 712 (1941).

<sup>107</sup> 311 U. S. at 427, citing *Monongahela Navigation Co. v. United States*, 148 U. S. 312, 327 (1893) and *United States v. Chandler-Dunbar Co.*, 229 U. S. 53, 66, 76 (1913).

<sup>108</sup> *United States v. Willow River Power Co.*, 324 U. S. 499, 510 (1945). At p. 502, the Court makes this exposition of the philosophy underlying the rule as to compensation, "The Fifth Amendment, which requires just compensation when private property is taken for public use, undertakes to redistribute certain economic losses inflicted by public improvements so that they will fall upon the public rather than wholly upon those who happen to lie in the path of the project. It does not undertake, however, to socialize all losses, but those only which result from a taking of property. If damages from any other cause are to be absorbed by the public, they must be assumed by act of Congress and may not be awarded by the courts merely by implication from the constitutional provision. \* \* \* But not all economic interests are 'property rights'; only those economic advantages are 'rights' which have the law back of them \* \* \*."

navigation.<sup>109</sup> It remains undecided whether a different rule must be applied where such interests are damaged in a valid exercise by the United States of commerce authority not relating to navigation. It is nevertheless established, as we have already seen, that the exercise of commerce authority over waters under the jurisdiction of Congress is not limited to navigation, but is as broad as the needs of commerce.<sup>110</sup>

Finally, it should be noted that the Supreme Court has held that, with respect to a validly authorized federal project, a state cannot:<sup>111</sup>

call a halt to the exercise of the eminent domain power of the federal government because the subsequent flooding of the land taken will obliterate its boundary. And the suggestion that this project interferes with the state's own program for water development and conservation is likewise of no avail. That program must bow before the "superior power" of Congress.

### Proprietary Power

Additional federal authority concerning water and land resources stems from the Property Clause of the Constitution, under which Congress has proprietary power:<sup>112</sup>

to dispose of and make all needful Rules and Regulations respecting the Territory or other Property belonging to the United States \* \* \*

This clause drew scant comment in the Constitutional Convention. Indeed, records of the Proceedings of the Convention disclose that no comparable provision was included in the draft of the Plan of a Federal Constitution tendered to the Convention by Charles Pinckney of South Carolina.<sup>113</sup> Toward the end of the Convention, however, the Property Clause was made

<sup>109</sup> See *United States v. Gerlach Live Stock Co.*, 339 U. S. 725, 737 (1950).

<sup>110</sup> See *supra*, pp. 22-23. See also *infra*, p. 47.

<sup>111</sup> *Oklahoma v. Atkinson*, 313 U. S. 508, 534-535 (1941).

<sup>112</sup> U. S. CONST., Art. IV, § 3, cl. 2.

<sup>113</sup> 5 Elliot, DEBATES ON THE FEDERAL CONSTITUTION, 128-132 (rev. ed. 1845).

a part of the Constitution during debate relating to the admission of new states into the Union.<sup>114</sup> Thus did this "vastly important clause" come into being almost as an afterthought.<sup>115</sup>

**PUBLIC LANDS.**—By the Property Clause, Congress is entrusted with unlimited power over the use of federal public lands, and it is for Congress, not the courts, to say how that trust shall be administered.<sup>116</sup> Thus, Congress alone can prohibit absolutely the use of public lands, or without limitation fix the terms on which they may be used.<sup>117</sup>

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<sup>114</sup> *Id.* pp. 496-497. In the *Dred Scott* case, discussing the historical purpose of the Property Clause as a means of providing for control by the Federal Government over property held in common by the states and principally as a means to sell lands in order to pay the war debt, the majority of the justices took the view that this proprietary authority was confined to property "which the States held in common" at the time the Constitution was established, having no application to property which the Federal Government might subsequently acquire. *Dred Scott v. Sandford*, 19 How. 393, 435-442 (U. S. 1856). In this respect, however, the decision has been regularly disregarded by the Court. See *Downes v. Bidwell*, 182 U. S. 244, 272-275 (1901); *Dorr v. United States*, 195 U. S. 138, 139-149 (1904).

<sup>115</sup> "The latter part of the motion was intended to calm the fears of those who thought that by requiring consent of a State to erection of a new State within its jurisdiction, the Constitution might be favoring the claims of some State to vacant lands ceded to the United States by the treaty of peace with Great Britain. Morris' motion was carried, with only one dissenting vote (that of Maryland); and it became the second clause of Article V, section 3, of the Constitution. In this way, this vastly important clause, under which the United States has governed all its territorial possessions, came into being, almost as an afterthought, and towards the end of the Convention." Warren, *THE MAKING OF THE CONSTITUTION*, p. 600 (1937).

<sup>116</sup> *United States v. City and County of San Francisco*, 310 U. S. 16, 29-30, reh. den., 310 U. S. 657 (1940).

<sup>117</sup> *Light v. United States*, 220 U. S. 523, 535-537 (1911), recognizing the constitutionality of the authority to establish national forests; *United States v. Grimaud*, 220 U. S. 506, 521 (1911) holding constitutional the delegation of authority to make rules and regulations relative to national forests; *Utah Power & Light Co. v. United States*, 243 U. S. 389, 410 (1917) holding that the United States may require a license for use of public lands as sites for works employed in generating and distributing electric energy; *Ruddy v. Rossi*, 248 U. S. 104, 107 (1918) holding constitutional a provision in the 1862 Homestead Act that no lands acquired thereunder shall be liable to satisfy any debt contracted prior to issuance of patent therefor; *Arizona v. California*, 283 U. S. 423, 464 (1931) holding that a state has no constitutional right to use, in aid of appropriation, any land of the United States, and it cannot complain of a provision conditioning the use of such land. See also

For example, in authorizing the City and County of San Francisco to construct the Hetch-Hetchy Project on public lands, Congress provided for municipal distribution of the electric energy with a proviso against the transfer of that function to a private utility.<sup>118</sup> The Supreme Court sustained an injunction against violation of that proviso when the City and County arranged for distribution by a private utility company, saying:<sup>119</sup>

Thus, Congress may constitutionally limit the disposition of the public domain to a manner consistent with its views of public policy. And the policy to govern disposal of rights to develop hydroelectric power in such public lands may, if Congress chooses, be one designed to avoid monopoly and to bring about a wide-spread distribution of benefits.

The authority of Congress to require a conditional license for development of electric energy on public lands was recognized by the Supreme Court in 1917 in *Utah Power & Light Co. v. United States*.<sup>120</sup> Recently, however, conditions imposed in a Federal Power Act license for use of public lands have been questioned by the Idaho Power Company.<sup>121</sup>

There has been almost uniform acceptance of the power of Congress to legislate in connection with property held by the United States in the several states. And the Supreme Court has observed that "in the instances where it has been questioned in this court its validity has been upheld and its supremacy over state enactments sustained."<sup>122</sup> The Court had earlier held that admission of a state into the Union did not deprive

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*Coggeshall v. United States*, 95 F. 2d 986, 989 (C. A. 4, 1938) upholding federal power to condemn lands necessary solely for protection of a national forest.

<sup>118</sup> Act of December 19, 1913, § 6, 38 Stat. 241, 245.

<sup>119</sup> *United States v. City and County of San Francisco*, 310 U. S. 16, 30, reh. den., 310 U. S. 657 (1940).

<sup>120</sup> 243 U. S. 389 (1917).

<sup>121</sup> This case is now before the United States Court of Appeals for the District of Columbia Circuit. *Idaho Power Co. v. Federal Power Commission*, Case No. 10530, October Term, 1950.

<sup>122</sup> *Utah Power & Light Co. v. United States*, 243 U. S. 389, 404-405 (1917).

the United States of the power to protect adequately its own property, saying that a "different rule would place the public domain of the United States completely at the mercy of the state legislation."<sup>122</sup>

Federal authority over the use of public lands is thus complete and clear.

**RIGHTS TO USE OF WATER.**—Although states may adopt legislation respecting the character of rights to the use of water which may be acquired in streams under their dominion, the Supreme Court held over a half-century ago that states may not, by legislation and without the consent of Congress:<sup>123</sup>

destroy the right of the United States, as the owner of lands bordering on a stream, to the continued flow of its waters; so far at least as may be necessary for the beneficial uses of the government property.

Because of the direct importance to our survey, we turn to a consideration of rights to use of water.<sup>124</sup> It is elementary that a water right is a right only to the use of water—a right usufructuary in character, not a right to the corpus of the water itself.<sup>125</sup> But such a water right is held to be real property, deemed as "fundamental under the law of riparian rights as under the law of appropriation."<sup>126</sup> Moreover, the right to have water flow from a stream into a ditch is likewise held to be real property, and a wrongful diversion of water an injury

<sup>122</sup> *Campfield v. United States*, 167 U. S. 518, 526 (1897).

<sup>123</sup> *United States v. Rio Grande Irrigation Co.*, 174 U. S. 690, 703 (1899); *Kansas v. Colorado*, 206 U. S. 46 (1907).

Speaking of the need for supremacy of the United States in its field of delegated authority, Mr. Chief Justice Marshall said in *McCulloch v. Maryland*, "To impose on it the necessity of resorting to means which it cannot control, which another government may furnish or withhold, would render its course precarious, the result of its measures uncertain, and create a dependence on other governments, which might disappoint its most important designs, and is incompatible with the language of the constitution." 4 Wheat. 316, 424 (U. S. 1819).

<sup>124</sup> For a more extensive discussion of these matters, particularly in their relation to irrigation, see *infra*, pp. 154-167.

<sup>125</sup> See, e. g., *Lus v. Haggin*, 69 Cal. 255, 390, 10 Pac. 674, 753 (1896); *Mettler v. Ames Realty Co.*, 61 Mont. 152, 161-162, 201 Pac. 702, 704 (1921).

<sup>126</sup> I Wiel, *WATER RIGHTS IN THE WESTERN STATES*, § 18, p. 21 (3d ed. 1911).

to real property.<sup>128</sup> It has been said that a right by appropriation to the use of water has "all the dignity of and is an estate of fee simple, or a freehold."<sup>129</sup>

On numerous occasions and in a variety of ways, the United States has acquired rights to the use of water. By cessions from France, Spain, Mexico, Great Britain, Texas, and the Indian Tribes, huge territories were acquired by the United States. With these cessions, the United States became the owner, subject to private rights already vested, of the land and of at least the right to use the waters.<sup>130</sup> In this connection, Vattel has said:<sup>131</sup>

When a nation takes possession of a country, with a view to settle there, it takes possession of everything included in it, as lands, lakes, rivers, etc.

Also, the United States has acquired rights to the use of water by voluntary purchase.<sup>132</sup> Likewise, acquisitions have been accomplished through the exercise of the power of eminent domain.<sup>133</sup>

*Significance in the West.*—The importance of the Property Clause to the development, utilization, and conservation of water resources has special significance in the development of the West.

Reporting to Congress with reference to the disposal of the public domain, Alexander Hamilton stated that "convenient tracts shall, from time to time, be set apart for the purpose of locations by actual settlers, in quantities not exceeding, to one person, one hundred acres."<sup>134</sup> Similarly, in 1785 Thomas

<sup>128</sup> *Id.* § 283, pp. 298-299.

<sup>129</sup> *Id.* § 285, p. 301.

<sup>130</sup> 2 KINNEY, IRRIGATION AND WATER RIGHTS, 1112 (2d ed. 1912).

<sup>131</sup> Vattel, THE LAW OF NATIONS OR PRINCIPLES OF THE LAW OF NATURE APPLIED TO THE CONDUCT AND AFFAIRS OF NATIONS AND SOVEREIGNS, Bk. I, ch. XXII, § 266, p. 120 (Chitty's 5th American ed. 1839).

<sup>132</sup> See, e. g., *United States v. Gerlach Live Stock Co.*, 339 U. S. 725, 740 (1950).

<sup>133</sup> See, e. g., *International Paper Co. v. United States*, 282 U. S. 399, 408 (1931).

<sup>134</sup> AMERICAN STATE PAPERS: PUBLIC LANDS, vol. 1, p. 8 (Lowrie and Clarke ed. 1832).

Jefferson said that "it is not too soon to provide by every possible means that as few as possible shall be without a little portion of land. The small landholders are the most precious part of a state."<sup>135</sup>

In keeping with such views, Congress accorded to settlers a preference right in providing for disposal of the public domain in Preemption Acts dating back to 1801.<sup>136</sup> It has been described as a preference for "actual tilling and residing upon a piece of land."<sup>137</sup> Moreover, under the first Homestead Act of 1862, provision was made for more fully effectuating the policy of settling the public domain.<sup>138</sup> But in the arid West, settlement gave rise to problems not present in the more humid regions. As the Supreme Court observed in *California Orgeon Power Co. v. Beaver Portland Cement Co.*:<sup>139</sup>

From a line east of the Rocky Mountains almost to the Pacific Ocean, and from the Canadian border to the boundary of Mexico—an area greater than that of the original thirteen states—the lands capable of redemption, in the main, constituted a desert, impossible of agricultural use without artificial irrigation.

*Appropriation and Riparian Doctrines.*—Among miners in the Pacific States and Territories, where precious metals were mined on public lands of the United States, a custom evolved whereby the first appropriator of waters in the streams on such lands for mining purposes was held to have a better right than others to use the waters.<sup>140</sup> Under these conditions and the aridity prevailing in parts of the West, a rule became generally recognized that the acquisition of water by prior appro-

<sup>135</sup> THE WRITINGS OF THOMAS JEFFERSON, p. 18 (memorial ed. 1904).

<sup>136</sup> See, e. g., Act of June 22, 1838, 5 Stat. 251.

<sup>137</sup> Donaldson, THE PUBLIC DOMAIN, p. 214 (1884).

<sup>138</sup> Act of May 20, 1862, 12 Stat. 392, see 43 U. S. C. 161 *et seq.* In 1828, similar legislation had been favorably reported by the Commission on Public Lands which recommended "that small tracts of eighty acres be given to the heads of such families as will cultivate, improve, and reside on the same for five years." 32 AMERICAN STATE PAPERS: PUBLIC LANDS, vol. v, p. 449 (Dickins and Forney ed.).

<sup>139</sup> 295 U. S. 142, 156 (1935). •

<sup>140</sup> *Atchison v. Peterson*, 20 Wall. 507, 510 (U. S. 1874).

priation for a beneficial use was entitled to protection—a rule evidenced not alone by legislation and judicial decision, but also by local and customary law and usage as well.<sup>141</sup> This doctrine of prior appropriation involved a marked departure from the riparian doctrine, prevailing in the East, under which only an owner of lands riparian to a stream may make reasonable use of its waters, and only on his riparian lands.<sup>142</sup>

*Acts of 1866 and 1870.*—Claiming under formal patents taken out under the 1862 Homestead Act and the 1864 Pacific Railway Act, patentees on lands containing streams claimed

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<sup>141</sup> *California Oregon Power Co. v. Beaver Portland Cement Co.*, 295 U. S. 142, 154 (1935). With reference to the appropriation doctrine, under which rights are not confined to owners of land riparian to a stream, the Supreme Court has said that "Under this doctrine, diversion and application of water to a beneficial use constitute an appropriation, and entitle the appropriator to a continuing right to use the water, to the extent of the appropriation, but not beyond that reasonably required and actually used. The appropriator first in time is prior in right over others upon the same stream \* \* \*." *Arizona v. California*, 298 U. S. 558, 565-566 (1936). See also *infra*, pp. 156-158.

<sup>142</sup> See *Lua v. Haggin*, 69 Cal. 255, 390, 10 Pac. 674, 753 (1886). Recently tracing the historical origins of the common-law riparian doctrine, the Supreme Court said, "As long ago as the Institutes of Justinian, running water, like the air and the sea, were *res communes*—things common to all and property of none. Such was the doctrine spread by civil-law commentators and embodied in the Napoleonic Code and in Spanish law. This conception passed into the common law. From these sources, but largely from civil-law sources, the inquisitive and powerful minds of Chancellor Kent and Mr. Justice Story drew in generating the basic doctrines of American water law.

"Riparian rights developed where lands were amply watered by rainfall. The primary natural asset was land, and the run-off in streams or rivers was incidental. Since access to flowing waters was possible only over private lands, access became a right annexed to the shore. The law followed the principle of equality which requires that the corpus of flowing water become no one's property and that, aside from rather limited use for domestic and agricultural purposes by those above, each riparian owner has the right to have the water flow down to him in its natural volume and channels unimpaired in quality. The riparian system does not permit water to be reduced to possession so as to become property which may be carried away from the stream for commercial or nonriparian purposes. In working out details of this egalitarian concept, the several states made many variations, each seeking to provide incentives for development of its natural advantages. These are set forth in *Shively v. Bowlby*, 152 U. S. 1." *United States v. Gerlach Live Stock Co.*, 339 U. S. 725, 744-745 (1950). See also *infra*, pp. 155-156.



to be the true successors of the United States with the right to oust prior appropriators under the possessory system.<sup>143</sup> Against the background of the foregoing facts, Congress enacted the Act of 1866 which declared mining lands free and open to preemption and included this provision in Section 9:<sup>144</sup>

That, whenever, by priority of possession, rights to the use of water for mining, agricultural, manufacturing, or other purposes, have vested and accrued, and the same are recognized and acknowledged by the local customs, laws, and the decisions of courts, the possessors and owners of such vested rights shall be maintained and protected in the same; and the right of way for the construction of ditches and canals for the purposes aforesaid is hereby acknowledged and confirmed: *Provided, however,* That whenever, after the passage of this act, any person or persons shall, in the construction of any ditch or canal, injure or damage the possession of any settler on the public domain, the party committing such injury or damage shall be liable to the party injured for such injury or damage.

Referring to Section 9 of the 1866 Act, Congress provided by the Act of 1870 that:<sup>145</sup>

All patents granted, or preemption of homesteads allowed, shall be subject to any vested and accrued water rights, or rights to ditches and reservoirs used in connection with such water rights, as may have been acquired under or recognized by the ninth section of the act \* \* \*.

The author of the 1866 Act deemed it a recognition of "the obligation of the government to respect private rights which

<sup>143</sup> Act of May 20, 1862, 12 Stat. 392, see 43 U. S. C. 161 *et seq.*; Act of July 2, 1864, § 3, 13 Stat. 365, 367; I Wiel, WATER RIGHTS IN THE WESTERN STATES, § 87 (3d ed. 1911).

<sup>144</sup> R. S. § 2339, from Act of July 26, 1866, § 9, 14 Stat. 251, 253, now codified as part of 43 U. S. C. 661.

<sup>145</sup> R. S. § 2340, from Act of July 9, 1870, § 17, 16 Stat. 217, 218, now codified as part of 43 U. S. C. 661.

had grown up under its tacit consent and approval.”<sup>146</sup> And the Supreme Court soon declared that this legislation constituted congressional recognition of the doctrine of right by prior appropriation.<sup>147</sup> Pointing out that while the statutory language used was not “happy,” the Court has also said that Congress thereby recognized as valid the appropriation system governing use of water which had grown up among occupants of the public lands under peculiar local necessities of their condition.<sup>148</sup> At the same time, it noted that prior to the 1866 Act the claims of individuals to water were good “except as against the government.”<sup>149</sup> The 1866 Act has also been characterized as “an unequivocal grant” for existing diversions of water on public lands—a voluntary recognition of a preexisting right of possession, rather than the establishment of a new one.<sup>150</sup> And the Court has recently said that Congress thus “made good appropriations in being as against a later patent to riparian parcels of the public domain, and removed the cloud cast by adverse federal claims.”<sup>151</sup>

*Desert Land Act of 1877.*—Soon after passage of the Acts of 1866 and 1870, Congress enacted the Desert-Land Act of 1877, which allowed desert land entries with a proviso that:<sup>152</sup>

the right to the use of water by the person so conducting the same, on or to any tract of desert land of three hundred and twenty acres shall depend upon bona fide prior appropriation; and such right shall not exceed the amount of water actually appropriated, and necessarily used for the purpose of irrigation and reclamation; and all surplus water over and above such actual appropriation and use, together with the water of all lakes, rivers,

<sup>146</sup> *Jennison v. Kirk*, 98 U. S. 453, 459 (1898).

<sup>147</sup> *Atchison v. Peterson*, 20 Wall. 507, 513 (U. S. 1874).

<sup>148</sup> *Bacey v. Gallagher*, 20 Wall. 670, 683-684 (U. S. 1874).

<sup>149</sup> 20 Wall. at 681. Cf. *Sturr v. Beck*, 133 U. S. 541 (1890).

<sup>150</sup> *Broder v. Water Company*, 101 U. S. 274, 275 (1879).

<sup>151</sup> *United States v. Gerlach Live Stock Co.*, 339 U. S. 725, 748 (1950).

<sup>152</sup> Act of March 3, 1877, § 1, 19 Stat. 377, as amended, 43 U. S. C. 321. This provision applies only in California, Colorado, Oregon, Nevada, Washington, Idaho, Montana, Utah, Wyoming, Arizona, New Mexico, and North and South Dakota. §§ 3, 8, 19 Stat. 377, as amended, 43 U. S. C. 323.

and other sources of water supply upon the public lands and not navigable, shall remain and be held free for the appropriation and use of the public for irrigation, mining, and manufacturing purposes subject to existing rights.

With the foregoing proviso, the 1877 Act allows: <sup>153</sup>

entry and reclamation of desert lands within the states of California, Oregon and Nevada (to which Colorado was later added), and the then territories of Washington, Idaho, Montana, Utah, Wyoming, Arizona, New Mexico, and Dakota \* \* \*

Congress thus granted the right to appropriate waters for irrigation on that part of the public domain subject to the 1877 Act.<sup>154</sup> The intention of Congress, the Court has said, was "to further the disposition and settlement of the public domain."<sup>155</sup> And it declared that Congress intended by the 1877 Act: <sup>156</sup>

to establish the rule that for the future the land should be patented separately; and that all nonnavigable waters thereon should be reserved for the use of the public under the laws of the states and territories named.

*Effect of the Acts of 1866, 1870, and 1877.*—In evaluating the effect of the Acts of 1866, 1870, and 1877, it must be borne in mind, as the Supreme Court said in *California Oregon Power Co. v. Beaver Portland Cement Co.*, that: <sup>157</sup>

<sup>153</sup> *California Oregon Power Co. v. Beaver Portland Cement Co.*, 295 U. S. 142, 156 (1935).

<sup>154</sup> *Gutierrez v. Albuquerque Land & Irrigation Co.*, 188 U. S. 545, 553 (1903). More recently, the Court has referred to the 1877 Act as the means by which "waters upon the public domain in the arid-land states and territories were dedicated to the use of the public for irrigation and other purposes." *Brush v. Commissioner of Internal Revenue*, 300 U. S. 352, 367 (1937).

<sup>155</sup> *California Oregon Power Co., v. Beaver Portland Cement Co.*, 295 U. S. 142, 161 (1935). The court also declared it "inconceivable that Congress intended to abrogate the common-law right of the riparian patentee for the benefit of the desert land owner and keep it alive against the homestead or preemption claimant." 295 U. S. at 162.

<sup>156</sup> 295 U. S. at 162.

<sup>157</sup> 295 U. S. at 162. See also *Ickes v. Fox*, 300 U. S. 82, 95 (1937); *United States v. Gerlach Live Stock Co.*, 339 U. S. 725, 747-748 (1950).

As the owner of the public domain, the government possessed the power to dispose of land and water thereon together, or to dispose of them separately.

After an examination of all three statutes and decisions construing them, the Court added: <sup>158</sup>

What we hold is that following the Act of 1877, if not before, all non-navigable waters then a part of the public domain became *publici juris*, subject to the plenary control of the designated states, including those since created out of the territories named, with the right in each to determine for itself to what extent the rule of appropriation or the common-law rule in respect of riparian rights should obtain. For since "Congress cannot enforce either rule upon any state," *Kansas v. Colorado*, 206 U. S. 46, 94, the full power of choice must remain with the state. The Desert Land Act does not bind or purport to bind the states to any policy. It simply recognizes and gives sanction, in so far as the United States and its future grantees are concerned, to the state and local doctrine of appropriation, and seeks to remove what otherwise might be an impediment to its full and successful operation.

The effect of the recognition accorded by these statutes to the doctrine of appropriation, so far as they concern public lands, is subject to certain qualifications, as several decisions of the Supreme Court have pointed out. For example, in its 1899 opinion in the *Rio Grande* case, the Court held that: <sup>159</sup>

in the absence of specific authority from Congress, a State cannot by its legislation destroy the right of the United States, as the owner of lands bordering on a stream, to the continued flow of its waters; so far at least as may be necessary for the beneficial uses of the government property \* \* \*

<sup>158</sup> 295 U. S. at 163-164.

<sup>159</sup> *United States v. Rio Grande Irrigation Co.*, 174 U. S. 690, 703 (1899).

By the Acts of 1866, 1870, and 1877, the Court said that: <sup>100</sup>

so far as they extended, Congress recognized and assented to the appropriation of water in contravention of the common law rule as to continuous flow. To infer therefrom that Congress intended to release its control over the navigable streams of the country and to grant in aid of mining industries and the reclamation of arid lands the right to appropriate the waters on the sources of navigable streams to such an extent as to destroy their navigability, is to carry those statutes beyond what their fair import permits. This legislation must be interpreted in the light of existing facts—that all through this mining region in the West were streams, not navigable, whose waters could safely be appropriated for mining and agricultural industries, without serious interference with the navigability of the rivers into which those waters flow. And in reference to all these cases of purely local interest the obvious purpose of Congress was to give its assent, so far as the public lands were concerned, to any system, although in contravention to the common law rule, which permitted the appropriation of those waters for legitimate industries. To hold that Congress, by these acts, meant to confer upon any State the right to appropriate all the waters of the tributary streams which unite into a navigable watercourse, and so destroy the navigability of that watercourse in derogation of the interests of all the people of the United States, is a construction which cannot be tolerated. It ignores the spirit of the legislation and carries the statute to the verge of the letter and far beyond what under the circumstances of the case must be held to have been the intent of Congress.

In *Winters v. United States*, the Court in 1908 held that the United States has undeniable power to reserve waters of a non-navigable Montana stream and exempt the same from appro-

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<sup>100</sup> 174 U. S. at 706-707. See also *Oklahoma v. Atkinson*, 313 U. S. 508, 523 (1941).

priation under state laws, citing the *Rio Grande* case.<sup>161</sup> It should be noted, however, that the reservation there involved, although made after passage of the Acts of 1866, 1870, and 1877, was effected while Montana was a territory, and that it was the result of an agreement between the United States and certain Indians, ratified by act of Congress.<sup>162</sup> Such an exempting of waters from appropriation under state laws has been held by the United States Court of Appeals for the Ninth Circuit to apply with respect to reservations established upon territorial lands by administrative action, as well as by a treaty.<sup>163</sup>

We should also note here certain comments by the Supreme Court in disposing of interstate litigation involving the Colorado River. In its 1935 opinion in *Arizona v. California*, the Court said:<sup>164</sup>

The Colorado River is a navigable stream of the United States. The privilege of the states through which it flows and their inhabitants to appropriate and use the water is subject to the paramount power of the United States to control it for the purpose of navigation.

The Court had similarly held, in its 1931 decision in *Arizona v. California*, that in lawfully exercising its commerce authority over waters, the United States need not conform to regulation by the states under their police power.<sup>165</sup> And it seems immaterial that the federal power there involved was that over commerce, instead of some other delegated power. For it is established that:<sup>166</sup>

The federal government is one of delegated powers, and from that it necessarily follows that any constitutional exercise of its delegated powers is governmental.

Intervening in a recent suit by Nebraska against Wyoming, the United States contended that the statutes of 1866, 1870,

<sup>161</sup> *Winters v. United States*, 207 U. S. 564, 577 (1908).

<sup>162</sup> See *infra*, pp. 56-57, 249-250.

<sup>163</sup> *United States v. Walker River Irr. Dist.*, 104 F. 2d 334, 335-338 (C. A. 9, 1939); *United States v. McIntire*, 101 F. 2d 650, 653-654 (C. A. 9, 1939).

<sup>164</sup> 298 U. S. 558, 569 (1936).

<sup>165</sup> 283 U. S. 423, 451 (1931).

<sup>166</sup> *Federal Land Bank v. Bismarck Co.*, 314 U. S. 95, 102 (1941).

and 1877 did not divest it of title to or control over unappropriated waters in nonnavigable streams in the West.<sup>167</sup> The States, on the other hand, claimed that these statutes constitute an irrevocable surrender of any right the United States might have had to control the use of those waters.<sup>168</sup> An apparent sequel to the latter view would be denial to the United States of property rights in waters flowing over federal lands within the boundaries of a state except as permitted by the law of that state.<sup>169</sup> In disposing of the case, however, the Supreme Court found it unnecessary to pass on the conflicting claims.<sup>170</sup>

*Subsequent Regulation of Use of Waters on Public Lands.*—Subsequent to enactment of the foregoing three statutes, Congress in 1897 enacted the following provision regulating the use of waters within national forests:<sup>171</sup>

All waters on such reservations may be used for domestic, mining, milling, or irrigation purposes, under

<sup>167</sup> See BRIEF FOR THE UNITED STATES OF AMERICA, INTERVENOR, *Nebraska v. Wyoming*, October Term, 1944, No. 6 Original, pp. 53-72, decided 325 U. S. 589 (1945).

<sup>168</sup> See the following filed in *Nebraska v. Wyoming*, note preceding: ANSWER BRIEF OF COMPLAINANT, STATE OF NEBRASKA, TO BRIEFS FILED ON BEHALF OF THE UNITED STATES AND THE STATES OF COLORADO AND WYOMING, pp. 2-65; ANSWER BRIEF OF DEFENDANT, STATE OF WYOMING, pp. 8-25, 34-39. See also OBJECTIONS OF THE STATE OF COLORADO, IMPEADED DEFENDANT, TO MOTION ON BEHALF OF THE UNITED STATES FOR LEAVE TO FILE ITS PETITION OF INTERVENTION, pp. 8-12.

<sup>169</sup> See, e. g., 2 Kinney, IRRIGATION AND WATER RIGHTS, pp. 1098-1124 (2d ed. 1912).

<sup>170</sup> *Nebraska v. Wyoming*, 325 U. S. 589, 611-616 (1945). On this question generally, see also 2 Kinney, *op. cit.*, note preceding, at 1113; STATE WATER LAW IN THE DEVELOPMENT OF THE WEST, Report to the Water Resources Committee by its Subcommittee on State Water Law, National Resources Planning Board, pp. 36-37 (1943); PRESERVATION OF INTEGRITY OF STATE WATER LAWS, Report and Recommendations of the Committee of the National Reclamation Association, pp. 49-54 (1943).

<sup>171</sup> Act of June 4, 1897, § 1, 30 Stat. 11, 36, 16 U. S. C. 481. Also enacted after the Acts of 1866, 1870, and 1877, still other statutes involving use of public lands purport to exercise control over acquisition of rights to use of water, or proceed on an assumption of existence of the power to do so. See, e. g., Act of June 3, 1878, § 1, 20 Stat. 89, see 43 U. S. C. 311; Act of March 3, 1891, § 18, 26 Stat. 1095, 1101, see 43 U. S. C. 946; Act of June 17, 1902, § 8, 32 Stat. 388, 390, 43 U. S. C. 383, 372; Act of June 11, 1906, § 3, 34 Stat. 233, 234, 16 U. S. C. 508.

the laws of the State wherein such forest reservations are situated, or under the laws of the United States and the rules and regulations established thereunder.

Not long after passage of this legislation, the Attorney General held in 1907 that appropriations on forest lands could not be taken independently of permits issued by appropriate federal officials.<sup>172</sup> Provisions for rights-of-way had been prescribed by Congress after enactment of the 1897 statute.<sup>173</sup> And in 1916, the Supreme Court sustained the right of the Federal Government to require such conditional permits for entry upon forest lands, saying: <sup>174</sup>

\* \* \* we are of opinion that the inclusion within a State of lands of the United States does not take from Congress the power to control their occupancy and use, to protect them from trespass and injury and to prescribe the conditions upon which others may obtain rights in them, even though this may involve the exercise in some measure of what commonly is known as the police power. "A different rule," as was said in *Camfield v. United States, supra*, "would place the public domain of the United States completely at the mercy of state legislation."

*Reclamation Projects.*—Preliminarily, it should be observed that the grant of proprietary power to the United States is one of control over its property, affording Congress no legislative control over the states, being limited to authority over federal property within their limits.<sup>175</sup> Hence, while the Supreme Court in 1907 expressly rejected a claim in *Kansas v. Colorado* by the United States of an "inherent" or "sovereign" power "to control the whole system of the reclamation of arid lands," it

<sup>172</sup> 26 Ops. Att'y Gen. 421, 426 (1907).

<sup>173</sup> Act of February 15, 1901, 31 Stat. 790, 16 U. S. C. 522, and Act of February 1, 1905, § 4, 33 Stat. 628, 16 U. S. C. 524.

<sup>174</sup> *Utah Power & Light Co. v. United States*, 243 U. S. 389, 405 (1917).

<sup>175</sup> *Kansas v. Colorado*, 206 U. S. 46, 89, 92 (1907). For a detailed discussion of irrigation, see Chapter 5, *infra*, pp. 151-258.



affirmed federal proprietary authority to legislate for the benefit of arid federal lands.<sup>176</sup>

Many public lands are arid, and the Property Clause became the constitutional foundation for the 1902 Reclamation Act—a statute with many supplements and amendments comprising Reclamation Law under which numerous reclamation and irrigation projects have been constructed in the 17 Western States.<sup>177</sup> When the legislation was proposed, its opponents complained that it would convert the Government into a “real estate improvement society.”<sup>178</sup> But the Supreme Court had long before brushed aside a similar objection to the leasing of public mineral lands on the ground that it would encroach on state rights by the creation of a numerous “tenantry” within their borders, its 1840 decision in *United States v. Gratiot* holding that the Property Clause permitted such disposition of federal property and that the choice of method was for the discretion of Congress.<sup>179</sup>

The few cases passing on the constitutionality of the Reclamation Act have sustained its validity. In *United States v. Hanson*, the United States Court of Appeals for the Ninth Circuit deemed it a valid means under the Property Clause for improving public lands to make them marketable.<sup>180</sup> Rejecting a contention that the work to be done and the expenditures to be made were not public and governmental in character, and not within the limited powers of the Federal Government, the Circuit Court referred to the Property Clause under which power is “vested in Congress without limitation,” and said:<sup>181</sup>

In pursuance of that power, Congress passed the reclamation act to make marketable and habitable large

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<sup>176</sup> 206 U. S. 85-89, 92. Cf. *Ashwander v. Tennessee Valley Authority*, 297 U. S. 288, 330-331, 336 (1936).

<sup>177</sup> Act of June 17, 1902, 32 Stat. 388, as amended and supplemented, 43 U. S. C. 371 *et seq.*

<sup>178</sup> See minority views, H. Rep. No. 794, Part 2, 57th Cong., 1st sess., p. 10 (1902).

<sup>179</sup> 14 Pet. 526, 538 (U. S. 1840).

<sup>180</sup> 167 Fed. 881, 883 (C. A. 9, 1909). Cf. *Twin Falls Canal Co. v. Foote*, 192 Fed. 583, 594 (C. C. D. Idaho 1911).

<sup>181</sup> 167 Fed. at 883-884.

areas of desert land within the public domain, which lands are valueless and uninhabitable unless reclaimed by irrigation, and the irrigation whereof is impracticable except upon expenditure of large sums of money in the construction of a system of reservoirs and distributing canals. \* \* \* Congress, being the owner of the lands and vested with unlimited authority over the same, as it has been held by numerous decisions of the Supreme Court, had unquestionably the right to expend money thereon for their improvement.

Referring to the Reclamation Fund, a special fund reserved by the Act to be used in the prosecution of irrigation works, the Court said that:<sup>182</sup>

there is no difficulty in the way of holding that the use of the funds contemplated by the reclamation act is for the common welfare. It is as clearly as much so as are the grants of lands in aid of the construction of transcontinental railroads which have been judicially sustained.

In the following year, the same Circuit Court held in *Burley v. United States* that the Federal Government can constitutionally exercise the power of eminent domain to obtain private lands necessary for a project irrigating both public and private lands.<sup>183</sup> It pointed out that "the public welfare" requires that public lands, "as well as those held in private ownership, should be reclaimed and made productive."<sup>184</sup> And in regard to the objective to be attained in furthering reclamation of the arid West, the Court declared that:<sup>185</sup>

The policy of reclaiming the arid region of the West for a beneficial use open to all the people of the United

<sup>182</sup> 167 Fed. at 885; for a discussion of the Reclamation Fund, see *infra*, pp. 198-202.

<sup>183</sup> 179 Fed. 1 (C. A. 9, 1910). See also *Griffiths v. Cole*, 264 Fed. 369, 373-374 (D. C. Idaho 1919) concerning the application of surplus water to non-project lands where there results a lessening of cost to project lands.

<sup>184</sup> 179 Fed. at 9.

<sup>185</sup> 179 Fed. at 11.

States is as much a national policy as the preservation of rivers and harbors for the benefit of navigation.

Moreover, while the validity of the Reclamation Act was not in issue in the 1907 case of *Kansas v. Colorado*, the United States Supreme Court made this comment respecting the basis upon which the program rests:<sup>106</sup>

As to those lands within the limits of the States, at least of the Western States, the National Government is the most considerable owner and has power to dispose of and make all needful rules and regulations respecting its property.

Another feature of reclamation legislation merits notice here. Section 7 of the 1902 Reclamation Act authorizes the Secretary of the Interior to purchase or condemn any rights necessary to the carrying out of the Act.<sup>107</sup> By Section 8, it is provided:<sup>108</sup>

That nothing in this Act shall be construed as affecting or intended to affect or to in any way interfere with the laws of any State or Territory relating to the control, appropriation, use, or distribution of water used in irrigation, or any vested right acquired thereunder, and the Secretary of the Interior, in carrying out the provisions

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<sup>106</sup> 206 U. S. 46, 92 (1907). Cf. *Henkel v. United States*, 237 U. S. 43, 49 (1915). And see *Swigart v. Baker*, 229 U. S. 187, 197 (1913), where the objectives of the Reclamation Act were reviewed in detail.

Furthermore, it may be noted that in the course of litigation over waters of the Colorado River, the Supreme Court has referred to reclamation legislation as an exercise of federal authority under the Property Clause. In *Arizona v. California*, the Court held the Boulder Canyon Project Act to be a constitutional exercise of commerce power, declining to rule whether construction of the dam might have been supported under federal authority to irrigate public lands. 283 U. S. 423, 457 (1931). But in *United States v. Arizona*, while denying that a 1904 statute authorizing the Secretary of the Interior to divert waters from the Colorado River for irrigating lands in certain Indian reservations could be considered "the consent of Congress" necessary under the 1899 River and Harbor Act before placing obstructions affecting navigable capacity, the Court expressly characterized the former statute as a part of the Reclamation Laws enacted under the proprietary authority. 295 U. S. 174, 184-185 (1935).

<sup>107</sup> Act of June 17, 1902, § 7, 32 Stat. 388, 389, 43 U. S. C. 421.

<sup>108</sup> § 8, 32 Stat. 390, 43 U. S. C. 383, 372.

of this Act, shall proceed in conformity with such laws, and nothing herein shall in any way affect any right of any State or of the Federal Government or of any landowner, appropriator, or user of water in, to, or from any interstate stream or the waters thereof: *Provided*, That the right to the use of water acquired under the provisions of this Act shall be appurtenant to the land irrigated and beneficial use shall be the basis, the measure, and the limit of the right.

In the recent *Gerlach* case, the Court noted evidence that administrative practice under the Reclamation Law has been to pay for water rights acquired under state law.<sup>189</sup> Also, Mr. Justice Douglas, concurring in part and dissenting in part, noted a conclusion by the Commissioner of Reclamation that the almost invariable practice of the Bureau has been to file notices of appropriations under state law without regard to whether the stream involved was navigable or nonnavigable.<sup>190</sup> Speaking for the Court, Mr. Justice Jackson declared that it was immaterial whether Congress could have chosen to take the rights there involved by exercise of its dominant navigation servitude, and after pointing to the language of Section 8, stated:<sup>191</sup>

We conclude that, whether required to do so or not, Congress elected to recognize any state-created rights and to take them under its power of eminent domain.

On this point, Mr. Justice Douglas concluded that Congress, by Section 8:<sup>192</sup>

agreed to pay (though not required to do so by the Constitution) for water rights acquired under state law in navigable as well as nonnavigable streams.

Section 8 also received attention in litigation between the States of Nebraska and Wyoming. In its 1935 opinion in *Ne-*

<sup>189</sup> *United States v. Gerlach Live Stock Co.*, 339 U. S. 725, 735 (1950).

<sup>190</sup> 339 U. S. at 760.

<sup>191</sup> 339 U. S. at 739, after referring to *International Paper Co. v. United States*, 282 U. S. 399, 407 (1931). Footnote at end of quote omitted.

<sup>192</sup> 339 U. S. at 761.

*braska v. Wyoming*, the Supreme Court held that the Secretary of the Interior was not a necessary party, saying: <sup>295</sup>

The bill alleges, and we know as a matter of law, that the Secretary and his agents, acting by authority of the Reclamation Act and supplementary legislation, must obtain permits and priorities for the use of water from the State of Wyoming in the same manner as a private appropriator or an irrigation district formed under the state law. His rights can rise no higher than those of Wyoming, and an adjudication of the defendant's rights will necessarily bind him. Wyoming will stand in judgment for him as for any other appropriator in that state.

Later, the United States became a party in the litigation, and in the Court's 1945 opinion in *Nebraska v. Wyoming*, Section 8 was characterized as "a direction by Congress to the Secretary of the Interior" to proceed in conformity with state laws in the appropriation of water for irrigation purposes.<sup>296</sup> The consequences thus vary with the law of the state involved. In New Mexico, for example, a special state statute applies in the case of federal reclamation projects. Reservation of certain unappropriated waters of the state may be effected by a notification from the proper federal officer to the State Engineer that the United States intends to make use of those waters.<sup>297</sup>

One court has held that Section 8 does not constitute a waiver of immunity of the United States from suit.<sup>298</sup> However, apart from Section 8, the Supreme Court of the United States was

<sup>295</sup> 295 U. S. 40, 43 (1935). See also *Kansas v. Colorado*, 206 U. S. 46, 92-93 (1907); *California Oregon Power Co. v. Beaver Portland Cement Co.*, 295 U. S. 142, 164 (1935); *Mason Co. v. Tax Commission of Washington*, 302 U. S. 186, 198-199 (1937); *United States v. West Side Irrigating Co.*, 230 Fed. 284, 290 (D. C. Wash. 1916); *United States v. Humboldt Lovelock Irr. Light & Power Co.*, 97 F. 2d 38, 42 (C. A. 9, 1938), cert. den., 305 U. S. 630 (1938). And compare *First Iowa Hydro-Electric Coop. v. Federal Power Commission*, 328 U. S. 152, 164, 175-177 (1946).

<sup>296</sup> 325 U. S. 589, 614 (1945).

<sup>297</sup> N. MEX. STAT. ANN. (1941) Vol. 5, § 77-531. Cf. OKLA. STAT. ANN. (perm. ed.) Title 82, § 91.

<sup>298</sup> *North Side Canal Co. v. Twin Falls Canal Co.*, 12 F. 2d 311, 313-314 (D. C. Idaho 1926).

confronted in *Ickes v. Fox* with a question whether a suit against the Secretary of the Interior to protect vested rights to the use of water was a suit against the United States.<sup>197</sup> The Court held that the United States was not an indispensable party and declared that suit maintainable as an action against a named official challenging his authority to perform the act against which the complaint was made. In a later decision, however, the Court noted that the "ground for decision in *Ickes v. Fox* is not altogether clear."<sup>198</sup>

In addition to the foregoing, other constitutional considerations have been involved in litigation concerning federal irrigation undertakings. For example, it has been held that discretion of the Secretary of the Interior may be made conclusive as to the necessity for taking land for such a project.<sup>199</sup> So also is his decision on the necessity for drainage and the methods of conducting the work.<sup>200</sup> The federal right of eminent domain may be exercised to obtain any rights or interests in property necessary to carry out an irrigation project.<sup>201</sup> Lands

<sup>197</sup> 300 U. S. 82, 96-97 (1937).

<sup>198</sup> *Larson v. Domestic & Foreign Corp.*, 337 U. S. 682, 702, n. 26 (1949). The note continues: "The argument was made in that case that the Secretary of the Interior had no statutory power to overrule a determination of the rights of the plaintiffs made by his predecessor in office. 300 U. S. at 86. The tortious injury to the plaintiffs was also argued, in reliance on *Goltra v. Weeks*, as a basis for avoiding the sovereign's immunity. The court appears to have relied on both grounds without indicating which was controlling. It said: 'The suits \* \* \* are brought to enjoin the Secretary of the Interior from enforcing an order, the wrongful effect of which will be to deprive respondents of vested property rights not only acquired under Congressional acts, state laws, and government contracts, but settled and determined by his predecessors in office.' (Emphasis added). *Id.* at 96-97. In support of the conclusion that the suit could be maintained, the Court relied first on *Noble v. Union Logging R. Co.*, 147 U. S. 165 (1893), a decision resting entirely on the officer's lack of statutory power to overrule the decision of his predecessor." (Italics and parenthetical addition are the Court's.)

<sup>199</sup> *United States v. Burley*, 172 Fed. 615, 616 (C. C. D. Idaho 1909), affirmed, 179 Fed. 1 (C. A. 9, 1910).

<sup>200</sup> *United States v. Ide*, 277 Fed. 373, 382 (C. A. 8, 1921), affirmed, 263 U. S. 497 (1924). See also *Yuma County Water Users' Assoc. v. Schlecht*, 262 U. S. 138, 145 (1923).

<sup>201</sup> *Henkel v. United States*, 237 U. S. 43, 50 (1915).

condemned for a right-of-way for a canal or ditch required in carrying out an irrigation project are taken for a public use.<sup>202</sup>

Similarly, there is adequate constitutional authority for acquisition of land for establishment of a new site for a town, relocation of which was occasioned by the building of a dam and a reservoir.<sup>203</sup> Enhancement of value resulting from a projected improvement must be excluded as an element of market value as of the date of taking if the lands involved "were probably within the scope of the project from the time the Government was committed to it."<sup>204</sup> In a case where seepage and percolation caused by a federal irrigation project raised the ground-water table, the injury resulting was held to be incidental, incurring no liability.<sup>205</sup> But the cost of draining lands flooded by such seepage and percolation must be borne by the lands within a project.<sup>206</sup> Lands acquired by condemnation proceedings for irrigation projects are not taxable by a subdivision of the state.<sup>207</sup> Nor are they liable for special assessments.<sup>208</sup>

**ELECTRIC POWER.**—The rights of the United States as a proprietor have particular importance in connection with the generation and sale of electric power. In the 1936 *Ashwander* case, petitioners argued that even if the Government might properly dispose of surplus power necessarily produced beyond its own needs at a dam constructed primarily for navigation, it could not adopt a deliberate plan for generating and selling power surplus to its own needs.<sup>209</sup> Without finding it necessary to pass on the validity of the TVA Act, the Supreme Court held that, upon the construction of Wilson Dam in aid of national defense and navigation: <sup>210</sup>

<sup>202</sup> *United States v. O'Neill*, 198 Fed. 677, 680 (D. C. Colo. 1912).

<sup>203</sup> *Brown v. United States*, 263 U. S. 78, 81 (1923).

<sup>204</sup> *United States v. Miller*, 317 U. S. 369, 377 (1943).

<sup>205</sup> *Horstmann Co. v. United States*, 257 U. S. 138, 145-146 (1921).

<sup>206</sup> *Nampa & Meridian Irr. Dist. v. Bond*, 268 U. S. 50 (1925).

<sup>207</sup> *United States v. Power County, Idaho*, 21 F. Supp. 684, 686-687 (D. C. Idaho 1937).

<sup>208</sup> *Mullen Benevolent Corp. v. United States*, 290 U. S. 89, 91 (1933).

<sup>209</sup> *Ashwander v. Tennessee Valley Authority*, 297 U. S. 288, 335 (1936).

<sup>210</sup> 297 U. S. at 330. This is but a logical culmination of the principles already announced in *Kaukauna Water Power Co. v. Green Bay & Miss. Canal*

The Government acquired full title to the dam site with all riparian rights. The power of falling water was an inevitable incident of the construction of the dam. That water power came into the exclusive control of the Federal Government. The mechanical energy was convertible into electric energy, and the water power, the right to convert it into electric energy, and the electric energy thus produced, constitute property belonging to the United States. \* \* \*

Authority to dispose of property constitutionally acquired by the United States is expressly granted to the Congress by § 3 of Article IV of the Constitution.

After observing that the Property Clause is silent as to the method of disposition, the Court specified that the method employed must: <sup>221</sup>

be an appropriate means of disposition according to the nature of the property, it must be one adopted in the public interest as distinguished from private or personal ends, and we may assume that it must be consistent with the foundation principles of our dual system of government and must not be contrived to govern the concerns reserved to the States.

Thereupon, the Court held valid the disposition method there involved, including acquisition of transmission lines, and that as to the surplus power, "The Government could lease or sell and fix the terms." <sup>222</sup>

Later, in the *Tennessee Electric Power Company* case, certain utility companies operating in the vicinity of existing and proposed TVA dams sought to enjoin TVA from carrying out its power program except as related to sale of electric energy generated at Wilson Dam. <sup>223</sup> Finding the TVA project to be

*Co.*, 142 U. S. 254 (1891); *Green Bay & Miss. Canal Co. v. Pattern Paper Co.*, 172 U. S. 58 (1898), reh. den., 173 U. S. 179 (1899); *United States v. Chandler-Dunbar Co.*, 229 U. S. 53 (1913). See *supra*, pp. 19-21.

<sup>221</sup> 297 U. S. at 338.

<sup>222</sup> 297 U. S. at 338-339.

<sup>223</sup> *Tennessee Electric Power Co. v. Tennessee Valley Authority*, 21 F. Supp. 947 (D. C. Tenn. 1938).



reasonably adapted to use for combined navigation, flood control, power, and national defense, the United States District Court concluded that the TVA program represented a proper exercise of the commerce and war powers, and that the electric energy capable of generation at the dams could properly be sold in competition with energy offered for sale by private utilities. Without passing on the merits, the Supreme Court held that the constitutionality of a federal statute may be challenged only in a suit seeking to protect a legal right; that the plaintiff utilities had no legal right to be free from competition resulting from activities of the Federal Government; and that business injuries resulting from such competition could not provide a basis for challenging the constitutionality of the TVA Act.<sup>214</sup>

In another case, suit was brought against TVA to recover damages for alleged negligence in operation of its dams during a period of flood.<sup>215</sup> A United States District Court concluded that Congress did not intend that TVA be "liable in damages in connection with its handling and manipulating of the waters placed in its control. Any other idea would be quite contrary to public policy."<sup>216</sup>

**USE OF GOVERNMENT PROPERTY FREE FROM INTERFERENCE.—**The United States may not be subjected to legal proceedings at law or in equity without its consent.<sup>217</sup> This immunity "extends to suits of every class."<sup>218</sup> Consent to be sued must be given by act of Congress.<sup>219</sup> But such a consent must be strictly interpreted, "since it is a relinquishment of a sovereign immunity."<sup>220</sup> "Where jurisdiction has not been conferred by

<sup>214</sup> *Tennessee Electric Power Co. v. Tennessee Valley Authority*, 306 U. S. 118 (1939).

<sup>215</sup> *Grant v. Tennessee Valley Authority*, 49 F. Supp. 564 (D. C. Tenn. 1942). See also *Atchley v. Tennessee Valley Authority*, 69 F. Supp. 952 (D. C. Ala. 1947).

<sup>216</sup> 49 F. Supp. at 566.

<sup>217</sup> *The Siren*, 7 Wall. 152, 154 (U. S. 1868).

<sup>218</sup> *Ill. Cent. R. R. Co. v. Public Utilities Commission*, 245 U. S. 493, 505 (1918).

<sup>219</sup> *Belknap v. Schild*, 161 U. S. 10, 16-17 (1896); *Stanley v. Schwalby*, 162 U. S. 255, 269-270.

<sup>220</sup> *United States v. Sherwood*, 312 U. S. 584, 590 (1914); *Ill. Cent. R. R. Co. v. Public Utilities Commission*, 245 U. S. 493, 504 (1918).

Congress, no officer of the United States has power to give any court jurisdiction of a suit against the United States.”<sup>221</sup>

Moreover, a proceeding “against property in which the United States has an interest is a suit against the United States.”<sup>222</sup> Accordingly, an officer of the Government cannot submit its property to suit.<sup>223</sup> Nor may the conduct of officers who have no authority to dispose of government property “cause the Government to lose its valuable rights by their acquiescence, laches, or failure to act.”<sup>224</sup> And its properties are not subject to state or local taxes or public assessments.<sup>225</sup>

Also important here is the question of jurisdiction. As to public-domain lands within a state, Congress has:<sup>226</sup>

the power to control their occupancy and use, to protect them from trespass and injury and to prescribe the conditions upon which others may obtain rights in them, even though this may involve the exercise in some measure of what commonly is known as the police power.

Over such lands the state has civil and criminal jurisdiction for many purposes, but such jurisdiction cannot be exercised in any way inconsistent with the rights of the United States.<sup>227</sup>

In the case of lands purchased by the United States with consent of the state, the jurisdiction theretofore residing in the state passes to the United States, “thereby making the jurisdiction of the latter the sole jurisdiction.”<sup>228</sup> But the United States may share a divided jurisdiction with the state. Thus, where a state cedes land to the United States, but reserves the right to exercise its taxing jurisdiction, such reservation must be respected by the United States.<sup>229</sup> Without an appropriate

<sup>221</sup> *Minnesota v. United States*, 305 U. S. 382, 388-389 (1939); *Stanley v. Schwalby*, 162 U. S. 255, 270 (1896).

<sup>222</sup> *Minnesota v. United States*, 305 U. S. 382, 386 (1939).

<sup>223</sup> *Stanley v. Schwalby*, 162 U. S. 255, 270 (1896).

<sup>224</sup> *United States v. California*, 332 U. S. 19, 40 (1947), decree expanded, 332 U. S. 804 (1947).

<sup>225</sup> *Van Brocklin v. Tennessee*, 117 U. S. 151 (1886); *Mullen Benevolent Corp. v. United States*, 290 U. S. 89, 94 (1933).

<sup>226</sup> *Utah Power & Light Co. v. United States*, 243 U. S. 389, 405 (1917).

<sup>227</sup> 243 U. S. at 404.

<sup>228</sup> *Surplus Trading Co. v. Cook*, 281 U. S. 647, 652 (1930). See U. S. CONST., Art. I, § 8, cl. 17.

<sup>229</sup> *Collins v. Yosemite Park & Curry Co.*, 304 U. S. 518, 530 (1938).

reservation, the state may not exercise its taxing jurisdiction.<sup>230</sup>

On the other hand, lands purchased by the United States without consent of the state are not subject to any jurisdictional control by the state which "would impair or destroy their effective use for the purpose" for which they were acquired.<sup>231</sup> Over such lands, the United States has the rights of an ordinary proprietor, except so far as its exclusive jurisdiction is necessary "for the execution of the powers of the general government."<sup>232</sup>

## War Power

In addition to its constitutional power to "declare War," Congress also has express power to levy taxes and to appropriate funds to provide for the "common Defence" of the United States.<sup>233</sup> While the scope of these powers as they relate to water resources remains largely unexplored by the judiciary, the 1936 *Ashwander* case casts some light on the subject.<sup>234</sup>

Under the 1916 National Defense Act, Congress authorized the President to cause an investigation to be made to determine the best means for production of nitrates and other products for munitions of war; to designate for use by the United States such sites on rivers or public lands as he deemed necessary to carry out the purposes of the Act; to construct, maintain, and operate on any such site navigation improvements and power houses as he deemed best for generation of power for production of nitrates or other products for munitions of war and useful in the manufacture of fertilizers and other useful products.<sup>235</sup> The Act also specified that products of such plants were to be used for military purposes and that any surplus was to be disposed of under regulations prescribed by the President. Under this authorization, construction of

<sup>230</sup> *Standard Oil Co. of California v. California*, 291 U. S. 242, 244 (1934).

<sup>231</sup> *Fort Leavenworth R. R. Co. v. Lowe*, 114 U. S. 525, 539 (1885).

<sup>232</sup> 114 U. S. at 527.

<sup>233</sup> U. S. Const., Art. I, § 8, cls. 1, 11; Art. I, § 9, cl. 7.

<sup>234</sup> *Ashwander v. Tennessee Valley Authority*, 297 U. S. 288 (1936).

<sup>235</sup> Act of June 3, 1916, § 124, 39 Stat. 166, 215, 50 U. S. C. 79.

the Wilson Dam at Muscle Shoals on the Tennessee River was begun in 1917 and completed in 1926.

Taking judicial notice of the international situation in 1916, the Supreme Court concluded that the Wilson Dam and power plant are "adapted to the purposes of national defense."<sup>236</sup> Moreover, the Court found ample support for the District Court's finding that, while there was no intention to use the nitrate plants or hydroelectric units for production of war materials in time of peace, the maintenance of those properties in operating condition and "the assurance of an abundant supply of electric energy in the event of war, constitute national defense assets."<sup>237</sup> And after discussing the exercise of commerce authority involved,<sup>238</sup> the Court then made plain its approval of the construction as an exercise of both the war and commerce powers, saying:<sup>239</sup>

The Wilson Dam and its power plant must be taken to have been constructed in the exercise of the constitutional functions of the Federal Government.

So far as the disposition of surplus power was concerned, as previously noted, the Court also held that the Property Clause empowered Congress to authorize the method employed, including the acquisition of transmission lines.<sup>240</sup>

Subsequently, in the *Tennessee Electric Power Company* case, the District Court approved the TVA Act as a proper exercise of the federal commerce and war powers.<sup>241</sup> The Supreme Court did not reach this issue on review, holding petitioners not entitled to challenge the constitutionality of the statute.<sup>242</sup>

<sup>236</sup> 297 U. S. at 327.

<sup>237</sup> 297 U. S. at 328.

<sup>238</sup> 297 U. S. at 328-330. See also *supra*, n. 210, p. 50.

<sup>239</sup> 297 U. S. at 330.

<sup>240</sup> See *supra*, pp. 50-51.

<sup>241</sup> *Tennessee Electric Power Co. v. Tennessee Valley Authority*, 21 F. Supp. 947 (D. C. Tenn. 1938).

<sup>242</sup> *Tennessee Electric Power Co. v. Tennessee Valley Authority*, 306 U. S. 118 (1939). See *supra*, pp. 51-52.

## Treaty-Making Power

Under the Constitution, the President has power: <sup>243</sup>

by and with the Advice and Consent of the Senate, to make Treaties, provided two thirds of the Senators present concur \* \* \*.

The Constitution also provides that treaties made under the authority of the United States: <sup>244</sup>

shall be the supreme Law of the Land; and the Judges in every State shall be bound thereby, any Thing in the Constitution or laws of any State to the Contrary notwithstanding.

The foregoing provisions have existing and potential importance, particularly as to international streams such as the Rio Grande, the Colorado River, the Columbia River, and the St. Lawrence River.<sup>245</sup> As we shall later see, important functions respecting certain international streams have been vested in international agencies created pursuant to the provisions of treaties.<sup>246</sup> Likewise, reference will later be made to the historic utility of treaties in preservation of waterways as common highways.<sup>247</sup>

<sup>243</sup> U. S. CONST., Art. II, § 2, cl. 2.

<sup>244</sup> U. S. CONST., Art. VI, cl. 2. From Mr. Justice Story comes this statement of the reason why treaties should be held the supreme law of the land: "It is to be considered that treaties constitute solemn compacts of binding obligation among nations; and unless they are scrupulously obeyed and enforced, no foreign nations would consent to negotiate with us \* \* \*. It is, therefore, indispensable that they should have the obligation and force of a law, that they may be executed by the judicial power, and be obeyed like other laws. \* \* \* The peace of the nation, and its good faith, and moral dignity indispensably require that all State laws should be subjected to their supremacy." 2 Story, CONSTITUTION OF THE UNITED STATES, Bk. III, ch. XLII, § 1838, pp. 604-605 (5th ed. 1891). See also *Missouri v. Holland*, 252 U. S. 416, 433-435 (1920).

<sup>245</sup> For example, by treaty respecting the Colorado River and subject to certain conditions, a right was recently guaranteed to Mexico to receive annually 1,500,000 acre-feet of water. Treaty between the United States of America and Mexico, Utilization of the Waters of the Colorado and Tijuana Rivers, and of the Rio Grande, February 3, 1944, Treaty Series 994, Art. 10, 59 Stat. 1219, 1237.

<sup>246</sup> See *infra*, pp. 121-123, 147-148, 309-311, 480-481.

<sup>247</sup> See *infra*, pp. 74-75.

Moreover, treaties constitute a source for limitation on uses within the United States of waters of international streams.<sup>248</sup> And it is plain that, in accordance with the express requirements of the Constitution, provisions of valid treaties become the supreme law of the land to which other provisions of federal and state law are subordinated.<sup>249</sup>

By treaties with western tribes of Indians, the United States has reserved certain rights to use of water. In the case of *Winters v. United States*, involving such a reservation effected by an agreement ratified by act of Congress, the Supreme Court said:<sup>250</sup>

The power of the Government to reserve the waters and exempt them from appropriation under the state laws is not denied, and could not be \* \* \*. That the Government did reserve them we have decided, and for a use which would be necessarily continued through years.

### General-Welfare Power

Congress is expressly empowered by the Constitution to levy taxes and to appropriate funds to provide for the general welfare of the United States.<sup>251</sup>

It was early established that the Federal Government is one of delegated powers, but not until 1936 was it determined in the *Butler* case that the General-Welfare Clause constitutes a delegation of power separate from and not restricted by those later enumerated in the same section of the Constitution, such as federal authority over commerce.<sup>252</sup> Settling that point, the

<sup>248</sup> Cf. *Arizona v. California*, 283 U. S. 423, 458, n. 10 (1931).

<sup>249</sup> *United States v. Pink*, 315 U. S. 203, 230-231 (1942).

<sup>250</sup> 207 U. S. 564, 577 (1908). See also *United States v. Powers*, 305 U. S. 527, 528-532 (1939); *Conrad Inv. Co. v. United States*, 161 Fed. 829 (C. A. 9, 1908); *United States v. McIntire*, 101 F. 2d 650, 653-654 (C. A. 9, 1939); *United States v. Walker River Irr. Dist.*, 104 F. 2d 334, 336 (C. A. 9, 1939); *United States v. Perkins*, 18 F. 2d 643, 644 (D. C. Wyo. 1926).

<sup>251</sup> U. S. CONST., Art. I, § 8, cl. 1; Art. I, § 9, cl. 7.

<sup>252</sup> *United States v. Butler*, 297 U. S. 1, 64-66 (1936).

Court however left unascertained the scope of the general-welfare power.<sup>253</sup> In the recent *Gerlach* case, the Court noted that:<sup>254</sup>

Congress has a substantive power to tax and appropriate for the general welfare, limited only by the requirement that it shall be exercised for the common benefit as distinguished from some mere local purpose.

And then it asserted:<sup>255</sup>

Thus the power of Congress to promote the general welfare through large-scale projects for reclamation, irrigation, and other internal improvement, is now *as clear and ample as* its power to accomplish the same results indirectly through resort to *strained* interpretation of the power over navigation (italics supplied).

The italicized words render the dictum somewhat enigmatic. The statement nevertheless seems to lean toward a view that such projects may be validly authorized under the general-welfare power. In any event, the sole test indicated is that the power must be exercised "for the common benefit as distinguished from some mere local purpose."

### Equitable Apportionment

A river is more than an amenity, it is a treasure. It offers a necessity of life that must be rationed among those who have power over it. \* \* \* Both States have real and substantial interests in the River that must be reconciled as best they may be. The different traditions and practices in different parts of the country may lead to varying results, but the effort always is to secure an equitable apportionment without quibbling over formulas.<sup>256</sup>

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<sup>253</sup> 297 U. S. at 68.

<sup>254</sup> *United States v. Gerlach Live Stock Co.*, 339 U. S. 725, 738 (1950), citing *Helvering v. Davis*, 301 U. S. 619, 640 (1937).

<sup>255</sup> 339 U. S. at 738.

<sup>256</sup> *New Jersey v. New York*, 233 U. S. 336, 342-343 (1931).

Thus did Mr. Justice Holmes characterize the Supreme Court's objective in disposing of complex controversies over waters of interstate streams in suits between states.

The Constitution of the United States provides that:<sup>257</sup>

The judicial Power of the United States, shall be vested in one supreme Court, and in such inferior Courts as the Congress may from time to time ordain and establish.

Moreover, the Supreme Court has original and exclusive jurisdiction of "All controversies between two or more States."<sup>258</sup>

The Court has passed upon a number of water controversies between states, most of them involving disputes concerning the diversion and use of water from interstate streams.<sup>259</sup> Disposition of these controversies has been based upon the principles of equitable apportionment. On the basis of equality of rights, this doctrine fits the decision to the facts of the controversy, without adherence to any particular formula. The doctrine stems from the 1907 opinion in *Kansas v. Colorado*.<sup>260</sup> Kansas claimed the right to have the water of the Arkansas River flow into Kansas undiminished in quantity and unimpaired in quality.<sup>261</sup> On the other hand, Colorado denied that it had in any substantial manner diminished the flow of the Arkansas River into Kansas.<sup>262</sup> The Court found that, while Colorado had diminished the flow into Kansas by appropriation for irrigation purposes, the result had been reclamation of large areas in Colorado, and that the ensuing diminution in

<sup>257</sup> U. S. CONST., Art. III, § 1.

<sup>258</sup> Act of June 25, 1948, § 1, 62 Stat. 869, 927, 28 U. S. C. 1251(a) (1) and note following (Supp. III); U. S. CONST., Art. III, § 2.

<sup>259</sup> Other disputes include: alleged interference with navigation—*South Carolina v. Georgia*, 93 U. S. 4 (1876) and *Wisconsin v. Illinois*, 278 U. S. 367 (1929), 281 U. S. 179 (1930); alleged pollution—*Missouri v. Illinois*, 180 U. S. 208 (1901), 200 U. S. 496 (1906) and *New York v. New Jersey*, 249 U. S. 202 (1919), 256 U. S. 296 (1921); alleged flood damage—*North Dakota v. Minnesota*, 256 U. S. 220 (1921), 263 U. S. 365 (1923).

<sup>260</sup> 206 U. S. 46 (1907).

<sup>261</sup> 206 U. S. at 50-52.

<sup>262</sup> 206 U. S. at 66.



flow had caused little if any detriment in Kansas.<sup>206</sup> Accordingly, the Court refused to enjoin Colorado, saying:<sup>207</sup>

We must consider the effect of what has been done upon the conditions in the respective States and so adjust the dispute upon the basis of equality of rights as to secure as far as possible to Colorado the benefits of irrigation without depriving Kansas of the like beneficial effects of a flowing stream.

A few years later, Wyoming sued Colorado to enjoin a proposed diversion of water out of the basin of the Laramie River which rises in Colorado and flows northward into Wyoming.<sup>208</sup> After noting that both litigants adhered to the doctrine of prior appropriation, the Court stated:<sup>209</sup>

We conclude that Colorado's objections to the doctrine of appropriation as a basis of decision are not well taken, and that it furnishes the only basis which is consonant with the principles of right and equity applicable to such a controversy as this is. The cardinal rule of the doctrine is that priority of appropriation gives superiority of right. Each of these States applies and enforces this rule in her own territory, and it is the one to which

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<sup>206</sup> 206 U. S. at 113-114, 117.

<sup>207</sup> 206 U. S. at 100. However, it was made clear that Kansas would be free to return to the Court for relief if Colorado's diversions increased to a point where Kansas might justly say that there is no longer an "equitable division of benefits." 206 U. S. at 117. In subsequent litigation between the two States, Kansas claimed that the water users in Colorado had increased their use and sought a decree allocating the flow of the Arkansas River. But relief was again denied on the ground that Kansas had failed to prove that the users in Colorado had so increased their use as to work serious detriment to users in Kansas. *Colorado v. Kansas*, 320 U. S. 333, 400 (1943).

<sup>208</sup> *Wyoming v. Colorado*, 259 U. S. 419 (1922).

<sup>209</sup> 259 U. S. at 470. Compare *Bean v. Morris*, 221 U. S. 485 (1911) involving a water-right dispute in which there was a prior appropriation in Wyoming and an alleged interference by diversion in Montana. There, the Court said, "We know no reason to doubt, and we assume, that subject to such rights as the lower State might be decided by this court to have, and to vested private rights, if any, protected by the Constitution, the State of Montana has full legislative power over Sage Creek while it flows within that State." 221 U. S. at 486.

intending appropriators naturally would turn for guidance. The principle on which it proceeds is not less applicable to interstate streams and controversies than to others. Both States pronounce the rule just and reasonable as applied to the natural conditions in that region; and to prevent any departure from it the people of both incorporated it into their constitutions. It originated in the customs and usages of the people before either State came into existence, and the courts of both hold that their constitutional provisions are to be taken as recognizing the prior usage rather than as creating a new rule. These considerations persuade us that its application to such a controversy as is here presented cannot be other than eminently just and equitable to all concerned.

Any suggestion, however, that the relative rights of contending states must depend upon the rules of law applied in such states was negated in *Connecticut v. Massachusetts*.<sup>257</sup> Connecticut sought to enjoin Massachusetts from diverting water from the watershed of the Connecticut River for domestic purposes. Both States recognized the common-law doctrine that riparian owners have the right to the undiminished flow of the stream free from contamination.<sup>258</sup> After noting that the Court will not exert its extraordinary power to control the conduct of one State at the suit of another, unless the threatened invasion of rights is of serious magnitude and established by clear and convincing evidence, the Court said: <sup>259</sup>

For the decision of suits between States, federal, state and international law are considered and applied by this Court as the exigencies of the particular case may require. The determination of the relative rights of contending States in respect of the use of streams flowing through them does not depend upon the same considerations and is not governed by the same rules of law that are applied in such states for the solution of similar questions of private right. \* \* \* And, while the mu-

<sup>257</sup> 252 U. S. 660 (1931).

<sup>258</sup> 252 U. S. at 662.

<sup>259</sup> 252 U. S. at 670.

nicipal law relating to like questions between individuals is to be taken into account, it is not to be deemed to have controlling weight. As was shown in *Kansas v. Colorado*, \* \* \* such disputes are to be settled on the basis of equality of right. But this is not to say that there must be an equal division of the waters of an interstate stream among the States through which it flows. It means that the principles of right and equity shall be applied having regard to the "equal level or plane on which all the States stand, in point of power and right, under our constitutional system" and that, upon the consideration of all the pertinent laws of the contending States and all other relevant facts, this Court will determine what is an equitable apportionment of the use of such waters.

Shortly thereafter, the rule of equitable apportionment was again followed in deciding *New Jersey v. New York*.<sup>270</sup> Limiting the extent of diversion of waters of the Delaware River by New York, the Court asserted that its effort in such controversies "always is to secure an equitable apportionment without quibbling over formulas."<sup>271</sup>

Still more recently, the doctrine was reaffirmed in *Hinderlider v. La Plata River & Cherry Creek Ditch Co.*<sup>272</sup> Stating that the "rule of equitable apportionment was settled by *Kansas v. Colorado*," the Court declared that:<sup>273</sup>

Whether the apportionment of the water of an interstate stream be made by compact between the lower and upper States with the consent of Congress or by a decree of this Court, the apportionment is binding upon the citizens of each State and all water claimants, even where the State had granted the water rights before it entered into the compact.

Passing note should be made of two cases indicating situations where the Court will not intervene in interstate water

<sup>270</sup> 283 U. S. 336 (1931).

<sup>271</sup> 283 U. S. at 342-343.

<sup>272</sup> 304 U. S. 92 (1938).

<sup>273</sup> 304 U. S. at 102, 106.

disputes. Summarizing the circumstances involved in *Washington v. Oregon*, the Court said: <sup>274</sup>

The case comes down to this: The court is asked upon uncertain evidence of prior right and still more uncertain evidence of damage to destroy possessory interests enjoyed without challenge for over half a century. In such circumstances an injunction would not issue if the contest were between private parties, at odds about a boundary. Still less will it issue here in a contest between states, a contest to be dealt with in the large and ample way that alone becomes the dignity of the litigants concerned.

And when the Court denied the relief sought in *Arizona v. California*, it said that "there is no occasion for determining now Arizona's rights to interstate or local waters which have not been, and which may never be, appropriated." <sup>275</sup>

While litigation is one method of settling complicated interstate water controversies, this method has obvious shortcomings. It has been said that "Continuous and creative administration is needed; not litigation, necessarily a sporadic process, securing at best merely episodic and mutilated settlements, which leave the central problems for adjustment unsolved." <sup>276</sup> Moreover, litigation between states is often subject to serious and protracted delays.<sup>277</sup> And the Court itself has suggested that interstate water disputes might better be solved by compact, saying:<sup>278</sup>

<sup>274</sup> 297 U. S. 517, 529 (1936).

<sup>275</sup> 283 U. S. 423, 463-464 (1931); see also *Arizona v. California*, 298 U. S. 558 (1936).

<sup>276</sup> Frankfurter and Landis, *The Compact Clause of the Constitution, A Study in Interstate Adjustments*, 34 *YALE L. J.* 685, 707 (1925).

<sup>277</sup> *Id.* p. 705, n. 87.

<sup>278</sup> *Colorado v. Kansas*, 320 U. S. 383, 392 (1943). Similarly, in *New York v. New Jersey*, the Court said, "We cannot withhold the suggestion, inspired by the consideration of this case, that the grave problem of sewage disposal presented by the large and growing populations living on the shores of New York Bay is one more likely to be wisely solved by cooperative study and by conference and mutual concession on the part of representatives of the States so vitally interested in it than by proceedings in any court however constituted." 256 U. S. 296, 313 (1921).

The reason for judicial caution in adjudicating the relative rights of States in such cases is that, while we have jurisdiction of such disputes, they involve the interests of quasi-sovereigns, present complicated and delicate questions, and, due to the possibility of future change of conditions, necessitate expert administration rather than judicial imposition of a hard and fast rule. Such controversies may appropriately be composed by negotiation and agreement, pursuant to the compact clause of the federal Constitution. We say of this case, as the court has said of interstate differences of like nature, that such mutual accommodation and agreement should, if possible, be the medium of settlement, instead of invocation of our adjudicatory power.

### Interstate Compacts

The Constitution of the United States provides that:<sup>279</sup>

No State shall, without the consent of the Congress, \* \* \* enter into any Agreement or Compact with another State \* \* \*.

The Supreme Court has said that it discerns no difference between "compact" and "agreement," except that the former is generally used with reference to more formal engagements. Compacts and agreements cover "all stipulations affecting the conduct or claims of the parties."<sup>280</sup> Nor does the Constitution "state when the consent of Congress shall be given, whether it shall precede or may follow the compact made, or whether it shall be expressed or may be implied."<sup>281</sup>

Noteworthy in this connection is the fact that, in 1911, Congress gave blanket consent to the states for compacts "for the

<sup>279</sup> U. S. CONST., Art. I, § 10, cl. 3. This provision apparently seemed desirable to the framers of the Constitution and evoked little comment, either in the Convention debates or in The Federalist papers. See *Barron v. Baltimore*, 7 Pet. 243, 248 (U. S. 1833); I Bryce, *THE AMERICAN COMMONWEALTH*, 326 (1941); Madison in *THE FEDERALIST*, No. 44.

<sup>280</sup> *Virginia v. Tennessee*, 148 U. S. 503, 520 (1893).

<sup>281</sup> 148 U. S. at 521. See also *Wharton v. Wise*, 153 U. S. 155, 173 (1894).

purpose of conserving the forests and the water supply of the States" entering into such compacts.<sup>252</sup> Also, in connection with projects authorized by the 1936 Flood Control Act, Congress gave blanket consent to states to enter into compacts whereby they would provide certain project funds, exempting a specified type from a requirement that they be effective only after approval.<sup>253</sup> And in 1948, blanket consent was given to the states for negotiation of interstate compacts for the prevention and abatement of pollution, and for establishment of agencies to make such compacts effective.<sup>254</sup> No record has been found, however, of the consummation of compacts negotiated expressly pursuant to these authorizations.

On the other hand, difficulties in several fields of legislation have elicited application of the Compact Clause.<sup>255</sup> While much has been written concerning interstate compacts,<sup>256</sup> and states have made use of this device in many situations,<sup>257</sup> those concerned with water and land resources are of special interest here. Of these, most common are the ones providing for the apportionment of waters of interstate streams.<sup>258</sup> Several re-

<sup>252</sup> Act of March 1, 1911, § 1, 36 Stat. 961, 16 U. S. C. 552. One writer has characterized this blanket consent statute as the first of its kind. Dodd, *Interstate Compacts*, 70 U. S. LAW REV. 557, 561 (1936).

<sup>253</sup> See *infra*, n. 34, pp. 133-134.

<sup>254</sup> Act of June 30, 1948, § 2(c), 62 Stat. 1155, 1156, 33 U. S. C. 466a(c) (Supp. III).

<sup>255</sup> See, e. g., Frankfurter and Landis, *The Compact Clause of the Constitution, A Study in Interstate Adjustments*, 34 YALE L. J. 685, 696-704 (1925).

<sup>256</sup> See, e. g., INTERSTATE COMPACTS, A COMPILATION OF ARTICLES FROM VARIOUS SOURCES, Colorado Water Conservation Board (1946).

<sup>257</sup> For a listing of compacts with the consent of Congress from 1789-1925, with related data, see Frankfurter and Landis, *op. cit.*, *supra*, n. 285, at 735-748; for a listing of interstate compacts from 1789-1936 with related data, see Dodd, *Interstate Compacts*, 70 U. S. LAW REV. 557, 574-578 (1936); for a listing of interstate compacts from 1934-1949 with related data, see THE BOOK OF THE STATES, The Council of State Governments, pp. 26-31 (1950-1951).

<sup>258</sup> See *Hinderlider v. La Plata River & Cherry Creek Ditch Co.*, 304 U. S. 92, 106 (1938), where the Court pointed out that up to that time Congress had consented to 15 such compacts, of which five were ratified by two or more of the contracting states.

Compacts providing for, among other things, apportionment, equitable apportionment, equitable distribution, or equitable division of waters of interstate streams, include the following: La Plata River Compact (Colo-

cent ones in this group also contain provisions relating to river development.<sup>289</sup> Others are concerned principally with pollution,<sup>290</sup> one being also concerned especially with control of floods.<sup>291</sup> Early examples relate to navigation.<sup>292</sup> By their nature, interstate water compacts involve matters of mutual

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rado and New Mexico, Act of January 29, 1925, 43 Stat. 796); South Platte River Compact (Colorado and Nebraska, Act of March 8, 1926, 44 Stat. 196); Colorado River Compact (Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming, Act of December 21, 1928, 45 Stat. 1057, 43 U. S. C. 617-617t); Rio Grande Compact (Colorado, New Mexico, and Texas, Act of May 31, 1939, 53 Stat. 785); Republican River Compact (Colorado, Kansas, and Nebraska, Act of May 26, 1943, 57 Stat. 86); Belle Fourche River Compact (South Dakota and Wyoming, Act of February 26, 1944, 58 Stat. 94); Costilla Creek Compact (Colorado and New Mexico, Act of June 11, 1946, 60 Stat. 246); Upper Colorado River Basin Compact (Arizona, Colorado, New Mexico, Utah, and Wyoming, Act of April 6, 1949, 63 Stat. 31); Arkansas River Compact (Colorado and Kansas, Act of May 31, 1949, 63 Stat. 145); Pecos River Compact (New Mexico and Texas, Act of June 9, 1949, 63 Stat. 159); Snake River Compact (Idaho and Wyoming, Act of April 21, 1950, 64 Stat. 29).

<sup>289</sup> Colorado River Compact, Upper Colorado River Basin Compact, Pecos River Compact, and Snake River Compact (see preceding note).

Several other compacts are concerned with construction and operation of interstate facilities. Notable among these are the ones providing for the New York Port Authority (New Jersey and New York, Act of August 23, 1921, 42 Stat. 174), and that providing for the Bi-State Metropolitan Development District for the St. Louis Area (Illinois and Missouri, Act of August 31, 1950, 64 Stat. 568).

<sup>290</sup> Tri-State Compact (Connecticut, New Jersey, and New York, Act of August 27, 1935, 49 Stat. 932); Red River of the North Compact (Minnesota, North Dakota, and South Dakota, Act of April 2, 1938, 52 Stat. 150); Ohio River Valley Water Sanitation Compact (Illinois, Indiana, Kentucky, New York, Ohio, Pennsylvania, Tennessee, Virginia, and West Virginia, Act of July 11, 1940, 54 Stat. 752); Potomac River Compact (District of Columbia, Maryland, Pennsylvania, Virginia, and West Virginia, Act of July 11, 1940, 54 Stat. 748); New England Interstate Water Pollution Control Compact (Connecticut, Massachusetts, New York, Rhode Island, and Vermont, Act of July 31, 1947, 61 Stat. 682).

<sup>291</sup> Red River of the North Compact (see preceding note).

<sup>292</sup> 1785 Agreement, Maryland and Virginia (1 DORSEY, MD. LAWS, 1692-1839, p. 187, and 12 HENING VA. STAT. p. 50; see also *Wharton v. Wise*, 153 U. S. 155, 172 (1894)); 1788 Agreement, Georgia and South Carolina (PRINCE DIG. GA. LAWS, 53 and 1 COOPER S. CAR. STATS. 411; see also *South Carolina v. Georgia*, 93 U. S. 4, 9 (1876)).

concern and interest to the United States and the affected states.<sup>293</sup>

Since a primary purpose of many of these compacts is apportionment of waters of interstate streams, importance attaches to the case of *Hinderlider v. La Plata River & Cherry Creek Ditch Co.*<sup>294</sup> This litigation involved the La Plata River which flows from Colorado into New Mexico. The Ditch Company sought to enjoin the State Engineer of Colorado from closing its headgate, thus permitting water adjudicated to it under an early state decree to flow down to water users in New Mexico. The State Engineer defended on the ground that he was acting in conformity with the provisions of a compact between Colorado and New Mexico, approved by Congress. The Supreme Court of Colorado reversed a holding by the lower court that the State Engineer's action was justified by the compact, declaring in effect that the compact could not disregard vested rights in Colorado. But this decision was reversed by the Supreme Court of the United States which said:<sup>295</sup>

The Supreme Court of Colorado held the Compact unconstitutional because, for aught that appears, it embodies not a judicial, or quasi-judicial, decision of controverted rights, but a trading compromise of conflicting claims. The assumption that a judicial or quasi-judicial decision of the controverted claims is essential to the validity of a compact adjusting them, rests upon misconception. It ignores the history and order of devel-

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<sup>293</sup> In this connection, it is pertinent to note the following comments in identical letters of May 3, 1950 from President Truman to Mr. R. J. Newell and Mr. E. O. Larsen, federal representatives in compact negotiations concerning the Yellowstone River and Bear River, respectively, " \* \* \* I refer to the somewhat recent tendency to incorporate in interstate water compacts questionable or conflicting provisions imposing restrictions on use of water by the United States, such as appear in the Snake River Compact enactment which I approved on March 21, 1950 \* \* \* .

" \* \* \* I am impressed with the importance of insuring that compact provisions reflect as clearly as possible a recognition of the respective responsibilities and prerogatives of the United States and the affected States."

<sup>294</sup> 304 U. S. 92 (1938).

<sup>295</sup> 304 U. S. at 104.



opment of the two means provided by the Constitution for adjusting interstate controversies. The compact—the legislative means—adapts to our Union of sovereign States the age-old treaty-making power of independent sovereign nations. Adjustment by compact without a judicial or quasi-judicial determination of existing rights had been practiced in the Colonies, was practiced by the States before the adoption of the Constitution, and had been extensively practiced in the United States for nearly half a century before this Court first applied the judicial means in settling the boundary dispute in *Rhode Island v. Massachusetts*, 12 Pet. 657, 723-725.

As earlier noted, the Court also pointed out that whether apportionment of the waters of an interstate stream be made by compact or by decree of the Supreme Court, "the apportionment is binding upon the citizens of each State and all water claimants, even where the State had granted the water rights before it entered into the compact."<sup>286</sup> Moreover, the Court held that whether the waters of an interstate stream must be apportioned between two states "is a question of 'federal common law' upon which neither the statutes nor the decisions of either State can be conclusive."<sup>287</sup>

Another holding of significance in regard to interstate compacts is a recent decision by the Supreme Court of Appeals of West Virginia in *State ex rel. Dyer v. Sims*.<sup>288</sup> West Virginia is a signatory state to the Ohio River Valley Sanitation Compact which became effective as to West Virginia in 1948. The legislature of that State appropriated \$12,250 as its proportionate share, under the compact terms, of the Commission expenses for the fiscal year ending June 30, 1950. The act also ratified the compact and vested certain powers in the compact Commission. A requisition upon the auditor to make the

<sup>286</sup> 304 U. S. at 106.

<sup>287</sup> 304 U. S. at 110, citing *Kansas v. Colorado*, 206 U. S. 46, 95, 97-98 (1907); *Connecticut v. Massachusetts*, 282 U. S. 660, 669-671 (1931); *New Jersey v. New York*, 283 U. S. 336, 342-343 (1931); *Washington v. Oregon*, 297 U. S. 517, 523 (1936).

<sup>288</sup> 133 W. Va. —, 58 S. E. 2d 766, decided April 4, 1950.

appropriation effective was refused, whereupon proceedings were instituted in the Supreme Court of Appeals of West Virginia for a writ of mandamus to compel him to honor the requisition. On demurrer, the Court denied the writ.

The first of two grounds upon which the Court based its decision was its conclusion that the West Virginia statute:<sup>299</sup>

in all reasonable probability, bound future Legislatures to make appropriations for the continuation of the activities of the Sanitation Commission, and \* \* \* amounts to the creation of a debt inhibited by Section 4 of Article X of our State Constitution.

Secondly, the Court held that the compact device under consideration involved an invalid attempt to delegate state police power, pointing out that the compact made detailed provisions for enforcement of the Commission's orders concerning abatement action.<sup>300</sup> While conceding that the legislature may delegate police power to governmental agencies within the state, the court concluded that the legislature does not possess authority to delegate any portion of that power to another state, or to the Federal Government, or to a combination of the two.<sup>301</sup> And the Court continued:<sup>302</sup>

We realize that in this instance the purpose in view can only be worked out through cooperation between the states drained in whole or in part by the Ohio River and its tributaries. We would not be understood as desiring to stand in the way of such cooperation; but it must be such cooperation as does not surrender or barter away the rights of this State as one of the sovereign states of the Union.

Thereafter, a petition for *certiorari* was filed in the Supreme Court of the United States by the State of West Virginia. Also, the Solicitor General of the United States filed a memorandum as *amicus curiae* urging that the Court review the decision and

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<sup>299</sup> 58 S. E. 2d at 775.

<sup>300</sup> 58 S. E. 2d at 775-777.

<sup>301</sup> 58 S. E. 2d at 776.

<sup>302</sup> 58 S. E. 2d at 777.

emphasizing its practical effect upon interstate compacts. On October 9, 1950, the Supreme Court granted the petition.<sup>308</sup>

### Summary

The Constitution is the supreme law of the land. Under it, federal authority is limited to those powers expressly delegated and such as may reasonably be implied from those granted. All other powers are reserved to the states or to the people. The Federal Government is paramount in its own sphere.

**COMMERCE POWER.**—Federal commerce authority comprehends navigation, and Congress has jurisdiction over all navigable waters of the United States. In addition, it may exercise its commerce jurisdiction both as to the upper nonnavigable reaches of a navigable waterway and as to the nonnavigable tributaries thereof, if the navigable capacity of the navigable waterway is affected or if interstate commerce is otherwise affected.

Commerce power also includes flood protection and watershed development. It may be employed to authorize construction of navigation and flood-control dams, at the same time providing for federal generation and sale of power. Similarly, Congress may permit nonfederal development of water power upon conditions which need not be related to navigation. For its authority over waterways is as broad as the needs of commerce. Many decisions in connection with the exercise of commerce power are for Congress alone.

A riparian owner under state law may hold title, as between himself and others outside of the Government, to a part of the bed of a navigable stream, since the people became sovereign following the American Revolution and thus held absolute right to navigable waters and the beds under them, subject to those rights surrendered to the Government in the Constitution. From this latter paramount qualification evolved the general rule that the United States does not have to compen-

<sup>308</sup> *State of West Virginia ex rel. Dyer v. Sims*, October Term, 1950, No. 147, — U. S. —.

sate for destruction of interests over which, at the point of conflict, it has a superior navigation easement, the exercise of which occasions the damage.

Since the United States has control over the water power inherent in a navigable stream, it is liable to no one for its use or nonuse, and in building a dam, it must pay the judicially determined fair value for the fast land taken, but nothing for the water power.

**PROPRIETARY POWER.**—By the Property Clause of the Constitution, Congress is entrusted with unlimited authority to control the use of federal public lands. The United States has acquired lands and rights to the use of water in several ways. While states may adopt legislation respecting the character of rights to use of water which may be acquired in streams under their dominion, they may not, by legislation and without the consent of Congress, destroy the rights of the United States, as the owner of lands bordering a stream, to the continued flow of its water, so far at least as may be necessary for the beneficial uses of the government property.

By legislation in 1866 and 1870, Congress recognized as valid the appropriation system governing use of water which had grown up among the occupants of public lands under the peculiar local necessities of their condition. An 1877 statute declares that all nonnavigable streams upon specified public lands in the West shall remain and be held free for the appropriation and use of the public, subject to existing rights. As owner of the public domain, the United States had the power to dispose of the land and water thereon together or separately.

The Property Clause became the foundation for the 1902 Reclamation Act, the validity of which has been sustained in the few cases where it has been tested. Section 8 of that Act, apart from any constitutional requirement, has recently been held to constitute an election by Congress to "recognize any state-created rights and to take them under its power of eminent domain." Thus, where such rights are necessary in carrying out the Act, they must be purchased or condemned as authorized by Section 7.

The Property Clause has additional importance in connection with electric power. The power of falling water at a federal dam comes into exclusive federal control, with the right to convert it into electric energy constituting federal property which may be sold or leased.

**WAR POWER.**—The scope of this power in relation to water resources is largely unexplored by the judiciary. Constructed in the exercise of war and commerce powers, the Wilson Dam and power plant were held adapted to the purposes of national defense. Even though there was no intention to use the nitrate plants or hydroelectric units for production of war materials in time of peace, their maintenance in operating condition and the assurance of an abundant supply of energy in event of war were held to constitute national defense assets.

**TREATY-MAKING POWER.**—Treaties have existing and potential significance, particularly as to international streams. Also, by treaties with western tribes of Indians, the United States has reserved rights to use of waters and exempted them from appropriation under state laws.

**GENERAL-WELFARE POWER.**—The authority to provide for the general welfare of the United States is a delegation of power separate from and not restricted by other delegations of power enumerated in the same section of the Constitution. Recently, the Supreme Court said that the only limit here is that the power must be exercised for the common benefit as distinguished from some mere local purpose.

**EQUITABLE APPORTIONMENT.**—In the disposition of water controversies between states, the Supreme Court has applied the principles of equitable apportionment. On the basis of equality of rights, this doctrine fits the decision to the facts of the controversy, without adherence to any particular formula.

**INTERSTATE COMPACTS.**—Apportionment of waters of interstate streams is the purpose of most existing interstate compacts concerning water resources. Apportionment thus accomplished is binding upon the citizens of the compacting states and all water claimants, even where the state had granted water rights before entering into the compact.

# Navigation

"The power of Congress \* \* \* comprehends navigation, within the limits of every State in the Union; so far as that navigation may be, in any manner, connected with 'commerce with foreign nations, or among the several States, or with the Indian tribes.'"<sup>1</sup> Federal commerce power over navigation includes authority to control not only all navigable waters of the United States, but also the nonnavigable reaches of navigable waterways and their nonnavigable tributaries if the navigable capacity of navigable waterways is affected or if interstate commerce is otherwise affected.<sup>2</sup>

Navigation has always been a principal use of navigable waters, and Congress has enacted numerous laws directly or indirectly relating to water-borne transportation and commerce. For our purposes, those laws may be conveniently divided into four categories. First, we shall consider those statutes dealing directly with the use of waters for transportation purposes. Next comes a large body of legislation seeking navigation improvement of waterways. We shall then examine a smaller number of statutes directed toward protection of navigable waters. A few legislative provisions relating to international boundary waters constitute the fourth group.

## Water-Borne Transportation

In addition to its inherent importance as an integral element of our national economy, the transportation industry has

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<sup>1</sup> *Gibbons v. Ogden*, 9 Wheat. 1, 197 (U. S. 1824); see *supra*, pp. 9-10.

<sup>2</sup> See *supra*, pp. 15-17.

even broader significance in its service to and use by every group in that economy. Moreover, it must be remembered that transportation by watercraft is but one aspect of an enormous industry which also employs carriers by rail, by road, by air, by pipe, and even by belt. For these reasons, water-borne transportation cannot intelligently be appraised in isolation from the industry as a whole. Therefore, while the necessities of time and space require us to attempt a separate and brief examination of the principal features of statutes dealing with the use of navigable waters in transportation of commerce, it must not be assumed that the significance of these laws can be assessed independently. On the contrary, it would be necessary to view them as interrelated with laws governing other methods of transportation, and further to evaluate their administration. The narrower purpose of our particularized survey is to demonstrate the extent of congressional attention to transportation as one of the uses of water resources.

From the beginning of our history, domestic transportation by water has been a matter of national concern. The Treaty of Independence, for example, contains a provision assuring that the Mississippi River "shall forever remain free and open" to citizens of the United States and the subjects of Great Britain.<sup>3</sup> Similarly, the Northwest Ordinance, adopted during the first session of the first Congress, declared that:<sup>4</sup>

The navigable waters leading into the Mississippi and St. Lawrence, and the carrying places between the same, shall be common highways, and forever free, as well to

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<sup>3</sup> Art. VIII, 8 Stat. 80, 83. See also Malloy, *TREATIES, CONVENTIONS, INTERNATIONAL ACTS, PROTOCOLS, AND AGREEMENTS BETWEEN THE UNITED STATES OF AMERICA AND OTHER POWERS: 1776-1909*, Ser. Doc. No. 357, 61st Cong., 2d sess., pp. 580, 583 (1910); Hill, *LEADING AMERICAN TREATIES*, pp. 22-43 (1931).

<sup>4</sup> Adopted by Act of August 7, 1789, 1 Stat. 50, 52. For opinions construing this provision, see *Escauabe Co. v. Chicago*, 107 U. S. 673, 683-690 (1882); *Huss v. Glover*, 119 U. S. 543, 546-548 (1886); *Sands v. Manistee River Improvement Co.*, 123 U. S. 288, 295-296 (1887); *Herman v. Chicago*, 147 U. S. 396, 410-411 (1893); *Economy Light Co. v. United States*, 258 U. S. 113, 120-121 (1921).

the inhabitants of the said territory, as to the citizens of the United States, and those of any other States that may be admitted into the confederacy, without any tax, impost, or duty therefor.

Likewise, acts of Congress enabling the people of the territories to form state governments and acts providing for the admission of new states contained declarations that navigable waters shall be common highways and forever free.<sup>5</sup> Corresponding declarations that navigable waters shall be deemed "public highways" appeared in various acts providing for the sale of public lands in the territories.<sup>6</sup>

However, for many years tolls were charged by states and private companies for passage through nonfederally owned canals and through privately constructed navigation works. Congress aided the states in the construction of canals by donating public lands for the canal sites, and for sale in order to obtain funds for waterway improvements.<sup>7</sup> In such cases, it provided that no tolls were to be charged for Government use of the canals. Congress further aided the development of waterways by authorizing the Secretary of the Treasury to purchase specified numbers of shares of capital stock in canal companies,

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<sup>5</sup> See, *e. g.*, Act of April 8, 1812, § 1, 2 Stat. 701, 703 (Louisiana); Act of March 6, 1820, § 2, 3 Stat. 545 (Missouri); Act of September 9, 1850, § 3, 9 Stat. 452 (California); Act of February 14, 1859, § 2, 11 Stat. 383 (Oregon).

<sup>6</sup> See, *e. g.*, Act of May 18, 1796, § 9, 1 Stat. 464, 468; Act of March 3, 1803, § 17, 2 Stat. 229, 235; Act of March 26, 1804, § 6, 2 Stat. 277, 279; Act of February 15, 1811, § 12, 2 Stat. 617, 621.

<sup>7</sup> Canal Sites: Act of March 2, 1827, 4 Stat. 234 (Canal, Illinois River to Lake Michigan); Act of March 2, 1827, 4 Stat. 236 (Canal, Wabash River to Lake Erie); Act of August 8, 1846, 9 Stat. 77 (Des Moines River, Iowa); Act of August 8, 1846, 9 Stat. 83 (Fox and Wisconsin Rivers, Wisconsin); Act of August 26, 1852, 10 Stat. 35 (Canal, St. Marys Falls, Michigan); Act of March 3, 1865, 13 Stat. 519 (Harbor and Ship Canal, Portage Lake to Lake Superior); Act of April 10, 1866, 14 Stat. 30 (Green Bay and Lake Michigan Canal).

Waterway Improvements: Act of March 2, 1819, § 6, 3 Stat. 489, 491 (Territory of Alabama); Act of March 14, 1826, 4 Stat. 149 (Mississippi); Act of September 4, 1841, § 9, 5 Stat. 453 (Ohio, Indiana, Illinois, Alabama, Missouri, Mississippi, Louisiana, Arkansas, Michigan); Act of February 26, 1857, § 5, 11 Stat. 166, 167 (Territory of Minnesota).



the United States to receive its proportionate share of the tolls.<sup>8</sup> These private canals later were acquired by the United States and made toll free.<sup>9</sup> Other nonfederal works of improvement were donated to or acquired by the United States and made toll free.<sup>10</sup> In 1884, Congress adopted a prohibition—effective today—against the levying of tolls upon watercraft passing through any federal lock, canal, canalized river or other work for the use and benefit of navigation.<sup>11</sup> Likewise, when it later authorized nonfederal river and harbor improvements subject to approval by the Secretary of the Army and the Chief of Engineers, Congress specifically declared that “no toll shall be imposed on account thereof.”<sup>12</sup>

NAVIGATION AIDS AND RULES.—Reference should be made here to the extensive legislative attention to the provision of aids to, and rules for navigation. For example, on the sea and lake coasts and on rivers of the United States, the United States Coast Guard establishes and maintains navigation aids, such as lighthouses, buoys, lights, radio beacons, and radio direction-finder stations.<sup>13</sup>

Also, Congress has made provision for rules for navigating harbors and inland waterways,<sup>14</sup> and at sea.<sup>15</sup> In addition to direct legislative prescription of many such rules, Congress has empowered the Commandant of the Coast Guard to establish

<sup>8</sup> Act of March 3, 1825, 4 Stat. 124 (Chesapeake and Delaware Canal Co.); Act of May 13, 1826, 4 Stat. 162 (Louisville and Portland Canal Co.); Act of May 18, 1826, 4 Stat. 169 (Dismal Swamp Canal Co.).

<sup>9</sup> Act of March 3, 1873, 17 Stat. 560, 563; Act of May 11, 1874, § 3, 18 Stat. 43, 44; Act of May 18, 1880, 21 Stat. 141 (Louisville and Portland Canal); Act of March 2, 1919, 40 Stat. 1275, 1277 (Chesapeake and Delaware Canal); Act of March 3, 1925, 43 Stat. 1186 (Lake Drummond or Dismal Swamp Canal).

<sup>10</sup> Act of June 14, 1880, 21 Stat. 180, 189 (St. Marys Falls Canal, Michigan); Act of June 3, 1896, 29 Stat. 202, 217 (Monongahela River Improvements).

<sup>11</sup> Act of July 5, 1884, 23 Stat. 133, 147, as amended, 33 U. S. C. 5. This Act in effect supersedes a similar prohibition of 1882 (August 2, 1882, 22 Stat. 191, 209). See also particularized exemptions from tolls codified in 33 U. S. C. 6-10. In the case of the Panama Canal, however, tolls are charged. Act of August 24, 1912, § 5, 37 Stat. 560, 562, as amended, 48 U. S. C. 1315.

<sup>12</sup> Act of June 13, 1902, § 1, 32 Stat. 331, 371, 33 U. S. C. 565.

<sup>13</sup> See 14 U. S. C., ch. 5 (Supp. III).

<sup>14</sup> See 33 U. S. C., ch. 3.

<sup>15</sup> See 33 U. S. C., ch. 2.

certain ancillary rules.<sup>16</sup> Requirements are thus specified for such matters as lights, sound signals for fog and speed in fog, steering and sailing rules and signals, and distress signals. Separate but similar groups of provisions have been prescribed for the Great Lakes and their connecting and tributary waters;<sup>17</sup> and for the Red River of the North and rivers emptying into the Gulf of Mexico and their tributaries.<sup>18</sup> General regulations have also been enacted for such other matters as the duties of ship officers and owners after collision;<sup>19</sup> for summary trials for certain offenses against navigation laws;<sup>20</sup> and even for the suppression of piracy.<sup>21</sup>

In 1908, Congress made it unlawful to interfere with navigation aids established or maintained by the Coast Guard, or to anchor vessels in navigable waters so as to interfere with range lights.<sup>22</sup>

Furthermore, Congress has delegated to the Secretary of the Army general authority to establish and prescribe rules concerning anchorage grounds for vessels in harbors and other navigable waters, making the enforcement of such rules the duty of the Coast Guard or of the Chief of Engineers where no Coast Guard vessel is available.<sup>23</sup> On the other hand, the Commandant of the Coast Guard has the duty of marking anchorage grounds.<sup>24</sup> And in the case of Pearl Harbor, the prescription of anchorage rules is made the duty of the Secretary of the Navy.<sup>25</sup>

Complementing the foregoing, Congress has delegated to the Secretary of the Army general authority to prescribe regulations for navigation of navigable waters "covering all matters

<sup>16</sup> Act of June 7, 1897, § 2, 30 Stat. 96, 102, as amended, 33 U. S. C. 157.

<sup>17</sup> See 33 U. S. C., ch. 4.

<sup>18</sup> See 33 U. S. C., ch. 5.

<sup>19</sup> See 33 U. S. C., ch. 6.

<sup>20</sup> See 33 U. S. C., ch. 8.

<sup>21</sup> See 33 U. S. C., ch. 7.

<sup>22</sup> Act of May 14, 1908, § 6, 35 Stat. 160, 162, as amended, 33 U. S. C. 761.

<sup>23</sup> Act of March 4, 1915, § 7, 38 Stat. 1049, 1053, as amended, 33 U. S. C. 471. But such authority is vested in the Commandant of the Coast Guard as to portions of the St. Marys River. Act of March 6, 1896, §§ 1-3, 29 Stat. 54, 54-55, as amended, 33 U. S. C. 474.

<sup>24</sup> Act of September 15, 1922, 42 Stat. 844, as amended, 33 U. S. C. 472.

<sup>25</sup> Act of August 22, 1912, 37 Stat. 328, 341, 33 U. S. C. 475.

not specifically delegated by law to some other executive department."<sup>26</sup> He is also expressly empowered to make navigation rules in the case of the South and Southwest Passes of the Mississippi River.<sup>27</sup> Furthermore, he has general authority to prescribe regulations for the use and navigation of navigable waters endangered or likely to be endangered by target practice, areas occupied by accessories pertaining to seacoast fortifications, or areas occupied by any plant engaged in the execution of public navigation improvement.<sup>28</sup>

In connection with transportation of explosives by water, Congress has prescribed laws and has empowered the Commandant of the Coast Guard, the Secretary of the Army and the Interstate Commerce Commission to issue certain rules relating thereto.<sup>29</sup>

**REGULATION OF WATER CARRIERS.**—While Congress has thus for many years made extensive provisions for rules governing navigation, detailed regulation of water carriers themselves is a relatively recent development. Under the original 1887 Interstate Commerce Act, jurisdiction over water carriers was confined to water service rendered under a common agreement with railroads and was largely limited to rate matters.<sup>30</sup> Some additional jurisdiction over port-to-port rates was conferred by the Panama Canal Act of 1912.<sup>31</sup> In 1916 and in 1933, limited authority over domestic water transportation was vested in the United States Shipping Board and was later transferred to the United States Maritime Commission.<sup>32</sup>

In 1940, however, Congress enacted legislation for the regulation of water carriers which bears a general similarity to the regulatory scheme for rail and motor carriers. In so doing, it conferred upon the Interstate Commerce Commission, with specified exceptions, jurisdiction over water carriers engaged

<sup>26</sup> Act of August 18, 1894, § 4, 28 Stat. 338, 362, as amended, 33 U. S. C. 1.

<sup>27</sup> Act of March 3, 1909, § 5, 35 Stat. 815, 817, 33 U. S. C. 2.

<sup>28</sup> Act of July 9, 1918, § 1, 40 Stat. 845, 892, 33 U. S. C. 3.

<sup>29</sup> See 46 U. S. C., ch. 7; 33 U. S. C. 3; 18 U. S. C. 383.

<sup>30</sup> Act of February 4, 1887, 24 Stat. 379.

<sup>31</sup> Act of August 24, 1912, § 11, 37 Stat. 560, 566, as amended, 49 U. S. C. 6 (11).

<sup>32</sup> Act of September 7, 1916, 39 Stat. 728, as amended, 46 U. S. C. 801 *et seq.* See 46 U. S. C. 804 note following.

in transportation in interstate or foreign commerce, extending to their rates, service, intercarrier relations, and ancillary matters.<sup>23</sup> At the same time, Congress pronounced a national transportation policy to govern the administration and enforcement of the Interstate Commerce Act as it applies to all carriers. It is:<sup>24</sup>

to provide for fair and impartial regulation of all modes of transportation subject to the provisions of this Act, so administered as to recognize and preserve the inherent advantages of each; to promote safe, adequate, economical, and efficient service and foster sound economic conditions in transportation and among the several carriers; to encourage the establishment and maintenance of reasonable charges for transportation services, without unjust discriminations, undue preferences or advantages, or unfair or destructive competitive practices; to cooperate with the several States and the duly authorized officials thereof; and to encourage fair wages and equitable working conditions; all to the end of developing, coordinating, and preserving a national transportation system by water, highway, and rail, as well as other means, adequate to meet the needs of the commerce of the United States, of the Postal Service, and of the national defense. All of the provisions of this Act shall be administered and enforced with a view to carrying out the above declaration of policy.

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<sup>23</sup> Act of September 18, 1940, § 1, 54 Stat. 898, 929, 49 U. S. C. 901 *et seq.* Variation in some of the regulatory provisions depends upon whether the water carrier is a common or contract carrier. The Act defines a "common carrier by water" as "any person which holds itself out to the general public to engage in the transportation by water in interstate or foreign commerce of passengers or property or any class or classes thereof for compensation \* \* \*," and a "contract carrier by water" as any other person "which, under individual contracts or agreements, engages in the transportation \* \* \* by water of passengers or property in interstate or foreign commerce for compensation." § 302, 54 Stat. 930, 49 U. S. C. 902. The presence of contract carriers in water and motor transportation and the differing provisions for their regulation are a principal source of distinction between regulation provided for them and that regulation prescribed for railroads.

<sup>24</sup> § 1, 54 Stat. 899, 49 U. S. C. 901 note preceding.

*Rates.*—Rates of common carriers must be just, reasonable, and nondiscriminatory.<sup>10</sup> But differences in rates of a “water carrier in respect of water transportation from those in effect by a rail carrier with respect to rail transportation” are expressly declared not to constitute unjust discrimination.<sup>11</sup> Water carriers must file and publish their rates, rules, and regulations with the Commission, and no changes therein may be made except after a specified notice.<sup>12</sup> The Commission may suspend a new rate when filed and enter upon a hearing concerning its lawfulness.<sup>13</sup> It may also investigate the lawfulness of established rates.<sup>14</sup>

The Commission is empowered to fix the “maximum or minimum, or maximum and minimum” rate for a common carrier by water.<sup>15</sup> Also, it is authorized to require common carriers by water and carriers by railroad to establish through routes and joint rates, and to determine just divisions of such rates.<sup>16</sup> In the exercise of its rate authority, the Commission is required to give due consideration: <sup>17</sup>

to the effect of rates upon the movement of traffic by the carrier or carriers for which the rates are prescribed; to the need, in the public interest, of adequate and efficient water transportation service at the lowest cost consistent with the furnishing of such service; and to the need of revenues sufficient to enable water carriers, under honest, economical, and efficient management, to provide such service.

In the case of contract water carriers, the Commission may fix a reasonable minimum rate, but not a maximum rate.<sup>18</sup>

<sup>10</sup> § 305, 54 Stat. 934, 49 U. S. C. 905.

<sup>11</sup> *Id.*

<sup>12</sup> § 306, 54 Stat. 935, 49 U. S. C. 906.

<sup>13</sup> § 307g, 54 Stat. 938, 49 U. S. C. 907.

<sup>14</sup> § 307h, 54 Stat. 939, 49 U. S. C. 907.

<sup>15</sup> § 307d, 54 Stat. 937, 49 U. S. C. 907.

<sup>16</sup> § 307, 54 Stat. 937, 49 U. S. C. 907 and Act of February 4, 1887, § 6, 24 Stat. 379, 380, as amended, 49 U. S. C. 6.

<sup>17</sup> § 307f, 54 Stat. 938, 49 U. S. C. 907.

<sup>18</sup> § 307h, 54 Stat. 939, 49 U. S. C. 907.

Moreover, in connection with competition between water and rail carriers, it should be noted that it is unlawful for any common carrier by railroad or water: <sup>44</sup>

to charge or receive any greater compensation in the aggregate for the transportation of passengers, or of like kind of property, for a shorter than for a longer distance over the same line or route in the same direction, the shorter being included within the longer distance, or to charge any greater compensation as a through rate than the aggregate of the intermediate rates \* \* \*.

The exceptions to this requirement allowed in special cases "shall not permit the establishment of any charge to or from the more distant point that is not reasonably compensatory for the service performed; and no such authorization shall be granted on account of merely potential water competition not actually in existence." <sup>45</sup> Whenever a carrier by railroad shall in competition with a water route reduce its rate to or from competitive points, it shall not be permitted to increase such rates unless after hearing the Commission finds the proposed increase rests upon changed conditions "other than the elimination of water competition." <sup>46</sup>

*Obligation to Serve.*—It is the duty of every common carrier by water, with respect to transportation subject to the Act which it undertakes or holds itself out to perform, or which it is required by the Act to perform, "to provide and furnish such transportation upon reasonable request." <sup>47</sup> By its nature, of course, contract carrier service involves no similar requirement.

*Certificates.*—By means of its authority to grant certificates, the Commission controls, with some exceptions, entry into and exit from the business of common-carrier transportation by water. No common carrier by water may engage in transportation subject to the Act without a "certificate of public

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<sup>44</sup> Act of February 4, 1887, § 4, 24 Stat. 379, 380, as amended by the Act of June 18, 1910, § 8, 36 Stat. 539, 547, as amended, 49 U. S. C. 4(1).

<sup>45</sup> § 6(a), 54 Stat. 904, 49 U. S. C. 4(1).

<sup>46</sup> Act of February 28, 1920, § 406, 41 Stat. 456, 480, as amended, 49 U. S. C. 4(2).

<sup>47</sup> § 305, 54 Stat. 934, 49 U. S. C. 905.

convenience and necessity" issued by the Commission.<sup>22</sup> Broad discretion is vested in the Commission by the Act's requirement that a certificate shall issue to an applicant only upon a Commission finding that the proposed service "is or will be required by the present or future public convenience and necessity."<sup>23</sup>

While a certificate must specify the route over which a carrier may operate and while the Commission may attach reasonable conditions to the exercise of the privileges granted by a certificate, it is expressly provided that no limitations shall restrict the carrier's right to add to its equipment, facilities, or service within the scope of such certificate, or its right:<sup>24</sup>

to extend its services over uncompleted portions of waterway projects now or hereafter authorized by Congress, over the completed portions of which it already operates, as soon as such uncompleted portions are open for navigation.

In the case of contract carriers, the Commission has similar authority through its power to grant permits.<sup>25</sup>

*Inter-carrier Relations.*—Reference has already been made to the provision for establishment of through routes and joint rates. Also noteworthy in this connection is a 1948 amendment placing responsibility on the Commission to approve or disapprove agreements between two or more carriers relating to rates and certain other matters; parties to an approved agreement are relieved from the operation of the antitrust laws as to the making and carrying out of such agreement.<sup>26</sup>

Likewise, extensive provisions cover combinations and consolidations of carriers, and other means of acquisition of control.<sup>27</sup> These provisions include a prohibition against ownership or control by a railroad of any common carrier by water operating through the Panama Canal or elsewhere, with which it does or may compete, provision being made for exceptions other than in the case of a Panama Canal carrier. .

<sup>22</sup> § 309a, 54 Stat. 941, 49 U. S. C. 909.

<sup>23</sup> § 309c, 54 Stat. 942, 49 U. S. C. 909.

<sup>24</sup> § 309d, 54 Stat. 942, 49 U. S. C. 909.

<sup>25</sup> § 309f, 54 Stat. 942, 49 U. S. C. 909.

<sup>26</sup> Act of June 17, 1948, 62 Stat. 472, as amended, 49 U. S. C. 5b (Supp. III).

<sup>27</sup> Act of February 4, 1887, § 5, 24 Stat. 379, 380, as amended, 49 U. S. C. 5.

*Ancillary Matters.*—Other provisions include those relating to accounts, records and reports by carriers; and investigation, enforcement, and procedures.<sup>54</sup>

*Exemptions.*—A number of exemptions from the Act are specified, principal among which are those for the transportation of commodities in bulk.<sup>55</sup>

**WATER TERMINALS.**—In 1918, Congress directed the Chief of Engineers to submit special reports on terminal and transfer facilities and to indicate in his Annual Reports the character of such facilities existing on every harbor or waterway under maintenance or improvement by the United States, with a statement as to their adequacy for existing commerce.<sup>56</sup> The following year Congress declared its policy that water terminals are essential at all cities and towns located upon harbors or navigable waterways, and that “at least one public terminal should exist, constructed, owned and regulated by the municipality, or other public agency of the State and open to use of all on equal terms.”<sup>57</sup> This policy respecting water terminals thus aids federal navigation improvement of rivers and harbors under statutes which we shall later examine.<sup>58</sup>

Moreover, Congress has also provided that if the public interest would not seriously suffer by delay, the Secretary of the Army<sup>59</sup> may withhold moneys appropriated for further improvement of existing projects unless there are adequate water terminals or assurances that they will be provided.<sup>60</sup>

**INLAND WATERWAYS CORPORATION.**—After almost 100 years of federal improvement of navigable waterways for commercial use by others,<sup>61</sup> in 1918 the Federal Government itself began a limited commercial operation of boats and facilities on inland waterways. After the President had taken over transportation

<sup>54</sup> See 49 U. S. C. 13, 14, 16, 20.

<sup>55</sup> § 303, 54 Stat. 931, 49 U. S. C. 903.

<sup>56</sup> Act of July 18, 1918, § 7, 40 Stat. 904, 911, 33 U. S. C. 550; see also Act of June 5, 1920, § 8, 41 Stat. 988, 992, as amended, 46 U. S. C. 867.

<sup>57</sup> Act of March 2, 1919, § 1, 40 Stat. 1275, 1286, 33 U. S. C. 551.

<sup>58</sup> See *infra*, pp. 87-112.

<sup>59</sup> The Department of the Army and its Secretary will be referred to hereafter, excepting in quotations, by their present official titles.

<sup>60</sup> Act of March 2, 1919, § 1, 40 Stat. 1275, 1286.

<sup>61</sup> See *infra*, pp. 88-90.



systems during the first World War, Congress enacted the Federal Control Act, enabling federal acquisition of boats, barges, tugs, and other transportation facilities and operation of a barge line on the Mississippi and Warrior Rivers.<sup>53</sup>

In 1920, operation of the barge line was transferred to the Secretary of the Army.<sup>54</sup> This statute declared the policy of Congress: <sup>54</sup>

to promote, encourage, and develop water transportation, service, and facilities in connection with the commerce of the United States, and to foster and preserve in full vigor both rail and water transportation.

With the express object of promoting, encouraging, and developing inland waterway transportation facilities, Congress made it the duty of the Secretary of the Army, from whom it was transferred in 1939 to the Secretary of Commerce: <sup>55</sup>

to investigate the appropriate types of boats suitable for different classes of such waterways; to investigate the subject of water terminals, both for inland waterway traffic and for through traffic by water and rail, including the necessary docks, warehouses, apparatus, equipment, and appliances in connection therewith, and also railroad spurs, and switches connecting with such terminals, with a view to devising the types most appropriate for different locations, and for the more expeditious and economical transfer or interchange of passengers or property between carriers by water and carriers by rail; to advise with communities, cities, and towns regarding the appropriate location of such terminals, and to cooperate with them in the preparation of plans for suitable terminal facilities; to investigate the existing status of water transportation upon the different inland waterways of the country, with a view to determining whether such waterways are being utilized

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<sup>53</sup> Act of March 21, 1918, § 6, 40 Stat. 451, 454.

<sup>54</sup> Act of February 23, 1920, § 201(a), 41 Stat. 456, 458, see 49 U. S. C. 141-142, and notes following.

<sup>55</sup> § 500, 41 Stat. 499, as amended, 49 U. S. C. 142.

<sup>56</sup> *Id.* and see 49 U. S. C. 142 note following.

to the extent of their capacity, and to what extent they are meeting the demands of traffic, and whether the water carriers utilizing such waterways are interchanging traffic with the railroads; and to investigate any other matter that may tend to promote and encourage inland water transportation.

In 1924, Congress created the Inland Waterways Corporation to carry out the policies it had enunciated in the 1920 legislation.<sup>66</sup> This action was declared to be for the purpose of: <sup>67</sup>

carrying on the operations of the Government-owned inland, canal, and coastwise waterways system to the point where the system can be transferred to private operation to the best advantage of the Government \* \* \*

To date, such transfer has not been accomplished.

The Corporation operates boats and terminal facilities on the Mississippi, Warrior, Illinois, and Missouri Rivers.<sup>68</sup> Also, Congress directed that, when the improvement of any tributary or connecting waterway of the Mississippi River, not including the Ohio River, shall have been completed or advanced to the point where within two years thereafter a sufficient and dependable channel for safe operation of suitable barges and towboats will have been substantially completed; and when the Chief of Engineers shall certify that fact to the Secretary of Commerce, the latter shall cause a survey to be made for the purpose of ascertaining the amount of traffic, the terminal facilities, and the through routes and joint tariff arrangements with connecting carriers, that are or will within such years be probably available on such tributary or connecting waterway.<sup>69</sup> After completion of the survey, and a finding by the Secretary of Commerce that water transportation can success-

<sup>66</sup> Act of June 3, 1924, 43 Stat. 360, as amended, 49 U. S. C. 151 *et seq.*

<sup>67</sup> § 1, 43 Stat. 360, as amended, 49 U. S. C. 151.

<sup>68</sup> UNITED STATES GOVERNMENT ORGANIZATION MANUAL, 1950-1951, p. 253 (1950).

<sup>69</sup> § 3, 43 Stat. 361, 49 U. S. C. 153(b).

fully be operated in the public interest, the Secretary of Commerce may extend the service of the Corporation to such tributary or connecting waterway as soon as suitable facilities are available.<sup>70</sup>

Congress expressly declared its policy to continue the service of the Corporation until: (1) completion of navigable channels, as authorized by Congress, adequate for reasonably dependable and regular transportation service in the rivers where the Corporation operates; (2) provision of terminal facilities reasonably adequate for joint rail and water service; (3) publication and filing of such joint tariffs with rail carriers as to make available joint rail and water transportation upon fair terms to both rail and water carriers; and (4) private entities engage or are ready and willing to engage in common-carrier service.<sup>71</sup>

In providing for the sale or lease of the facilities of the Corporation after the foregoing conditions have been satisfied, Congress specified that they should not be sold or leased (1) to a carrier by rail or anyone connected with such carrier, or (2) to anyone not giving satisfactory assurance that the facilities will be continued in common-carrier service substantially like that rendered by the Corporation, or (3) until the same have been appraised and the fair value thereof ascertained by the Interstate Commerce Commission and reported to the President, and the sale or lease thereof has been approved by the President.<sup>72</sup>

The 1939 Reorganization Plan No. II transferred the Inland Waterways Corporation to the Department of Commerce where it functions under the supervision and direction of the Secretary.<sup>73</sup>

**STATISTICS.**—Congress has made provision respecting certain relevant statistical information. The collection of statistics on water-borne domestic commerce and their publication in Annual Reports of the Chief of Engineers is governed by vari-

<sup>70</sup> *Id.*

<sup>71</sup> § 3, 43 Stat. 361, as amended, 49 U. S. C. 153 (c).

<sup>72</sup> § 3, 43 Stat. 361, as amended, 49 U. S. C. 153 (d).

<sup>73</sup> Reorganization Plan No. 2, § 6, effective July 1, 1939, 53 Stat. 1431, 5 U. S. C. 133t note following.

ous laws enacted since 1866.<sup>74</sup> In 1891, Congress required that, with respect to vessels arriving at or departing from localities where navigation improvements are carried on, there be furnished a "comprehensive statement" of vessels, passengers, freight and tonnage.<sup>75</sup> This requirement was implemented in 1922 when the Secretary of the Army was authorized to specify the scope of such statements.<sup>76</sup>

In the collection of such statistics, Congress in 1912 required the Army Engineers to adopt a uniform system of classification for freight, and upon rivers and inland waterways to collate ton-mileage statistics as far as practicable.<sup>77</sup>

### Improvement of Navigable Waters

In the early decades of our national history, improvement of waterways was undertaken by states and private companies.<sup>78</sup> For example, construction of the Erie Canal by the State of New York was commenced in 1817 and completed in 1825.<sup>79</sup> We have already noted instances where the Federal Government aided and encouraged development by states and private companies.<sup>80</sup> Such instances included grants of public lands for specific projects and for river improvement generally, and federal purchase of stock in canal companies.

But the responsibilities which have been assumed by the Federal Government for the protection and promotion of commerce

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<sup>74</sup> Act of June 23, 1866, § 4, 14 Stat. 70, 74; Act of June 13, 1902, § 14, 32 Stat. 331, 376. Under the provisions of the Federal Reports Act of 1942, the Corps of Engineers is the sole federal agency to collect, compile and publish data on domestic water-borne commerce. Act of December 24, 1942, § 3, 56 Stat. 1078, 5 U. S. C. 139-139f; see RHB Form No. 1, Budget No. 49-R 268.2 and RHB Form No. 1b, Budget No. 49-R 302.1. A like function as to foreign commerce is similarly assigned to the Bureau of the Census. See Department of Commerce Form No. 7525V, Budget No. 41-R 397.2; Customs Form No. 7501, Budget No. 48-R 217.1.

<sup>75</sup> Act of February 21, 1891, § 1, 26 Stat. 766, 33 U. S. C. 554.

<sup>76</sup> Act of September 22, 1922, § 11, 42 Stat. 1038, 1043, 33 U. S. C. 555.

<sup>77</sup> Act of July 25, 1912, § 1, 37 Stat. 201, 223, 33 U. S. C. 553.

<sup>78</sup> See PUBLIC AIDS TO TRANSPORTATION, Federal Coordinator of Transportation, vol. III, p. 10 (1939).

<sup>79</sup> *Ibid.*

<sup>80</sup> See *supra*, pp. 75-76.

on inland waters were a logical and largely unavoidable consequence of our geography and system of government. The economic confusion in business relations during the period immediately prior to establishment of the Constitution brought the colonies within the shadow of commercial destruction.<sup>81</sup> One sequel, as already indicated, was the constitutional delegation to Congress of the exclusive power to regulate interstate commerce.<sup>82</sup> Another was the constitutional insurance against imposition by the states of oppressive tariffs and embargoes.<sup>83</sup> These developments, coupled with our westward growth, accentuated demands for federal navigation improvements.<sup>84</sup>

Even before the Supreme Court's historic opinion in *Gibbons v. Ogden*,<sup>85</sup> Congress in 1820 appropriated funds for a survey of certain tributaries to the Mississippi and of portions of the Ohio and Mississippi Rivers.<sup>86</sup> And in 1824 came congressional authorization for a survey of such roads and canals as the President might deem of national importance, together with an appropriation for removal of obstructions from the Mississippi and Ohio Rivers.<sup>87</sup> In the same year, President Monroe recommended a plan for connecting various parts of the country by a network of roads, canals, and improved rivers.<sup>88</sup>

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<sup>81</sup> 3 Channing, HISTORY OF THE UNITED STATES, ch. 15 (1912); Fiske, THE CRITICAL PERIOD OF AMERICAN HISTORY, ch. 4 (1888); Nevins, THE AMERICAN STATES DURING AND AFTER THE REVOLUTION, pp. 555-568 (1924); Warren, THE MAKING OF THE CONSTITUTION, pp. 85-88 (1928).

<sup>82</sup> See *supra*, pp. 8-29.

<sup>83</sup> "No State shall, without the Consent of the Congress, lay any Imposts or Duties on Imports or Exports, except what may be absolutely necessary for executing it's inspection Laws: and the net Produce of all Duties and Imposts, laid by any State on Imports or Exports, shall be for the Use of the Treasury of the United States; and all such Laws shall be subject to the Revision and Controul of the Congress." U. S. CONST., Art I, § 10, cl. 2.

<sup>84</sup> See *supra* n. 19, p. 9.

<sup>85</sup> 9 Wheat. 1 (U. S. 1824). See *supra*, pp. 9-10.

<sup>86</sup> Act of April 14, 1820, 3 Stat. 562, 563. The report on this work by the Board of Engineers was communicated to Congress in 1823 by President Monroe. 2 Richardson, MESSAGES AND PAPERS OF THE PRESIDENTS, 199 (1896); 2 AMERICAN STATE PAPERS: COMMERCE & NAVIGATION, pp. 740-746 (1834).

<sup>87</sup> Act of May 24, 1824, 4 Stat. 32.

<sup>88</sup> 2 AMERICAN STATE PAPERS: MILITARY AFFAIRS, pp. 698-701 (1824); 2 Richardson, *op. cit.*, *supra*, n. 86, at pp. 255, 257.

In 1828 and 1846, Congress made land grants to Alabama, Iowa, and Wisconsin to promote river improvement.<sup>89</sup> But no substantial improvements resulted, and the demand for federal undertaking of improvement of waterways continued.<sup>90</sup> In 1850, President Fillmore took the position that unless Congress directly undertook waterway improvements, they could not be accomplished at all.<sup>91</sup> In the latter part of the century Congress appropriated funds for improving or completing private developments, provided the owners relinquished their rights to charge tolls.<sup>92</sup>

Also, it authorized the acquisition of state and privately owned canals and navigation works by donation,<sup>93</sup> condemnation,<sup>94</sup> and by purchase.<sup>95</sup> In addition and despite an apparent hesitancy to undertake sole responsibility and despite rapid rail expansion, Congress by 1882 had appropriated over one hundred million dollars for rivers and harbors.<sup>96</sup>

In total, Congress has now enacted many hundreds of laws

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<sup>89</sup> Act of May 23, 1828, 4 Stat. 290, amended by Act of April 24, 1830, 4 Stat. 397; Act of February 12, 1831, 4 Stat. 441; Act of July 16, 1832, 4 Stat. 604; Act of June 23, 1836, 5 Stat. 57 (Alabama); Act of August 8, 1846, 9 Stat. 77 (Iowa); *id.*, p. 83 (Wisconsin). See Hibbard, *A HISTORY OF THE PUBLIC LAND POLICIES*, pp. 240-241 (1924).

<sup>90</sup> Sen. Doc. No. 137, 27th Cong., 3d sess. (1843). See also Sen. Doc. No. 72, 21st Cong., 2d sess. (1831).

<sup>91</sup> 5 Richardson, *MESSAGES AND PAPERS OF THE PRESIDENTS*, 90 (1896).

<sup>92</sup> Act of March 3, 1879, 20 Stat. 363, 371 (Aransas Pass and Bay, Texas); Act of August 2, 1882, 22 Stat. 191, 199 (Little Kanawha River); Act of July 5, 1884, 23 Stat. 133, 135 (Galveston Bay, Texas); Act of June 13, 1902, 32 Stat. 331, 349 (St. Lawrence River).

<sup>93</sup> Act of June 14, 1880, 21 Stat. 180, 189 (St. Marys Falls Canal, Michigan); Act of August 5, 1886, 24 Stat. 310, 324 (Muskingum River Improvements).

<sup>94</sup> Act of June 3, 1896, 29 Stat. 202, 217 (Monongahela River Improvements).

<sup>95</sup> Act of July 25, 1912, 37 Stat. 201, 206 (Chesapeake and Albemarle Canal); Act of August 8, 1917, 40 Stat. 250, 262 (Cape Cod Canal); Act of March 2, 1919, 40 Stat. 1275, 1277 (Chesapeake and Delaware Canal); Act of March 3, 1925, 43 Stat. 1186 (Lake Drummond or Dismal Swamp Canal).

<sup>96</sup> *APPROPRIATIONS AND EXPENDITURES FOR RIVERS AND HARBOES*, H. Exec. Doc. No. 64, 48 Cong., 1st sess., p. 285 (1884); Ambler, *A HISTORY OF TRANSPORTATION IN THE OHIO VALLEY*, pp. 185-209 (1932); Clowes, *SHIPWAYS TO THE SEA*, p. 31 (1929); *TRANSPORTATION IN THE MISSISSIPPI AND OHIO VALLEYS*, Corps of Engineers, U. S. Army, and Bureau of Operations, United States Shipping Board, pp. 170-172 (1929).

to improve and protect navigable waters in the interests of navigation.<sup>97</sup> With few exceptions, it has employed its commerce and spending powers in the enactment of these laws. And as we shall shortly see, their administration has been assigned largely to the Army Engineers. By June 30, 1949, total expenditures on improvement and maintenance of rivers and harbors had exceeded \$3,461,000,000.<sup>98</sup> Total expenditures during the fiscal year ending June 30, 1949, exceeded \$160,000,000, approximately 50% more than the total amount spent during all the years prior to 1882.<sup>99</sup> Additional amounts have been allocated to navigation at reclamation projects.<sup>100</sup>

CORPS OF ENGINEERS, U. S. ARMY.—From the beginning, federal responsibility for navigation improvement of rivers and harbors has been the duty of the Army Engineers almost exclusively.<sup>101</sup> In 1824, Congress authorized the President to cause surveys, plans, and estimates to be made of such "roads and canals as he may deem of national importance, in a commercial or military point of view, or necessary for the transportation of the public mail;" and to that end, to employ two or more skillful civil engineers and "officers of the corps of engineers."<sup>102</sup> This authority to employ civil engineers was

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<sup>97</sup> For the most part, the laws hereafter surveyed in this section appear in three published volumes of LAWS OF THE UNITED STATES, IMPROVEMENT OF RIVERS AND HARBORS, covering the years 1790 to 1939 and totalling 2620 pages; Volume 1 (H. Doc. No. 1491, 62d Cong., 3d sess., 1913) from 1790 to 1896; Volume 2 (H. Doc. No. 1491, 62d Cong., 3d sess., 1913) from 1897 to 1913; Volume 3 (H. Doc. No. 379, 76th Cong., 1st sess., 1939) from 1913 to 1939. An index to these laws is contained in a separate volume (H. Doc. No. 379, 76th Cong., 1st sess., 1939). Subsequent laws are now being compiled by the Army Engineers. See Act of June 30, 1948, § 106, 62 Stat. 1171, 1174.

<sup>98</sup> ANNUAL REPORT OF THE CHIEF OF ENGINEERS, U. S. ARMY, p. 23 (1949).

<sup>99</sup> *Id.* p. 20.

<sup>100</sup> See *infra*, p. 240.

<sup>101</sup> Hereafter, the Corps of Engineers, U. S. Army, will be referred to as the "Army Engineers."

For the participation of Mississippi River Commission, see *infra*, p. 98; the California Débris Commission, see *infra*, pp. 119-120; the International Joint Commission, see *infra*, pp. 121-122; the International Boundary and Water Commission, see *infra*, pp. 122-123; the Tennessee Valley Authority, see *infra*, pp. 484-486; the Bureau of Reclamation, see *infra*, p. 240.

<sup>102</sup> Act of April 30, 1824, 4 Stat. 22.

later repealed.<sup>103</sup> But the service of the Army Engineers continued without interruption.<sup>104</sup> From 1852 to 1892, congressional appropriations for specific projects provided that funds be expended under the superintendence of the Secretary of the Army, who assigned the work to the Army Engineers.<sup>105</sup> Like appropriations for specific projects between 1892 and 1922 provided that the moneys be expended under the direction of the Secretary and supervision of the Chief of Engineers.<sup>106</sup> From 1922 to the present time, each River and Harbor Act has authorized various projects and has provided that they shall be prosecuted under the direction of the Secretary and supervision of the Chief of Engineers.<sup>107</sup>

In addition to those periodic grants of authority, Congress provided generally in 1935 that investigations and improvements of rivers, harbors, and other waterways shall be under the jurisdiction of, and shall be prosecuted by, the Department of the Army under the direction of its Secretary and supervision of the Chief of Engineers.<sup>108</sup>

**PREPARING FOR PROJECTS.**—Congress has enacted many laws significantly affecting preparations for navigation improvements prosecuted by the Army Engineers.

*Examinations and Surveys.*—Since 1892, it has provided that no preliminary examination or survey for new work

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<sup>103</sup> Act of July 5, 1838, § 6, 5 Stat. 256, 257.

<sup>104</sup> SERVICE MONOGRAPHS OF THE UNITED STATES GOVERNMENT, No. 27, OFFICE OF THE CHIEF OF ENGINEERS, Institute for Government Research, p. 5 *et seq.* (1923).

<sup>105</sup> See, *e. g.*, Act of August 30, 1852, 10 Stat. 56; Par. 1, Regulations in Relation to River and Harbor Improvements, September 10, 1852, filed in DECISIONS, ORDERS AND REGULATIONS, WAR OFFICE, No. 3, from July 8, 1844, to —, National Archives, which divided the work between the Corps of Engineers and the then existing Corps of Topographical Engineers, both U. S. Army.

Hereafter in this Chapter, the designation, "the Secretary," will refer to the Secretary of the Army.

<sup>106</sup> See, *e. g.*, Act of July 13, 1892, § 1, 27 Stat. 88.

<sup>107</sup> See, *e. g.*, Act of September 22, 1922, 42 Stat. 1038.

<sup>108</sup> Act of August 30, 1935, § 1, 49 Stat. 1028, 33 U. S. C. 540.



shall be made unless authorized by law.<sup>109</sup> General congressional practice has long been to authorize examinations and surveys in omnibus "River and Harbor Acts," almost 100 of which have been enacted since the first in 1826.<sup>110</sup> If preliminary examination shows a proposed improvement not advisable, no further action may be taken unless directed by Congress; if favorable, the Secretary has discretion to cause a survey to be made and the cost and advisability reported to Congress.<sup>111</sup> After a regular or formal report on an examination or survey is submitted, no supplemental or additional report may be made unless authorized by law.<sup>112</sup>

In connection with the foregoing restrictions, however, note should be made of an important general authorization resulting in the so-called 308 Reports.<sup>113</sup> In 1925, Congress directed the Secretary, through the Army Engineers, and the Federal Power Commission jointly to prepare and submit an estimate of the cost of making examinations and surveys of those navigable streams and their tributaries where power development appears feasible and practicable, with a view to the formulation of general plans for improvement of navigation and the prosecution of such improvement in combination with efficient development of potential water power, control of floods,

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<sup>109</sup> Act of July 13, 1892, § 8, 27 Stat. 88, 116. All River and Harbor Acts regularly contain this provision. See, *e. g.*, Act of May 17, 1950, 64 Stat. 163, —. In addition, appropriation acts prohibit expenditure of appropriated funds for examinations and surveys not authorized by law. See, *e. g.*, Act of September 6, 1950, 64 Stat. 595, —. Whenever permission for construction of dams is granted or under consideration by Congress, such surveys and investigations of the affected streams may be made as are necessary to secure conformity with "rational plans" for improvement of the streams for navigation. Act of June 25, 1910, § 3, 36 Stat. 630, 668, 33 U. S. C. 546.

<sup>110</sup> See, *e. g.*, Act of May 20, 1826, 4 Stat. 175; Act of May 17, 1950, 64 Stat. 163, —.

<sup>111</sup> Act of March 4, 1913, 37 Stat. 801, 825-826, 33 U. S. C. 545.

<sup>112</sup> Act of September 22, 1922, § 12, 42 Stat. 1038, 1043. This limitation has been repeated in all subsequent River and Harbor Acts. See, *e. g.*, Act of May 17, 1950, 64 Stat. 163, —. Similar restrictions were included in earlier statutes. See, *e. g.*, Act of June 5, 1920, § 2, 41 Stat. 1009, 1010.

<sup>113</sup> This designation arises from the fact that cost estimates of the surveys were published in H. Doc. No. 308, 69th Cong., 1st sess. (1926).

and the needs of irrigation.<sup>114</sup> The 1927 River and Harbor Act authorized prosecution of these extensive surveys by the Army Engineers alone.<sup>115</sup> And in 1935, Congress directed that such surveys be supplemented by "such additional study or investigation as the Chief of Engineers finds necessary to take into account important changes in economic factors as they occur, and additional stream-flow records, or other factual data."<sup>116</sup> By June 30, 1949, these authorizations had resulted in surveys of 191 streams.<sup>117</sup> With approximately 97% of the task completed, reports on the remaining streams were then well advanced toward conclusion.<sup>118</sup>

Congress has stipulated a number of general requirements respecting the conduct of examinations and surveys and the composition of reports thereon. Thus, reports on preliminary examinations and surveys, containing plans and estimates, must include a statement as to the rate at which the work should be prosecuted; and in addition to full information regarding present and prospective commercial importance of the project and the probable benefit to commerce, each report must contain certain data respecting the existence of and need for private and public terminal and transfer facilities, the development and utilization of water power for industrial and commercial purposes, and other related subjects, provided that "consideration shall be given only to their bearing upon the improvement of navigation," to the possibility and desirability of their coordination with navigation improvements "to lessen the cost" of such improvements, and to their relation to the development and regulation of commerce.<sup>119</sup>

Another general requirement is that every report on a preliminary examination and survey concerning a proposed improvement of the entrance at the mouth of any river or inlet shall also contain information concerning the configuration of

<sup>114</sup> Act of March 3, 1925, § 3, 43 Stat. 1186, 1190. The Colorado River was excepted. *Id.*

<sup>115</sup> Act of January 21, 1927, § 1, 44 Stat. 1010, 1015.

<sup>116</sup> Act of August 30, 1935, § 6, 49 Stat. 1028, 1048.

<sup>117</sup> ANNUAL REPORT OF THE CHIEF OF ENGINEERS, U. S. ARMY, p. 2647 (1949).

<sup>118</sup> *Ibid.*

<sup>119</sup> Act of March 4, 1913, § 3, 37 Stat. 801, 825, 38 U. S. C. 545.

the shore line and the probable effect thereon likely to result from the improvement, having particular reference to "erosion and/or accretion" for a distance of not less than ten miles on either side of such entrance.<sup>120</sup>

Each survey report must also contain a statement of special or local benefits which will accrue to localities affected by the proposed improvement and a statement of general or national benefits, with recommendations as to any local cooperation which should be required on account of such special or local benefits.<sup>121</sup>

Likewise, every report submitting plans to Congress must specify the relationship between the proposed plans and plans, if any, submitted by the affected states; and if the use or control of waters which rise in whole or in part west of the ninety-seventh meridian is involved, plans submitted by the Secretary of the Interior.<sup>122</sup>

Similarly, any report on a proposal under which waters would be impounded, diverted, or otherwise controlled, must include the reports and recommendations of the Secretary of the Interior and of the state agency concerned with wildlife resources, based on investigations of the possible damage to wildlife resources and means for avoiding such damage.<sup>123</sup>

Possible use of dams as supports for highway bridges is another factor to be considered in preparation for projects. In 1946, Congress authorized the controlling federal agencies to design and construct dams so that they will constitute and serve as suitable and adequate foundations to support public highway bridges, provided that the highway department of the state where the dam is to be located and the United States Commissioner of Public Roads (1) certify that such bridge is economically desirable and needed as a link in the state or federal-aid highway system, (2) request such federal agency to design and construct the dam and bridge, and (3) agree to

<sup>120</sup> Act of August 30, 1935 § 5, 49 Stat. 1028, 1048, 33 U. S. C. 546a.

<sup>121</sup> Act of June 5, 1920, § 2, 41 Stat. 1009, 1010, 33 U. S. C. 547.

<sup>122</sup> Act of March 2, 1945, § 1, 59 Stat. 10. Also made applicable in all subsequent River and Harbor Acts. See also *infra*, pp. 96-97.

<sup>123</sup> Act of August 14, 1946, § 2, 60 Stat. 1080, 16 U. S. C. 662. See also *infra*, pp. 329-330.

reimburse such agency for additional cost incurred.<sup>124</sup> Also, such federal agency having jurisdiction over the dam must design and construct the bridge and determine that it will be structurally feasible and will not interfere with the proper functioning and operation of the dam.

In addition, the surveys of navigable streams shall include stream-flow measurements and other investigations of watersheds necessary for planning and proper consideration of all uses of the stream affecting navigation.<sup>125</sup>

*Other Data.*—A great variety of information is obviously necessary in connection with preparations for navigation improvements. Reference will later be made to certain basic data available to the Army Engineers and regularly assembled by other agencies, such as the Coast and Geodetic Survey, the Geological Survey, and the Weather Bureau.<sup>126</sup> Moreover, in addition to stipulating the inclusion of specified information in reports on examinations and surveys, already discussed, Congress has directed the Army Engineers to obtain other data. In 1871, it directed the Secretary to have water gauges established and daily observations made of the rise and fall of the Mississippi River and its tributaries.<sup>127</sup>

It should also be noted that Congress has declared that, in the preparation of projects, channel depths referred to shall be understood to signify the depth at mean low-water in tidal waters tributary to the Atlantic and Gulf Coasts, and at mean lower low-water in tidal waters tributary to the Pacific Coast, and at mean depth for a continuous period of 15 days of the lowest water in the navigation season of any year in rivers and nontidal channels.<sup>128</sup> Likewise, channel dimensions specified shall be understood to admit of such increase at the entrances, bends, sidings, and turning places as may be necessary to allow of the free movement of boats.<sup>129</sup>

<sup>124</sup> Act of July 29, 1946, § 1, 60 Stat. 709, 23 U. S. C. 64.

<sup>125</sup> Act of June 25, 1910, § 3, 36 Stat. 630, 668, 33 U. S. C. 546.

<sup>126</sup> See *infra*, pp. 342-348.

<sup>127</sup> R. S. § 5252, from Res. of February 21, 1871, No. 40, 16 Stat. 598, as amended, 33 U. S. C. 4.

<sup>128</sup> Act of March 4, 1915, § 5, 38 Stat. 1049, 1053, 33 U. S. C. 562.

<sup>129</sup> *Id.*

*Cooperation With Other Agencies.*—In a 1944 declaration of policy, Congress stated that: <sup>130</sup>

In connection with the exercise of jurisdiction over the rivers of the Nation through the construction of works of improvement, for navigation or flood control, as herein authorized, it is hereby declared to be the policy of the Congress to recognize the interests and rights of the States in determining the development of the watersheds within their borders and likewise their interests and rights in water utilization and control, as herein authorized to preserve and protect to the fullest possible extent established and potential uses, for all purposes, of the waters of the Nation's rivers; to facilitate the consideration of projects on a basis of comprehensive and coordinated development; and to limit the authorization and construction of navigation works to those in which a substantial benefit to navigation will be realized therefrom and which can be operated consistently with appropriate and economic use of the waters of such rivers by other users.

To implement that policy, the Act requires that investigations forming the basis of plans for navigation improvements be so conducted as to give the "affected" states the information developed, with an opportunity for consultation, and, to the extent deemed practicable by the Chief of Engineers, opportunity to cooperate in the investigations. The Chief of Engineers is to maintain relations with the governor of the "affected" state or such official or agency as the governor may designate. "Affected" states include (1) those in which improvements are proposed to be located, (2) those in whole or in part within the drainage basin involved and situated "in a state" lying wholly or in part "west of the ninety-eighth meridian," and (3) such of those east of that meridian as in the judgment of the Chief of Engineers will be substantially affected.

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<sup>130</sup> Act of December 22, 1944, § 1, 58 Stat. 887, 888. This is the 1944 Flood Control Act. The same statement was repeated in the 1945 River and Harbor Act. Act of March 2, 1945, 59 Stat. 10. It has since been made applicable in each River and Harbor and Flood Control Act.

Plans, proposals, reports, and related investigations shall be made to the end of facilitating the coordination of plans for the construction and operation of proposed works with other plans involving waters which would be used or controlled by such proposed works.

The Act also prescribes similar cooperation with the Secretary of the Interior where the investigations concern waters "arising west of the ninety-seventh meridian."

A copy of the report of the Chief of Engineers must be transmitted to each "affected" state in every case and also to the Secretary of the Interior in the case of plans and proposals concerning the use or control of waters "which rise in whole or in part west of the ninety-seventh meridian." Ninety days are allowed for submission of the views and recommendations of the affected states and the Secretary of the Interior. Thereafter, the proposed report, together with the submitted views and recommendations, are to be transmitted to Congress by the Secretary of the Army with his comments and recommendations.

Another example of cooperation prescribed by statute concerns wildlife resources. With a view to preventing loss of or damage to such resources, consultation with the Fish and Wildlife Service of the Department of the Interior and with the state agency concerned with wildlife resources is required in every case where waters are authorized to be impounded, diverted, or otherwise controlled.<sup>131</sup>

Apart from any requirement of statute, the Department of the Army participates with the Departments of Agriculture, Commerce, and the Interior, the Federal Power Commission, and the Federal Security Agency in the operations of the Federal Inter-Agency River Basin Committee.<sup>132</sup> More will be said later about this voluntary arrangement which seeks agency cooperation in preparation of reports on multiple-purpose projects and the correlation of results.<sup>133</sup>

<sup>131</sup> Act of August 14, 1946, § 2, 60 Stat. 1080, 16 U. S. C. 662. See *infra*, pp. 329-330.

<sup>132</sup> See *infra*, n. 198, p. 432.

<sup>133</sup> See *infra*, pp. 431-433.

*Mississippi River Commission.*—Because its statutory responsibilities relate primarily to the preparation of projects in specified areas, it is appropriate to consider here the Mississippi River Commission.<sup>134</sup> In creating the Commission in 1879, Congress gave it the duty of making certain surveys, examinations, and investigations.<sup>135</sup> It also has the duty to take into consideration and “mature” such plans and estimates “as will correct, permanently locate, and deepen the channel and protect the banks of the Mississippi River; improve and give safety and ease to the navigation thereof; prevent destructive floods; promote and facilitate commerce, trade, and the postal service.”<sup>136</sup>

With qualifications, the Commission’s jurisdiction was later extended to a part of the Arkansas River;<sup>137</sup> the harbor at Vicksburg, Mississippi, and a part of the Ohio River;<sup>138</sup> and to the tributaries and outlets of the Mississippi River between Cairo, Illinois, and the Head of the Passes.<sup>139</sup> Moreover, a 1917 statute authorizes expenditure of funds for certain improvements in the case of watercourses connected with the Mississippi River to such extent as might be necessary to exclude floodwaters from the upper limits of any delta basin, together with a part of the Ohio River.<sup>140</sup>

<sup>134</sup> In other respects, projects planned by the Commission today move forward as do other projects under the Chief of Engineers. See H. Doc. No. 90, 70th Cong., 1st sess., pp. 33–34 (1927); Act of July 13, 1892, 27 Stat. 88; Act of May 15, 1928, 45 Stat. 534; ANNUAL REPORT OF THE CHIEF OF ENGINEERS, U. S. ARMY, pp. 2671–2714 (1949). For a brief history of a somewhat similar but now nonexistent agency, the Missouri River Commission, see INDEX TO THE REPORTS OF THE CHIEF OF ENGINEERS, U. S. ARMY, 1866–1912, vol. 1, p. 1040.

<sup>135</sup> Act of June 28, 1879, 21 Stat. 37, as amended, 33 U. S. C. 647. By and with the advice and consent of the Senate, the President appoints the seven Commissioners: three from the Army Engineers, one of whom the President designates as president of the Commission; one from the Coast and Geodetic Survey; and three from civil life, two of whom must be civil engineers. § 2, 21 Stat. 37, 33 U. S. C. 642.

<sup>136</sup> § 4, 21 Stat. 37, 38, as amended, 33 U. S. C. 647.

<sup>137</sup> Act of July 27, 1916, § 1, 39 Stat. 391, 402, 33 U. S. C. 648.

<sup>138</sup> Act of July 27, 1916, § 1, 39 Stat. 391, 402, 33 U. S. C. 649.

<sup>139</sup> Act of September 22, 1922, § 13, 42 Stat. 1038, 1047, 33 U. S. C. 651.

<sup>140</sup> Act of March 1, 1917, § 1, 39 Stat. 948. Authorization for the use of certain other funds was provided by the Act of July 27, 1916, § 1, 39 Stat. 391, 402, 33 U. S. C. 650.

*Board of Engineers for Rivers and Harbors.*—In connection with preparations for navigation improvements, an important function is performed by the Board of Engineers for Rivers and Harbors, the creation of which in the Office of the Chief of Engineers was authorized by Congress in 1902.<sup>141</sup> All reports on examinations and surveys and all projects or changes in projects for works of improvement are referred to the Board, consisting of seven engineer officers, for its consideration and recommendation.<sup>142</sup> One of the purposes in providing for the Board was to insure greater uniformity in recommendations and reports.<sup>143</sup> The Board submits to the Chief of Engineers its recommendations on the commencing or continuance of improvements on which reports are required.

In considering such works and projects, the Board is required to have in view the amount and character of commerce existing or reasonably prospective which will be benefited by the improvement; the relation of the ultimate cost, both as to construction and maintenance, to the public commercial interests involved; the public necessity for the work; and the propriety of its construction, continuance, or maintenance at the expense of the United States.<sup>144</sup> "Commerce" is defined to include the use of waterways by "seasonal passenger craft, yachts, house

<sup>141</sup> Act of June 13, 1902, § 3, 32 Stat. 331, 372, as amended, 33 U. S. C. 541.

<sup>142</sup> Originally composed of five engineer officers, the Board's membership was enlarged to seven by Congress in 1913 with a specification that a majority shall be of rank not less than lieutenant colonel. Act of March 4, 1913, § 4, 37 Stat. 801, 826, 33 U. S. C. 541.

<sup>143</sup> H. Rep. No. 795, 57th Cong., 1st sess., p. 3 (1902). During debate in the House on the 1902 proposal, the Chairman of the Committee on Rivers and Harbors, Representative Burton, stated that, "It is true that to an extent we can decide upon these reports and recognize the different standards adopted, but it is very desirable that a uniform standard should be adopted by the Executive Department, and that a board of engineers, five in number, familiar with all the works in the country, should review them before they are sent to Congress." 35 CONG. REC. 2913.

The Chief of Engineers has stated that "The review is for the purpose of determining the economic and engineering justification of the projects reported upon." ANNUAL REPORT OF THE CHIEF OF ENGINEERS, U. S. ARMY, p. 2649 (1949).

<sup>144</sup> Act of June 13, 1902, § 3, 32 Stat. 331, 372, 33 U. S. C. 541.



boats, fishing boats, motor boats, and other similar water craft, whether or not operated for hire.”<sup>145</sup>

On request of the Committee on Public Works either of the Senate or of the House, the Board is required by statute to examine and review the report on any examination or survey made pursuant to law, and report thereon as in other cases.<sup>146</sup> But the law expressly states that the Board may not extend the scope of the project contemplated in the original report upon which its examination and review was requested, or in the provision of law authorizing the original examination or survey.<sup>147</sup> The word “scope” is not defined in the Act.

**AUTHORIZATION OF PROJECTS.**—Apparently to negate any inference that authorization of an examination or survey constitutes a project authorization, Congress in providing for such examinations and surveys has for many years stipulated that “the Government shall not be deemed to have entered upon any project” until it shall have been adopted by law.<sup>148</sup> General congressional practice for about one hundred years has been to authorize the prosecution of projects in omnibus “River and Harbor Acts,” just as in the case of examinations and surveys.<sup>149</sup>

*General Limitations.*—Certain limitations have been imposed in connection with the submission of reports and the authorization of projects under the jurisdiction of the Army Engineers. Congress has provided since 1892 that no project or estimate for new work shall be made unless authorized by law, just as in the case of examinations and surveys.<sup>150</sup> With respect to the latter, beginning in 1922, Congress has included in each River and Harbor Act a prohibition against submission of supplemental or additional reports or estimates after sub-

<sup>145</sup> Act of February 10, 1932, 47 Stat. 42, 33 U. S. C. 541.

<sup>146</sup> Act of March 4, 1913, § 4, 37 Stat. 801, 826, 33 U. S. C. 542.

<sup>147</sup> *Id.*

<sup>148</sup> See, *e. g.*, Act of July 3, 1930, § 2, 46 Stat. 918, 933. Earlier acts contained a like restriction contingent upon appropriation of funds for the project. See, *e. g.*, Act of January 21, 1927, § 4, 44 Stat. 1010, 1016.

<sup>149</sup> See *supra*, n. 110, p. 92.

<sup>150</sup> Act of July 13, 1892, § 8, 27 Stat. 88, 116; Act of May 17, 1950, 64 Stat. 163, —.

mission of regular or formal reports on any project or work, unless authorized by law.<sup>151</sup>

*Continuing Authorizations.*—The apparent restrictive effect of these provisions is, however, subject to certain qualifications arising from legislation in the nature of continuing authorizations. For example, in connection with a general grant of authority for repair of navigation works, Congress provided that, whenever “entire reconstruction” of the work is essential to its efficient and economical operation and maintenance, certain “modifications in plan and location” may be made by the Army Engineers where necessary to provide adequate facilities for existing navigation.<sup>152</sup> Also, reference has been made to another such general authorization, the grant of certain authority to construct bridges on dams.<sup>153</sup> In addition, Congress has enacted a number of statutes permitting some discretion in the use of funds for specified types of work. All constitute authorizations for projects, and excepting the first, all are continuing in nature. Each deviates from the general legislative practice of approving work on a project-by-project basis.

*Continuing Authorizations—Harbor Channels.*—Each act appropriating funds for the maintenance and improvement of river and harbor works since 1936 has contained a provision empowering the Secretary, in his discretion and on recommendation of the Chief of Engineers based on recommendation by the River and Harbor Board in review of reports authorized by law, to expend sums necessary “for the maintenance of harbor channels provided by a State, municipality, or other public agency, outside of harbor lines and serving essential needs of general commerce and navigation.”<sup>154</sup>

*Continuing Authorizations—Snag Removal.*—Similarly, a general authorization enacted in 1945 permits the Secretary to allot not to exceed \$300,000 from appropriations made for any one fiscal year for improvement of rivers and harbors, “for removing accumulated snags and other débris, and for protecting, clearing, and straightening channels in navigable

<sup>151</sup> Act of September 22, 1922, § 12, 42 Stat. 1038, 1043.

<sup>152</sup> Act of July 5, 1884, § 4, 23 Stat. 133, 147, as amended, 33 U. S. C. 5.

<sup>153</sup> See *supra*, pp. 94-95.

<sup>154</sup> Act of May 15, 1936, § 1, 49 Stat. 1278, 1307.

harbors and navigable streams and tributaries thereof, when in the opinion of the Chief of Engineers such work is advisable in the interests of navigation or flood control.”<sup>155</sup>

*Continuing Authorizations—Drift Removal.*—Another instance is the authorization for the Secretary of the Army to make direct allotments from appropriations for maintenance and improvement of existing river and harbor works or other available appropriations, “for the collection and removal of drift” in New York Harbor and its tributaries;<sup>156</sup> Baltimore Harbor and tributaries;<sup>157</sup> and Hampton Roads and harbors of Norfolk and Newport News, and their tributaries.<sup>158</sup>

*Continuing Authorizations—Highway, Railway, and Utility Repair.*—Still another example is the 1946 authorization for

<sup>155</sup> Act of March 2, 1945, § 3, 59 Stat. 10, 23, 33 U. S. C. 603a. This statute repealed a 1912 authorization giving the Chief of Engineers discretionary authority, after approval by the Secretary of the Army, to “make preliminary examinations and minor surveys and to remove snags and other temporary or readily removable obstructions from tributaries of waterways already under Federal improvement or in general use by navigation, to be paid from the appropriations for the adjoining waterways,” the cost in a single year not to exceed \$500 per tributary. Act of July 25, 1912, § 1, 37 Stat. 201, 222. The limit per tributary was increased in 1930 to \$1,000. Act of July 3, 1930, § 3, 46 Stat. 918, 946. In 1940, the limit was raised to \$3,000. Act of October 17, 1940, § 3, 54, Stat. 1198, 1200.

Other general authorizations for specified work in connection with removal of snags and other obstructions, providing some discretion in the use of funds, include: Act of August 11, 1888, §§ 1, 7, 25 Stat. 400, 421, 424, as amended by Act of March 3, 1909, § 3, 35 Stat. 815, 817, 33 U. S. C. 604 (Mississippi and other named Rivers); Act of August 11, 1888, §§ 1, 7, 25 Stat. 400, 420, 421, 424, as amended by Act of March 2, 1907, § 1, 34 Stat. 1073, 1102, and Act of March 3, 1909, § 3, 35 Stat. 815, 816, 33 U. S. C. 605 (Upper Mississippi and other named Rivers); Act of September 19, 1890, § 13, 26 Stat. 426, 455, as amended by Act of June 3, 1896, § 3, 29 Stat. 202, 234, 33 U. S. C. 606 (Ohio River). Cf. Act of August 11, 1888, § 1, 25 Stat. 400, 420, 33 U. S. C. 601 (authorizing making gaugings, Mississippi River); and Act of August 11, 1888, § 1, 25 Stat. 400, 422, as amended by Act of June 6, 1900, § 3, 31 Stat. 578, 584, and Act of June 13, 1902, § 1, 32 Stat. 331, 340, 33 U. S. C. 602 (authorizing maintenance of South Pass of Mississippi River and examinations and surveys thereof).

<sup>156</sup> Act of July 3, 1930, § 6, 46 Stat. 918, 947, 33 U. S. C. 607a. Cf. Act of August 8, 1917, § 1, 40 Stat. 250, 252, 33 U. S. C. 607.

<sup>157</sup> Act of June 30, 1948, § 102, 62 Stat. 1171, 1173, 33 U. S. C. 572 (Supp. III).

<sup>158</sup> Act of May 17, 1950, 64 Stat. 163, —.

the Chief of Engineers to use funds for the "repair, relocation, restoration, or protection" of a highway, railway, or utility when it has been or is being damaged or destroyed by reason of the operation of any dam or reservoir project under the Army's control.<sup>159</sup> For this purpose, he may utilize funds available for the construction, maintenance, or operation of the project involved.<sup>160</sup>

*Continuing Authorizations—Fishways and Future Development of Power.*—Two additional general enactments merit notice here. Both constitute continuing project authorizations, and both involve certain discretion in the use of funds. First, Congress in 1888 empowered the Secretary, in his discretion, to provide "practical and sufficient fishways" whenever improvements are found to operate as obstructions to the passage of fish.<sup>161</sup> Second, in order to make possible the economical future development of water power, Congress in 1912 delegated discretionary authority to the Secretary, upon recommendation of the Chief of Engineers, to provide in the permanent parts of any authorized navigation dam "such foundations, sluices, and other works, as may be considered desirable for the future development of its water power."<sup>162</sup>

<sup>159</sup> Act of July 24, 1946, § 9, 60 Stat. 644, 643, 33 U. S. C. 701q.

<sup>160</sup> *Id.* Specifically excluded from such protection are highways, railways, and utilities previously provided for by the Department of the Army, unless the Chief of Engineers determines that the actual damage exceeds that for which provision had previously been made. In connection with the purpose of the protection provision and the exclusion, it should be noted that the House Committee reporting the legislation indicated that, if owners or operators were assured compensation for damage resulting from extraordinary situations, there would no longer be necessity for their inclusion of "large contingency items covering all possible damages" in their estimates when negotiating a settlement at the time of construction of the project. H. Rep. No. 2165, 79th Cong., 2d sess., p. 8 (1946).

<sup>161</sup> Act of August 11, 1888, § 11, 25 Stat. 400, 425, 33 U. S. C. 608. See also *infra*, pp. 329-330.

<sup>162</sup> Act of July 25, 1912, § 12, 37 Stat. 201, 233, 33 U. S. C. 609. The 1945 and 1946 River and Harbor Acts provide that penstocks for future development of power shall be installed in any dam therein authorized when approved by the Secretary of the Army upon the recommendation of the Chief of Engineers and of the Federal Power Commission. Act of March 2, 1945, § 2, 59 Stat. 10, 12; Act of July 24, 1946, § 1, 60 Stat. 634. See also *infra*, n. 199, p. 291.

*Continuing Authorizations—Lakes Survey.*—The surveying and charting of the “Northern and Northwestern lakes” is accomplished as a project under unique authorizations of a continuing nature. Since 1841, the Department of the Army has made surveys of the Great Lakes under legislation appropriating funds for that purpose, ascertaining and charting depths in all significant directions to a plane 30 feet below the adopted low-water datum of the open lakes and 25 feet below the corresponding datum in the channels of the connecting rivers.<sup>163</sup> The scope of this continuing lake survey was extended in 1911 to include lakes and other navigable waters of the New York State canals;<sup>164</sup> in 1913, to include Lake Champlain;<sup>165</sup> and in 1914, to include the boundary waters between the Lake of the Woods and Lake Superior.<sup>166</sup>

*Allocation to Navigation at Reclamation Projects.*—Under the 1939 Reclamation Project Act, a portion of the total estimated construction cost of a reclamation project may be allocated by the Secretary of the Interior to navigation on a non-reimbursable basis.<sup>167</sup> And the 1939 Act permits automatic authorization of a reclamation project upon fulfillment of prescribed conditions, including the express amendment in the 1944 Flood Control Act.<sup>168</sup>

*Special Projects.*—Particular note should be made of three important project authorizations which are exceptions to the general legislative practice of authorizing works in omnibus River and Harbor Acts. All provided for works of improvement for navigation and additional purposes. Earliest was the authorization in the 1916 National Defense Act for the construction and operation by the Army Engineers of the Wilson Dam on the Tennessee River, later transferred to TVA.<sup>169</sup> In 1937, Congress authorized the Army Engineers to

<sup>163</sup> Act of March 3, 1841, § 1, 5 Stat. 421, 431; and, *e. g.*, Act of October 13, 1949, § 1, 63 Stat. 845, —.

<sup>164</sup> Act of March 4, 1911, § 1, 36 Stat. 1363, 1407.

<sup>165</sup> Act of June 23, 1913, § 1, 38 Stat. 4, 38.

<sup>166</sup> Act of August 1, 1914, § 1, 38 Stat. 609, 637.

<sup>167</sup> Act of August 4, 1939, § 9(a), 53 Stat. 1187, 1193, 43 U. S. C. 485h(a).

<sup>168</sup> Act of December 22, 1944, § 1(c), 58 Stat. 887, 889.

<sup>169</sup> Act of June 3, 1916, § 124, 39 Stat. 166, 215, 50 U. S. C. 79. See *supra*, pp. 54–55.

complete, maintain, and operate the Bonneville Dam and appurtenant works in the Columbia River, which had been initiated under earlier legislation.<sup>170</sup> A similar authorization was enacted in 1938 for the Fort Peck Dam and appurtenant works in the Missouri River.<sup>171</sup>

*Restrictions on Legislative Consideration.*—In addition to limitations upon the Army Engineers, discussed above, Congress has prescribed certain restrictions for itself. Thus, in 1922 it prohibited committee consideration of any project with a view to its adoption, except with a view to a survey, if five years have elapsed since submission of a survey report on such project.<sup>172</sup> A further effort to strengthen procedure appeared in 1946 when Congress declared its policy that no project or “any modification not authorized” shall be authorized by Congress unless a report has been previously submitted in conformity with law.<sup>173</sup>

FUNDS.—Present congressional practice is to appropriate annually lump sums “for the preservation and maintenance of existing river and harbor works, and for the prosecution of such projects heretofore authorized as may be most desirable in the interests of commerce and navigation.”<sup>174</sup>

In addition to such appropriations, there is statutory authority under which funds are otherwise made available for navigation improvements. Thus, some projects adopted by Congress require the local interests especially benefited to contribute cash, lands, or work for the construction of the

<sup>170</sup> Act of August 30, 1935, § 1, 49 Stat. 1028, 1038; Act of August 20, 1937, 50 Stat. 731, as amended, 16 U. S. C. 832 *et seq.*

<sup>171</sup> Act of May 18, 1938, 52 Stat. 403, as amended, 16 U. S. C. 833 *et seq.*

<sup>172</sup> Act of September 22, 1922, § 9, 42 Stat. 1038, 1043, 33 U. S. C. 568.

<sup>173</sup> Act of July 24, 1946, § 2, 60 Stat. 641, 33 U. S. C. 701o. The phrasing “any modification not authorized” apparently reflects a purpose not “to interfere with discretionary authority to modify projects as conferred on the Secretary of War and the Chief of Engineers.” Sen. Rep. No. 1624, 79th Cong., 2d sess., p. 1 (1946).

<sup>174</sup> Act of October 13, 1949, 63 Stat. 845, —. Regular use of the quoted language and the practice of making annual lump-sum appropriations began in 1920. Act of June 5, 1920, 41 Stat. 1009. Prior to 1920, Congress generally appropriated funds for each specific project. See, *e. g.*, Act of March 2, 1919, 40 Stat. 1275.

project.<sup>175</sup> The Secretary is empowered to receive cash contributions from private parties to be expended in connection with federal funds appropriated for any authorized project whenever such work may be considered by the Chief of Engineers as advantageous to the interests of navigation.<sup>176</sup> If local contributions made in accordance with specific requirement or under general authority exceed the cost of the work contemplated and chargeable to such contribution, the excess may be returned unless the provision of law enabling such contribution requires retention of the excess.<sup>177</sup> Moreover, the Secretary may receive and expend funds advanced by local interests for the "immediate prosecution" of a project; with specified exceptions, he is directed to repay such advances without interest from later appropriations.<sup>178</sup>

Congress has also prescribed certain generally applicable restrictions on the use of funds. For example, it specified in 1919 that no funds appropriated for works of river and harbor improvement "shall be used to pay for any work done by private contract if the contract price is more than 25 per centum in excess of the estimated cost of doing the work by Government plant."<sup>179</sup> Another restriction appears in an 1892 statute providing that no money appropriated for the improvement of rivers and harbors shall be expended "for dredging inside of harbor lines duly established."<sup>180</sup> Nor may funds authorized

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<sup>175</sup> See, *e. g.*, Act of March 2, 1945, § 2, 59 Stat. 10, 13, where local interests were required to contribute 50% of the first cost of improvement of Jones Inlet, New York, which is estimated to be \$2,420,000 and to furnish necessary lands, easements, and rights-of-way. See ANNUAL REPORT OF THE CHIEF OF ENGINEERS, U. S. ARMY, pp. 232-233 (1949).

<sup>176</sup> Act of March 4, 1915, § 4, 38 Stat. 1049, 1053, 33 U. S. C. 560.

<sup>177</sup> *Id.*

<sup>178</sup> Act of March 3, 1925, § 11, 43 Stat. 1186, 1197, 33 U. S. C. 561.

<sup>179</sup> Act of March 2, 1919 § 8, 40 Stat. 1275, 1290, 33 U. S. C. 624. The Act also required that, "in estimating the cost of doing the work by Government plant, including the cost of labor and materials, there shall also be taken into account proper charges for depreciation of plant and all supervising and overhead expenses and interest on the capital invested in the Government plant, but the rate of interest shall not exceed the maximum prevailing rate being paid by the United States on current issues of bonds or other evidences of indebtedness." *Id.*

<sup>180</sup> Act of July 13, 1892, § 5, 27 Stat. 88, 111.

to be expended for acquirement of dredges be expended for their purchase from private contractors when they can be manufactured at lesser cost at any navy yard or other Government-owned factory.<sup>181</sup>

On the other hand, certain laws have been so framed as to allow some discretion in the use of funds to undertake specified types of work, constituting project authorizations. These we have already mentioned in the foregoing discussion of "Authorization of Projects."<sup>182</sup>

Also important in connection with funds is an 1899 statute requiring that the Annual Report of the Chief of Engineers specify any deterioration occurring in connection with works of river and harbor improvements, together with an estimate of the cost of rebuilding, repairing, or removing them, including also recommendations for "the discontinuance of appropriations for any river and harbor work" deemed "unworthy of further improvement."<sup>183</sup>

PROSECUTION OF PROJECTS.—Any project may be prosecuted "by direct appropriations, by continuing contracts, or by both."<sup>184</sup> Excepting surveys, estimates, and gaugings, Congress has provided that navigation improvements may be prosecuted "by contract or otherwise, as may be most economical and advantageous to the Government."<sup>185</sup> This authorization expressly extends to works authorized to be prosecuted or completed under contract; and in cases providing for construction or use of government dredging plant, the Secretary has discretion to contract for the work "if reasonable prices can be obtained."<sup>186</sup> Where works are done by contract, however, such contract must be made after "sufficient public advertisement for proposals" and "with the lowest responsible bidders," the Secretary having discretion to specify the manner and form

<sup>181</sup> Act of September 22, 1922, § 5, 42 Stat. 1038, 1042, 33 U. S. C. 630.

<sup>182</sup> See *supra*, pp. 100-105.

<sup>183</sup> Act of March 3, 1899, § 7, 30 Stat. 1121, 1150, 33 U. S. C. 549.

<sup>184</sup> Act of September 22, 1922, § 10, 42 Stat. 1038, 1043, 33 U. S. C. 621.

<sup>185</sup> Act of August 11, 1888, § 3, 25 Stat. 400, 423, as amended, 33 U. S. C. 622.

<sup>186</sup> *Id.*



of advertisements, securities to accompany bids, and conditions for faithful prosecution and completion of the work.<sup>187</sup>

Reference has already been made to the statutory prohibition against use of funds to pay for private contract work where the contract price is more than 25% in excess of the estimated cost of doing the work by government plant,<sup>188</sup> to the prohibition against expenditure for dredging inside of harbor lines,<sup>189</sup> and to the limitation on the expenditure for purchase of dredges.<sup>190</sup> In addition, a 1907 statute gives the Secretary discretionary authority to hire dredging plant in the manner then customary,<sup>191</sup> or on the basis of an equitable reimbursement for deterioration of plant when in use by the Government and a reasonable percentage of the total cost of the work.<sup>192</sup>

A number of specific requirements have also been prescribed in connection with the acquisition of land and materials. For example, in addition to authority to condemn, the Secretary is expressly empowered to purchase at an owner-fixed price which he deems reasonable, and to accept donations of lands or materials.<sup>193</sup> In certain circumstances, immediate possession of the property may be taken upon initiation of condemnation proceedings.<sup>194</sup>

Furthermore, where private property is taken in connection with navigation improvements, and in condemnation proceedings to acquire lands or easements where a part only of a parcel,

<sup>187</sup> § 3, 25 Stat. 423, 33 U. S. C. 623.

<sup>188</sup> See *supra*, p. 106.

<sup>189</sup> See *supra*, p. 106.

<sup>190</sup> See *supra*, pp. 106-107.

<sup>191</sup> The manner "customary" at that time may refer to an hourly contract rate. See, *e. g.*, ANNUAL REPORT OF THE CHIEF OF ENGINEERS, U. S. ARMY, p. 2009 (1907).

<sup>192</sup> Act of March 2, 1907, § 5, 34 Stat. 1073, 1119, 33 U. S. C. 629.

<sup>193</sup> Act of April 24, 1888, 25 Stat. 94, 33 U. S. C. 591. In specified circumstances, the Secretary of the Army may initiate condemnation proceedings in aid of a "person, company, or corporation, municipal or private" desiring to convey lands to the United States for an authorized project. Act of May 16, 1906, 34 Stat. 196, as amended, 33 U. S. C. 592. So also in aid of a "State, or any reclamation, flood control or drainage district, or other public agency created by any State." Act of August 8, 1917, § 9, 40 Stat. 250, 267, 33 U. S. C. 593.

<sup>194</sup> Act of July 18, 1918, § 5, 40 Stat. 904, 911, 33 U. S. C. 594.

lot, or tract of land is to be taken, the tribunal awarding just compensation or assessing damages "shall take into consideration by way of reducing the amount of compensation or damages any special and direct benefits to the remainder arising from the improvement."<sup>195</sup>

In connection with construction work, mention should also be made of a recent development. In 1946, Congress authorized the Chief of Engineers to provide school facilities for the education of dependents of persons engaged on construction of specifically named projects.<sup>196</sup> He was also authorized to enter into cooperative arrangements with local agencies for operation of such facilities, for expansion of local facilities, and for contributions to cover increased costs to local agencies for educational services required by the Government.<sup>197</sup>

OPERATION OF PROJECTS.—Certain aspects of the operation of navigation projects are governed by various laws enacted by Congress.

Of particular importance in this respect is the Act of December 22, 1944, making provision for certain multiple uses.<sup>198</sup> Under it, the Secretary has the duty of prescribing regulations for the use of storage allocated to navigation or flood control at all reservoir projects constructed wholly or in part with federal funds provided on the basis of such purposes; operation of any such project must accord with those regulations.<sup>199</sup>

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<sup>195</sup> Act of July 18, 1918, § 6, 40 Stat. 904, 911, 33 U. S. C. 595. For a discussion of certain relevant constitutional considerations, see *supra*, pp. 25-29.

<sup>196</sup> Act of July 24, 1946, § 6, 60 Stat. 634, 637, as amended by Act of May 17, 1950, 64 Stat. 163, —. Congress has recently enacted two statutes generally concerning the construction of school facilities in federally affected areas. Act of September 23, 1950, 64 Stat. 967, and Act of September 30, 1950, 64 Stat. 1100.

<sup>197</sup> *Id.* See also *infra*, p. 529.

<sup>198</sup> 58 Stat. 887.

<sup>199</sup> § 7, 58 Stat. 890, 33 U. S. C. 709. With a specified qualification concerning flood control, this provision does not apply to TVA. In this connection, see ANNUAL REPORT OF THE CHIEF OF ENGINEERS, U. S. ARMY, p. 1663 (1949). Also, in 1939, Congress empowered the Secretary of the Interior to make proper allocations to navigation and flood control of the estimated cost of new reclamation projects, directing him to operate the project for the purposes of navigation and flood control to the extent justified by such allocations. Act of August 4, 1939, § 9(b), 53 Stat. 1187, 1194, 43 U. S. C.

Likewise, the Act requires that electric power and energy generated at reservoir projects under the control of the Department of the Army and in the opinion of its Secretary not required in their operation, shall be delivered to the Secretary of the Interior for transmission and disposition.<sup>200</sup> With respect to such projects, the Secretary of the Army is authorized by the Act to make contracts with states, municipalities, private concerns, or individuals, at such prices and on such terms as he may deem reasonable for domestic and industrial uses for available surplus water, but no such contracts may adversely affect existing lawful uses of such water.<sup>201</sup>

The 1944 Act also provides for irrigation and recreation uses. Whenever the Secretary of the Army determines, upon recommendation by the Secretary of the Interior, that any project operated under direction of the Secretary of the Army may be utilized for irrigation purposes, the Secretary of the Interior is authorized to construct, operate, and maintain, under Reclamation Law, such additional works in connection therewith as he may deem necessary for irrigation purposes.<sup>202</sup>

The Act also authorizes the Army Engineers to construct, maintain, and operate public park and recreational facilities in reservoir areas under the control of the Department of the Army, or to permit the same.<sup>203</sup>

In connection with the operation of projects, legislative provision has been made for consideration of wildlife resources. Having earlier required that investigations and improvements

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485h (b). See also Act of June 28, 1941, § 1, 55 Stat. 303, 338, 22 U. S. C. 277f.

<sup>200</sup> § 5, 58 Stat. 890, 16 U. S. C. 825s. But Congress later expressly directed that surplus energy generated at the new hydroelectric power plant, Saint Marys River, Michigan, shall be leased by the Secretary of the Army upon such terms and conditions as he shall determine. Act of March 2, 1945, § 2, 59 Stat. 10, 20. See also *infra*, pp. 293-300.

<sup>201</sup> § 6, 58 Stat. 890, 33 U. S. C. 708.

<sup>202</sup> § 8, 58 Stat. 891, 43 U. S. C. 390. The irrigation works may be undertaken only after a prescribed report and findings by the Secretary of the Interior and subsequent specific authorization by Congress. See *infra*, pp. 196-197.

<sup>203</sup> § 4, 58 Stat. 889, as amended by Act of July 24, 1946, § 4, 60 Stat. 641, 642, 16 U. S. C. 460d. The statute also prescribes detailed provisions for administration. See *infra*, p. 331.

include a "due regard for wildlife conservation,"<sup>204</sup> Congress in 1946 required that whenever waters are impounded, diverted or otherwise controlled by federal agencies, "adequate provision consistent with the primary purposes" must be made for wildlife resources.<sup>205</sup> Similarly, in the management of existing facilities administered by the Army Engineers in the upper Mississippi River, including locks, dams, and pools, the Department of the Army was directed in 1948 to give full consideration to the needs of fish and other wildlife resources "without increasing additional liability to the Government, and, to the maximum extent possible without causing damage to levee and drainage districts, adjacent railroads and highways, farm lands, and dam structures, shall generally operate and maintain pool levels as though navigation was carried on throughout the year."<sup>206</sup>

It has already been pointed out that Congress in 1946 made conditional provision for the design and construction of dams with a view to their use as supports for public highway bridges.<sup>207</sup> Subject to the same conditions, the statute contemplates a like use in the case of dams already constructed. It should also be noted that the Secretary of the Army has authority to transfer or convey to states or political subdivisions thereof, title to bridges constructed or acquired in connection with navigation or flood-control projects.<sup>208</sup>

With respect to specified projects in the West, Congress in recent authorizations has expressly subordinated navigation use of waters to beneficial consumptive use. Since 1944, all river and harbor and all flood control acts have provided that the use for navigation, in connection with the operation and maintenance of works therein authorized for construction, of waters arising in states lying wholly or partly west of the ninety-eighth meridian shall be only such use as does not con-

<sup>204</sup> Act of June 20, 1938, § 1, 52 Stat. 802, 33 U. S. C. 540.

<sup>205</sup> Act of August 14, 1946, § 3, 60 Stat. 1080, 1081, 16 U. S. C. 663. See also *infra*, pp. 329-330.

<sup>206</sup> Act of March 10, 1934, 48 Stat. 401, as added June 19, 1948, 62 Stat. 497, 16 U. S. C. 665a (Supp. III).

<sup>207</sup> Act of July 29, 1946, 60 Stat. 709, 23 U. S. C. 64. See *supra*, pp. 94-95.

<sup>208</sup> Act of May 17, 1950, § 109, 64 Stat. 163, —.

flict with any beneficial consumptive use, present or future, in states lying wholly or partly west of the ninety-eighth meridian, of such waters for domestic, municipal, stock-water, irrigation, mining, or industrial purposes.<sup>209</sup>

A provision of more limited application merits notice here. As to debris-storage reservoirs of the California Débris Commission,<sup>210</sup> the Secretary is authorized to enter into contracts to supply storage for water and the use of outlet facilities for domestic and irrigation purposes and power development upon such conditions of delivery, use, and payment as he may approve.<sup>211</sup>

### Protection of Navigable Waters

As we have seen, Congress since 1820 has enacted numerous laws designed to insure and provide for improvement of rivers and harbors in the interests of navigation. Lagging somewhat behind came sporadic and less extensive legislative efforts to preserve and protect the navigability of waters from encroachments by bridges, wharves, dams, and other structures. An early example is an 1862 statute which specified navigation clearances in authorizing the construction of bridges over the Ohio River.<sup>212</sup> Designed for more general protection was an 1884 act whereby Congress delegated authority to the Secretary to require owners to provide bridges with specified aids in the interests of navigation.<sup>213</sup> Similarly, Congress in 1890 forbade the deposit of certain refuse matter, and prohibited the creation of any obstruction, "not affirmatively authorized by law" to the navigable capacity of any waters, in respect of which the United States has jurisdiction, at the same time regulating the construction of bridges and other structures.<sup>214</sup> Still more comprehensive, as we shall shortly see, are the provisions of the River and Harbor Act of 1899—Section 9 through 20 being presently effective—which consolidated and supplemented requirements pertaining to the protection of navigable

<sup>209</sup> See, e. g., Act of December 22, 1944, § 1(b), 58 Stat. 887, 889; Act of March 2, 1945, § 1(b), 59 Stat. 10, 11.

<sup>210</sup> See *infra*, pp. 119-120.

<sup>211</sup> Act of March 1, 1893, § 23, 27 Stat. 507, 510, as amended, 33 U. S. C. 683.

<sup>212</sup> Act of July 14, 1862, § 1, 12 Stat. 569.

<sup>213</sup> Act of July 5, 1884, § 8, 23 Stat. 133, 148.

<sup>214</sup> Act of September 19, 1890, §§ 6-10, 26 Stat. 426, 453.

waters.<sup>215</sup> In large measure, protective legislation since then has been confined to relatively minor modifications of the requirements of the 1899 Act.

**BRIDGES.**—The 1899 statute makes it unlawful to construct any bridge over navigable waters of the United States without the consent of Congress and the approval of plans by the Chief of Engineers and the Secretary.<sup>216</sup> Bridges may be built under state authority over waterways, the navigable portions of which lie wholly within a single state, provided the location and plans are first approved by the Chief of Engineers and the Secretary.<sup>217</sup>

A 1906 statute augments the foregoing restriction by specifying conditions applicable to the construction and maintenance of bridges thereafter authorized by Congress.<sup>218</sup> These conditions include provisions concerning the transmission of mails, troops, and munitions of war; reservation to the United States of the right to construct telephone and telegraph lines across the bridges; the use of the bridges by telegraph, telephone, and railroad companies; alteration of obstructive bridges; maintenance of lights and signals; operation of draws; and prescription of reasonable tolls by the Secretary.

In 1946, Congress enacted the General Bridge Act granting its blanket consent for the construction, maintenance, and operation of bridges over navigable waters of the United States, subject to stipulated conditions.<sup>219</sup> Prior to construction, location and plans must be approved by the Chief of Engineers and the Secretary, who have authority to impose such conditions relating to maintenance and operation as they deem necessary "in the interests of public navigation."<sup>220</sup> In addi-

<sup>215</sup> Act of March 3, 1899, §§ 9-20, 30 Stat. 1121, 1151.

<sup>216</sup> Act of March 3, 1899, § 9, 30 Stat. 1121, 1151, 33 U. S. C. 401.

<sup>217</sup> This provision of the 1899 statute does not apply to bridges constructed under the 1946 General Bridge Act. See Act of August 2, 1946, § 507, 60 Stat. 812, 849, 33 U. S. C. 530.

<sup>218</sup> Act of March 23, 1906, 34 Stat. 84, 33 U. S. C. 491-498.

<sup>219</sup> Act of August 2, 1946, 60 Stat. 812, 847, 33 U. S. C. 525 *et seq.*

<sup>220</sup> Significant here is the fact that bridges constructed under the approval of the 1946 Act are expressly exempted from the conditions mandatory under the 1906 statute, several of which are unrelated to "public navigation." 60 Stat. 847, 33 U. S. C. 525.

tion, the location and plans of privately owned highway toll bridges must be approved by the highway department or departments of the state or states in which the bridge is situated. Where a bridge shall be between two or more states and their highway departments are unable to agree, approval of the Public Roads Administration is sufficient. The Secretary of the Army may prescribe reasonable rates of toll for transit over interstate bridges. States may acquire interstate toll bridges by condemnation or expropriation, and limitations on the amount of compensation are specified if acquisition occurs after the expiration of five years after completion of the bridge. Actual original costs of privately owned interstate toll bridges must be filed with the Secretary of the Army and the highway departments of the states in which the bridge is located; the Secretary may, and upon the request of the highway department shall, within three years after completion of the bridge, investigate such costs and make a finding as to their reasonableness. His findings are conclusive for the purpose of condemnation or expropriation. If tolls are charged for use of a publicly owned interstate bridge, rates must be sufficient to make the bridge free of tolls within 30 years.<sup>221</sup>

*Alteration of Obstructive Bridges.*—The 1899 Act authorizes the Secretary of the Army, after opportunity for hearing, to order the alteration of any bridge which he believes to be an unreasonable obstruction to free navigation.<sup>222</sup> In giving notice to alter, he shall specify the changes recommended by the Chief of Engineers.<sup>223</sup> The right to require alteration of unreasonably obstructive bridges at the expense of the owners has been upheld by the Supreme Court of the United States.<sup>224</sup>

But there are recent deviations from the long-established legislative practice of requiring owners to alter such bridges at their own expense. Two such statutes providing that the costs of alterations be borne by the United States involve certain

<sup>221</sup> Amendment of May 25, 1948, 62 Stat. 267, 33 U. S. C. 529.

<sup>222</sup> Act of March 3, 1899, § 18, 30 Stat. 1121, 1153, 33 U. S. C. 502.

<sup>223</sup> *Id.*

<sup>224</sup> *Union Bridge Co. v. United States*, 204 U. S. 364 (1907). See *supra*, pp. 10-11.

bridges over the Columbia River and in the Tennessee Valley.<sup>225</sup>

In the case of bridges carrying railroad traffic, a similar but broader modification became effective in 1940 over a presidential veto.<sup>226</sup> In addition to prescription of detailed procedural provisions, the 1940 legislation provides for an apportionment between the United States and the owners of the costs of altering or relocating unreasonably obstructive railroad bridges. The owner must bear such part of the costs as is attributable to benefits accruing to him as a result of the change, including expectable savings in repair or maintenance costs, and that part attributable to the requirements of traffic by railroad or highway or both,<sup>227</sup> including any expenditure for increased carrying capacity of the bridge, and including such proportion of the actual capital cost of the old bridge or such part of the old bridge as may be altered or changed or rebuilt, as the used service life of the whole or the part bears to the total estimated service life of the whole or such part.<sup>228</sup> The United States shall bear "the balance of the cost, including that part attributable to the necessities of navigation."<sup>229</sup>

*Drawbridge Operation.*—Since 1894, the Secretary has had authority to prescribe such rules and regulations, as in his opinion the public interests require, to govern the opening of drawbridges for the passage of vessels and other water crafts.<sup>230</sup>

*Regulation of Tolls.*—As to bridges constructed under the 1906 Bridge Act, Congress authorized the Secretary to pre-

<sup>225</sup> Act of August 16, 1937, 50 Stat. 648; Act of November 21, 1941, 55 Stat. 773, 18 U. S. C. 831c-1.

<sup>226</sup> See President Roosevelt's Message of June 10, 1940, H. Doc. No. 834, 76th Cong., 3d sess., and Act of June 21, 1940, 54 Stat. 497, 33 U. S. C. 511-523.

<sup>227</sup> That part of the cost of alteration of a bridge used for both highway and railroad traffic, attributable to requirements of traffic by highway, shall be borne by the proprietor of the highway. § 6, 54 Stat. 497, 499, 33 U. S. C. 516.

<sup>228</sup> *Id.* If the alteration is desirable both because the bridge unreasonably obstructs navigation and for some additional reason, the Secretary may require equitable contribution from interested persons or agencies desiring such alteration as a condition precedent to ordering the alteration.

<sup>229</sup> *Id.*

<sup>230</sup> Act of August 18, 1894, § 5, 28 Stat. 338, 362, as amended, 33 U. S. C. 499.



scribe "reasonable rates of toll."<sup>231</sup> From time to time, the Secretary's regulatory authority over tolls has been extended to other bridges over navigable waters of the United States.<sup>232</sup> With some exceptions, toll-bridge rates are today subject to the Secretary's regulatory power.<sup>233</sup>

**DAMS, DIKES, AND CAUSEWAYS.**—The 1899 Act also makes it unlawful to construct a dam, dike, or causeway over navigable waters of the United States without the consent of Congress and approval of the plans by the Chief of Engineers and the Secretary.<sup>234</sup> Such structures, as in the case of bridges, may be built under state authority in waterways, the navigable portions of which lie wholly within a single state, if the location and plans are first approved by the Chief of Engineers and the Secretary.<sup>235</sup>

As to power dams, the requirements of this statute are satisfied if the construction is authorized by a license issued under the provisions of the Federal Power Act.<sup>236</sup> But no such license affecting the navigable capacity of any navigable waters of the United States may be issued until the plans of the dam or other structure affecting navigation have been approved by the Chief of Engineers and the Secretary.<sup>237</sup>

**WHARVES, PIERS, AND OTHER STRUCTURES.**—The 1899 Act also makes it unlawful to create any obstruction, "not affirmatively authorized by Congress," to the navigable capacity of any

<sup>231</sup> Act of March 23, 1906, § 4, 34 Stat. 84, 85, as amended, 33 U. S. C. 494.

<sup>232</sup> Act of June 10, 1930, § 17, 46 Stat. 540, 552, 33 U. S. C. 498a; Act of June 27, 1930, § 1, 46 Stat. 821, 33 U. S. C. 498b; Act of August 21, 1935, 49 Stat. 670, 33 U. S. C. 504; Act of August 2, 1946, § 503, 60 Stat. 812, 847, 33 U. S. C. 526.

<sup>233</sup> *Id.* See also 49 Stat. 670, 33 U. S. C. 503.

<sup>234</sup> Act of March 3, 1899, § 9, 30 Stat. 1121, 1151, 33 U. S. C. 401.

<sup>235</sup> *Id.*

<sup>236</sup> Act of June 10, 1920, 41 Stat. 1063; Act of August 26, 1935, 49 Stat. 838, as amended, 16 U. S. C. 791a *et seq.* *United States v. Appalachian Electric Power Co.*, 311 U. S. 377 (1940), *reh. den.*, 312 U. S. 712 (1941). *Of. United States v. Arizona*, 295 U. S. 174, 185-186 (1935) holding that the congressional grant of authority to the Secretary of the Interior to divert waters of the Colorado River for irrigating lands in certain Indian reservations did not constitute the "consent of Congress" required under the 1899 Act.

<sup>237</sup> Act of June 10, 1920, § 4(e), 41 Stat. 1063, 1065, as amended, 16 U. S. C. 797(e).

of the waters of the United States.<sup>238</sup> Also made unlawful is the building or commencing of building of any wharf, pier, dolphin, boom, weir, breakwater, bulkhead, jetty, or other structure in any navigable waters of the United States, outside established harbor lines, or where no harbor lines have been established, except on plans recommended by the Chief of Engineers and authorized by the Secretary.<sup>239</sup> So also as to any alteration of the course, location, condition, or capacity of any port, roadstead, haven, harbor, canal, lake, harbor of refuge or enclosure within the limits of any breakwater, or of the channel of any navigable water of the United States.<sup>240</sup> Authority is also provided for the Secretary, where he deems it essential to the preservation and protection of harbors, to cause harbor lines to be established, beyond which no piers, wharves, bulkheads, or other works may be extended or deposits made, except under such regulations as he may prescribe.<sup>241</sup>

**RIGHT TO PROHIBIT DIVERSION OF WATER.**—It is important to note the breadth of the foregoing prohibition in the 1899 Act against the creation of unauthorized obstructions to the navigable capacity of navigable waters of the United States.<sup>242</sup> In upholding the right of the United States, under a similar 1890 legislative prohibition, to enjoin a proposed irrigation diversion in the nonnavigable upper reaches of a navigable stream, the Supreme Court in 1899 said:<sup>243</sup>

It is not a prohibition of any obstruction to the navigation, but any obstruction to the navigable capacity, and anything, wherever done or however done, within the limits of the jurisdiction of the United States which tends to destroy the navigable capacity of one of the navigable waters of the United States, is within the terms of the prohibition.

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<sup>238</sup> Act of March 3, 1899, § 10, 30 Stat. 1121, 1151, 33 U. S. C. 403.

<sup>239</sup> *Id.*

<sup>240</sup> *Id.*

<sup>241</sup> § 11, 30 Stat. 1151, 33 U. S. C. 404.

<sup>242</sup> § 10, 30 Stat. 1151, 33 U. S. C. 403.

<sup>243</sup> *United States v. Rio Grande Irrigation Co.*, 174 U. S. 690, 708 (1899).  
See Act of September 19, 1890, § 10, 26 Stat. 426, 454.

**REFUSE MATTER.**—For the most part, legislation regulating the use of navigable waters as depositories or carriers of refuse matter has been confined to preventing impediments to navigation. We shall examine here the principal laws involved, reserving for discussion later a recent legislative effort to deal with the subject of pollution, as it is commonly understood.<sup>244</sup> In an 1886 prohibition against deposit of specified refuse matter, Congress confined its application to New York Harbor.<sup>245</sup> Two years later, Congress prohibited deposit in any manner in the tidal waters of New York Harbor and certain adjacent waters of any kind of matter “other than that flowing from streets, sewers, and passing therefrom in a liquid state.”<sup>246</sup> A line officer of the Navy, designated by the President as supervisor of the Harbor and acting under the direction of the Secretary of the Army, is charged with enforcement of the provisions of the Act.<sup>247</sup> There followed shortly a prohibition of general application, when Congress included in the 1890 River and Harbor Act a provision making it unlawful to deposit in any navigable water of the United States specified refuse matter “which shall tend to impede or obstruct navigation.”<sup>248</sup> Authority was granted to the Secretary to issue permits for such deposits in places where navigation would not be obstructed.

Likewise limited are the provisions in the 1899 law in force today.<sup>249</sup> They apply to any kind of refuse matter “other than that flowing from streets and sewers and passing therefrom in a liquid state.” The Act’s prohibition against deposit of such matter extends not only to navigable waters, but also to any tributary from which the refuse matter may be washed into a navigable water. Similarly, it is declared unlawful to deposit

<sup>244</sup> See *infra*, pp. 338–342.

<sup>245</sup> Act of August 5, 1886, § 3, 24 Stat. 310, 329. The prohibition extended to “ballast, stone, slate, gravel, earth, slack, rubbish, wreck, filth, slabs, edgings, sawdust, slag, or cinders, or other refuse or mill-waste of any kind.”

<sup>246</sup> Act of June 29, 1888, § 1, 25 Stat. 209, as amended, 33 U. S. C. 441 *et seq.*

<sup>247</sup> § 5, 25 Stat. 210, 33 U. S. C. 451.

<sup>248</sup> Act of September 19, 1890, § 6, 26 Stat. 426, 453. See also Act of August 18, 1894, § 13, 28 Stat. 338, 360.

<sup>249</sup> Act of March 3, 1899, § 13, 30 Stat. 1121, 1152, 33 U. S. C. 407.

material on banks from which it is liable to be washed into a navigable water "whereby navigation shall or may be impeded or obstructed." And the Secretary is empowered to permit the deposit of any material in navigable waters whenever in the judgment of the Chief of Engineers "anchorage and navigation will not be injured thereby."<sup>250</sup> A modified version of this statute was enacted in 1910 for restricted application to Lake Michigan opposite or in front of Cook County, Illinois.<sup>251</sup>

Protection of navigation was again made the limited objective of a 1905 statute which empowered the Secretary to prescribe regulations governing the transportation and dumping into navigable waters of dredgings, earth, garbage, or other refuse materials "whenever in his judgment such regulations are required in the interest of navigation."<sup>252</sup> This provision is specifically inapplicable to waters used for cultivation of oysters, "except navigable channels which have been or may hereafter be improved by the United States."

A slightly broader objective was contemplated by a 1924 statute relating to the discharge of oil from vessels into all "portions of the sea within the territorial jurisdiction of the United States, and all inland waters navigable in fact in which the tide ebbs and flows."<sup>253</sup> In addition to prohibiting such discharge except in emergency cases, this statute authorizes the Secretary to prescribe regulations permitting discharge of oil in circumstances deemed by him not to "be deleterious to health or seafood, or a menace to navigation, or dangerous to persons or property engaged in commerce on such waters, and for the loading, handling, and unloading of oil."

*California Débris Commission.*—In connection with laws relating to refuse matter, reference should be made here to the California Débris Commission. Created in 1893, this Commission has certain jurisdiction over hydraulic mining in the territory drained by the Sacramento and San Joaquin river sys-

<sup>250</sup> But see *infra*, p. 341.

<sup>251</sup> Act of June 23, 1910, 36 Stat. 593, 33 U. S. C. 421.

<sup>252</sup> Act of March 3, 1905, § 4, 33 Stat. 1117, 1147, 33 U. S. C. 419.

<sup>253</sup> Act of June 7, 1924, § 2 (c), 43 Stat. 604, 605, 33 U. S. C. 431.

tems.<sup>254</sup> Except where permitted under the Act, hydraulic mining directly or indirectly injuring navigability is made unlawful.<sup>255</sup>

The Commission has the duty to mature and adopt plans, from such examinations and surveys as it may deem necessary, as will improve the navigability of all rivers comprising the systems, deepen their channels, and protect their banks. Such plans must be matured "with a view of making the same effective as against the encroachment of and damage from débris resulting from mining operations, natural erosion, or other causes, with a view of restoring, as near as practicable and the necessities of commerce and navigation demand, the navigability of said rivers to the condition existing" in 1860, and permitting hydraulic mining without injury to navigability.<sup>256</sup>

The Act provides for construction by the Commission of certain restraining works, for a system of permits for hydraulic mining operations, and for payment by the operators for "each cubic yard mined from the natural bank a tax equal to the total capital cost of the dam, reservoir, and rights-of-way divided by the total capacity of the reservoir for the restraint of débris."<sup>257</sup>

**VESSELS.**—In addition to providing against other impediments to navigation, the aforementioned 1899 statute makes it unlawful to tie up or anchor vessels or other craft in navigable channels in such a manner as to obstruct passage of other craft.<sup>258</sup> Vessels sunk in navigable channels must be marked by the owners and diligently removed.<sup>259</sup>

<sup>254</sup> Act of March 1, 1893, § 3, 27 Stat. 507, 33 U. S. C. 663. By and with the advice and consent of the Senate, the President appoints the three Commission members from officers of the Army Engineers. It functions under the supervision of the Chief of Engineers and the direction of the Secretary. Act of March 1, 1893, § 1, 27 Stat. 507, 33 U. S. C. 661.

<sup>255</sup> § 3, 27 Stat. 507, as amended, 33 U. S. C. 663.

<sup>256</sup> § 4, 27 Stat. 507, as amended, 33 U. S. C. 664.

<sup>257</sup> § 23, 27 Stat. 510, 33 U. S. C. 683.

<sup>258</sup> Act of March 3, 1899, § 15, 30 Stat. 1121, 1152, 33 U. S. C. 409.

<sup>259</sup> *Id.* If sunken vessels are not marked by their owners, the Commandant of the Coast Guard at the expense of the owners marks them for the protection of navigation, until they are abandoned, at which time the Secretary of the Army takes over the marking duties. R. S. § 4676, from Res. of March 2, 1868, No. 16, § 1, 15 Stat. 249, as amended, 33 U. S. C. 736.

The 1899 Act also provides authority for the Secretary to remove sunken vessels obstructing or endangering navigation, if such obstruction has existed for a longer period than 30 days, or whenever the abandonment of such obstruction can be legally established in a lesser space of time.<sup>260</sup> In emergency cases of serious interference with navigation, immediate possession and removal or destruction of the craft may be undertaken.<sup>261</sup>

**LOGS AND TIMBER.**—The 1899 Act also makes it unlawful to float loose timber and logs or “sack rafts of timber and logs” in streams actually navigated by steamboats in such a manner as to “obstruct, impede, or endanger navigation.”<sup>262</sup> In the following year, this prohibition was made inapplicable where the floating of loose timber and logs and sack rafts “is the principal method of navigation,” and such navigation was made subject to regulations to be prescribed by the Secretary.<sup>263</sup>

### International Commissions

In connection with certain boundary waters between the United States and Canada and between the United States and Mexico, relevant provisions of law so differ from those considered thus far as to make desirable their separate consideration.

**INTERNATIONAL JOINT COMMISSION.**—As to boundary waters between the United States and Canada, the International Joint Commission has, among others, certain duties and responsibilities relating to navigation. It was created by the 1909 treaty between the United States and Great Britain, the purpose of which was:<sup>264</sup>

to prevent disputes regarding the use of boundary waters and to settle all questions which are now pending

<sup>260</sup> Act of March 3, 1899, § 19, 30 Stat. 1121, 1154, 33 U. S. C. 414.

<sup>261</sup> § 20, 30 Stat. 1154, 33 U. S. C. 415.

<sup>262</sup> § 15, 30 Stat. 1152, 33 U. S. C. 409.

<sup>263</sup> Act of May 9, 1900, § 1, 31 Stat. 172, 33 U. S. C. 410.

<sup>264</sup> 36 Stat. 2448. The Commission consists of six members, three representing the United States and three representing Canada.

between the United States and the Dominion of Canada involving the rights, obligations, or interests of either in relation to the other or to the inhabitants of the other, along their common frontier, and to make provision for the adjustment and settlement of all such questions as may hereafter arise \* \* \*.

The interests of navigation are encompassed by the Commission's jurisdiction which includes authority to approve the use, obstruction, or diversion of boundary waters, and the construction or maintenance of remedial or protective works or dams or other obstructions in waters flowing from boundary waters or in waters at a lower level than the boundary in rivers flowing across the boundary, the effect of which is to raise the natural level of waters on the other side of the boundary.<sup>265</sup>

The Commission must observe the following order of precedence in the exercise of the foregoing authority:<sup>266</sup>

- (1) Uses for domestic and sanitary purposes;
- (2) Uses for navigation, including the service of canals for the purposes of navigation;
- (3) Uses for power and irrigation purposes.

Either Government may refer to the Commission, for investigation and report, matters of difference arising between them involving the rights, obligations, and interests of either in relation to the other or to the inhabitants of the other along the common frontier.<sup>267</sup> Similarly, with consent of both Governments, like matters may be referred to the Commission for decision.<sup>268</sup>

**INTERNATIONAL BOUNDARY AND WATER COMMISSION, UNITED STATES AND MEXICO.**—The principal duties and responsibilities of this agency relate to flood control and irrigation, and will be discussed later.<sup>269</sup>

<sup>265</sup> Arts. III, IV, 36 Stat. 2449-2450.

<sup>266</sup> Art. VIII, 36 Stat. 2451.

<sup>267</sup> Art. IX, 36 Stat. 2452.

<sup>268</sup> Art. X, 36 Stat. 2453.

<sup>269</sup> See *infra*, pp. 148-149, 480-481. The Commission is composed of a Commissioner and a Consulting Engineer appointed for each Government by its President, together with their staffs. Convention of March 1, 1889, Art. II, 26 Stat. 1512, 1513.

However, it should be noted here that, in addition to examining and deciding differences arising on the boundary portions of the Rio Grande and Colorado River, the Commission also has responsibilities concerning the construction of projects. Under the Treaty of February 3, 1944, between the United States and Mexico, the following order of preference is prescribed as a guide in matters in which the Commission may be called upon to make provision for joint use of international waters:<sup>270</sup>

1. Domestic and municipal uses.
2. Agriculture and stock raising.
3. Electric power.
4. Other industrial uses.
5. Navigation.
6. Fishing and hunting.
7. Any other beneficial uses which may be determined by the Commission.

### Summary

Navigation has always been a principal use of navigable waters. Exercising its extensive authority over commerce in the interests of navigation, Congress has enacted numerous laws concerning the use, improvement, and protection of navigable waters.

USE.—Domestic transportation by water has been a matter of national concern from the beginning of our history. To assure free transportation use, tolls have long been prohibited at federal navigation works and at nonfederal works approved by the Secretary of the Army. Congress has also declared a policy that municipally owned terminals be provided at harbors or navigable waters. Provision is made for collection of statistics on water-borne commerce.

In addition, many laws provide for navigation aids and rules. An example is the establishment by the Coast Guard of lighthouses, buoys, lights, radio beacons, and radio direction-finder stations.

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<sup>270</sup> Art. 3, 59 Stat. 1219, 1225.



Also, jurisdiction has been conferred upon the Interstate Commerce Commission, with specified exceptions, over water carriers engaged in transportation in interstate or foreign commerce, extending to their rates, service, intercarrier relations, and ancillary matters. Noteworthy is the exemption, among others, for the transportation of commodities in bulk. In general, the regulatory scheme for water carriers is similar to that provided for rail and motor carriers. A national transportation policy adopted by Congress in 1940 governs administration of the Interstate Commerce Act as it applies to all carriers.

After almost a century of federal navigation improvements, the Federal Government in 1918 began a limited commercial operation of boats and facilities by the Inland Waterways Corporation on the Mississippi, Warrior, Illinois, and Missouri Rivers.

**IMPROVEMENT.**—Since 1824, the Federal Government has devoted increasing attention to navigation improvements. This work has always been prosecuted by the Army Engineers. In preparing for projects, examinations and surveys are undertaken only upon express congressional authorization. Under an important general authorization in 1927—the basis for the “308 Reports”—there have been completed surveys of almost 200 waterways for the purpose of developing general plans of improvement of navigation in combination with the development of water power, control of floods, and needs of irrigation. Many laws specify the data to be included in examination and survey reports. Others provide for cooperation with other agencies and with the states in preparing for projects. Provision has been made for review of all reports by the Board of Engineers for Rivers and Harbors.

Like examinations and surveys, projects may be undertaken only when authorized by Congress, but a number of laws in the nature of continuing authorizations provide for various types of work. A number of these also enable some discretion in the use of funds. General congressional practice is to appropriate annually lump sums for the prosecution of authorized projects. While the Federal Government bears the bulk of

expense, local interests specially benefited are required to make contributions.

Other statutes govern the prosecution and operation of projects. As to the latter, express provision is made for multiple uses. Thus, the Secretary of the Interior is authorized to dispose of surplus power and water for irrigation at Army reservoir projects. Similarly, the Secretary of the Army has authority to dispose of surplus water for domestic and industrial uses, and may provide recreation facilities at reservoir areas. The Fish and Wildlife Service may use such areas for wildlife conservation. Dams may be used as foundations for highway bridges. In the case of certain projects in the West, Congress has subordinated navigation use to beneficial consumptive uses.

**PROTECTION.**—In addition to the foregoing provisions, Congress has legislated to protect and preserve navigable waters. These laws govern the construction, maintenance, operation and removal of structures, the deposit of refuse matter, and other protective measures.

**INTERNATIONAL WATERS.**—In the case of certain international waters, provision has been made for international commissions having specified responsibilities concerning navigation, among other uses.

# Flood Control

Assumption of federal responsibility for the control of floods on a national basis is a relatively recent development. For many years and because of a variety of reasons, flood control was deemed a problem largely local in character.

Early legislative evidence of federal interest appeared in the Swamp Land Acts of 1849 and 1850, granting unsold swamp and overflowed lands to Louisiana, Arkansas, and other states containing similar lands.<sup>1</sup> These Acts made such lands subject to disposal of the state legislatures and required that the proceeds therefrom shall be applied to the prosecution of drainage, reclamation, and flood-control projects. In the next two decades, federal investigations, surveys, and reports reflected a continuing interest confined largely to flood problems in the Mississippi Valley.<sup>2</sup> In 1874, Congress provided for the appointment of a commission of engineers to investigate and report a permanent plan for reclamation of that portion of the alluvial basin of the Mississippi River subject to inundation.<sup>3</sup> The resulting report discussed various methods of flood control including cutoffs, diversion of tributaries, reservoirs, outlets,

<sup>1</sup> Act of March 2, 1849, 9 Stat. 352; Act of September 28, 1850, 9 Stat. 519; under these statutes, the patented areas by acres were: Arkansas, 7,686,455; Louisiana, 9,405,929; Mississippi, 3,288,418; Missouri, 3,346,936. H. Rep. No. 1072, 70th Cong., 1st sess., pp. 114-115 (1928).

<sup>2</sup> Congress made appropriations totaling \$100,000 for surveys and investigations of the Mississippi Delta to determine "the most practicable plan for securing it from inundation." Act of September 30, 1850, § 1, 9 Stat. 523, 539; Act of August 31, 1852, § 1, 10 Stat. 105, 107; and see Sen. Exec. Doc. No. 20, 32d Cong., 1st sess. (1851); REPORT UPON THE PHYSICS AND HYDRAULICS OF THE MISSISSIPPI RIVER, PROFESSIONAL PAPER No. 13, Corps of Engineers, U. S. Army (1861); Sen. Exec. Doc. No. 8, 40th Cong., 1st sess. (1866).

<sup>3</sup> Act of June 22, 1874, 18 Stat. 190.

and levees.<sup>4</sup> Speaking of the inefficacy of local efforts in connection with levee construction, this 1875 report said: <sup>5</sup>

In fine, then, the experience of one hundred and fifty years has utterly failed to create judicious laws or effective organization in the several States themselves, and no systematic co-operation has ever been attempted between them. The latter is no less important than the former, for the river has no respect for State boundaries \* \* \*.

The foregoing sequence of events led to the establishment of the Mississippi River Commission in 1879, with Congress delegating to it the duty of considering such plans as would improve navigation of the Mississippi, "prevent destructive floods," and promote and facilitate commerce, trade, and the postal service.<sup>6</sup> But until 1890 Congress restricted appropriations for the Commission to improvement of navigation, expressly prohibiting the use of funds on levees for reclaiming lands or preventing injury to lands by overflow.<sup>7</sup> Between 1890 and 1917, however, appropriation statutes permitted Commission expenditures not only for navigation improvement, but also to serve broader interests of commerce.<sup>8</sup> Otherwise, federal interest in flood control during this period prior to 1917

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<sup>4</sup> H. Exec. Doc. No. 127, 43d Cong., 2d sess. (1875).

<sup>5</sup> *Id.* p. 19.

<sup>6</sup> Act of June 28, 1879, § 4, 21 Stat. 37, 38, as amended, 33 U. S. C. 647. As to later extension of geographic limits of the Commission's jurisdiction, see *supra*, p. 98.

<sup>7</sup> Act of March 3, 1881, § 1, 21 Stat. 468, 474; Act of August 2, 1882, § 1, 22 Stat. 191, 208; Act of January 19, 1884, 23 Stat. 1; Act of July 5, 1884, § 1, 23 Stat. 133, 146; Act of August 5, 1886, § 1, 24 Stat. 310, 328-329; Act of August 11, 1888, § 1, 25 Stat. 400, 421. If Congress had doubts as to its power to make appropriations for flood control, they were not shared by President Arthur, who, in recommending favorable consideration by Congress of an 1882 Commission report on flood control, said: "The constitutionality of a law making appropriations in aid of these purposes cannot be questioned." § Richardson, MESSAGES AND PAPERS OF THE PRESIDENTS, 95 (1896).

<sup>8</sup> For a listing of the relevant statutes, see Laurent, A COMPILATION OF THE MORE IMPORTANT CONGRESSIONAL ACTS, TREATIES, PRESIDENTIAL MESSAGES, JUDICIAL DECISIONS, AND OFFICIAL REPORTS AND DOCUMENTS HAVING TO DO WITH THE CONTROL, CONSERVATION, AND UTILIZATION OF WATER RESOURCES, TVA Legal Department, pp. 68-69 (1938).

was largely limited to incidental treatment of the subject in reports,<sup>9</sup> and major responsibilities remained with local interests and agencies.<sup>10</sup>

Major floods stimulated increasing national interest in their control. After floods in 1915 and 1916, Congress authorized appropriations totaling over \$50,000,000 for control of floods on the Mississippi and Sacramento Rivers.<sup>11</sup> And the 1923 Flood Control Act authorized an additional \$60,000,000 for flood-control work on the lower Mississippi.<sup>12</sup> While enlarging the scope of federal responsibility, both statutes recognized local obligations through provision for local contributions. Moreover, the "control of floods" was one of the express purposes for which Congress sought information when it laid the basis for the "308 Reports" in 1925.<sup>13</sup>

Major floods in 1927 brought added impetus.<sup>14</sup> As a result,

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<sup>9</sup> See, e. g., REPORT ON INTERNAL COMMERCE OF THE UNITED STATES, H. Exec. Doc. No. 6, Part 2, 50th Cong., 1st sess., pp. 234-250, 572-577 (1887); FLOODS ON THE MISSISSIPPI RIVER, U. S. Weather Bureau (1888); PRELIMINARY REPORT OF THE INLAND WATERWAYS COMMISSION, SEN. DOC. NO. 325, 60th Cong., 1st sess., pp. 22-25 (1908); DENUDATION AND EROSION IN THE SOUTHERN APPALACHIAN REGION AND THE MONONGAHELA BASIN, U. S. Geological Survey, Professional Paper No. 72, pp. 25-30; REPORT OF THE NATIONAL CONSERVATION COMMISSION, SEN. DOC. NO. 676, 60th Cong., 2d sess., vol. 1, p. 24 (1909); PRELIMINARY REPORT OF THE UNITED STATES NATIONAL WATERWAYS COMMISSION, APPENDIX I TO FINAL REPORT OF NATIONAL WATERWAYS COMMISSION, SEN. DOC. NO. 469, 62d Cong., 2d sess., pp. 82-84 (1912); FINAL REPORT TO NATIONAL WATERWAYS COMMISSION, SEN. DOC. NO. 469, 62d Cong., 2d sess., p. 27 (1912); PREVENTION OF DAMAGE BY FLOODS, H. DOC. NO. 914, 63d Cong., 2d sess. (1914); FLOOD PROTECTION AND PREVENTION, H. DOC. NO. 1792, 64th Cong., 2d sess. (1916).

<sup>10</sup> See REPORT ON INTERNAL COMMERCE OF THE UNITED STATES, H. Exec. Doc. No. 6, 50th Cong., 1st sess., Part 2, pp. 234-263 (1888); Frank, THE DEVELOPMENT OF THE FEDERAL PROGRAM OF FLOOD CONTROL ON THE MISSISSIPPI RIVER, pp. 11-44 (1930).

<sup>11</sup> Act of March 1, 1917, 39 Stat. 948.

<sup>12</sup> Act of March 4, 1923, 42 Stat. 1505.

<sup>13</sup> Act of March 3, 1925, § 3, 43 Stat. 1186, 1190. See *supra*, pp. 92-93.

<sup>14</sup> See President Coolidge's Annual Message discussing the 1927 flood on the Mississippi and recommending adoption of a plan to prevent a recurrence, and his submittal of a letter from the Secretary of the Army recommending the Army Engineers' plan for flood control of the Mississippi River in its alluvial valley, 69 CONG. REC. 7126; see also FLOOD CONTROL IN THE MISSISSIPPI VALLEY, H. REP. NO. 1072, 70th Cong., 1st sess. (1928); Fly, *The Role of the Federal Government in the Conservation and Utilization of Water Resources*, 86 U. OF PA. L. REV. 274, 283, n. 63 (1938).

Congress in 1928 enacted flood-control legislation which further broadened federal responsibility.<sup>15</sup> It adopted a project for control of floods of the Mississippi River in its alluvial valley in accordance with a plan of the Army Engineers,<sup>16</sup> and authorized appropriations of \$325,000,000 in addition to the unexpended balance of appropriations under the 1917 and 1923 legislation.<sup>17</sup> Significantly, this legislation reaffirmed the principle of local contribution, but provided that it would not be required here because of large expenditures in the past by local interests.<sup>18</sup> It should also be noted that, while the 1928 Act made immediate provision only for the extension of the levee system and diversion floodways, it also directed the completion of studies for supplementing the levees by a system of tributary reservoirs.<sup>19</sup>

Prior flood protection had depended principally on confinement of water to rivers by means of levees, with resulting difficulties from increase in flood heights, and studies showed that reservoirs were necessary to reduce flood heights.<sup>20</sup> Before 1936, Congress gave express recognition to this use of reservoirs in legislation relating to specific multiple-purpose projects.<sup>21</sup> From the interstate nature of the problem of controlling floods, it became increasingly apparent that federal action was desirable to assure protection which often required an integrated system of reservoirs and levees, usually affecting more states than one.

Following major floods in 1935 and 1936, Congress for the first time authorized numerous flood-control projects through-

<sup>15</sup> Act of May 15, 1928, 45 Stat. 534.

<sup>16</sup> Set forth in H. Doc. No. 90, 70th Cong., 1st sess. (1927).

<sup>17</sup> § 1, 45 Stat. 534, 33 U. S. C. 702a.

<sup>18</sup> § 2, 45 Stat. 535, 33 U. S. C. 702b.

<sup>19</sup> § 10, 45 Stat. 538, 33 U. S. C. 702l.

<sup>20</sup> *Haben, FLOOD FLOWS: A STUDY OF FREQUENCIES AND MAGNITUDES*, p. 172 (1930); *COMPREHENSIVE REPORT ON RESERVOIRS IN MISSISSIPPI RIVER BASIN*, H. Doc. No. 259, 74th Cong., 1st sess. (1936); *OHIO RIVER*, H. Doc. No. 306, 74th Cong., 1st Sess. (1936); *REPORT OF THE CHIEF OF ENGINEERS*, Com. Doc. No. 1, 75th Cong., 1st sess. (1937).

<sup>21</sup> Act of December 21, 1928, § 1, 45 Stat. 1057, 43 U. S. C. 617 (Boulder Canyon); Act of May 18, 1933, 48 Stat. 58, as amended, 16 U. S. C. 831 *et seq.* (Tennessee Valley); Act of August 30, 1935, § 2, 49 Stat. 1023, 1039 (Parker and Grand Coulee).

out the Nation when it enacted the 1936 Flood Control Act containing this declaration of policy: <sup>22</sup>

It is hereby recognized that destructive floods upon the rivers of the United States, upsetting orderly processes and causing loss of life and property, including the erosion of lands, and impairing and obstructing navigation, highways, railroads, and other channels of commerce between the States, constitute a menace to national welfare; that it is the sense of Congress that flood control on navigable waters or their tributaries is a proper activity of the Federal Government in cooperation with States, their political subdivisions, and localities thereof; that investigations and improvements of rivers and other waterways, including watersheds thereof, for flood-control purposes are in the interest of the general welfare; that the Federal Government should improve or participate in the improvement of navigable waters or their tributaries, including watersheds thereof, for flood-control purposes if the benefits to whomsoever they may accrue are in excess of the estimated costs, and if the lives and social security of people are otherwise adversely affected.

In 1944, Congress provided that the words "flood control", as used in this 1936 declaration, shall be construed to include "channel and major drainage improvements." <sup>23</sup>

During this same period, as we have already noted, the Supreme Court removed any possible doubts as to power of Congress under the Commerce Clause to legislate in the interest of flood control.<sup>24</sup> In the 1940 *New River* opinion, "flood

<sup>22</sup> Act of June 22, 1936, § 1, 49 Stat. 1570, 33 U. S. C. 701a. See also Act of June 15, 1936, 49 Stat. 1508, modifying the 1928 project for the Mississippi River. For statistics on loss of life and property in the United States from floods 1924-1940, see *THE RIVER AND FLOOD FORECASTING SERVICE OF THE WEATHER BUREAU*, Department of Commerce, p. 8, tab. 2 (September 1941).

<sup>23</sup> Act of December 22, 1944, § 2, 58 Stat. 887, 889, 33 U. S. C. 701a-1.

<sup>24</sup> See *supra*, pp. 18-19. See also *Jackson v. United States*, 230 U. S. 1 (1913); *Hughes v. United States*, 230 U. S. 24 (1913); *Cubbins v. Mississippi River Commission*, 241 U. S. 351 (1916); *Howck v. United States*, 201 Fed. 862 (C. A. 8, 1912); *Cape Girardeau & T. B. T. R. Co. v. Jordan*, 201 Fed. 868 (C. A. 8, 1912).

protection" was expressly identified as a part of commerce control.<sup>25</sup> And in the 1941 *Denison Dam* case, the Court pointed out that there is no constitutional reason why Congress cannot, under the commerce power, "treat the watersheds as a key to flood control on navigable streams and their tributaries."<sup>26</sup> Here, the Court again specifically said that commerce authority extends to the tributaries of navigable streams, as it had previously pointed out in 1899 and 1931.<sup>27</sup>

In the main, provisions of existing flood-control law are found in the statutes enacted in 1917, 1928, and 1936, discussed above, supplemented and modified from time to time. In the 1917 legislation, Congress declared that all provisions of "existing" law relating to examinations and surveys and to works of improvement of rivers and harbors "shall apply, so far as applicable" to examinations and surveys and to works of improvement relating to flood control.<sup>28</sup> Expenditures of funds for flood-control projects are also required under the 1917 law to be made in accordance with the law governing expenditures of funds for navigation improvements.<sup>29</sup>

Hence, to avoid needless repetition here, the following discussion will be restricted to laws enacted since the 1917 statute. A complete picture of flood-control legislation, therefore, will require the reader to supplement the following summaries by a reexamination of that part of the preceding chapter dealing with "Improvements of Navigable Waters," so far as it concerns provisions dealing with expenditures of funds (pp. 105-107) and so far as it otherwise concerns "applicable" pre-1917 laws (pp. 87-112).

We shall see that flood-control legislation since 1917 bears a general similarity to legislation for navigation improvements. Consequently, flood-control and navigation projects are much alike today with respect to provisions of law affecting preparation, authorization, funds, and operation.

<sup>25</sup> *United States v. Appalachian Electric Power Co.*, 311 U. S. 377, 426 (1940), reh. den., 312 U. S. 712 (1941).

<sup>26</sup> *Oklahoma v. Atkinson*, 313 U. S. 508, 525 (1941); see *supra*, pp. 18-19.

<sup>27</sup> *United States v. Rio Grande Irrigation Co.*, 174 U. S. 690, 703, 706, 708 (1899); *United States v. Utah*, 283 U. S. 64, 90 (1931); see *supra*, pp. 16-17.

<sup>28</sup> Act of March 1, 1917, § 3, 39 Stat. 948, 950, 33 U. S. C. 701. Nowhere does this statute explain which provisions of "existing" law are "applicable."

<sup>29</sup> *Id.*



Despite the relatively short history of federal responsibility for control of floods on a national basis, the total federal expenditures by the Army Engineers for flood control between July 1, 1936, and June 30, 1949, exceeded \$1,781,000,000, over one-half of the amount spent in over a century on federal navigation improvements.<sup>30</sup> During the fiscal year ending June 30, 1949, a total of over \$400,000,000 was expended for flood control, an amount more than double the corresponding figure for river and harbor improvements.<sup>31</sup> These amounts are in addition to federal expenditures for flood control by the Department of Agriculture, and allocations to flood-control purposes at Bureau of Reclamation projects.<sup>32</sup>

## Jurisdiction

In the 1936 statute, Congress declared that federal investigations and improvements of rivers and other waterways for flood control and allied purposes shall be under the jurisdiction of and prosecuted by the Department of the Army under the direction of its Secretary and the supervision of the Chief of Engineers.<sup>33</sup> By these same provisions, jurisdiction is given to the Department of Agriculture with respect to investigations of watersheds and measures for run-off and water-flow retardation and soil-erosion prevention, except as to reclamation projects under the Interior Department.<sup>34</sup>

<sup>30</sup> ANNUAL REPORT OF THE CHIEF OF ENGINEERS, U. S. ARMY, p. 15 (1936); *id.*, p. 23 (1949); see *supra*, p. 90.

<sup>31</sup> ANNUAL REPORT OF THE CHIEF OF ENGINEERS, U. S. ARMY, p. 20 (1949); see *supra*, p. 90.

<sup>32</sup> See *infra*, pp. 374-377, 240.

<sup>33</sup> Act of June 22, 1936, § 2, 49 Stat. 1570, as amended, 33 U. S. C. 701b; to the same effect, see Act of December 22, 1944, § 2, 53 Stat. 887, 889, 33 U. S. C. 701a-1.

Hereafter in this Chapter, the designation, "the Secretary," will refer to the Secretary of the Army.

<sup>34</sup> This aspect of law we shall reserve for discussion in Chapter 8 on Related Land Uses, *infra*, pp. 374-377. It should also be noted that, in connection with projects authorized by the 1936 Act, Congress granted blanket consent to states to enter into compacts whereby they would provide specified project funds. From a further requirement that no such compact shall become effective without its approval, Congress excepted only those providing for expenditure of funds and performance of work

## Preparing for Projects

In addition to the "applicable" pre-1917 laws,<sup>35</sup> Congress has enacted other legislation directly affecting preparations for flood-control projects.

**EXAMINATIONS AND SURVEYS.**—Examinations and surveys are generally authorized for specific localities in omnibus "Flood Control Acts."<sup>36</sup> A number of laws govern the making of such examinations and surveys. Repeating a requirement already made applicable,<sup>37</sup> Congress in 1939 provided that no preliminary examination, survey, project, or estimate for new works shall be made except where authorized by law, and further that, after the regular or formal report thereon is submitted, no supplemental or additional report or estimate shall be made unless authorized by law.<sup>38</sup> However, in the 1941 and subsequent flood-control statutes, Congress provided that the Secretary may cause a review of any examination and survey to be made and a report thereon submitted to Congress, if in his opinion such review "is required by the national defense or by changed physical or economic conditions."<sup>39</sup>

Also, as already stated, legislation providing for the "308 Reports" authorizes "such additional study or investigation as the Chief of Engineers finds necessary to take into account important changes in economic factors as they occur, and additional stream-flow records, or other factual data."<sup>40</sup> Moreover, it should be noted that construction and maintenance funds are available for making examinations and surveys, or in preparing reports in review thereof as authorized by law.<sup>41</sup>

Congress has also enacted additional specifications of data to be obtained and set forth in reports. Thus, all examinations

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by the Department of the Army. Act of June 22, 1936, § 4, 49 Stat. 1570, 1571, 33 U. S. C. 701d. No record has been found of approval by Congress of a compact under this provision.

<sup>35</sup> See *supra*, pp. 132-133.

<sup>36</sup> See, *e. g.*, Act of May 17, 1950, 64 Stat. 163.

<sup>37</sup> See *supra*, pp. 132-133.

<sup>38</sup> Act of August 11, 1939, § 6, 53 Stat. 1414, 1415, 33 U. S. C. 701b-4.

<sup>39</sup> See, *e. g.*, Act of August 18, 1941, § 4, 55 Stat. 638, 648.

<sup>40</sup> Act of August 30, 1935, § 6, 49 Stat. 1028, 1048; see *supra*, pp. 92-93.

<sup>41</sup> Act of August 11, 1939, § 2, 53 Stat. 1414, 33 U. S. C. 701b-3.

and surveys must include "a comprehensive study" of the watershed, and each report thereon must include data relating to the extent and character of the area to be affected by the project, the probable effect upon any navigable water, the possible economical development and utilization of power, and other properly related uses.<sup>42</sup> In the preparation of flood-control reservoir projects, as in the case of like navigation improvements, reports must include specified information concerning possible damage to wildlife resources,<sup>43</sup> and also relevant is the possible use of dams as supports for highway bridges.<sup>44</sup>

**COOPERATION WITH OTHER AGENCIES.**—In connection with navigation improvements, we pointed out that the Army Engineers are required by statute in certain cases to cooperate with states and with the Secretary of the Interior,<sup>45</sup> and also with the Fish and Wildlife Service.<sup>46</sup> The statutory situation is the same in each case as to flood-control projects. So also as to participation in the voluntary operations of the Federal Inter-Agency River Basin Committee.<sup>47</sup>

**RIVER AND HARBOR BOARD.**—The duties and functions of the Board of Engineers for Rivers and Harbors respecting navigation improvements apply also as to flood-control projects.<sup>48</sup> In addition, Congress in 1917 expressly directed that the Board give its opinion in the case of flood-control projects as to what federal interest, if any, is involved; what share of the expense, if any, should be borne by the United States; and the advisability of adopting the project.<sup>49</sup>

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<sup>42</sup> Act of March 1, 1917, § 3, 39 Stat. 948, 950, 33 U. S. C. 701. This statute also makes provision for assistance to the Army Engineers by representatives of other departments in order to avoid duplication and to coordinate the various government services.

<sup>43</sup> See *supra*, p. 97.

<sup>44</sup> See *supra*, pp. 94-95.

<sup>45</sup> See *supra*, pp. 96-97. The details of the congressional policy were first specified in the Act of December 22, 1944, § 1, 58 Stat. 887, and also were made applicable in subsequent flood control acts.

<sup>46</sup> See *supra*, p. 97.

<sup>47</sup> See *supra*, p. 97.

<sup>48</sup> See *supra*, pp. 99-100.

<sup>49</sup> Act of March 1, 1917, § 3, 39 Stat. 948, 950, 33 U. S. C. 701.

On request of the Committee on Public Works of either the Senate or the House, the Board is required by statute to examine and review the report on any examination or survey made pursuant to law, and report thereon as in other cases.<sup>50</sup>

### Authorization of Projects

In authorizing examinations and surveys, Congress has regularly provided that the Government shall not be deemed to have "entered upon" any project until it shall have been adopted by law.<sup>51</sup> Congressional practice has been to authorize the prosecution of projects in omnibus "Flood Control Acts," as in the case of examinations and surveys.<sup>52</sup>

**GENERAL LIMITATIONS.**—Congress has directed that no project or estimate for new work shall be made except where authorized by law, and that after a written or formal report thereon, no supplemental or additional report or estimate shall be made unless authorized by law.<sup>53</sup>

**CONTINUING AUTHORIZATIONS.**—The apparent restrictive effect of those limitations is qualified, however, by a number of laws in the nature of continuing authorizations for specified types of work. Each of them deviates from the general legislative practice of approving work on a project-by-project basis. Also, a number of them allow varying degrees of discretion in the use of funds, as we shall see.

*Small Projects.*—Thus, Congress in 1948 empowered the Secretary to allot from appropriated funds up to \$2,000,000 in any one fiscal year for the construction of undefined "small flood-control projects" not specifically authorized by Congress, and not within the areas intended to be protected by authorized projects.<sup>54</sup> It was also required that such "small" projects

<sup>50</sup> *Id.* See also *supra*, p. 100.

<sup>51</sup> Act of June 22, 1936, § 6, 49 Stat. 1570, 1592.

<sup>52</sup> See, *e. g.*, Act of June 30, 1948, § 201, 62 Stat. 1171, 1175.

<sup>53</sup> This requirement was expressly stipulated in the Flood Control Acts of 1936, 1938, and 1939, but omitted from subsequent Flood Control Acts. See, *e. g.*, Act of June 22, 1936, § 6, 49 Stat. 1570, 1592. See also references to the "applicable" pre-1917 provisions discussed *supra*, p. 132.

<sup>54</sup> Act of June 30, 1948, § 205, 62 Stat. 1171, 1182, 33 U. S. C. 701s (Supp. III).

come within the 1936 congressional declaration of policy;<sup>55</sup> that not more than \$100,000 from appropriations for any one fiscal year be allotted at a single locality; that the local-cooperation requirements of the amended 1936 Act apply;<sup>56</sup> and that the work be complete in itself and not commit the United States to additional improvement except as may result from the normal procedure applying to projects authorized after submission of preliminary examination and survey reports.<sup>57</sup> In 1950, the foregoing amounts were increased to \$3,000,000 and \$150,000, respectively.<sup>58</sup>

*Rescue Work, Repair, Maintenance, and Modification.*—Wide discretion is permitted in the use of funds and a substantial project authorization is given by legislative provisions for rescue and related work. In 1941, Congress authorized the Secretary to allot, from flood-control appropriations, up to \$1,000,000 in any one fiscal year for undefined "rescue work," or the repair or maintenance of flood-control work threatened or destroyed by flood.<sup>59</sup> This amount was increased to \$2,000,000 by the Flood Control Act of 1946.<sup>60</sup> In 1948, the authorization was extended to include the strengthening, raising, extending, or other modification of any flood-control work deemed necessary by the Chief of Engineers for the adequate functioning of the work for flood control.<sup>61</sup> In 1950, Congress made provision for an emergency fund of \$15,000,000 for such activities, authorizing an appropriation for initial establishment of the fund and its replenishment on an annual basis.<sup>62</sup>

<sup>55</sup> *Id.* See *supra*, p. 131.

<sup>56</sup> *Id.* See *infra*, pp. 144-145.

<sup>57</sup> *Id.* See *supra*, pp. 134-135.

<sup>58</sup> Act of May 17, 1950, § 212, 64 Stat. 163, —.

<sup>59</sup> Act of August 18, 1941, § 5, 55 Stat. 638, 650.

<sup>60</sup> Act of July 24, 1946, § 12, 60 Stat. 641, 652, as amended, 33 U. S. C. 701n (Supp. III).

<sup>61</sup> Act of June 30, 1948, § 206, 62 Stat. 1171, 1182, 33 U. S. C. 701n (Supp. III).

<sup>62</sup> Act of May 17 1950, § 210, 64 Stat. 163, —. An earlier statute contains an authorization for a sum of \$25,000,000 to be appropriated as a somewhat similar emergency fund, subject to conditions (1) that local interests provide without cost to the United States all necessary lands, easements, and rights-of-way and operate the works in a manner satisfactory to the Chief of Engineers, (2) that, pending appropriation of such sum,

*Bank Protection: Highways, Bridge Approaches, and Public Works.*—For the construction of emergency bank-protection works to prevent flood damage to highways, bridge approaches, and public works, the Secretary is authorized under 1946 legislation to allot, from flood-control appropriations, not to exceed \$1,000,000 per year but not more than \$50,000 at any single locality, when the Chief of Engineers deems such work advisable.<sup>63</sup>

*Highways, Railways, and Utilities.*—A similar general authorization under the same 1946 legislation empowers the Chief of Engineers to use funds for the “repair, relocation, restoration, or protection” of a highway, railway, or utility when it has been or is being damaged or destroyed by reason of the operation of any dam or reservoir project under the Army’s control.<sup>64</sup> For this purpose, he may utilize any funds available for the construction, maintenance, or operation of the project involved.<sup>65</sup>

*Removal of Obstructions and Clearing Channels.*—Still another continuing project authorization involving discretion in the use of funds is the authority of the Secretary to allot not to exceed \$1,000,000 from appropriations for any one fiscal year for flood control, for removing snags and other débris, and clearing and straightening the channels in navigable streams and their tributaries, when the Chief of Engineers deems such work advisable in the interests of flood control; not more than \$50,000 may be expended for a single tributary from appropriations for any one fiscal year.<sup>66</sup>

*Evacuation of Flooded Areas.*—Discretion in the use of funds and continuing authority for project modification are both in-

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the Secretary may allot from existing flood-control appropriations sums necessary for immediate prosecution of the emergency work thus authorized, such appropriations to be reimbursed from the emergency fund when appropriated, and (3) that funds to be allotted shall not be diverted from unobligated funds from the appropriation “Flood Control—General.” See Act of June 30, 1948, § 208, 62 Stat. 1171, 1182, 33 U. S. C. 701t (supp. III).

<sup>63</sup> Act of July 24, 1946, § 14, 60 Stat. 641, 653, 33 U. S. C. 701r.

<sup>64</sup> § 9, 60 Stat. 643, 33 U. S. C. 701q.

<sup>65</sup> *Id.* As to exclusions from this protection, see *supra*, n. 160, p. 103.

<sup>66</sup> Act of August 28, 1937, § 2, 50 Stat. 876, 877, as amended, 33 U. S. C. 701g.

volved in a 1938 statute empowering the Chief of Engineers to modify project plans so as to evacuate areas rather than protect them by levees or flood walls.<sup>67</sup> He may expend "a sum, not substantially exceeding" the amount saved in construction cost, for evacuation of the area and rehabilitation of the persons so evacuated, or he may transfer such sum to another federal agency for that purpose, or enter into agreement with states, local agencies, or individuals for evacuation, rehabilitation, and reimbursement.<sup>68</sup>

*Insufficient Authorization.*—Considerable latitude both as to utilization of funds and as to project modification is afforded where the total authorization for a project is not sufficient for its completion. The Chief of Engineers may plan and make expenditures on preparations for the project, such as the purchase of lands, easements, and rights-of-way; readjustment of roads, railroads, and other utilities; removal of towns, cemeteries, and dwellings from reservoir sites; and the construction of foundations.<sup>69</sup> Also, he may modify plans so that the dam or other work will be smaller than originally planned "with a view to completing a useful improvement within an authorization."<sup>70</sup> The smaller structure must be so located that it will be feasible later to enlarge the work to permit full utilization of the site for "all purposes of conservation such as flood control, navigation, reclamation, the development of hydroelectric power, and the abatement of pollution."<sup>71</sup>

*Water Supply.*—In connection with an authorization for the Secretary to receive funds from states to be expended with federal funds for authorized flood-control work, Congress provided generally that plans for any reservoir project may be modified to provide additional storage capacity for domestic water supply or other conservation storage, if the cost of such increased capacity is contributed by local agencies and they

<sup>67</sup> Act of June 23, 1938, § 3, 52 Stat. 1215, 1216, 33 U. S. C. 7011.

<sup>68</sup> *Id.*

<sup>69</sup> Act of August 18, 1941, § 2, 55 Stat. 638, 33 U. S. C. 701m.

<sup>70</sup> *Id.*

<sup>71</sup> *Id.* See also H. Rep. No. 750, 77th Cong., 1st sess., p. 6 (1941).

agree to utilize the same in a manner consistent with federal uses and purposes.<sup>73</sup>

*School Facilities.*—While not a continuing general authorization, it should be noted that Congress has recently empowered the Chief of Engineers to provide school facilities for the education of dependents of persons engaged on the construction of a number of specified flood-control projects, and to pay for the same from funds available for such projects.<sup>73</sup> Likewise, “when it is determined to be in the public interest,” he is authorized to enter into cooperative arrangements with local agencies for the operation of such facilities, for their expansion at federal expense, and for federal contributions to cover the increased cost to local agencies of providing the educational services required by the Government.<sup>74</sup>

*Railroad Bridges Altered at Federal Expense.*—The Chief of Engineers is vested with exceptionally wide and continuing discretion in connection with railroad-bridge alterations included in authorized flood-protection projects. For Congress in 1946 “authorized” but did not “direct” him to include at federal expense the necessary alterations of railroad bridges and approaches in connection therewith.<sup>75</sup> Thus, federal funds may be used for items otherwise considered as local responsibilities.

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<sup>73</sup> Act of June 22, 1936, § 5, 49 Stat. 1570, 1572, as added by Act of July 19, 1937, § 1, 50 Stat. 515, 518, 33 U. S. C. 701h.

<sup>74</sup> Act of July 24, 1946, § 6, 60 Stat. 641, 642, as amended June 25, 1948, § 1, 62 Stat. 1019, 1022. Congress recently enacted two statutes generally concerning the construction of school facilities at federally affected areas. Act of September 23, 1950, 64 Stat. 967, and Act of September 30, 1950, 64 Stat. 1100.

<sup>75</sup> *Id.* See also *infra*, p. 529.

<sup>76</sup> Act of July 24, 1946, § 3, 60 Stat. 641, 642. In reporting this legislation, the House Committee asserted that it is usually beyond the ability of levee districts and local communities to bear the cost of railroad-bridge changes made necessary by the prosecution of levee, flood-wall and channel rectification projects; and that since the benefits from maintaining the railroad transportation network accrue to the country as a whole, it was deemed fair to include the expense of such authorization as a federal cost. H. Rep. No. 2165, 79th Cong., 2d sess., p. 6 (1946).



*Bridges, Future Power, and Fishways.*—Also, we should mention three additional continuing authorizations of activities, but which are not accompanied by authorizations for appropriations of funds. One example has already been noted—the general authority to construct bridges on dams.<sup>76</sup> Likewise, in acts authorizing flood-control projects since 1938, Congress has directed that penstocks and other similar facilities adapted to possible use in the development of power be installed.<sup>77</sup> Similarly, an 1888 statute gives the Secretary general discretionary authority to construct fishways whenever improvements are found to obstruct the passage of fish.<sup>78</sup>

MISSISSIPPI RIVER.—In addition to the foregoing statutes constituting continuing authorizations for various types of work, several other aspects of legislation concerning project authorization should be noted. The first concerns the Mississippi River. Reference has been made to the fact that the development of federal responsibility for flood control on a national basis was largely an outgrowth of federal interest in the control of Mississippi floods.<sup>79</sup> Historic importance thus attaches to the role played by the Mississippi River Commission in the lower Mississippi.<sup>80</sup> Legislation specifying the nature and scope of federal interest and responsibility is lengthy, complicated, and varied.<sup>81</sup> Thus, many extensive and involved provisions apply here which are unlike those obtaining generally, such as those concerning bridges,<sup>82</sup> local contribution,<sup>83</sup> flowage rights,<sup>84</sup> discretion as to modifications,<sup>85</sup> and

<sup>76</sup> See *supra*, pp. 94–95.

<sup>77</sup> Act of June 28, 1938, § 4, 52 Stat. 1215, 1216, 33 U. S. C. 701j. Repeated in all subsequent Flood Control Acts.

<sup>78</sup> Act of August 11, 1888, § 11, 25 Stat. 400, 425, 33 U. S. C. 608.

<sup>79</sup> See *supra*, pp. 127–130.

<sup>80</sup> For a discussion of the previous and existing projects, together with recommended modifications, see ANNUAL REPORT OF THE CHIEF OF ENGINEERS, U. S. ARMY, pp. 2673–2679 (1949).

<sup>81</sup> See 33 U. S. C. 702 *et seq.*; *cf.* authorization of flood-control work by the California Débris Commission, Act of March 1, 1917, § 2, 39 Stat. 948, 949, 33 U. S. C. 703.

<sup>82</sup> Act of June 15, 1936, § 7, 49 Stat. 1508, 1510, 33 U. S. C. 702a–7.

<sup>83</sup> Act of May 15, 1928, § 2, 45 Stat. 534, 535, 33 U. S. C. 702b.

<sup>84</sup> Act of May 15, 1928, § 4, 45 Stat. 534, 536, as amended, 33 U. S. C. 702d.

<sup>85</sup> See, *e. g.*, Act of June 15, 1936, § 4, 49 Stat. 1508, 1509, as amended, 33 U. S. C. 702j–l.

numerous others. But it should not be assumed that this work on the lower Mississippi is an isolated and independent project, for on the contrary Congress has sought to integrate it with flood-control measures initiated elsewhere on the Mississippi and its tributaries.<sup>86</sup>

**FLOOD CONTROL AT RECLAMATION PROJECTS.**—Under the 1939 Reclamation Project Act, a portion of the total estimated construction cost of a Reclamation project may be allocated by the Secretary of the Interior to flood control on a nonreimbursable basis.<sup>87</sup> That Act permits automatic authorization of a Reclamation project upon the fulfillment of prescribed conditions, including the amendment in the 1944 Flood Control Act.<sup>88</sup>

**A SPECIAL CASE.**—An unusual example of project authorization deserves notice. Concerning the then existing Alamogordo Dam and Reservoir, Congress in 1939 authorized and declared it to be “for the purposes of controlling floods” and other specified objects, directing that the amount properly allocable to flood control be determined and transferred from the general fund of the Treasury to the Reclamation Fund, for reduction of the maximum repayment obligation of The Carlsbad Irrigation District.<sup>89</sup>

**RESTRICTIONS ON LEGISLATIVE CONSIDERATION.**—Apart from specifications applicable to the Army Engineers in connection with project authorizations, described above, Congress in 1946 announced a restriction upon its own actions, declaring that it would authorize no project “or any modification not authorized” unless a report for such project or modification has been previously submitted by the Chief of Engineers in conformity with law.<sup>90</sup>

<sup>86</sup> See, *e. g.*, COMPREHENSIVE FLOOD CONTROL PLAN FOR OHIO AND LOWER MISSISSIPPI RIVERS, Flood Control Com. Doc. No. 1, 75th Cong., 1st sess. (1937), as partially authorized in the Act of June 28, 1938, § 4, 52 Stat. 1215, 1216.

<sup>87</sup> Act of August 4, 1939, § 9(a), 53 Stat. 1187, 1193, 43 U. S. C. 485h(a).

<sup>88</sup> Act of December 22, 1944, § 1(c); 58 Stat. 887, 889.

<sup>89</sup> Act of August 11, 1939, § 7, 53 Stat. 1414, 1417, 33 U. S. C. 707.

<sup>90</sup> See *supra*, n. 173, p. 105. This same pronouncement is repeated in subsequent Flood Control Acts.

## Funds

Congressional practice is to appropriate annually lump sums "for the construction and maintenance of certain public works on rivers and harbors for flood control, and for other purposes."<sup>91</sup> Such funds are declared to "remain available until expended."<sup>92</sup>

Generally, such funds are also available for detailed surveys and for preparing plans and specifications necessary for the construction of flood-control projects.<sup>93</sup> But recent appropriation acts have contained an admonition that expenditures of funds for surveys "shall not be construed as a commitment of the Government to the construction of any project."<sup>94</sup> Moreover, it should be noted that Congress in 1941 authorized "all appropriations" necessary for operation and maintenance of flood-control works authorized to be operated and maintained by the United States.<sup>95</sup>

CONTRIBUTIONS AND ADVANCES.—In addition to moneys obtained under such appropriations, funds may otherwise be made available for flood-control work under specific statutory provisions. For example, the Secretary may receive contributions from states and their political subdivisions, to be expended in connection with federal funds for any authorized flood-control project whenever such work and expenditure are deemed by him on recommendation of the Chief of Engineers to be "advantageous in the public interest."<sup>96</sup> Similarly, the Secretary is empowered to receive funds advanced by states and their political subdivisions and expend the same "in the immediate prosecution" of an authorized flood-control project.<sup>97</sup> Such advances must be repaid without interest from appropriations provided by Congress for flood-control works,

<sup>91</sup> See, *e. g.*, Act of June 25, 1948, § 1, 62 Stat. 1019, 1022.

<sup>92</sup> *Id.*

<sup>93</sup> *Id.*

<sup>94</sup> *Id.*

<sup>95</sup> Act of August 18, 1941, § 10, 55 Stat. 638, 651, 33 U. S. C. 701f-1 note following.

<sup>96</sup> Act of June 22, 1936, § 5, 49 Stat. 1570, as added by Act of July 19, 1937, § 1, 50 Stat. 515, 518, 33 U. S. C. 701h.

<sup>97</sup> Act of October 15, 1940, 54 Stat. 1176, 33 U. S. C. 701h-1.

but no repayment may be made of funds contributed for the purpose of meeting conditions of local cooperation.<sup>99</sup>

**NAVIGATION AND PROJECT-AUTHORIZATION LAWS.**—In addition to the foregoing and to the fact that flood-control expenditures must accord with laws governing expenditures for navigation improvements, as already noted,<sup>99</sup> Congress has enacted a number of other laws specifically governing the use of flood-control funds. They generally allow varying degrees of discretion in the use of funds to undertake specified types of work, and many of them constitute continuing project authorizations. These we have already discussed in connection with "Authorization of Projects."<sup>100</sup>

**LOCAL COOPERATION.**—Another and a specially significant aspect of legislation governing use of funds is the evolution of requirements relating to local cooperation, which establish a prohibition against the use of funds in certain cases. In the 1936 Flood Control Act, Congress provided that no money appropriated under the authority of that Act shall be expended on the construction of any project until states, political subdivisions thereof, or other responsible local agencies have given assurances satisfactory to the Secretary of the Army that they will: (a) provide without cost to the United States all necessary lands, easements, and rights-of-way; (b) hold and save the United States free from damages due to the construction work; and (c) maintain and operate all the works after completion in accordance with regulations prescribed by the Secretary of the Army.<sup>101</sup> This 1936 statute also provided that, if expenditures for lands exceed estimated construction cost, the local agency may be reimbursed one-half of such excess. Also, if benefits accrue to lands outside the state where the project is located, the Secretary, with the consent of the state where the project is located, may acquire the necessary lands after he has received from the benefited states the estimated land

<sup>99</sup> *Id.*

<sup>100</sup> See *supra*, p. 132.

<sup>101</sup> See *supra*, pp. 136-140.

<sup>102</sup> Act of June 22, 1936, § 3, 49 Stat. 1570, 1571. As amended in a manner not here relevant, this provision is codified in 33 U. S. C. 701c.

cost, less one-half the amount by which the estimated land cost exceeds the corresponding estimated construction cost. The Secretary must determine the proportion of the estimated land cost to be contributed by each state, political subdivision, or local agency "in consideration for the benefits to be received by such agency." Moreover when not less than 75% of the estimated benefits accrue to lands outside the state in which the project is located, condition (c) above shall not apply.

A 1938 amendment of the foregoing provisions requires that, in the case of "any dam and reservoir project, or channel improvement or channel rectification project for flood control" authorized in the 1936 and 1938 Flood Control Acts, the United States shall acquire all lands, easements, and rights-of-way, and conditions (a), (b), and (c) of the 1936 Act shall not apply.<sup>102</sup> In addition, provision was made for reimbursement to states and other agencies for actual land expenditures for such projects.

Also, as to projects authorized since 1941, except dam and reservoir projects, conditions (a), (b), and (c) have been made applicable.<sup>103</sup> Thus, the conditions continue to be stripped of a large measure of significance. However, exceptions to the general policy and varying requirements of local cooperation are prescribed by law in some cases.<sup>104</sup>

In all cases where conditions of local cooperation are made applicable, however, the project authorization expires within five years from the date of notification to the local interests of the requirements of local cooperation, unless such local

<sup>102</sup> Act of June 28, 1938, § 2, 52 Stat. 1215. As amended in a manner not here relevant, this provision is codified in 33 U. S. C. 701c-1.

<sup>103</sup> Act of August 18, 1941, § 2, 55 Stat. 638; Act of December 22, 1944, § 3, 58 Stat. 887, 889; Act of July 24, 1946, § 2, 60 Stat. 641; Act of June 30, 1948, § 201, 62 Stat. 1171, 1175; see 33 U. S. C. 701c note (Supp. III). See also Act of May 17, 1950, § 201, 64 Stat. 163, —.

<sup>104</sup> For example, in the case of the Bald Hill Reservoir Project on the Sheyenne River, local-contribution requirements include the furnishing of \$208,000 toward the cost of the project, estimated at \$810,000. See Act of December 22, 1944, § 10, 58 Stat. 887, 896; Sen. Doc. No. 193, 78th Cong., 2d sess., p. 2 (1944). See also ANNUAL REPORT OF THE CHIEF OF ENGINEERS, U. S. ARMY, p. 8 (1949).

interests furnish within that time satisfactory assurances that such cooperation will be furnished.<sup>105</sup>

**PLANNING FOR CONSTRUCTION PROGRAM.**—In recent Flood Control Acts, Congress has regularly authorized use of any available flood-control funds for “plans, specifications, and preliminary work” to enable “rapid inauguration of a construction program.”<sup>106</sup>

**SERVICES OF OTHER AGENCIES.**—The Secretary is authorized to cooperate with institutions, organizations, and individuals, and to utilize the services of federal, state, and other public agencies in carrying out the purposes of the 1936 Flood Control Act, as amended and supplemented.<sup>107</sup> To this end, he may pay by check to the cooperating agency, either in advance or upon the furnishing or performance of the services, all or part of their estimated or actual cost.<sup>108</sup>

**WEATHER BUREAU.**—In 1938, provision was made for the establishment, operation, and maintenance by the Weather Bureau of a current information service on precipitation, flood forecasts, and warnings, whenever in the opinion of the Chief of Engineers and the Chief of the Weather Bureau such service is advisable in connection with either preliminary examinations and surveys or works of improvement authorized by law for flood-control purposes.<sup>109</sup> An expenditure of not to exceed \$375,000 per annum, from flood-control appropriations, is authorized, and the Chief of Engineers may allot to the Weather Bureau funds for such expenditure.<sup>110</sup>

### Prosecution of Projects

In connection with laws relating to authorization of projects, we summarized those concerning evacuation, insufficient

<sup>105</sup> See *supra*, n. 103, p. 145.

<sup>106</sup> Act of July 24, 1946, § 10, 60 Stat. 641, 644; Act of June 30, 1948, § 203, 62 Stat. 1171, 1175; Act of May 17, 1950, § 204, 64 Stat. 163, —.

<sup>107</sup> Act of June 28, 1938, § 5, 52 Stat. 1215, 1223, as amended, 33 U. S. C. 701b-2.

<sup>108</sup> *Id.*

<sup>109</sup> Act of June 28, 1938, § 8, 52 Stat. 1215, 1226, 33 U. S. C. 706.

<sup>110</sup> *Id.*

authorization, water supply, school facilities, and railroad bridges altered at federal expense.<sup>111</sup> In addition to authorizing particular types of work, these laws also govern the related aspects of prosecution of projects. Also applicable here are the pre-1917 laws relating to the prosecution of navigation improvements, already discussed.<sup>112</sup> Apart from these two groups of statutes, Congress has enacted no legislation specifically governing the prosecution of flood-control projects.

### Operation of Projects

In the discussion of laws affecting the operation of navigation projects, we summarized those parts of the Act of December 22, 1944, which relate to the use of dams and reservoirs for navigation, power, water supply, irrigation, and recreation.<sup>113</sup>

Similarly, reference was there made to the provisions of 1946 legislation concerning wildlife resources.<sup>114</sup> So also as to the provisions of the Act of July 29, 1946, regarding the possible use of dams as foundations for bridges.<sup>115</sup> All of those provisions apply with like force to the operation of flood-control projects. Moreover, with respect to specified flood-control projects in the West, Congress in recent authorizations has expressly subordinated navigation use of waters to beneficial consumptive use, exactly as in the case of navigation projects.<sup>116</sup>

Congress has provided that the Secretary shall prescribe regulations for the use of storage allocated for flood control, just as in the case of navigation, at all reservoirs constructed wholly or in part with federal funds.<sup>117</sup> This law does not apply to the Tennessee Valley Authority, except that in case of danger from floods on the lower Ohio and Mississippi

<sup>111</sup> See *supra*, pp. 138-140.

<sup>112</sup> Act of March 1, 1917, § 3, 39 Stat. 948, 950, 33 U. S. C. 701. See *supra*, pp. 107-109.

<sup>113</sup> 58 Stat. 887; see *supra*, pp. 109-110.

<sup>114</sup> See *supra*, pp. 110-111.

<sup>115</sup> See *supra*, pp. 94-95.

<sup>116</sup> See, *e. g.*, Act of December 22, 1944, § 1(b), 58 Stat. 887, 889; see *supra*, pp. 111-112.

<sup>117</sup> Act of December 22, 1944, § 7, 58 Stat. 887, 890, 33 U. S. C. 709; see *supra*, p. 109.

Rivers, TVA must regulate the release of water from the Tennessee River into the Ohio River in accordance with instructions of the Department of the Army.<sup>118</sup>

### International Commissions

Duplication may again be avoided by reference to a discussion of this subject in the preceding chapter, "Navigation."<sup>119</sup> Here as there, significance attaches to the duties, responsibilities, and jurisdiction of the International Joint Commission.<sup>120</sup>

Similarly pertinent here are the duties, responsibilities, and jurisdiction of the International Boundary and Water Commission, United States and Mexico.<sup>121</sup> The Convention of February 1, 1933, provides for rectification by the Commission of the Rio Grande between El Paso and Fort Quitman, Texas, for flood protection and for the stabilization of the international boundary.<sup>122</sup> Likewise, the Secretary of State, acting through the American Commissioner, is authorized to conduct investigations relating to flood control; among other things, upon the boundary between the United States and Mexico.<sup>123</sup> And the President has authority over construction, operation, and maintenance of any project provided for in a treaty with Mexico.<sup>124</sup> Also, Congress has authorized the United States Section of the Commission to construct the Rio Grande Canalization Project, designed primarily for flood control and to facilitate compliance with the Water Convention of May 21, 1906.<sup>125</sup>

Considerable expansion of the Commission's activities resulted under the Treaty of February 3, 1944. It was given general jurisdiction over the boundary parts of the Rio Grande and the Colorado River, with provision for construction of works of conservation and flood control on the Rio Grande, and

<sup>118</sup> *Id.*

<sup>119</sup> See *supra*, pp. 121-123.

<sup>120</sup> See *supra*, pp. 121-122.

<sup>121</sup> See *supra*, pp. 122-123.

<sup>122</sup> Art's. I, VI, 48 Stat. 1621, 1622, 1624.

<sup>123</sup> Act of May 13, 1924, § 1, 43 Stat. 118, as amended, 22 U. S. C. 277a.

<sup>124</sup> § 1, 43 Stat. 118, 22 U. S. C. 277b.

<sup>125</sup> Act of August 29, 1935, § 1, 49 Stat. 961; Act of June 4, 1936, § 1, 49 Stat. 1463; Act of April 22, 1940, § 1, 54 Stat. 151.



on the Colorado and Tijuana Rivers, in connection with the division of their waters between the two countries.<sup>128</sup>

### Summary

Assumption of federal responsibility for control of floods on a national basis is a relatively recent development. Although beginning about a century ago, legislative evidence of federal interest was long confined principally to the Mississippi Valley. In 1917 and again in 1928, such interest was accentuated and broadened. Finally, Congress in 1936 pronounced a national flood-control policy and authorized numerous flood-control projects throughout the Nation. "Flood control" is defined to include "channel and major drainage improvements."

In the main, legislation relevant here bears a marked similarity to that governing navigation improvements. Thus, investigations and improvements of rivers and other waterways for flood control and allied purposes are prosecuted by the Army Engineers. In the preparation of flood-control projects, many laws concerning navigation improvements are expressly made applicable. Similarly, authorizations of surveys, preparation of reports thereon, cooperation with states and other agencies, and review by the Board of Engineers for Rivers and Harbors—all substantially follow the pattern applicable to navigation improvements.

Projects may be undertaken only when expressly authorized by Congress, and a number of laws have been enacted in the nature of continuing authorizations for specified types of work, many allowing varying degrees of discretion in the use of funds.

Excepting dam and reservoir projects, law generally applicable to authorizations for flood-control work requires that states or other local interests provide the necessary lands and maintain local works.

With few exceptions, laws concerning funds and concerning prosecution and operation of projects, including multiple uses, are substantially like those governing navigation improvements.

As to certain international waters, two international commissions have functions concerning, among other things, flood control.

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<sup>128</sup> 59 Stat. 1219.

# Irrigation

Irrigation is the artificial application of water to soil for the purpose of supplying the water essential to plant growth.<sup>1</sup> Both streams and other surface waters are used by direct diversion and by storage in reservoirs. Artesian flow and pumping from natural and artificially recharged underground supplies are also employed. In addition, scientific research seeks still other supplies, including artificial development of precipitation through nuclear process and conversion of sea and other saline waters to fresh water.<sup>2</sup> Purification of water contaminated by sewage and industrial waste is also under study.<sup>3</sup>

Irrigation is practiced in some areas of the United States having a relatively large annual but poorly distributed seasonal rainfall.<sup>4</sup> It is essential to sustain plant life in a substantial portion of the West.<sup>5</sup> Lands west of the one-hundredth meridian were apparently considered to comprise the western area concerned with irrigation in relation to public lands when Congress in 1890 required that patents to those lands reserve a right-of-way for canals or ditches constructed by authority of the United States.<sup>6</sup> Moreover, a recent re-

<sup>1</sup> Israelsen, *IRRIGATION PRINCIPLES AND PRACTICES*, p. 1 (1932).

<sup>2</sup> A recent bill would provide for research and demonstration in these matters. S. 1300, 81st Cong., 1st sess. (1949).

<sup>3</sup> See, e. g., *The Scientific Monthly*, Vol. LXXI, No. 2, p. vi (August 1950); *CANADIAN RIVER PROJECT IN TEXAS*, H. Doc. No. 678, 81st Cong., 2d sess., pp. IV, 11, 14 (1950).

<sup>4</sup> See 1 Kinney, *IRRIGATION AND WATER RIGHTS*, § 588, p. 1011 (2d ed. 1912); *STATISTICAL ABSTRACT OF THE UNITED STATES*, Table 179, p. 150 (1949).

<sup>5</sup> *California Oregon Power Co. v. Beaver Portland Cement Co.*, 295 U. S. 142, 157-158 (1935); see *supra*, p. 34, and *infra*, n. 9, p. 152.

<sup>6</sup> Act of August 30, 1890, § 1, 26 Stat. 371, 391, 43 U. S. C. 945.

Neither the Act of 1866 nor the Act of 1870 specifies the geographic area to which they shall apply, although the title of the former refers to rights-of-way "on the public lands." See *supra*, pp. 35-37.

quirement for consultation by the Chief of Engineers with the Secretary of the Interior and for cooperation was made applicable to investigations concerned with the use or control of "waters arising west of the ninety-seventh meridian."<sup>7</sup> And in connection with the operation and maintenance of navigation and flood-control projects authorized since 1944, Congress has provided that use for navigation of "waters arising in States lying wholly or partly west of the ninety-eighth meridian" shall be only such use as does not conflict with beneficial consumptive use for specified purposes, including irrigation.<sup>8</sup>

Nearly 95% of the total land irrigated in the United States is within the area generally referred to as the 17 Western States.<sup>9</sup> These are: Arizona, California, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, and Wyoming.<sup>10</sup> As we shall later see, each follows exclusively the appropriation doctrine of water rights, or recognizes it in part.<sup>11</sup> Irrigation is also practiced to some extent

<sup>7</sup> Act of December 22, 1944, § 1(a), 58 Stat. 887, 888. As previously noted, in providing for cooperation with "affected States," this statute defines that term to include those in which all or part of the works would be located; those which in whole or part are both within the drainage basin involved and situated in a State lying wholly or in part "west of the ninety-eighth meridian"; and such of those "east of the ninety-eighth meridian" as, in the judgment of the Chief of Engineers, will be substantially affected. See *supra*, pp. 96-97.

Section 1(c) of the 1944 Act also requires that, "The Secretary of the Interior, in making investigations of and reports on works for irrigation and purposes incidental thereto shall, in relation to an affected State or States (as defined in paragraph (a) of this Section) and to the Secretary of War, be subject to the same provisions regarding investigations, plans, proposals, and reports as described in paragraph (a) of this section for the Chief of Engineers and the Secretary of War." § 1(c), 58 Stat. 889.

<sup>8</sup> See, *e. g.*, § 1(b), 58 Stat. 889, and Act of March 2, 1945, § 1(b), 59 Stat. 10, 11; Act of July 24, 1946, § 2, 60 Stat. 641; Act of June 30, 1948, § 202, 62 Stat. 1171, 1175; Act of May 17, 1950, § 202, 64 Stat. 163, —.

<sup>9</sup> In 1944, there were 19,431,000 acres of irrigated land in these States. Special Release Supplementing 1945 Census of Agriculture, Department of Commerce, Bureau of Census.

<sup>10</sup> See *infra*, p. 183.

<sup>11</sup> See *infra*, pp. 156-158 and the summaries of portions of the relevant law of each of the States set forth in Appendix B, *infra*, pp. 711-777.

in the States of Arkansas, Florida, New Jersey, and Louisiana.<sup>12</sup> The first three are generally considered common-law states,<sup>13</sup> while the law of Louisiana finds its source in the civil law.<sup>14</sup> All, however, generally recognize only the riparian doctrine.<sup>15</sup>

In the preface to the first edition to his work on *Irrigation and Water Rights*, Kinney observed in 1894 that, with the increase in irrigation undertakings and their involvement in the doctrine of appropriation, a departure from the common-law doctrine of riparian rights had already resulted in numerous water-right controversies and "a mass of court decisions and statutory law on the subject."<sup>16</sup> Eighteen years later, he prefaced his four-volume second edition of that work by noting the adoption in the interim by many irrigation states of water

<sup>12</sup> Special Release Supplementing 1945 Census of Agriculture, Department of Commerce, Bureau of Census.

<sup>13</sup> In this connection, see generally *Missouri Pac. R. Co. v. McKinney*, 189 Ark. 69, 72, 71 S. W. 2d 180, 181 (1934); *Knapp v. Fredricksen*, 148 Fla. 311, 40 So. 2d 251 (1941); *Girard Trust Co. v. Schmitz*, 129 N. J. Eq. 444, 467, 20 A. 2d 21, 35 (1941).

Under a 1909 Arkansas statute, certain powers are available to corporations created "for the purpose of furnishing water to the public for irrigation of any lands or crops." ARK. STATS. ANN., 1947, § 35-1201. A recent statute also provides for the establishment of irrigation districts. ARK. STATS. ANN., 1947, CUM. SUPP., 1949, §§ 21-901-21-933.

In Florida, the riparian doctrine is generally applicable under a statute in force since 1856. See FLA. STATS. ANN., § 271.01 and cases there cited. Cooperative irrigation districts are also authorized. § 611.38. Moreover, the Florida State Improvement Commission may acquire and maintain facilities for irrigation, among other purposes. § 420.06(7).

In New Jersey, a board of chosen freeholders may build and operate irrigation systems. N. J. STAT. ANN., 1940, § 40.31-1. For that purpose, such a board is authorized to take water "from any river, stream, lake or other source." § 40.31-2.

<sup>14</sup> In this connection, see generally DART'S CIVIL CODE OF LA. (1870 rev.) pp. iii-v. The right of drawing water is declared to be a servitude. DART'S CIVIL CODE OF LA. § 720.

Pertinent here is Kinney's statement that "the law of appropriation in principle follows the civil law more closely than it does the common law, although the California Courts and the Courts of some of the other States attempt to justify the diversion of water for irrigation and other uses which consume the water under the common law." 1 KINNEY, IRRIGATION AND WATER RIGHTS, § 552, p. 959 (2d ed. 1912).

<sup>15</sup> See generally, 1 KINNEY, IRRIGATION AND WATER RIGHTS, § 507, pp. 870-873 (2d ed. 1912).

<sup>16</sup> 1 KINNEY, IRRIGATION AND WATER RIGHTS, Preface (1894).

codes and irrigation-district laws, and the addition of thousands of decisions by "courts of last resort of these Western States, deciding or attempting to decide many propositions as they were presented and new phases of rights to waters."<sup>17</sup> Statutes and decisions have of course continued to accumulate since then. We shall not attempt here to treat this mass of law with its multiple variations from state to state. It should be noted, however, that Appendix B of this volume contains independently prepared summaries of portions of such state laws.

Our direct concern is with federal responsibility for and participation in irrigation undertakings. To provide a necessary part of the background, however, we shall first discuss generally the divergent doctrines of water law in their relation to irrigation, including the use of underground water and return flow. Similarly, we shall summarize the significant developments leading to assumption of federal irrigation responsibilities. Then comes an examination in more detail of the nature and scope of federal irrigation activities. Principal attention will thus be devoted to Reclamation Law, a term which we shall use to refer to the Reclamation Act of 1902, as supplemented and amended over a period of nearly 50 years by more than 175 general, basic, and special acts of Congress.<sup>18</sup> In addition, we shall consider other federal statutes significantly relating directly or indirectly to federal irrigation undertakings.

## Water Rights

A water right is a right only to use of water—a right usufructuary in character, not a right to the corpus of the water itself.<sup>19</sup> Wiel has described the right as "real property," saying

<sup>17</sup> 1 Kinney, *IRRIGATION AND WATER RIGHTS*, Preface (2d ed. 1912).

<sup>18</sup> Act of June 17, 1902, 32 Stat. 388, as amended and supplemented, 43 U. S. C. 391 *et seq.* These and other statutes applying to specific projects have been printed in a single volume entitled *FEDERAL RECLAMATION LAWS, ANNOTATED*, Department of the Interior, Bureau of Reclamation (2d ed. 1943). An annotated cumulative supplement thereto carries a collection through 1946.

<sup>19</sup> See, e. g., *Luz v. Haggin*, 69 Cal. 255, 390, 10 Pac. 674, 753 (1886); *Mettler v. Ames Realty Co.*, 61 Mont. 152, 161-162, 201 Pac. 702, 704 (1921).

that it is "as fundamental under the law of riparian rights as under the law of appropriation."<sup>20</sup> With respect to the riparian doctrine, the Supreme Court has recently said:<sup>21</sup>

The riparian system does not permit water to be reduced to possession so as to become property which may be carried away from the stream for commercial or non-riparian purposes.

Correspondingly under the appropriation doctrine, a water right is only a right to use.<sup>22</sup>

**RIPARIAN AND APPROPRIATION DOCTRINES.**—There are two basic though fundamentally divergent doctrines controlling the use of waters of natural, surface watercourses. A 1943 summary of the situation in the West points out that:<sup>23</sup>

The western law of water rights embraces the common-law doctrine of riparian rights and the statutory doctrine of prior appropriation. The principles underlying these two doctrines are diametrically opposed to each other, the former being based on the ownership of land contiguous to a stream, without regard to the time of use or to any actual use at all, and the latter on the time of use and on actual use without regard to the ownership of land contiguous to the watercourse.

The riparian doctrine is recognized in varying degrees in seven of the 17 Western States but has been specifically repudiated in

<sup>20</sup> "This usufructuary right or 'water right,' is the substantial right with regard to flowing waters; is the right which is almost invariably the subject matter over which irrigation or water power or similar contracts are made and litigation arises; and is real property. It is as fundamental under the law of riparian rights as under the law of appropriation." I WIEL, *WATER RIGHTS IN THE WESTERN STATES*, § 18, pp. 20-21 (3d ed. 1911). See also 56 *AM. JUR.*, *Waters*, § 292, p. 742.

<sup>21</sup> *United States v. Gerlach Live Stock Co.*, 339 U. S. 725, 745 (1950). See also *supra*, n. 142, p. 35.

<sup>22</sup> See, e. g., *Rock Creek Ditch & Flume Co. v. Müller*, 93 Mont. 248, 253, 17 P. 2d 1074, 1076 (1933).

<sup>23</sup> *STATE WATER LAW IN THE DEVELOPMENT OF THE WEST*, Report to the Water Resources Committee by its Subcommittee on State Water Law, National Resources Planning Board, p. 5 (1943).

eight of them, the situation being less clear in the remaining two; on the other hand the appropriation doctrine is variously recognized in all 17.<sup>24</sup>

Under the riparian doctrine, only an owner of lands riparian to a stream may make reasonable use of its waters, but only on his riparian lands.<sup>25</sup> His right is subject to the same right in all others similarly situated, each of whom is entitled to share equitably in the water use.<sup>26</sup> Moreover, this doctrine entitles a proprietor of riparian land to the continued natural flow of the stream, a right enforceable by judicial process.<sup>27</sup> The right of a riparian owner is not gained by actual use of water, or lost by failure to use it.<sup>28</sup> The riparian doctrine has undergone varying modification in those Western States still according it some recognition.<sup>29</sup>

The appropriation doctrine, on the other hand, rests on the proposition that beneficial use of water is the basis, meas-

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<sup>24</sup> "The riparian doctrine has been recognized to varying degrees in North Dakota, South Dakota, Nebraska, Kansas, Texas, California, and Washington. In Oklahoma it has been assumed that the riparian doctrine is in effect but the right of a riparian owner against an appropriator of the water of the same stream has not yet been defined by the Supreme Court. It is theoretically recognized in Oregon, but statutes and court decisions in that State are such that it has been practically discarded. The doctrine has been specifically repudiated in toto in Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming.

"The appropriation doctrine has been adopted in all 17 of the arid and semiarid Western States. In such of these States as also recognize the riparian doctrine, the two doctrines are recognized concurrently. The two-fold system is often referred to as the 'California doctrine' and the exclusive appropriation system as the 'Colorado doctrine.'" *Id.* p. 8. See also summaries in Appendix B of this volume.

<sup>25</sup> See, e. g., *Lus v. Haggis*, 69 Cal. 255, 10 Pac. 674 (1886).

<sup>26</sup> *Head v. Amoskeag Manufacturing Co.*, 113 U. S. 9, 23 (1885).

<sup>27</sup> *United States v. Rio Grande Irrigation Co.*, 174 U. S. 690, 702 (1889); *Kansas v. Colorado*, 206 U. S. 46, 85 (1907).

<sup>28</sup> Chandler, ELEMENTS OF WESTERN WATER LAW, p. 27 (1913).

<sup>29</sup> See *supra*, n. 142, p. 35. Views of early writers differed as to the extent of modification which the common-law riparian doctrine has undergone. For example, compare the discussions of *Lus v. Haggis* by Chandler and Wiel. Chandler, ELEMENTS OF WESTERN WATER LAW, p. 13 (1913); I Wiel, WATER RIGHTS IN THE WESTERN STATES, §§ 673-674, pp. 745-747 (3d ed. 1911).

ure, and limit of the appropriative right.<sup>20</sup> The first in time is prior in right.<sup>21</sup> Neither the diversion of water alone nor intent alone will suffice to vest an appropriative right.<sup>22</sup> Perfected only by use, the right is lost by abandonment.<sup>23</sup> Similarly, under provisions of many state statutes, forfeiture will follow failure to use beneficially for a specified time.<sup>24</sup> An appropriative water right is not identified by ownership of riparian lands.<sup>25</sup> On the contrary, its existence and relationship to other rights on the same stream are identified in terms of time of initiation of the right by starting the work to divert water, coupled with an intent to make beneficial use of it, and the diligence with which the appropriator prosecutes to completion his diversion works and actually applies the water to beneficial use.<sup>26</sup>

The term "appropriation of water" under the arid-region doctrine has been defined as follows: <sup>27</sup>

The appropriation of water consists in the taking or diversion of it from some natural stream or other source of water supply, in accordance with law, with the intent to apply it to some beneficial use or purpose, and con-

<sup>20</sup> *Ide v. United States*, 263 U. S. 497, 505 (1924), citing the Wyoming statute declaratory of the principle, WYO. COMP. STAT. 1910, § 724.

It should also be noted that Section 8 of the 1902 Reclamation Act contains a proviso that "the right to the use of water acquired under the provisions of this act shall be appurtenant to the land irrigated and beneficial use shall be the basis, the measure, and the limit of the right." Act of June 17, 1902, § 8, 32 Stat. 388, 390, 43 U. S. C. 372.

<sup>21</sup> *Arizona v. California*, 298 U. S. 558, 566 (1936); *Arizona Copper Co. v. Gillespie*, 12 Ariz. 190, 202, 100 Pac. 465, 469 (1909).

<sup>22</sup> *Albuquerque Land & Irrigation Co. v. Gutierrez*, 10 N. Mex. 177, 240, 61 Pac. 357, 361 (1900).

<sup>23</sup> I Wiel, WATER RIGHTS IN THE WESTERN STATES, §§ 566-567, pp. 603-607 (3d ed. 1911).

<sup>24</sup> See, e. g., N. MEX. STATS. ANN., 1941, § 77-526, which works a forfeiture of an appropriative right to use water, except that for storage reservoirs, upon failure to exercise the right for four years, unless caused by conditions beyond control of the owner of the right.

<sup>25</sup> *Boquillas Land & Cattle Co. v. Curtis*, 213 U. S. 339, 347 (1909).

<sup>26</sup> *Arizona v. California*, 298 U. S. 558, 566 (1936). See also the meaning of the term "to appropriate water" as set forth in *Arizona v. California*, 293 U. S. 423, 459 (1931).

<sup>27</sup> 2 Kinney, IRRIGATION AND WATER RIGHTS, § 707, p. 1216 (2d ed. 1912).



summed, within a reasonable time, by the actual application of all of the water to the use designed, or to some other useful purposes.

The steps taken toward acquisition must accord with the laws of the state where the water is found.<sup>38</sup> And "every State is free to change its laws governing riparian ownership and to permit the appropriation of flowing waters for such purposes as it may deem wise."<sup>39</sup>

It should also be noted that all of the western irrigation states excepting Montana have adopted comprehensive statutes controlling the acquisition, administration, and control of water rights.<sup>40</sup> The Supreme Court of the United States has pointed out that the reason for passage of such statutes lies in the deficiency of the ordinary procedure and processes of law to meet the need for segregation, by various individuals or companies, of water taken by separate canals or ditches at different points along the same stream under appropriative rights.<sup>41</sup>

GROUND WATER.—With the diminution of the quantity of unappropriated water in the normal flow of western surface streams, increasing attention has been turned to ground water for additional supply.<sup>42</sup> It has been estimated that the 1945 daily use for irrigation of water pumped from wells reached an

<sup>38</sup> *Arizona v. California*, 283 U. S. 423, 459 (1931).

<sup>39</sup> *Connecticut v. Massachusetts*, 282 U. S. 660, 670 (1931). See also CALIF. CONST., Art XIV, § 3, specifying certain limitations on riparian rights.

<sup>40</sup> STATE WATER LAW IN THE DEVELOPMENT OF THE WEST, Report to the Water Resources Committee by its Subcommittee on State Water Law, National Resources Planning Board, pp. 99-111 (1943).

<sup>41</sup> *Montezuma Canal Co. v. Smithville Canal Co.*, 218 U. S. 371, 385 (1910), citing with approval *Farm Investment Co. v. Carpenter*, 9 Wyo. 110, 125, 61 Pac. 258, 260 (1900).

<sup>42</sup> In Utah, for example, "The U. S. Geological Survey has made a careful study of ground-water resources. The State Engineer's Office has devoted special attention to the clarification and recording of rights to ground water. Perplexing legal questions and costly water-right litigation have, nevertheless, retarded ground water development." IRRIGATION COMPANIES IN UTAH, Bulletin 322, Agricultural Experiment Station, Utah State Agricultural College, p. 30 (March 1946).

unprecedented 10 billion gallons, about half the total pumping for all purposes, and that more than 90% of that irrigation use occurred in the 17 Western States.<sup>43</sup>

As compared with surface waters, it is more difficult to ascertain the occurrence and characteristics of ground water. Considerable expense often attaches to attempts to use the latter, and naturally surface waters were generally used first. Thus, the legal principles applicable to ground water use have not crystallized as rapidly as those applying to surface waters.

Classification presents one resulting source of difficulty. Some hydrologists consider that all water in the "zone of saturation" should be encompassed in the single classification "ground water."<sup>44</sup> But in the current state of the law that approach, however sound hydrologically, at once encounters difficulty if applied in legal actions. For courts have generally divided ground waters into two classifications, waters flowing in definite underground streams and percolating waters.<sup>45</sup> Moreover, in the absence of another statutory basis, ground waters are presumed in some states to be percolating waters unless it is evident that they flow in a defined channel.<sup>46</sup> And the burden of proving the existence of an underground stream rests with the party alleging it.<sup>47</sup>

In the case of defined subterranean streams, the previously mentioned 1943 survey states that:<sup>48</sup>

It seems well settled in the Western States that defined subterranean streams are subject to the same rules

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<sup>43</sup> Paulsen, *GROUND-WATER PROBLEMS IN THE UNITED STATES*, Department of the Interior, Geological Survey, p. 4 (September 1949).

<sup>44</sup> See, e. g., Thompson and Fiedler, *Some Problems Relating to Legal Control of Use of Ground Waters*, *AMERICAN WATERWORKS ASSOCIATION JOURNAL*, Vol. 30, No. 7, p. 1061 (July 1938).

<sup>45</sup> *STATE WATER LAW IN THE DEVELOPMENT OF THE WEST*, Report to the Water Resources Committee by its Subcommittee on State Water Law, National Resources Planning Board, p. 70 (1943).

<sup>46</sup> See, e. g., *Evans v. City of Seattle*, 182 Wash. 450, 453, 47 P. 2d 984, 985 (1935). See also 56 *AM. JUR.*, Waters § 103, n. 17.

<sup>47</sup> See, e. g., *Clinchfield Coal Corp. v. Compton*, 148 Va. 437, 448, 139 S. E. 308, 312 (1927). See also 56 *AM. JUR.*, Waters § 103, n. 18.

<sup>48</sup> *STATE WATER LAW IN THE DEVELOPMENT OF THE WEST*, Report to the Water Resources Committee by its Subcommittee on State Water Law, National Resources Planning Board, p. 71 (1943).

of law which are applicable to surface streams. Consequently, in any State, the appropriation and riparian doctrines apply to subterranean streams to the same extent to which they apply to surface streams. Regardless of whether or not the appropriation statutes refer to underground streams, court decisions in the Western States have invariably upheld the appropriability of unappropriated waters of known and defined underground streams, subject to vested rights.

In the case of percolating waters, that survey outlines three concepts of rights as applied in different jurisdictions.<sup>49</sup> The first is the common-law rule based upon the principle that the owner of the soil has absolute right to use all that is found therein. Thus, the landowner may withdraw percolating waters without limitation and regardless of effect elsewhere.<sup>50</sup> The second is the "reasonable use" rule, under which a landowner may make only a reasonable use of percolating water underlying the land, having due regard for the equal right of all other owners of land overlying the same common supply.<sup>51</sup> In an adaptation of this rule, California follows the rule of "correlative rights," under which the rights of all owners of overlying lands are considered correlative and coequal.<sup>52</sup> The third is the appropriation doctrine, previously discussed in its relation to surface waters.<sup>53</sup>

The 1949 California opinion in *Pasadena v. Alhambra* merits notice here.<sup>54</sup> In that case, the plaintiff sought to enjoin overdrafts and a determination of ground-water rights in the 40 square mile, alluvial-filled Raymond Basin Area. The Supreme Court of California reviewed the correlative-right prin-

<sup>49</sup> *Id.* pp. 72-76.

<sup>50</sup> *Id.* p. 72.

<sup>51</sup> *Id.* p. 73.

<sup>52</sup> See, e. g., *Katz v. Walkinshaw*, 141 Cal. 116, 70 Pac. 663 (1902), 74 Pac. 766 (1903).

<sup>53</sup> STATE WATER LAW IN THE DEVELOPMENT OF THE WEST, Report to the Water Resources Committee by its Subcommittee on State Water Law, National Resources Planning Board, pp. 75-76 (1943).

<sup>54</sup> 33 Cal. 2d 908, 207 P. 2d 17 (1949), cert. den. sub nom. *California-Michigan Land & Water Co. v. Pasadena*, 339 U. S. 937 (1950).

ciple and declared the classification of rights in an underground basin to embrace overlying, appropriative, and prescriptive rights.<sup>55</sup> It held that appropriative rights may attach only to surplus ground water; that the surplus is not subject to prescription as against an overlying owner because, if surplus, no right of the overlying owner is invaded; that surplus water may be exported from the basin for nonoverlying uses; and that appropriative rights in such surplus are, in time of shortage, subject to the rights of overlying owners which are paramount to appropriative rights except as invaded by prescription.<sup>56</sup> The Court limited all withdrawals to the amount of the estimated safe yield.<sup>57</sup>

In general, recent legislative trend appears moving toward conservation of ground water on the reasonable-use basis, and toward applying to ground water the principles of use and administration applicable to surface waters.<sup>58</sup> It may also be

<sup>55</sup> 33 Cal. 2d at 925, 207 P. 2d at 28.

<sup>56</sup> 33 Cal. 2d at 925, 926, 207 P. 2d at 28-29.

<sup>57</sup> 33 Cal. 2d at 936-937, 207 P. 2d at 34-35.

<sup>58</sup> For a summary of the ground-water law in each of the 17 Western States see STATE WATER LAW IN THE DEVELOPMENT OF THE WEST, Report to the Water Resources Committee by its Subcommittee on State Water Law, National Resources Planning Board, App. C, pp. 118-127 (1943).

From the date of the foregoing report, May 1943, through 1949 legislative sessions, no change of major significance appears in the relevant laws of Colorado, Idaho, Montana, Nebraska, North Dakota, Oklahoma, Oregon, South Dakota, and Washington. Abbreviated indications of the general nature of principal subsequent alterations in other Western States follow:

*Arizona*.—Adopted a ground-water code in 1948, including provision for "critical groundwater areas," wherein irrigation wells may be constructed only by permit. ARIZ. CODE ANN. 1939 CUM. SUPP., § 75-145 *et seq.*

*California*.—In 1949, added provisions for investigating damage to quality of underground waters and for reporting data upon completion of water wells or upon conversion of oil and gas wells to water wells. DEERING'S CALIFORNIA CODES, WATER, 1949 CUM. SUPP., §§ 231, 7076, 7077.

*Kansas*.—Ground waters made subject in 1945 to enactments providing for appropriation for enumerated beneficial uses, subject to prior vested rights and forfeiture on nonuse for three years. 1947 CUM. SUPP. KANS. GEN. STATS., 1935, §§ 82a-701, 82a-707.

*Nevada*.—Act for conservation and distribution of underground waters amended in 1947 and 1949 to provide for exempting domestic appropriations not exceeding two gallons per minute and for designating basin areas

noted that there is little federal legislation dealing expressly with ground waters.<sup>69</sup>

**RETURN FLOW.**—Another increasingly important aspect of water law concerns the right to return flow, the right of the

wherein underground waters shall be administered pursuant to the act. New provisions as to drilling of wells, waste, procedure for appropriation, adjudication of rights, forfeiture, and abandonment. NEV. COMP. LAWS, SUPP. 1943-1949, §§ 7993.11-7993.21.

*New Mexico.*—Added 1943 amendment to clarify recognition of existing rights in connection with applications for use of underground water, and in 1949 required licenses for the drilling of wells from chartered underground sources. N. MEX. STAT. 1941, 1949 SUPP., §§ 77-1103, 77-1116-17-1121.

*Texas.*—In 1949, authorized creation of Underground Water Conservation Districts with such powers as issuance of rules and regulations, and also permits for drilling wells. Recognized owner of overlying land as owning ground water subject to district regulations. VERNON'S ANN. REV. CIVIL STATS. OF TEXAS, 1949 CUM. SUPP., Art. 7880-3c.

*Utah.*—In 1945, provided for control of artesian wells wasting water and required that notice of all claims to the use of underground waters be filed with the State Engineer, such notice since 1949 being *prima facie* evidence as to all rights defined in the claim. UTAH CODE ANN. 1943, 1949 CUM. SUPP., §§ 100-2-21, 100-5-12, 100-5-15.

*Wyoming.*—In 1947, provided for broader regulation of underground water rights. Reasonable use of all underground waters declared a matter of public interest. Reasonable, economic, beneficial use the basis, measure, and limit of the right. Domestic, culinary, and stock-farm uses exempted. So also use for irrigation for lawns and gardens not exceeding four acres. Claims, descriptions, and applications to appropriate to be filed with State Engineer. Upon determination of capacity and extent of underground water formations, State Board of Control may adjudicate rights therein after hearing, subject to appeal, and issue certificates of right of appropriation. Abandonment subject to same laws as in case of surface waters. Change of location of appropriation may be made within same underground basin without loss of right. WYO. COMP. STATS. 1945, 1949, CUM. SUPP., §§ 71-408-71-420.

<sup>69</sup> The Secretary of the Interior is authorized to issue permits for not more than 2,560 acres of public land in Nevada, for exploration and development of "water beneath the surface," on condition that the permittee shall commence "development of underground waters" within six months from the permit date. When sufficient water has been developed for a profitable crop production, other than native grasses, on not less than 20 acres, a patent may be issued to as much as 640 acres. The statute says nothing respecting state laws and apparently proceeds on the assumption that, as owner of the public lands, the United States owns and may dispose of underlying waters. Act of October 22, 1919, 41 Stat. 293, as amended, 43 U. S. C. 351-360.

original diverter of waters to reuse them.<sup>60</sup> For example, water escaping from a reservoir by leakage may collect in low areas or percolate through the subsoil later to augment the flow of the stream from which it was diverted. Litigation involving return flow has arisen in connection with a number of large irrigation projects under Reclamation Law.<sup>61</sup> Like ground water, return flow presents complicated physical problems not present in the case of surface waters, such as that encountered in efforts to trace and identify return flow.<sup>62</sup>

As large-scale irrigation operations progressed, irrigated areas experienced a rising water table. At times, this resulted in widespread waterlogging of lands irrigated by the project and of other lands.<sup>63</sup> Remedies have included use of deep, open drainage ditches or sumps from which water is pumped into wasteways. Recovery of significant flows in this manner sharpened interest in legal rights to their use.

Some states have enacted legislation regarding rights in seepage from constructed works.<sup>64</sup> A 1941 New Mexico statute furnishes an interesting example.<sup>65</sup> It defines "artificial surface waters" as:

waters whose appearance or accumulation is due to escape, seepage, loss, waste, drainage, or percolation from

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<sup>60</sup> Judicial opinions variously refer to "waste waters," "seepage and waste waters," or "return flow." See, e. g., *Nebraska v. Wyoming*, 325 U. S. 589, 600 (1945); *Ramshorn Ditch Co. v. United States*, 269 Fed. 80, 85 (C. A. 8, 1920).

<sup>61</sup> For example: Salt River Project, *Lambeye v. Garcia*, 18 Ariz. 178, 157 Pac. 977 (1916); Boise Project, *Griffiths v. Cole*, 264 Fed. 369 (D. C. Idaho 1919); North Platte Project, *Ramshorn Ditch Co. v. United States*, 269 Fed. 80 (C. A. 8, 1920); Boise Project, *United States v. Haga*, 276 Fed. 41 (D. C. Idaho 1921); Shoshone Project, *Ida v. United States*, 263 U. S. 497 (1924); North Platte Project, *United States v. Tilley*, 124 F. 2d 850 (C. A. 8, 1941); Kendrick Project, *Nebraska v. Wyoming*, 325 U. S. 589 (1945).

<sup>62</sup> See, e. g., the reference to the "obscurity in the movement of percolating waters" in *Natron Soda Company v. United States*, 257 U. S. 138, 146 (1921).

<sup>63</sup> See, e. g., *Nampa & Meridian Irrigation District v. Bond*, 268 U. S. 50, 52 (1925). For more extensive discussion of the facts, see *Nampa & Meridian Irrigation Dist. v. Bond*, 288 Fed. 541 (C. A. 9, 1923).

<sup>64</sup> See, e. g., the review of the law of several states in *Binning v. Miller*, 55 Wyo. 451, 466, 102 P. 2d 54, 59 (1940).

<sup>65</sup> N. MEX. STAT. ANN. 1941, § 77-525.

constructed works either directly or indirectly, and which depend for their continuance upon the acts of man.

Such waters are declared to be primarily private and subject to beneficial use by the owner or developer. It is provided, however, that they shall become subject to appropriation when they have passed beyond the dominion of the developer and have reached a natural stream without having been used by him for a four-year period after their first appearance.

But under the statute no appropriator may require the owner or developer to continue such a water supply, except by contract, grant, dedication, or condemnation. In this respect, it incorporates principles similar to those enunciated in the 1916 Arizona opinion in *Lambeye v. Garcia*.<sup>66</sup> Still earlier, Kinney had said in 1912 that a like rule was generally followed in the case of irrigation water which, because of the lay of the land of a prior appropriator, flows on to the land of another.<sup>67</sup>

Similar principles were applied in *United States v. Haga*, a case arising in Idaho.<sup>68</sup> There, a United States District Court upheld an original appropriator's right to wastage, both in the form of surface run-off and deep percolation, so long as he can identify it and his right has not been abandoned or forfeited by nonuse.<sup>69</sup> The *Haga* opinion was quoted with approval by the United States Supreme Court when it examined rights in seepage waters of the Shoshone Project in *Ide v. United States*.<sup>70</sup> The Court there upheld the right of the United States to straighten and use a ravine to collect return flow from water used for irrigation and to reuse such water.<sup>71</sup> In connection with the North Platte Project, the United States Court of Appeals for the Eighth Circuit used like reasoning in holding that an appropriator has a reasonable time within which to reclaim seepage.<sup>72</sup> Over 20 years later, similar questions arose in connection with this Project, and the same Court

<sup>66</sup> 18 Ariz. 178, 181-182, 157 Pac. 976, 979 (1916).

<sup>67</sup> 2 Kinney, IRRIGATION AND WATER RIGHTS, § 661, p. 1150 (2d ed. 1912).

<sup>68</sup> 276 Fed. 41 (D. C. Idaho 1921).

<sup>69</sup> 276 Fed. at 43-44.

<sup>70</sup> 263 U. S. 497, 506 (1924).

<sup>71</sup> 263 U. S. at 507.

<sup>72</sup> *Ramshorn Ditch Co. v. United States*, 269 Fed. 80, 85 (C. A. 8, 1920).

sustained the right of the United States to collect seepage waters and apply them on any of the lands of the Project.<sup>73</sup>

Also important here is *Nebraska v. Wyoming*, in which those States sought an apportionment of the waters of the North Platte River.<sup>74</sup> Colorado was impleaded as a defendant, and the United States was granted leave to intervene.<sup>75</sup> One question concerned the recapture in Wyoming of return-flow water from the Kendrick Project after its return to the River and commingling with the general flow. Another concerned diversions from the River at or above the Alcova Reservoir as "in lieu of" Kendrick Project return flow reaching the River below Alcova.<sup>76</sup> While the Project was not then completed, it was estimated that natural drainage and that from drainage facilities, including sump areas, would contribute return flow of 96,000 acre-feet a year, of which an estimated 46,000 would occur during the irrigation period.<sup>77</sup> The Court's opinion expressly employs the term "natural flow" as including return flow reaching the River.<sup>78</sup>

Reaffirming the principles of the *Ide* case, the Court held that the United States, as owner of the Project, is entitled to obtain full use of water for the Project and to retain control over it until abandonment.<sup>79</sup> In connection with return flow from drainage facilities, the Court deferred consideration on the merits pending ascertainment of the extent of the contribution from artificial drainage. It accordingly concluded that, when the Project had been put in operation and there is a full development of return flow, application might be made for revision of the decree to permit "in lieu of" diversions at or above Alcova.<sup>80</sup>

Worthy of note here is an 1899 Colorado statute providing that ditches built to use "waste, seepage or spring waters of

<sup>73</sup> *United States v. Tilley*, 124 F. 2d 850 (C. A. 8, 1941).

<sup>74</sup> 325 U. S. 589, 633-637 (1945).

<sup>75</sup> See *supra*, pp. 47-48.

<sup>76</sup> 325 U. S. at 636-637.

<sup>77</sup> 325 U. S. at 634.

<sup>78</sup> *Ibid.*

<sup>79</sup> 325 U. S. at 637.

<sup>80</sup> *Ibid.*



the state" shall be governed by the same laws as control appropriations from ditches constructed to utilize water of running streams, a statute frequently subject to judicial scrutiny.<sup>81</sup> While it reserves a prior right in the owner of lands on which such waters arise, such a right has been held to attach only to waters not tributary to a natural stream, and the right may be lost by prescription.<sup>82</sup> A recent case in point also holds that one asserting that water is not tributary has the burden of proof, the natural presumption being that all water finds its way to a stream.<sup>83</sup>

In another recent case, the Supreme Court of California rejected a contention that leakage from the Rodriguez Dam in Mexico on the Tijuana River and return flow from an adjoining irrigation project constituted "waste" or "foreign" waters.<sup>84</sup> The Court held such waters to be portions of the natural stream flow which, after interruption by storage and use, find their way back into the surface and underground channel of the River and flow over the international boundary, becoming subject to appropriation under the laws of California.<sup>85</sup>

The foregoing considerations indicate a lack of uniformity in the law respecting return flow. Significant, however, are such recent holdings as that permitting prescription against a landowner's unexercised right of use in favor of others willing and able to use the water, and the mounting insistence upon widest practicable use of return flow.<sup>86</sup>

<sup>81</sup> 1935 COLO. STATE ANN., vol. 3, ch. 90, § 20 and cases there cited.

<sup>82</sup> *Lomas v. Webster*, 109 Colo. 107, 110-112, 122 P. 2d 248, 250-251 (1942).

<sup>83</sup> *De Haas v. Benesch*, 116 Colo. 344, 350, 181 P. 2d 453, 456 (1947).

<sup>84</sup> *Allen v. California Water & Telephone Co.*, 29 Cal. 2d 466, 482, 176 P. 2d 8, 18 (1946).

<sup>85</sup> *Ibid.*

<sup>86</sup> The Supreme Court of California has said, "It is the policy of the state to foster the beneficial use of water and discourage waste, and when there is a surplus, whether of surface or ground water, the holder of prior rights may not enjoin its appropriation." *Pasadena v. Alhambra*, 33 Cal. 2d 908, 926, 207 P. 2d 17, 28 (1949). See also *Lomas v. Webster*, 109 Colo. 107, 111, 122 P. 2d 248, 250-251 (1942).

Quoting from the *Ide* case, the United States Supreme Court said in *Nebraska v. Wyoming*, "The State law and the National Reclamation Act both contemplate that the water shall be so conserved that it may be subjected to the largest practicable use." 325 U. S. 589, 635 (1945).

INTERSTATE RIVERS.—Many important rivers or their tributaries originate in the highlands of one state to pursue a course through others. As we later point out, there is a growing awareness of the multiple benefits to be derived from basin-wide development of river systems and their watersheds under comprehensive plans.<sup>87</sup> In the process of comprehensive development, particular projects are of especial concern to the people within their immediate area.

In the case of irrigation projects, the availability of suitable land, characteristics of local economy, lesser financial outlay required for diversion works, and other factors sometimes promote downstream development before projects are initiated for use of waters upstream. On the other hand, opportunities for diversion first occur in upstream areas.

Just as in the case of individual water users on a stream, questions have arisen between states in regard to their respective rights in waters of interstate rivers. Despite the differences in basic systems of state water law, some of which we have already noted, the relative rights of states litigating a water controversy do not depend upon their respective systems of law.<sup>88</sup> On the contrary, in settling interstate water controversies, the Supreme Court has applied the principles of equitable apportionment, a doctrine which resolves the controversy on the basis of the equality of rights without adherence to any particular formula.<sup>89</sup>

Use of water for irrigation is vitally affected by determination of such interstate water controversies. As we have already pointed out, such controversies may be settled by original suits brought in the United States Supreme Court, or by interstate compacts.<sup>90</sup>

## Irrigation Water Companies and Irrigation Districts

Outstanding among organizations for group irrigation development are irrigation water companies and irrigation

<sup>87</sup> See Chapter 9, Comprehensive Development, *infra*, pp. 383-491.

<sup>88</sup> *Connecticut v. Massachusetts*, 282 U. S. 660, 670 (1931).

<sup>89</sup> See *supra*, pp. 58-64.

<sup>90</sup> See *supra*, pp. 64-70.

districts. Because of their relationship to federal irrigation undertakings, we shall summarize here the characteristics of each.

As the opportunities for simpler irrigation developments were exhausted, attention was turned to undertakings more remote from streams. Necessarily, these were more complex and involved larger construction costs. An answer was found in irrigation companies, combining capital and labor to achieve greater results. And with the growth of the appropriation doctrine, the number of such companies increased.

Kinney reported in 1912 that the results of such private companies and corporations far exceeded the results of all other irrigation enterprises.<sup>91</sup> These private organizations may be divided into two groups, the corporation organized to supply water to the general public for compensation, and the mutual irrigation or ditch company, organized by irrigators to supply themselves.<sup>92</sup> They are thus quasi-public, or in the nature of mutual companies restricting service to their own stockholders.<sup>93</sup> A common type was the joint-stock company.<sup>94</sup>

Such companies found a use under the amended Desert Land Act of 1894, commonly called the Carey Act.<sup>95</sup> Approval of an application by a state for designation of desert lands for a Carey-Act project is followed by contract between the state and a construction or irrigation company for construction and operation of the irrigation works.<sup>96</sup> Settlers then usually

<sup>91</sup> 3 Kinney, IRRIGATION AND WATER RIGHTS, § 1450, pp. 2611-2613 (2d ed. 1912).

<sup>92</sup> Long, A TREATISE ON THE LAW OF IRRIGATION, §§ 279, 280, pp. 484-486 (2d ed. 1916).

<sup>93</sup> *Ibid.*

<sup>94</sup> Teele, IRRIGATION IN THE UNITED STATES, p. 191 (1915).

<sup>95</sup> Act of August 18, 1894, § 4, 28 Stat. 372, 424, as amended, 43 U. S. C. 641 *et seq.* See in particular the Act of June 11, 1896, § 1, 29 Stat. 413, 434, 43 U. S. C. 642. Under this amendment, wealthy individuals and corporations might be given a lien upon the lands for the money advanced by them for the construction of works. See 3 Kinney, IRRIGATION AND WATER RIGHTS, § 1323, p. 2397 (2d ed. 1912).

<sup>96</sup> See, e. g., *Portneuf-Marsh Valley Canal Co. v. Brown*, 274 U. S. 630, 632 (1927); REV. CODE OF MONT., 1947 ANN. §§ 81-2101-81-2104; WYO. COMP. STAT. 1945, §§ 24-406-24-417.

acquire their water rights by contract with such company.<sup>97</sup>

It became apparent as early as 1915 that the joint-stock companies were not well suited for construction of large projects since they were without substantial amounts of capital.<sup>98</sup> And the trend has been generally away from commercial irrigation enterprises.<sup>99</sup> There are, however, many mutual companies or associations still functioning, particularly in certain areas.<sup>100</sup>

An outstanding feature of these organizations is their voluntary character. In practice, landowners generally make mutual stock-subscription contracts subjecting them to assessments which become liens both upon the shares of stock and the water rights represented thereby to meet the authorized costs of the company.<sup>101</sup> A form of mutual company, the "water users' association," was an early contracting entity in operations under the Reclamation Law.<sup>102</sup>

But the success of an irrigation undertaking is often dependent upon participation by all of the lands situated so as to utilize waters from the development. In such a voluntary operation, therefore, an unwilling minority may thwart the development. This organizational limitation is overcome where the irrigation district is the medium for group development.<sup>103</sup>

<sup>97</sup> See, *e. g.*, REV. CODE OF MONT., 1947 ANN. § 81-2105; WYO. COMP. STAT. 1945, § 24-418.

<sup>98</sup> Teele, IRRIGATION IN THE UNITED STATES, p. 194 (1915).

<sup>99</sup> STATISTICAL ABSTRACT OF THE UNITED STATES, Department of Commerce, Bureau of the Census, Table No. 656, p. 595 (1949).

<sup>100</sup> See *ibid.* As an example of a particular area, Utah has about 700 private and mutual companies or associations having over 8,730 miles of earth canals, 410 pumping plants, 1,973 diversion dams, and extensive storage works. IRRIGATION COMPANIES IN UTAH, Bulletin 322, Agricultural Experiment Station, Utah State Agricultural College, p. 1 (March 1946). Most of these are mutual companies, and the largest commercial irrigation enterprise is the Utah-Idaho Sugar Co., serving approximately 54,000 acres of land in the Bear River Valley. *Id.* p. 13.

<sup>101</sup> 3 Kinney, IRRIGATION AND WATER RIGHTS, §§ 1481, 1482, 1489, pp. 2661, 2662, 2667-2678.

<sup>102</sup> *Id.* §§ 1281-1284, 1480, 1489, pp. 2319-2339, 2659, 2678.

<sup>103</sup> "The day of individual and partnership enterprise has long since passed and that of the private corporation and the mutual ditch company has now also gone so far as new projects are concerned. The public corporation

The irrigation-district system has been described as an express recognition of the doctrine of public ownership of irrigation works.<sup>104</sup> Its nature and purpose have been thus characterized by the Supreme Court of Oregon: <sup>105</sup>

The basal principle is the division of the arid area of the state, upon invitation of the settlers thereon, into communities or districts, which are determined by their irrigability from a common source and through the same system of works, and to invest such communities with power to raise revenue by taxation and the issuing of bonds for the purpose of acquiring water rights and constructing the necessary canals, reservoirs, and works for the distribution of the water over the lands within the district.

The legislature of the Territory of Utah enacted the first irrigation-district law in 1865.<sup>106</sup> Some of the principles of this early act were incorporated in California's Wright Act.<sup>107</sup> Enactment of this later statute was suggested in a period of growing irrigation consciousness in California, and in part to overcome opposition by the larger ranchers to previously used irrigation enterprises.<sup>108</sup> An important feature of the statute is its permission to a part of the residents of a given area to

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is being recognized as practically the sole means for the construction of new irrigation projects. And, due to the large sums of money and length of time required for development, public corporations will in the main need the cooperation of the National or State Government or both.

"The irrigation district is the result of the legislative application of the public municipal idea to the needs of irrigation." King and Burr, *HANDBOOK OF THE IRRIGATION DISTRICT LAWS OF THE SEVENTEEN WESTERN STATES OF THE UNITED STATES*, p. 8 (1920).

<sup>104</sup> II Wiel, *WATER RIGHTS IN THE WESTERN STATES*, § 1356, p. 1249 (3d ed. 1911).

<sup>105</sup> *Little Walla Walla Irr. District v. Preston*, 46 Ore. 5, 7, 78 Pac. 982, 983 (1904).

<sup>106</sup> See 3 Kinney, *IRRIGATION AND WATER RIGHTS*, § 1401, p. 2524 (2d ed. 1912).

<sup>107</sup> § 3 Kinney, *IRRIGATION AND WATER RIGHTS*, § 1401, p. 2525, and see *id.* § 1390, pp. 2518-2520.

<sup>108</sup> Chandler, *ELEMENTS OF WESTERN WATER LAW*, p. 132 (1913).

incur indebtedness for which all the lands therein would be liable.<sup>109</sup> Holding the Wright Act constitutional in *Fallbrook Irrigation District v. Bradley*, the United States Supreme Court concluded that in a State like California the need for irrigation of vast acreages is a matter of public interest and a public purpose not confined to landowners, or even to any one section of the State.<sup>110</sup>

The Wright Act served as a model for statutes of many other states.<sup>111</sup> Each of the 17 Western States has enacted an irrigation-district statute.<sup>112</sup> Each such State has provided that irrigation districts may function in cooperation with the United States and enter into repayment contracts under Reclamation Law.<sup>113</sup> The enabling provision is sometimes included in the irrigation district statute itself.<sup>114</sup> A statute especially designed for such cooperating districts was enacted in New Mexico.<sup>115</sup> Still another means is the inclusion of such a cooperation provision in a statute applying to various types of districts.<sup>116</sup> It may also be noted that various names have been given under different statutes to districts having functions and powers of the conventional Wright-Act type.<sup>117</sup>

By the 1916 Smith Act, Congress authorized the inclusion of public lands in irrigation districts, subject to specified conditions.<sup>118</sup>

The customary irrigation-district act contemplates inclusion of only those lands which will receive irrigation benefits from

<sup>109</sup> CAL. STATS. 1887, §§ 1, 17, as amended.

<sup>110</sup> 164 U. S. 112, 161 (1896).

<sup>111</sup> IRRIGATION DISTRICTS, THEIR ORGANIZATION, OPERATION, AND FINANCING, Department of Agriculture Technical Bulletin 254, p. 72 (1931).

<sup>112</sup> SUMMARY OF IRRIGATION-DISTRICT STATUTES OF WESTERN STATES, Department of Agriculture Miscellaneous Publication No. 103, p. 2 (1931).

<sup>113</sup> *Id.* p. 4 See also GEN. STATS. OF KAN., 1935, 1947 SUPP., § 42-701(a).

<sup>114</sup> See, e. g., UTAH CODE ANN. 1943, § 100-9-11.

<sup>115</sup> See, e. g., N. MEX. STAT. ANN. 1941, §§ 77-2201-77-2245.

<sup>116</sup> See, e. g., DEERING'S CALIF. CODES, WATER, § 23175 *et seq.*

<sup>117</sup> See, e. g., the provision for "water improvement districts" in VERNON'S ANN. REV. CIV. STAT. OF TEX., Art. 7622 *et seq.*

<sup>118</sup> Act of August 16, 1916, 39 Stat. 506, as amended, 43 U. S. C. 621 *et seq.*

the proposed system.<sup>120</sup> Consequently, by assessments and by charges for water services, irrigable lands alone bear the entire cost of the irrigation works and their operation. As a result, nearby urban settlements were established and flourished upon the reflected benefits from the irrigation development but bore none of the cost burden. This situation led some states to enact provisions for improvement districts authorized to include not only lands to be benefited directly but also adjacent areas indirectly benefited, including urban communities.<sup>120</sup>

Still broader is the Colorado statute making provision for a general *ad valorem* tax in certain types of districts.<sup>121</sup> This departure from the earlier limited concept of special benefit assessments, and the substitution of a general tax was upheld by the Supreme Court of Colorado as one "for a public purpose."<sup>122</sup> In addition to this provision for a general tax, the statute provides for voluntary agreements for benefit payments by special beneficiaries of the water development.<sup>122</sup> Another example of a statute providing for corporate entities with broad powers in connection with water-use developments is the Met-

<sup>120</sup> See, e. g., N. MEX. STAT. ANN. 1941, § 77-2205. Under this statute, the Elephant Butte Irrigation District was created in connection with the Rio Grande Project of the Bureau of Reclamation. §§ 77-2201 *et seq.* *Sperry v. Elephant Butte Irr. Dist.*, 33 N. Mex. 482, 484, 270 Pac. 889, 890 (1928).

<sup>121</sup> See, e. g., the New Mexico Conservancy District Act, N. MEX. STAT. ANN., § 77-2701 *et seq.*, and the New Mexico Conservancy District and Reclamation Contract Act, *id.* § 77-3101 *et seq.* Under the latter statute, the Arch Hurley Conservancy District functions in connection with the Tucumcari Project of the Bureau of Reclamation.

Districts of this broader type are often referred to as "conservancy districts," but the statute itself must be examined to ascertain the nature of the districts authorized since named designations are frequently misleading. See, e. g., N. MEX. STAT. ANN. §§ 77-3101 *et seq.*, and compare 1935 COLO. STAT. ANN., ch. 138, §§ 126-199.

<sup>122</sup> COLO. STAT. ANN. 1949 SUPP., ch. 173A, § 15 *et seq.*

Under this statute, the Northern Colorado Water Conservancy District was created in connection with the Colorado-Big Thompson Project of the Bureau of Reclamation. See Act of August 9, 1937, 50 Stat. 564, 592; *People ex rel. Rogers v. Letford*, 102 Colo. 284, 289, 79 P. 2d 274, 278 (1938).  
<sup>123</sup> *People ex rel. Rogers v. Letford*, 102 Colo. 284, 302, 79 P. 2d 274, 284 (1938).

<sup>124</sup> COLO. STAT. ANN. 1949 SUPP., ch. 173A, § 19 (3).

ropolitan Water District Act of Utah.<sup>124</sup> The Metropolitan Water District of Southern California was formed under a somewhat similar statute.<sup>125</sup>

Importance attaches to the financing aspect of irrigation district statutes. Most of them authorize the creation of a general obligation by the district in favor of bondholders, or provide for repayment contract obligations under Reclamation Law.<sup>126</sup> The district thus may impose assessments on all assessable lands in the district until a bond or comparable contract capital debt is retired. By this means, cumulative assessments may be made against district lands to meet deficiencies arising from nonpayment of assessments by some landowners.<sup>127</sup>

The Oregon case of *Yancey v. Noble* is representative of the majority view respecting this sort of cumulative assessments.<sup>128</sup> Provision for such assessments, strengthening the position of bondholders and facilitating financing of irrigation undertakings, has been referred to as the "last honest acre doctrine,"<sup>129</sup> and as the "inexhaustible taxing power."<sup>130</sup> But it may be noted that an inexhaustible taxing power is not always the equivalent of an inexhaustible tax-collecting power.<sup>131</sup>

A minority view will not permit recurring assessments to meet delinquencies in servicing bond issues. Representative

<sup>124</sup> UTAH CODE ANN. 1943, § 100-10-1 *et seq.* The constitutionality of this statute was upheld in *Lehi City v. Meling*, 87 Utah 237, 48 Pac. 530 (1935).

<sup>125</sup> 3 DEERING'S GENERAL LAWS OF CALIF., p. 3747 *et seq.*, and 1947 SUPP. p. 270 *et seq.* See also, THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA, HISTORY AND FIRST ANNUAL REPORT, pp. 26-40 (1939).

<sup>126</sup> See, *e. g.*, REMINGTON REV. STATS. OF WASH., 1932, §§ 7402-172, 7402-175.

<sup>127</sup> It should be noted here that under Reclamation Law the construction cost obligation must be included in a "general repayment obligation of the organization." Act of August 4, 1939, § 9(d), 53 Stat. 1187, 1195, 43 U. S. C. 485h(d).

<sup>128</sup> 116 Ore. 356, 241 Pac. 335 (1925).

<sup>129</sup> *Rosebud Land & Improvement Co. v. Carterville Irr. Dist.*, 102 Mont. 465, 472, 58 P. 2d 765, 768 (1936).

<sup>130</sup> See dissenting opinion in *State ex rel. Buckwalter v. City of Lakeland*, 112 Fla. 200, 218, 150 So. 508, 515 (1933).

<sup>131</sup> See, *e. g.*, *Snower v. Hope Drainage Dist.*, 2 F. Supp. 931, 934 (D. C. Mo., 1933), where the district pleaded its difficult financial situation, floods, droughts, decline in land values and farm products, and inability of landowners to pay their taxes—all making collection impossible.



is the Colorado case of *Interstate Trust Company v. Montezuma Valley Irrigation District*.<sup>132</sup> Under this rule, the bond liability is charged ratably against the land as a special assessment lien, so that each parcel once sold for that lien is freed from further obligation therefor.<sup>133</sup> Montana decisions accord with this rule.<sup>134</sup> A qualification of the rule has been adopted in Utah.<sup>135</sup>

Another aspect of financing merits notice. Like certain other local taxing agencies, an irrigation district may have a composition of its indebtedness under federal bankruptcy legislation.<sup>136</sup>

The increasing use of district organizations for water development, utilization, and conservation is well illustrated by Texas legislation. It has made special provision for over 30 separate districts of this type.<sup>137</sup> In addition, Texas has enacted general laws for the organization of many types of districts, including irrigation districts, water-improvement districts, conservation and reclamation districts, water-control and improvement districts, water-control and preservation districts, fresh-water-supply districts, levee-improvement districts, drainage districts, and navigation districts.<sup>138</sup>

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<sup>132</sup> 66 Colo. 219, 181 Pac. 123 (1919). Three years earlier, and prior to a state ruling on the point, a federal trial court adopted the minority view. *Norris v. Montezuma Valley Irr. Dist.*, 240 Fed. 825 (D. C. Colo., 1916). But this decision was reversed in *Norris v. Montezuma Valley Irr. Dist.*, 248 Fed. 369 (C. A. 8, 1918), *cert. den.*, 248 U. S. 569 (1918).

Subsequent federal decisions in cases arising in Colorado have followed the holding of the *Interstate* case. *Denver-Greeley Valley Irr. Dist. v. McNeil*, 80 F. 2d 929, 930-931 (C. A. 10, 1936); *Kiles v. Trinchera Irr. Dist.*, 136 F. 2d 894, 897 (C. A. 10, 1943).

<sup>133</sup> 66 Colo. at pp. 224-225, 181 Pac. at p. 125.

<sup>134</sup> See, e. g., *State ex rel. Malott v. Board of Com'rs of Cascade County*, 89 Mont., 37, 95, 296 Pac. 1, 18-19 (1931).

<sup>135</sup> See, e. g., *Nelson v. Board of Com'rs of Davis County*, 62 Utah 218, 224, 218 Pac. 952, 954 (1923).

<sup>136</sup> Act of August 16, 1937, 50 Stat. 653, 654, as amended, 11 U. S. C. 401 *et seq.* An earlier provision was held unconstitutional in *Ashton v. Cameron County Water Improvement District No. One*, 298 U. S. 513 (1936).

<sup>137</sup> See VERNON'S ANN. REV. CIVIL STATS. OF TEXAS, 1937, and 1949 CUM. SUPP., Title 128, ch. 8.

<sup>138</sup> VERNON'S ANN. REV. CIVIL STATS. OF TEXAS, vol. 21, Water.

## Early Irrigation in the West

While the time and place of its inception has been the subject of dispute, the practice of irrigation is generally accepted to be one of great antiquity.<sup>139</sup> Its origin has been variously placed in China, India, Armenia, the shores of the Mediterranean, and even upon the traditional lost island of Atlantis; and it is considered certain that the practice began at least 2,000 years B. C.<sup>140</sup>

Similarly, the practice was ancient and widespread in the New World.<sup>141</sup> For example, the 1888 Arizona opinion in *Clough v. Wing* states that evidences of the practice of irrigation are found:<sup>142</sup>

all over Arizona and New Mexico in the ancient canals of a pre-historic people, who once composed a dense and highly civilized population. These canals are now plainly marked, and some modern canals follow the track and use the work of this forgotten people.

The Court added that certain Indian tribes have for generations appropriated and used waters "in husbandry, and sacredly recognized the rights acquired by long use, and no right of a riparian owner is thought of."<sup>143</sup>

Similarly, Kinney pointed out in 1912 that some of these pre-historic canals with their laterals "must exceed a thousand

<sup>139</sup> See 1 KINNEY, IRRIGATION AND WATER RIGHTS, §§ 63-87, pp. 101-127 (2d ed. 1912).

It has been said that the earliest writings concerning irrigation are those found in the Code of Hammurabi, who lived more than 4,000 years ago. Included among the provisions of that Code are laws defining the obligations of water users, including penalties for one who neglects to keep his dam in repair, who opens his canal carelessly to the injury of his neighbor, or who steals a watering machine (fine five shekels) or a watering bucket (fine three shekels). JOHNS, THE OLDEST CODE OF LAWS IN THE WORLD, THE CODE OF LAWS PROMULGATED BY HAMMURABI, KING OF BABYLON, §§ 53, 55, 259-260 (1903). See also PRESERVATION OF INTEGRITY OF STATE WATER LAWS, Report and Recommendations of Committee of the National Reclamation Association, App. G, pp. 165-168 (1943).

<sup>140</sup> *Id.* § 63, p. 102.

<sup>141</sup> *Id.* §§ 77-85, pp. 114-124.

<sup>142</sup> 2 Ariz. 371, 380, 17 Pac. 451, 455-456 (1888).

<sup>143</sup> 2 Ariz. at 380, 17 Pac. at 456.

miles in length, and the ruins of many of them give evidence of the expenditure of vast labor in their construction.”<sup>144</sup> The Mesa Canal is a restoration by the Mormons of such a prehistoric canal.<sup>145</sup> Likewise, the ruins left in Arizona are said to have first suggested the reclamation of the valleys to settlers in the early 1870’s.<sup>146</sup> In the Salt River Valley alone, the amount of land practically covered by the canals in the ancient irrigation system totaled over a quarter of a million acres, and the population supported by the ditches has been estimated at a half million people.<sup>147</sup> This was the approximate population of Arizona in 1940.<sup>148</sup>

In their early wanderings through valleys in the Southwest, the Spaniards also played a part in early irrigation. For example, it has been reported that an effort was made by Cruzate in 1684 to relocate the village of Santa Fe to a point near the Pueblo of El Paso, hoping to enlarge an existing irrigation canal and make it available to the people.<sup>149</sup> Another writer, referring in 1630 to the village of Santa Fe, the residence of government officials and some 250 Spaniards, said:<sup>150</sup>

Proceeding westward toward the Rio del Norte \* \* \* begins the Teoas [Texas] Nation. \* \* \* The land is very fertile because a Religious has brought it water for the irrigation of its seed lands.

Later, he pointed out that the soil was fertile and “they have harvested very good crops from the stubble of the year before without having given it any other working than a little irrigat-

<sup>144</sup> I Kinney, *IRRIGATION AND WATER RIGHTS*, § 82, p. 120 (2d ed. 1912).

<sup>145</sup> *Ibid.*

<sup>146</sup> *Id.* § 86, p. 125.

<sup>147</sup> *Ibid.*

<sup>148</sup> *STATISTICAL ABSTRACTS OF THE UNITED STATES*, p. 33 (1949).

<sup>149</sup> Hughes, *THE BEGINNINGS OF SPANISH SETTLEMENT IN THE EL PASO DISTRICT*, University of California Publications in History, Vol. 1, No. 3, p. 328 (1914). With respect to the El Paso crop and food shortage of 1684, due in part to the limited means of irrigation, see *id.* p. 361.

The Pueblo of El Paso, today known as Ciudad Juarez, Mexico, is on the Rio Grande opposite El Paso, Texas.

<sup>150</sup> *THE MEMORIAL OF FRAY ALONSO DE VENAVIDES, 1630*, pp. 23-24 (Ayer’s Translation, privately printed, Chicago, 1916).

ing."<sup>151</sup> Following Mexico's 1821 independence from Spain, irrigation usage in the Southwest was influenced for a time by Mexico's colonization policies, an influence terminated as to Texas with its independence in 1836, and as to the areas ceded to the United States by the Treaty of Guadalupe Hidalgo in 1848, and under the Gadsden purchase in 1853.<sup>152</sup>

In the meantime, the Mormon settlers had already started irrigation works in the Utah area. The very afternoon of their arrival in Salt Lake Valley in 1847, it is reported that a small advance group of these pioneers set about building an irrigation dam.<sup>153</sup> Noteworthy here is the fact that the common-law, riparian doctrine never existed in Utah, the appropriation doctrine deriving from custom and from territorial and state laws now being reflected in a comprehensive water code.<sup>154</sup> In addition to the irrigation operations of many individuals, millions of acre-feet of water are today stored in Utah to furnish the needs of hundreds of mutual irrigation companies.<sup>155</sup>

Early day miners also influenced the development of water law in the West. After the 1848 discovery of gold in California, a custom evolved whereby the first appropriator of waters for mining purposes was held to have a better right than others to use the waters.<sup>156</sup> This custom was sanctioned by the courts of California and other western jurisdictions.<sup>157</sup>

<sup>151</sup> *Id.* p. 36.

<sup>152</sup> For an extensive discussion of Mexican legal antecedents of Texas water law, see *Mott v. Boyd*, 116 Tex. 82, 286 S. W. 458 (1926). See also *Boquillas Land & Cattle Co. v. Curtis*, 213 U. S. 339 (1909); *Los Angeles Farming and Milling Co. v. City of Los Angeles*, 217 U. S. 217 (1910); *United States v. Gerlach Live Stock Co.*, 339 U. S. 725, 742-745 (1950).

For discussion of Mexican law in relation to California water use, see *Lus v. Haggin*, 69 Cal. 255, 313-334, 10 Pac. 674, 705-719 (1886).

<sup>153</sup> IRRIGATION COMPANIES IN UTAH, Bulletin 322, Agricultural Experiment Station, Utah State Agricultural College, p. 10 (March 1946).

<sup>154</sup> *State v. Rolio*, 71 Utah 91, 100, 262 Pac. 987, 993 (1927); UTAH CODE ANN. 1943, § 100-1-1 *et seq.*

<sup>155</sup> IRRIGATION COMPANIES IN UTAH, Bulletin 322, Agricultural Experiment Station, Utah State Agricultural College, p. 3 (March 1946).

<sup>156</sup> *Atchison v. Peterson*, 20 Wall. 507, 510 (U. S. 1874); Long, A TREATISE ON THE LAW OF IRRIGATION, § 76, p. 138 (2d ed. 1916).

<sup>157</sup> I Wiel, WATER RIGHTS IN THE WESTERN STATES, §§ 154-155, pp. 177-180 (3d ed. 1911).

Thus, some would find the roots of the modern appropriation doctrine in the civil law, some in the practices of irrigation, and some in the customs of the miners as later copied by irrigators.<sup>158</sup> All these factors, as well as Spanish and Mexican colonization practices, undoubtedly made contributions to the doctrine. In any event, nature suggests that the dominant factor was the aridity generally prevailing in portions of the West, together with quantitatively disproportionate, highly irregular, and maldistributed stream flows. Thus we find indications in judicial opinions that the riparian doctrine is not suited to the conditions and the needs of Western States.<sup>159</sup>

Whatever the origin of the appropriation doctrine, however, its impact was later reflected in federal legislation. Contests arose between appropriators under this possessory system and patentees under the 1862 Homestead Act and the 1864 Pacific Railway Act, the latter claiming to be the successors of the United States with the right to oust prior appropriators of waters on the lands patented.<sup>160</sup> Soon thereafter, Congress enacted the Act of 1866.<sup>161</sup> This statute made good appropriations in being as against a later patent to riparian parcels of the public domain.<sup>162</sup> An 1870 supplement subjected patents, pre-emptions, and homesteads to vested water rights, or rights to ditches and reservoirs used in connection with such water rights, as may have been acquired under or recognized by the 1866 Act.<sup>163</sup>

<sup>158</sup> See, e. g., STATE WATER LAW IN THE DEVELOPMENT OF THE WEST, Report to the Water Resources Committee by its Subcommittee on State Water Law, National Resources Planning Board, p. 6 (1943); Long, A TREATISE ON THE LAW OF IRRIGATION, § 70, p. 126 (2d ed. 1916); I Wiel, WATER RIGHTS IN THE WESTERN STATES, § 66, p. 66 (3d ed. 1911).

<sup>159</sup> See, e. g., *United States v. Rio Grande Irrigation Co.*, 174 U. S. 690, 704 (1899); *Clough v. Wing*, 2 Ariz. 371, 381, 17 Pac. 453, 456 (1888).

<sup>160</sup> Act of May 20, 1862, 12 Stat. 392, see 43 U. S. C. 161 *et seq.*; Act of July 2, 1864, § 3, 13 Stat. 365, 367; I Wiel, WATER RIGHTS IN THE WESTERN STATES, § 87, p. 94 (3d ed. 1911).

<sup>161</sup> R. S. § 2339, from Act of July 26, 1866, § 9, 14 Stat. 251, 253, now codified as part of 43 U. S. C. 661. See also *supra*, pp. 35-37.

<sup>162</sup> *United States v. Gerlach Live Stock Co.*, 339 U. S. 725, 748 (1950).

<sup>163</sup> R. S. § 2340, from Act of July 9, 1870, § 17, 16 Stat. 217, 218, now codified as part of 43 U. S. C. 661. See also *supra*, p. 36.

Correspondingly significant is the Desert Land Act of 1877.<sup>164</sup> Under it, provision is made for reclamation of arid lands in the States of California, Oregon, and Nevada, Colorado being later added, and the then Territories of Washington, Idaho, Montana, Utah, Wyoming, Arizona, New Mexico, and Dakota.<sup>165</sup> The Act authorized the sale of 640 acres of land at \$1.25 per acre to any person who would irrigate it within three years.<sup>166</sup> In addition, a significant proviso is included which makes the right to the use of water depend upon "bona fide prior appropriation" not to exceed the amount "actually appropriated, and necessarily used for the purpose of irrigation and reclamation."<sup>167</sup> The Act also requires that:<sup>168</sup>

all surplus water over and above such actual appropriation and use, together with the water of all lakes, rivers and other sources of water supply upon the public lands and not navigable, shall remain and be held free for the appropriation and use of the public for irrigation, mining and manufacturing purposes subject to existing rights.

However, a 640-acre tract was too large for individual irrigation, and speculation was resulting from operations under this and other acts, which together had allowed one individual to acquire up to 1120 acres.<sup>169</sup> And in 1890 Congress limited all entries to a 320-acre maximum for a single claimant.<sup>170</sup>

In another 1890 statute, Congress reserved to the United States a right-of-way for ditches and canals constructed by federal authority with respect to lands west of the one-hundredth meridian thereafter patented under any of the land laws of the United States.<sup>171</sup> It has been said that this statutory

<sup>164</sup> Act of March 3, 1877, § 1, 19 Stat. 377, as amended, 43 U. S. C. 321.

<sup>165</sup> § 3, 19 Stat. 377, § 8 as added by Act of March 3, 1891, § 2, 26 Stat. 1096, as amended, 43 U. S. C. 323.

<sup>166</sup> § 1, 19 Stat. 377, as amended, 43 U. S. C. 321.

<sup>167</sup> *Id.*

<sup>168</sup> *Id.*

<sup>169</sup> 21 CONG. REC. 7930, 7766, 9139; Sen. Rep. No. 1466, 51st Cong., 1st sess., pp. 68-69 (1890); H. Rep. No. 2407, 51st Cong., 1st sess., p. 66 (1890).

<sup>170</sup> Act of August 30, 1890, § 1, 26 Stat. 371, 391, as amended, 43 U. S. C. 212.

<sup>171</sup> § 1, 26 Stat. 391, 43 U. S. C. 945.

reservation paved the way for future national reclamation legislation.<sup>172</sup> In the following year, Congress granted rights-of-way through public lands to canal and ditch companies for reservoirs and canals.<sup>173</sup> This latter statute also authorized entrymen on public lands to associate together in the construction of reclamation works.<sup>174</sup>

A notable increase of federal interest in irrigation appeared in the 1894 Carey Act.<sup>175</sup> It authorized donations to each public-land state of a maximum of one million acres of desert land in order to aid them:<sup>176</sup>

in the reclamation of the desert lands therein, and the settlement, cultivation and sale thereof in small tracts to actual settlers \* \* \*

The state is required to agree to cause the lands to be irrigated, reclaimed, occupied, and cultivated by actual settlers.<sup>177</sup> Tracts sold by the state must be limited to 160 acres for one person, and the lands may be used only for reclamation, cultivation, and settlement.<sup>178</sup> An 1896 amendment empowers the states to provide for liens against reclaimed lands for actual cost and necessary expense of reclamation.<sup>179</sup> This provision eased the financial or constitutional difficulties encountered by the states in constructing large canals and irrigation works.<sup>180</sup> It was pointed out, however, that this amendment would result in the acquisition by wealthy individuals and corporations of large bodies of land, to the exclusion of the settler.<sup>181</sup>

Operations under the Carey Act were fraught with a number of difficulties. Surveys of available water supplies were inadequate, and data respecting the type, character, and produc-

<sup>172</sup> 2 Kinney, IRRIGATION AND WATER RIGHTS, § 936, p. 1653 (2d ed. 1912).

<sup>173</sup> Act of March 3, 1891, § 18, 26 Stat. 1095, 1101, as amended, 43 U. S. C. 946.

<sup>174</sup> § 2, 26 Stat. 1096, 43 U. S. C. 327.

<sup>175</sup> Act of August 18, 1894, § 4, 28 Stat. 372, 422, 43 U. S. C. 641 *et seq.*

<sup>176</sup> § 4, 28 Stat. 422, as amended, 43 U. S. C. 641.

<sup>177</sup> *Id.*

<sup>178</sup> *Id.*

<sup>179</sup> Act of June 11, 1896, § 1, 29 Stat. 413, 434, 43 U. S. C. 642.

<sup>180</sup> 3 Kinney, IRRIGATION AND WATER RIGHTS, § 1323, p. 2397 (2d ed., 1912).

<sup>181</sup> *Ibid.*

tivity of soil were insufficient to guide the states.<sup>182</sup> From the start, settlers on many projects were in financial difficulties in connection with heavy mortgages executed for financing construction of irrigation works.<sup>183</sup> A number of projects nevertheless continued for some time to operate under the Carey Act.<sup>184</sup>

With respect to the foregoing federal statutes, it has been said that they failed to further in any substantial measure the Government's long-established policy of encouraging the settlement of arid public lands.<sup>185</sup>

### Reclamation Law

To this point, as we have seen, federal interest in irrigation was limited to providing for certain water uses and to permitting use of public lands on specified conditions. The statutes involved nevertheless foreshadowed passage of the 1902 Reclamation Act.<sup>186</sup> And with its passage, Congress established irrigation in the West as a national policy.<sup>187</sup> But while Reclamation projects are limited to the West, benefits are not limited to public lands.<sup>188</sup>

Early cases sustained the 1902 Act as a proper exercise of the Government's proprietary power.<sup>189</sup> Moreover, in speak-

<sup>182</sup> RECLAMATION HANDBOOK, Department of the Interior, Bureau of Reclamation, p. 22 (1942).

<sup>183</sup> *Ibid.*

<sup>184</sup> By 1930, only 17 irrigation enterprises were so operated, covering 174,246 acres. *Ibid.*

<sup>185</sup> See *United States v. Hanson*, 167 Fed. 881, 883 (C. A. 9, 1909).

<sup>186</sup> Act of June 17, 1902, 32 Stat. 388, 43 U. S. C. 391 *et seq.* Speaking of the earlier legislation, a Federal District Court in 1912 said, "By a series of acts and resolutions passed by Congress beginning as early as 1888 \* \* \* the Government unmistakably declared a purpose to reclaim its arid lands by conducting water to and across them, and provision was shortly made to enable it to carry out that purpose." *United States v. Van Horn*, 197 Fed. 611, 615 (D. C. Colo., 1912).

<sup>187</sup> *Burley v. United States*, 179 Fed. 1 (C. A. 9, 1910). "The policy of reclaiming the arid region of the West for a beneficial use open to all the people of the United States is as much a national policy as the preservation of rivers and harbors for the benefit of navigation." 179 Fed. at 11.

<sup>188</sup> See *supra*, p. 45.

<sup>189</sup> See *supra*, pp. 44-45.



ing of the Reclamation Fund, the United States Court of Appeals for the Ninth Circuit in 1909 found no difficulty in the way of holding that the "use of funds contemplated by the reclamation act is for the common welfare."<sup>190</sup> Recently pointing out that the only limitation on the power to tax and appropriate for the general welfare is that it must be "exercised for the common benefit as distinguished from some mere local purpose," the Supreme Court of the United States suggested that Congress may promote the general welfare through "large-scale projects for reclamation, irrigation, or other internal improvement."<sup>191</sup>

After a preliminary sketch of the framework of the 1902 Act, we shall here, as in earlier chapters, review the applicable provisions of law as they relate to the steps in the development of a project. In other words, we shall group them for review in the following sequence: preparing for projects, authorization of projects, prosecution of projects, and operation of projects. But one feature should be especially remembered. Reimbursement from project beneficiaries is accomplished through contractual arrangements. While the various provisions of law have undergone many changes, such contracts have of course been altered only with the consent of the signatory parties. There are thus outstanding contracts unaffected by many provisions of subsequently enacted legislation.

It should also be noted that many provisions of Reclamation Law have been rendered ineffective, or have been superseded by later legislation, and are irrelevant so far as future reclamation projects are concerned. But not having been expressly repealed, many such provisions nevertheless continue to appear in the United States Code.

Federal irrigation and related activities are today performed almost entirely by the Bureau of Reclamation under the supervision of the Secretary of the Interior.<sup>192</sup> It may also be noted

<sup>190</sup> *United States v. Hanson*, 167 Fed. 881, 885 (C. A. 9, 1909).

<sup>191</sup> *United States v. Gerlach Live Stock Co.*, 339 U. S. 725, 738 (1950). See also *supra*, pp. 57-58. And see *Oklahoma v. Atkinson*, 313 U. S. 508, 525 (1941).

<sup>192</sup> Act of May 26, 1926, 44 Stat. 657; Reorganization Plan No. III of 1950, § 1, 15 F. R. 3174; Department of the Interior Order No. 2563, May 2, 1950.

that, through June 30, 1949, federal funds made available for carrying out these functions reached a total of about \$1,800,000,000.<sup>193</sup>

**THE RECLAMATION ACT OF 1902.**—In his message to Congress in December 1901, President Theodore Roosevelt said:<sup>194</sup>

It is as right for the National Government to make the streams and rivers of the arid region useful by engineering works for water storage as to make useful the rivers and harbors of the humid regions by engineering works of another kind.

\* \* \* \* \*

Our people as a whole will profit, for successful home-making is but another name for upbuilding of the Nation.

The fundamental principles advanced in his message formed the basis for the Reclamation Act of 1902.<sup>195</sup> With its many supplements and amendments, that Act constitutes Reclamation Law.<sup>196</sup>

The 1902 Act established the Reclamation Fund with moneys derived from the sale of public lands in Arizona, California, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Utah, Washington, and Wyoming.<sup>197</sup> This Fund is to be used for irrigation works in those States, to which Texas was later added.<sup>198</sup> The Secretary of the Interior is directed to make

<sup>193</sup> ANNUAL REPORT OF THE SECRETARY OF THE INTERIOR, p. 70 (1949).

<sup>194</sup> H. Doc. No. 1, 57th Cong., 1st sess., pp. XXVIII–XXIX (1901).

<sup>195</sup> Act of June 17, 1902, 32 Stat. 388, 43 U. S. C. 391 *et seq.* "When Theodore Roosevelt became the President of the United States in 1901, the first major task to which he addressed himself was the establishment of a national program for the conservation of the land and water resources of the West. The fundamental principles he advanced in his message to the Congress form the basis for the reclamation law which was subsequently enacted with his approval on June 17, 1902." NATIONAL IRRIGATION POLICY—ITS DEVELOPMENT AND SIGNIFICANCE, Sen. Doc. No. 36, 76th Cong., 1st sess., p. VII (1939).

<sup>196</sup> See *supra*, n. 18, p. 154.

<sup>197</sup> § 1, 32 Stat. 388, 43 U. S. C. 391.

<sup>198</sup> There are no federal public lands in Texas. J. Res. of March 1, 1845, § 2, 5 Stat. 797. To enable the United States to carry into effect the terms

examinations and surveys and to locate and construct irrigation works, and was then to report annually to Congress on enumerated matters.<sup>199</sup>

The Act also provides for withdrawal of public lands from entry for construction of irrigation works.<sup>200</sup> Entries on lands so withdrawn are limited to a minimum of 40 and a maximum of 160 acres.<sup>201</sup> Upon determination that a project was practicable, the Secretary could let contracts if funds were available in the Reclamation Fund.<sup>202</sup> He must give public notice of lands available for entry, the permissible size of entry fixed in accordance with his determination of the acreage "reasonably required for the support of a family," and of the charges per acre to be made upon such entries and upon lands in private ownership.<sup>203</sup> Charges were to be determined with a view to returning to the Reclamation Fund the estimated cost of construction, and had to be paid in not to exceed 10 annual installments.<sup>204</sup> Additional homestead requirements for reclamation entries and patents are also established by the Act.<sup>205</sup>

Moreover, rights to use of water are limited to 160 acres as to private lands, and the landowner was required to be an

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of a proposed convention with Mexico, which was afterward signed on May 21, 1906, 34 Stat. 2953, Congress extended the Reclamation Act to the portion of Texas bordering upon the Rio Grande which could be irrigated from a dam to be constructed near Engle, New Mexico. Act of February 25, 1905, 33 Stat. 814. This is the Elephant Butte Dam. See *Sperry v. Elephant Butte Irr. Dist.*, 33 N. Mex. 482, 270 Pac. 889 (1928).

A month after the conclusion of the 1906 convention, the Reclamation Act was extended to the entire State of Texas. Act of June 12, 1906, 34 Stat. 259, see 43 U. S. C. 391. Until this legislation, Texas embraced the only portion of arid land in the United States not within the Act. H. Rep. No. 1790, 59th Cong., 1st sess. (1906).

<sup>199</sup> § 2, 32 Stat. 388, as amended, 43 U. S. C. 411. Through the remainder of this chapter, the word "Secretary," standing alone, will refer to the Secretary of the Interior.

<sup>200</sup> § 3, 32 Stat. 388, see 43 U. S. C. 416.

<sup>201</sup> *Id.*

<sup>202</sup> § 4, 32 Stat. 389, 43 U. S. C. 419.

<sup>203</sup> *Id.*

<sup>204</sup> § 4, 32 Stat. 389, see 43 U. S. C. 419. The Code omits the limit on installments.

<sup>205</sup> § 5, 32 Stat. 389, see 43 U. S. C. 439.

“actual bona fide resident of such land, or occupant thereof residing in the neighborhood of such land.”<sup>206</sup>

Use of the Reclamation Fund for operation and maintenance of works is authorized.<sup>207</sup> In this connection, the Act contains a significant provision that, when payments required by the Act have been made for the major portion of the lands irrigated, “management and operation” of the works shall pass to the owners of the lands irrigated to be maintained at their expense under such organization and rules as are acceptable to the Secretary.<sup>208</sup> However, “title to and the management and operation of the reservoirs and the works necessary for their protection and operation” remain in the Government “until otherwise provided by Congress.”<sup>209</sup>

The Secretary may acquire necessary rights or property by purchase or condemnation.<sup>210</sup> Nothing in the Act may be construed as interfering with state laws relating to the “control, appropriation, use, or distribution of water used in irrigation, or any vested right acquired thereunder.”<sup>211</sup> In carrying out the Act’s provisions, the Secretary “shall proceed in conformity with such laws.”<sup>212</sup> And nothing in the Act shall affect any “right of any State or of the Federal Government or of any landowner, appropriator, or user of water in, to, or from any interstate stream or the waters thereof.”<sup>213</sup> In addition, it is provided that the right to use of water acquired under the Act

<sup>206</sup> § 5, 32 Stat. 389, 43 U. S. C. 431.

<sup>207</sup> § 6, 32 Stat. 389, 43 U. S. C. 491.

<sup>208</sup> § 6, 32 Stat. 389, 43 U. S. C. 498.

<sup>209</sup> *Id.*

<sup>210</sup> § 7, 32 Stat. 389, 43 U. S. C. 421.

<sup>211</sup> § 8, 32 Stat. 390, 43 U. S. C. 333.

<sup>212</sup> *Id.* In *Nebraska v. Wyoming*, 325 U. S. 589, 614 (1945), this provision was characterized as “a direction by Congress to the Secretary of the Interior” to proceed in conformity with state laws in the appropriation of water for irrigation purposes. In this connection, it should be noted that some states have provided a simple procedure for application to federal irrigation undertakings. For example, a special New Mexico statute applies in the case of federal reclamation projects. Reservation of certain unappropriated waters of the State may be effected by a notification from the proper federal officer to the State Engineer that the United States intends to make use of those waters. N. MEX. STAT. ANN, 1941, § 77-531.

<sup>213</sup> *Id.*

“shall be appurtenant to the land irrigated, and beneficial use shall be the basis, the measure, and the limit of the right.”<sup>214</sup>

A provision requiring expenditure within each state of the major portion of the funds arising from the sale of public lands therein was repealed in 1910.<sup>215</sup> Finally, the Secretary is authorized to perform any and all acts and to make rules and regulations necessary to carrying out the statute’s provisions.<sup>216</sup>

Over the years, most of the foregoing provisions have been supplemented, amended, or superseded. This has frequently been accomplished without express reference to the provision affected. Some of the provisions are today in force wholly or in part only as to certain projects or divisions of projects. We turn now from the provisions of this basic Act to a review of the many statutes which have supplemented, amended, or superseded its various provisions.<sup>217</sup>

**PREPARING FOR PROJECTS.**—Under the 1902 Act, the Secretary was directed to locate and construct “irrigation works for the storage, diversion, and development of waters, including artesian wells.”<sup>218</sup> Recognition of other purposes appeared in succeeding statutes, correspondingly broadening the scope of preparation required. Thus, in 1906 Congress provided for furnishing water supplies to towns in the vicinity of projects.<sup>219</sup> At the same time, it made provision for the disposal of surplus power.<sup>220</sup> Similarly, a 1920 statute conditionally authorizes the Secretary to contract to supply water from any project irrigation system “for other purposes than irrigation.”<sup>221</sup>

Of especial significance here is the Reclamation Project Act of 1939 authorizing establishment of multiple-purpose projects

<sup>214</sup> § 8, 32 Stat. 390, 43 U. S. C. 372.

<sup>215</sup> § 9, 32 Stat. 390; Act of June 25, 1910, § 6, 36 Stat. 835, 836.

<sup>216</sup> § 10, 32 Stat. 390, as amended, 43 U. S. C. 373.

<sup>217</sup> It may be noted here that the House Committee on the Judiciary is currently formulating a recodification of Titles 16 and 43 of the United States Code, with a view to including in the former a recodification of the Reclamation Law, pursuant to the Act of June 22, 1949, 63 Stat. 222.

<sup>218</sup> Act of June 17, 1902, § 2, 32 Stat. 388, as amended, 43 U. S. C. 411.

<sup>219</sup> Act of April 16, 1906, § 4, 34 Stat. 116, 43 U. S. C. 567.

<sup>220</sup> § 5, 34 Stat. 117, as amended, 43 U. S. C. 522.

<sup>221</sup> Act of February 25, 1920, 41 Stat. 451, 43 U. S. C. 521.

under Reclamation Law, as we shall later see in detail.<sup>222</sup> This statute expressly recognized combination of uses for irrigation, power, municipal water supply or other miscellaneous purposes, together with flood control and navigation.<sup>223</sup>

*Examinations and Surveys.*—Under the 1902 Act, the Secretary of the Interior is directed to make examinations and surveys for “irrigation works for the storage, diversion, and development of waters, including artesian wells.”<sup>224</sup>

Subsequent legislation expressly or impliedly contemplates similar investigatory activities. Thus, the Secretary is required under a 1924 statute to classify the irrigable lands of each new project and division of a project.<sup>225</sup> Similarly, 1926 legislation requires the suspension of payment of construction charges on operating projects based upon determinations respecting the productivity of project lands.<sup>226</sup> A recent statute also requires determinations of the repayment ability of water users in connection with the return of “rehabilitation and bet-

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<sup>222</sup> Act of August 4, 1939, 53 Stat. 1187, as amended, 43 U. S. C. 485-485k. See also Hearings before the House Committee on Irrigation and Reclamation on H. R. 6773 and H. R. 6984, 76th Cong., 1st sess., p. 26 (1939); H. Rep. No. 995, 76th Cong., 1st sess., p. 5 (1939).

Recognition of multiple purposes had previously appeared in legislation for special projects. See, e. g., Act of December 21, 1928, § 1, 45 Stat. 1057, 43 U. S. C. 617 (Boulder Canyon Project); Act of August 30, 1935, § 2, 49 Stat. 1028, 1039 (Parker Dam and Grand Coulee Dam); Act of August 26, 1937, § 2, 50 Stat. 844, 850 (Central Valley Project, California).

<sup>223</sup> § 9, 53 Stat. 1193, 43 U. S. C. 485h.

<sup>224</sup> Act of June 17, 1902, § 2, 32 Stat. 388, as amended, 43 U. S. C. 411. A portion of the original section requiring certain annual reports to Congress relating to such examinations and surveys was repealed in 1946. Act of August 7, 1946, 60 Stat. 866, 867, see 43 U. S. C. 411.

It should also be noted that an 1888 appropriation statute made funds available for the purpose of “investigating the extent to which the arid region of the United States can be redeemed by irrigation, and the segregation of the irrigable lands in such arid region, and for the selection of sites for reservoirs and other hydraulic works necessary for the storage and utilization of water for irrigation and the prevention of floods and overflows,” the work to be performed by the Geological Survey under the Secretary of the Interior. Act of October 2, 1888, 25 Stat. 505, 526.

<sup>225</sup> Act of December 5, 1924, § 4, subsection D, 43 Stat. 672, 702, 43 U. S. C. 462.

<sup>226</sup> Act of May 25, 1926, § 43, 44 Stat. 636, 647, as amended, 43 U. S. C. 423b.

terment" costs, that is, maintenance costs which the water users cannot finance currently.<sup>227</sup>

The 1939 Reclamation Project Act broadened the scope of examinations and surveys undertaken in connection with irrigation projects. It prohibits expenditures or submission of estimates for construction of any new project, new division of a project, or new supplemental works on a project, until the Secretary has submitted to the President and to Congress his report and findings on:<sup>228</sup>

- (1) the engineering feasibility of the proposed construction;
- (2) the estimated cost of the proposed construction;
- (3) the part of the estimated cost which can properly be allocated to irrigation and probably be repaid by the water users;
- (4) the part of the estimated cost which can properly be allocated to power and probably be returned to the United States in net power revenues;
- (5) the part of the estimated cost which can properly be allocated to municipal water supply or other miscellaneous purposes and probably be returned to the United States.

Findings are also required as to any "allocation to flood control or navigation," as provided for by the statute.<sup>229</sup>

Recent appropriation legislation contains indications of the scope of examinations and surveys expected. For example, the 1950 Interior Department Appropriation Act provided funds for:<sup>230</sup>

engineering and economic investigations of proposed Federal reclamation projects and surveys, investigations, and other activities relating to reconstruction, rehabilitation, extensions, or financial adjustments of existing projects, and studies of water conservation and develop-

<sup>227</sup> Act of October 7, 1949, 63 Stat. 724.

<sup>228</sup> Act of August 4, 1939, § 9(a), 53 Stat. 1187, 1193, 43 U. S. C. 485h(a).

<sup>229</sup> *Id.*; § 9(b), 53 Stat. 1187, 1194, 43 U. S. C. 485h(b).

<sup>230</sup> Act of October 12, 1949, 63 Stat. 765, —.

ment plans, such investigations, surveys, and studies to be carried on by said Bureau either independently, or in cooperation with State agencies and other Federal agencies, including the Corps of Engineers and the Federal Power Commission \* \* \* which may be used to execute detailed surveys, and to prepare construction plans and specifications for specific projects or parts of projects until appropriations are available for construction thereof \* \* \* *Provided further*, That the expenditure of any sums from this appropriation for investigations of any nature requested by States, municipalities, or other interest shall be upon the basis of State, municipality, or other interest advancing at least 50 per centum of the estimated cost of such investigations.

An appropriation of over \$5,000,000 for a somewhat similarly phrased purpose in the General Appropriations Act, 1951, contains a further provision that, except as to certain investigations in Alaska, "no part of this appropriation shall be expended in the conduct of activities which are not authorized by law."<sup>231</sup> Still other investigations and surveys have been provided for by special provisions in appropriation and other legislation.<sup>232</sup>

<sup>231</sup> Act of September 6, 1950, ch. VII, § 101, 64 Stat. 595, —.

<sup>232</sup> For example:

Investigation of the reclamation by drainage of lands outside existing projects and of reclamation of cut-over timber lands in any state. Act of July 1, 1918, 40 Stat. 634, 676 (Appropriation). For the resulting report, see H. Doc. No. 262, 66th Cong., 1st sess. (1919).

Determination of portions of certain ceded lands to be opened to agricultural development through lowering the water level of Klamath Lake in California and Oregon. Act of May 27, 1920, § 1, 41 Stat. 627, repealed by Act of June 17, 1944, § 2(a), 58 Stat. 279, 43 U. S. C. 602.

Investigations and surveys similar to those provided for by Reclamation Law, with funds contributed by a state, municipality, corporation, association, firm, industry, or individual. Act of March 4, 1921, 41 Stat. 1367, 1404, 43 U. S. C. 395 (Appropriation).

Authorization of annual appropriation for "cooperative and miscellaneous investigations of the feasibility of reclamation projects." Act of February 21, 1923, 42 Stat. 1281.

Plans and estimates for the Casper-Alcova Project, Wyoming, Deschutes



In connection with examinations and surveys, it should also be noted that Congress has from time to time made special provision for consultants and advisers. For example, it has authorized the Secretary to employ for "consultation purposes on important reclamation work" 10 consulting engineers, geologists, appraisers, and economists.<sup>233</sup> A report by a committee of special advisers on reclamation, commonly known as the "Fact-Finders' Report," became the basis for the 1924 Fact-Finders' Act.<sup>234</sup> In 1937, Congress created a commission to investigate the financial, economic, and other conditions of

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Project, Oregon, and Southern Lassen Project, California, at least half the cost to be advanced by the state in which the project is located or by "parties interested." J. Res. of June 7, 1924, 43 Stat. 668.

A "comprehensive and detailed survey" on existing projects to determine all pertinent facts as to why settlers are unable to pay construction costs, and report results to Congress. Act of December 5, 1924, § 4, subsection K, 43 Stat. 672, 703, 43 U. S. C. 466.

An examination and investigation of swamp and overflow lands on certain rivers in Mississippi. Act of July 3, 1926, 44 Stat. 901. For the report on the Yazoo River, see H. Doc. No. 765, Part 2, 69th Cong., 2d sess. (1927).

In connection with a soil and moisture conservation program on lands under the jurisdiction of the Interior Department, necessary special measures for the "improvement of irrigation and land drainage." Act of July 2, 1942, 56 Stat. 506, 508 (Appropriation). The functions of the Soil Conservation Service in the Department of Agriculture with respect to soil and moisture conservation operations conducted on lands under the jurisdiction of the Department of the Interior were transferred to the latter Department in 1940. Reorganization Plan No. IV, § 6, effective June 30, 1940, 54 Stat. 1234, 1235, 5 U. S. C. 133t note following.

Examination and survey respecting utilization of waters of the San Juan River tributary to the Colorado River, and the feasibility of a diversion of the surplus waters therefrom to the Rio Chama, a tributary of the Rio Grande. Act of June 22, 1936, 49 Stat. 1806 (Appropriation).

Studies and investigations for the formulation of a comprehensive plan for the utilization of waters of the Colorado River System for irrigation, electric power, and other purposes, including studies of the "quantity and quality" of water and all other relevant factors. Act of July 19, 1940, § 2(d), 54 Stat. 774, 775, as amended, 43 U. S. C. 618a (d) (Supp. III).

<sup>233</sup> Act of February 28, 1929, § 1, 45 Stat. 1406, as amended, 43 U. S. C. 411b.

<sup>234</sup> This report and the President's message to Congress are printed in Sen. Doc. No. 92, 68th Cong., 1st sess. (1924); the so-called Fact-Finders' Act consists of §§ 1, 4, subsections A-R, of the Second Deficiency Act of 1924, Act of December 5, 1924, §§ 1, 4, subsections A-R, 43 Stat. 672, 684, 702-704, 43 U. S. C. 396, 371, 412, 433, 462, 463 (repealed), 473 (repealed), 474 (repealed), 500, 478, 494, 501, 526, 466, 467 (repealed), 433, 493, 377, 417, 376.

the various federal and Indian reclamation projects with reference to the ability of each such project to make payments of water-right charges without undue burden upon the water-user organization liable for such charges.<sup>226</sup> In 1928, the Secretary was authorized to appoint a board of five "eminent engineers and geologists, at least one of whom shall be an engineer officer of the Army" to advise him respecting the safety, economic, and engineering feasibility of the structure and incidental works proposed under the Boulder Dam Bill.<sup>228</sup>

Also related to investigations are various statutory provisions for cooperation with different agencies. In making an allocation to flood control or navigation under the 1939 Act, the Secretary is required to consult with the Chief of Engineers and the Secretary of the Army.<sup>227</sup> Moreover, he may perform any of the necessary investigations or studies under a cooperative agreement with the Secretary of the Army.<sup>228</sup> In making investigations of and reports on works for irrigation, the Secretary of the Interior is required, during the course of the investigations, to give affected states and the Secretary of the Army information developed by the investigations, opportunity for consultation regarding plans and proposals, and to the extent practicable, opportunity to cooperate in the investigations.<sup>229</sup> Whenever a proposed Bureau of Reclamation project would impound, divert, or otherwise control waters, it must consult with the Fish and Wildlife Service of the Department of the Interior and with the head of the state agency exercising administration over wildlife resources, with a view to preventing loss of and damage to wildlife resources.<sup>230</sup> The resulting re-

<sup>226</sup> Act of August 21, 1937, § 1, 50 Stat. 737. For the report of the Repayment Commission submitted under this Act, see H. Doc. No. 673, 75th Cong., 3d sess. (1938).

<sup>227</sup> S. J. Res. 164, May 29, 1928, 45 Stat. 1011. For the resulting report of December 3, 1928, see H. Doc. No. 446, 70th Cong., 2d sess. (1928). The Boulder Canyon Project Act was approved shortly thereafter. Act of December 21, 1928, 45 Stat. 1057, as amended, 43 U. S. C. 617-617t.

<sup>228</sup> Act of August 4, 1939, § 9(b), 53 Stat. 1187, 1194, 43 U. S. C. 485h(b).

<sup>229</sup> *Id.*

<sup>230</sup> Act of December 22, 1944, §§ 1(c), 1(a), 58 Stat. 887, 889, 888. See also *supra*, n. 7, p. 152.

<sup>231</sup> Act of August 14, 1946, § 2, 60 Stat. 1080, 16 U. S. C. 662.

ports and recommendations must be made an integral part of any report submitted by the Bureau.<sup>241</sup>

In addition to these general provisions for cooperation, special provisions are made from time to time. For example, in connection with the continuation of investigations on the general plan for development of the Missouri River Basin, the General Appropriations Act, 1951, authorizes the Bureau to expend allotments "through or in cooperation with State and other Federal agencies," advances to such agencies being also authorized.<sup>242</sup> We have earlier mentioned the jurisdiction of international commissions over certain international waters.<sup>243</sup> Cooperation with such agencies is at times an incident of operations of the Bureau.<sup>244</sup>

In the course of examinations and surveys, therefore, the Bureau cooperates with international and interstate agencies, state and other nonfederal agencies, and interdepartmental and intradepartmental agencies.<sup>245</sup>

A final feature concerning general investigations remains to be noted. The cost and expense of all such investigations, except when incurred on behalf of specific projects, shall be charged to the Reclamation Fund and not as a part of the reimbursable construction or operation and maintenance costs.<sup>246</sup>

*Reports on Examinations and Surveys.*—The 1902 Act originally required the Secretary to report annually to Con-

<sup>241</sup> *Id.* See also *infra*, pp. 329-330.

<sup>242</sup> Act of September 6, 1950, ch. VII, § 101, 64 Stat. 595, —.

<sup>243</sup> See *supra*, pp. 121-123, 148-149.

<sup>244</sup> In connection with the Mexican Water Treaty of 1944, there was formulated a Memorandum Agreement between the Secretary of State and the Secretary of the Interior for cooperation between the United States Section, International Boundary and Water Commission, United States and Mexico, and the Bureau of Reclamation, concerning the Rio Grande and the Colorado and Tijuana Rivers, dated February 14, 1945, approved by the President on June 18, 1945, H. Doc. No. 717, 80th Cong., 2d sess., App. 1407, p. A889 (1948).

<sup>245</sup> For a discussion of participation by the Department of the Interior in interdepartmental coordination of federal water-resource activities, and of its own program for intradepartmental coordination, see *infra*, pp. 438-439, 431-433.

<sup>246</sup> Act of December 5, 1924, § 4, subsection O, 43 Stat. 672, 704, as amended, 43 U. S. C. 377.

gress the results of examinations and surveys, giving estimates of cost of all contemplated works, the quantity and location of the lands which can be irrigated therefrom, and all facts relative to the practicability of each irrigation project, together with the cost of works being constructed and those completed.<sup>247</sup> In 1924, Congress required that, as a condition precedent to construction or submission of estimates for new projects and new divisions of projects, the Secretary secure detailed information "concerning the water supply, the engineering features, the cost of construction, land prices, and the probable cost of development," together with his written finding that the project is feasible, that it is adaptable for actual settlement and farm homes, and that it will probably return the cost to the United States.<sup>248</sup>

In 1939, Congress directed that the feasibility reports and findings of the Secretary, the expanded contents of which have already been set forth in detail, be submitted to "the President and to the Congress."<sup>249</sup> Similarly, we have noted that reports must include the written views and recommendations of affected states and of the Secretary of the Army.<sup>250</sup> In respect of wildlife resources, there must also be included the reports and recommendations of the Secretary of the Interior and of the head of the state agency concerned with wildlife resources.<sup>251</sup>

**AUTHORIZATION OF PROJECTS.**—While the 1902 Act prescribed no formula for project authorization, it did require the Secretary to report annually to Congress on, among other things, all facts relative to the "practicability of each irrigation project."<sup>252</sup> But the Reclamation Fund became exhausted before the projects initiated were completed.<sup>253</sup> As a result, Congress in 1910 repealed the 1902 provision requiring that the

<sup>247</sup> Act of June 17, 1902, § 2, 32 Stat. 388.

<sup>248</sup> Act of December 5, 1924, § 4, subsection B, 43 Stat. 672, 702, 43 U. S. C. 412.

<sup>249</sup> Act of August 4, 1939, § 9(a), 53 Stat. 1187, 1193, 43 U. S. C. 485h(a); see *supra*, p. 188.

<sup>250</sup> See *supra*, p. 191.

<sup>251</sup> See *supra*, pp. 191-192.

<sup>252</sup> Act of June 17, 1902, § 2, 32 Stat. 388, as amended, 43 U. S. C. 411.

<sup>253</sup> H. Rep. No. 1635, 61st Cong., 2nd sess., pp. 2-3 (1910).

major portion of the funds arising from the sale of such lands in each state be expended therein, and prohibited the commencement of new projects except where "recommended by the Secretary of the Interior and approved by the direct order of the President of the United States."<sup>254</sup>

In 1914, Congress prohibited expenditures from the Reclamation Fund after July 1, 1915 "except out of appropriations made annually by Congress," a requirement also being included for annual submission of estimates by the Secretary.<sup>255</sup> A further change in 1924 required that "no new project or new division of a project shall be approved for construction or estimates submitted therefor by the Secretary" until he shall secure specified information and make prescribed findings.<sup>256</sup>

Elaborate modification of project-authorization procedure was effected by the Reclamation Project Act of 1939. A project now becomes authorized upon submission of a report and prescribed findings by the Secretary to the President and to Congress, in accordance with the following provisions of Section 9(a) of the Act:<sup>257</sup>

No expenditures for the construction of any new project, new division of a project, or new supplemental works on a project shall be made, nor shall estimates be submitted therefor, by the Secretary until after he has made an investigation thereof and has submitted to the President and to the Congress his report and findings on—

- (1) the engineering feasibility of the proposed construction;
- (2) the estimated cost of the proposed construction;

<sup>254</sup> Act of June 25, 1910, § 4, 36 Stat. 835, 836, 43 U. S. C. 400, 413. See also H. Rep. No. 1635, 61st Cong., 2d sess. (1910); H. Rep. No. 1729, 61st Cong., 2d sess. (1910); 45 Cong. Rec. 8673, 8752, 8865, 8901, 9028, 9087, App. 386, 388, 396, 397.

<sup>255</sup> Act of August 13, 1914, § 16, 38 Stat. 690, 43 U. S. C. 414.

<sup>256</sup> Act of December 5, 1924, § 4, subsection B, 43 Stat. 672, 702, 43 U. S. C. 412. For the information and findings required, see *supra*, p. 193.

<sup>257</sup> § 9(a), 53 Stat. 1193, 43 U. S. C. 485h(a). When a point of order was raised on the floor of the House of Representatives with respect to an item for an initial appropriation for a project, it was ruled that a project is authorized when a report under § 9(a) has been transmitted as therein provided, and the point of order was overruled. 87 Cong. Rec. 4047 (1941).

(3) the part of the estimated cost which can properly be allocated to irrigation and probably be repaid by the water users;

(4) the part of the estimated cost which can properly be allocated to power and probably be returned to the United States in net power revenues;

(5) the part of the estimated cost which can properly be allocated to municipal water supply or other miscellaneous purposes and probably be returned to the United States.

If the proposed construction is found by the Secretary to have engineering feasibility and if the repayable and returnable allocations to irrigation, power, and municipal water supply or other miscellaneous purposes found by the Secretary to be proper, together with any allocation to flood control or navigation made under subsection (b) of this section, equal the total estimated cost of construction as determined by the Secretary, then the new project, new division of a project, or supplemental works on a project, covered by his findings, shall be deemed authorized and may be undertaken by the Secretary. If all such allocations do not equal said total estimated cost, then said new project, new division, or new supplemental works may be undertaken by the Secretary only after provision therefor has been made by Act of Congress enacted after the Secretary has submitted to the President and the Congress the report and findings involved.

Moreover, Section 9(b) authorizes nonreimbursable allocations to flood control and navigation of such part of the total estimated cost as the "Secretary may find to be proper."<sup>255</sup> In

<sup>255</sup> "In connection with any new project, new division of a project, or supplemental works on a project there may be allocated to flood control or navigation the part of said total estimated cost which the Secretary may find to be proper. Items for any such allocations made in connection with projects which may be undertaken pursuant to subsection (a) of this section shall be included in the estimates of appropriations submitted by the Secretary for said projects, and funds for such portions of the projects shall not become available except as directly appropriated or allotted to the

1946, similar allocations were authorized for preservation and propagation of fish and wildlife.<sup>289</sup>

A further modification in authorization requirements appears in the 1944 Flood Control Act. As already noted, it provides for the submission of views and recommendations of the "affected States" and of the Secretary of the Army.<sup>290</sup> If such views and recommendations set forth objections, the proposed works shall not be deemed authorized "except upon approval by an Act of Congress."<sup>291</sup>

Additional importance attaches here to the 1944 Flood Control Act in its provision for irrigation use of Army dam and reservoir projects on specified conditions.<sup>292</sup> Upon recommendation by the Secretary of the Interior, if the Secretary of the Army determines that such a project may be utilized for irrigation purposes, the Secretary of the Interior is authorized to construct, operate, and maintain under Reclamation Law such additional works in connection therewith as he deems necessary for irrigation purposes. These may be undertaken only after his report and finding pursuant to Reclamation Law and after "subsequent specific authorization" by Congress. Within the limits of the water-users' repayment ability, such report may be predicated on the allocation to irrigation of an appropriate portion of the cost of structures and facilities used for irrigation and other purposes. Specifically exempted from

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Department of the Interior. In connection with the making of such an allocation, the Secretary shall consult with the Chief of Engineers and the Secretary of War, and may perform any of the necessary investigations or studies under a cooperative agreement with the Secretary of War. In the event of such an allocation the Secretary of the Interior shall operate the project for purposes of flood control or navigation, to the extent justified by said allocation therefor." § 9(b), 53 Stat. 1193, 43 U. S. C. 485h(b).

Express provision was also made for such allocations in the case of "any project, division of a project, development unit of a project, or supplemental works on a project" which at the time of the Act's enactment was under construction or for which appropriations had been made and in connection with which a repayment contract had not been executed. § 7(b), 53 Stat. 1192, 43 U. S. C. 485f(b).

<sup>289</sup> Act of August 14, 1946, § 2, 60 Stat. 1080, see 16 U. S. C. 662.

<sup>290</sup> See *supra*, p. 191.

<sup>291</sup> Act of December 22, 1944, § 1(c), 58 Stat. 887, 889.

<sup>292</sup> § 8, 58 Stat. 891, 43 U. S. C. 390.

these provisions were existing Army projects which provide conservation storage for irrigation purposes.

**PROSECUTION OF PROJECTS.**—After project authorization but before initiation of construction, certain preparatory work must be accomplished, such as the preparation of plans and specifications. Congress appropriates funds expressly for this purpose.<sup>263</sup>

In the 1902 Act, express provision was made for the letting of "contracts for the construction" of irrigation projects "in such portions or sections as it may be practicable to construct and complete as parts of the whole project," providing funds are available.<sup>264</sup> The prevailing practice of the Bureau is to let contracts on competitive bids for construction of projects.<sup>265</sup> And appropriation statutes sometimes place a limit on the amount expendable for construction work by "force account or on a hired-labor basis."<sup>266</sup>

A number of provisions implement or regulate activities relating to prosecution of projects. For example, the 1902 statute authorizes the acquisition of necessary rights or property by purchase or by condemnation.<sup>267</sup> This provision has been held to permit acquisition of an incomplete irrigation system to be used in connection with a federal project.<sup>268</sup> But it does not authorize the expense of procuring options to purchase rights-of-way, water rights, or lands.<sup>269</sup>

The 1939 Reclamation Project Act has more elaborate provisions. It authorizes acquisition of lands or interests therein for "relocation of highways, roadways, railroads, telegraph, telephone, or electric transmission lines, or other properties

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<sup>263</sup> See, *e. g.*, the appropriation under "General Investigations" for "formulating plans and preparing designs and specifications for authorized Federal reclamation projects or parts thereof prior to appropriations for construction." Act of September 6, 1950, ch. VII, § 101, 64 Stat. 595, —.

<sup>264</sup> Act of June 17, 1902, § 4, 32 Stat. 388, 389, 43 U. S. C. 419.

<sup>265</sup> See ANNUAL REPORT OF THE SECRETARY OF THE INTERIOR, p. 7 (1949). See also 34 L. D. 567.

<sup>266</sup> See, *e. g.*, Act of September 6, 1950, ch. VII, title I, 64 Stat. 595, —.

<sup>267</sup> Act of June 17, 1902, § 7, 32 Stat. 388, 389, 43 U. S. C. 421.

<sup>268</sup> Opinion of Asst. Attorney General, January 6, 1906, 34 L. D. 351.

<sup>269</sup> 9 COMP. GEN. 569 (1903).



whatsoever," the relocation of which is necessitated by project construction, operation, and maintenance.<sup>270</sup> To this end, the Secretary is authorized to enter into contracts with the owners of such properties whereby they undertake to acquire the property needed for relocation, or to perform the work involved in such relocation.<sup>271</sup> He is also empowered to make contracts for "exchange or replacement of water, water rights, or electric energy or for the adjustment of water rights."<sup>272</sup>

After appropriations for project construction or operation have been made, the Secretary may enter into contracts for "miscellaneous services, for materials and supplies, as well as for construction."<sup>273</sup> While such contracts may cover such periods of time as he deems necessary, the liability of the United States shall be contingent upon appropriations being made therefor.<sup>274</sup>

**THE RECLAMATION FUND.**—Closely related to the question of authorization of projects is the matter of their financing. Here, federal interest in irrigation has taken a unique turn. For instead of the usual direct appropriations for projects, Congress in 1902 created a revolving fund to which we have earlier referred as the "Reclamation Fund."<sup>275</sup> The Fund was originally established by reserving, setting aside, and appropriating

<sup>270</sup> Act of August 4, 1939, § 14, 53 Stat. 1187, 1197, 43 U. S. C. 389.

<sup>271</sup> *Id.*

<sup>272</sup> *Id.*

<sup>273</sup> § 12, 53 Stat. 1197, 43 U. S. C. 388.

<sup>274</sup> *Id.*

<sup>275</sup> Act of June 17, 1902, § 1, 32 Stat. 388, as amended, 43 U. S. C. 391. See also *The Reclamation Era*, Vol. 22, No. 11, p. 258 (November 1931); Hearings before a Subcommittee of the House Committee on Public Lands on Irrigation and Reclamation, 80th Cong., 1st sess., pp. 5-8 (1947).

In reporting the proposed reclamation legislation, the House Committee on Irrigation of Arid Lands said, "We have now reached a condition of affairs, at least in some portions of the arid region, where it is necessary to undertake enterprises of considerable magnitude and of such character as to clearly place them beyond the reach of private enterprise under the American system of land laws." H. Rep. No. 1468, 57th Cong., 1st sess., p. 3 (1902). This report also points out that the states could not perform the work, since their only source of revenue was taxation with but a small portion of the lands involved being taxable. *Id.* pp. 3-4.

moneys received from the disposal of public lands in the 16 Western States and Territories named in the Act.<sup>276</sup>

It was held in 1909 that the 1902 provision was, in itself, an appropriation of the proceeds from the disposal of the lands.<sup>277</sup> However, Congress in 1914 prohibited expenditures "except out of appropriations made annually by Congress."<sup>278</sup>

Within a few years after passage of the 1902 Act, annual increments from disposal of the lands began to diminish.<sup>279</sup> And Congress in 1910 authorized substantial advances to the Fund.<sup>280</sup> Such advances were in addition to a number of statutes designed to augment the fund by revenues other than from sale of lands.<sup>281</sup>

<sup>276</sup> § 1, 32 Stat. 388, as amended, 43 U. S. C. 391; see *supra*, p. 183.

A number of subsequent acts authorized the disposal of certain other lands connected with reclamation projects, receipts to be covered into the Reclamation Fund, for example: proceeds from sales of town lots withdrawn in connection with reclamation projects (Act of April 16, 1906, § 2, 34 Stat. 116, 43 U. S. C. 562); proceeds from sales of town sites set apart within or in the vicinity of a reclamation project (Act of June 27, 1906, § 3, 34 Stat. 519, 43 U. S. C. 563); moneys derived from sale of lands acquired under certain provisions of Reclamation Law and placed to the credit of the project (Act of February 2, 1911, 36 Stat. 895, 43 U. S. C. 374); moneys derived from sales of public lands withdrawn and improved at expense of the Reclamation Fund and placed to the credit of the project (Act of May 20, 1920, 41 Stat. 605, 43 U. S. C. 375).

Moreover, a provision was made for covering into the Reclamation Fund proceeds from the lease of lands reserved or withdrawn under Reclamation Law or from the sale of products therefrom; and where such lands are affected by a reservation or withdrawal under some other law, such proceeds are likewise to be covered into the Fund where such lands are needed for the protection or operation of any reservoir or other works constructed under Reclamation Law. Act of July 19, 1919, § 1, 41 Stat. 163, 202, 43 U. S. C. 395.

<sup>277</sup> *United States v. Hanson*, 167 Fed. 881, 884-885 (C. A. 9, 1909).

<sup>278</sup> Act of August 13, 1914, § 16, 38 Stat. 686, 690, 43 U. S. C. 414.

<sup>279</sup> *The Reclamation Era*, Vol. 21, No. 2, p. 34 (February 1930).

<sup>280</sup> See, e. g., Act of June 25, 1910, § 1, 36 Stat. 835, 43 U. S. C. 397; Act of March 3, 1931, 46 Stat. 1507, 43 U. S. C. 391a, 391b.

<sup>281</sup> For example, Congress directed that the following revenues be paid into the Reclamation Fund:

Proceeds of sales of material utilized for temporary work and structures in connection with operations under Reclamation Law, and from sales of condemned property purchased thereunder, and also moneys refunded in connection with operations under Reclamation Law. Act of March 3, 1905, 33 Stat. 1032, 43 U. S. C. 393.

In 1933, construction of reclamation projects was made an integral part of the federal program of public works, projects being financed by allotments from emergency funds.<sup>222</sup> While large sums were so expended, such projects in 1937 again became dependent upon the Reclamation Fund or general appropriations.<sup>223</sup> Considerable sums were still needed to complete the work in progress.<sup>224</sup> The 1938 Senate Committee Report on the Hayden-O'Mahoney amendment incorporated a letter from the then Secretary which, in addition to detailing the foregoing facts, pointed to the need for supplementing the Reclamation Fund, saying: <sup>225</sup>

It is a wise policy, therefore, for the Government at this time to make provisions \* \* \* looking toward increasing the reclamation fund and toward the time when the fund will be adequate to finance a program of reclamation construction commensurate with the needs of the West.

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Moneys derived from leases of surplus power or power privilege and placed to the credit of the project. Act of April 16, 1906, § 5, 34 Stat. 116, 117, as amended, 43 U. S. C. 522.

Moneys received under contracts for storage and carriage of water for certain nonproject lands. Act of February 21, 1911, § 3, 36 Stat. 925, 926, 43 U. S. C. 525.

Receipts and rentals from potassium deposits. Act of October 2, 1917, § 10, 40 Stat. 297, 300, repealed by Act of February 7, 1927, § 6, 44 Stat. 1057, 1058.

Moneys derived from contracts for supply of water for other purposes than irrigation and placed to the credit of the project. Act of February 25, 1920, 41 Stat. 451, 43 U. S. C. 521.

With specified exceptions, 70% of past receipts and 52¼% of future receipts from bonuses, royalties, and rentals from the mining on the public domain of coal, phosphates, oil, oil shale, gas, and sodium. Act of February 25, 1920, § 35, 41 Stat. 437, 450, as amended, 30 U. S. C. 191 (Supp. III).

Under the Federal Power Act, 50% of charges for use of public lands and national forests by licensees, with specified exceptions. Act of June 10, 1920, § 17, 41 Stat. 1063, 1072, as amended, 16 U. S. C. 810; see *infra*, pp. 284-285.

Amounts collected from defaulting contractors or their sureties in connection with contracts under Reclamation Law. Act of June 6, 1930, 46 Stat. 522, 43 U. S. C. 401.

<sup>222</sup> See Sen. Rep. No. 1544, 75th Cong., 3d sess., p. 2 (1938).

<sup>223</sup> *Ibid.*

<sup>224</sup> *Ibid.*

<sup>225</sup> *Id.* p. 3.

Mere mention of the provisions of that legislation reflects its importance to the Reclamation Fund.<sup>286</sup> One provision transfers to it 52½% of the moneys accrued from lands within the naval petroleum reserves, except those in Alaska, from February 25, 1920, through June 30, 1938, less \$15,000,000 then owing on account of advances from general funds of the Treasury.<sup>287</sup> A second and more important provision requires that there be covered into the Reclamation Fund all moneys received in connection with irrigation projects, including incidental power features, financed with federal funds and constructed by the Secretary through the Bureau; net power revenues are to be paid into the General Treasury after repayment of the construction costs allocated to power.<sup>288</sup> These requirements do not apply to projects of the Bureau of Indian Affairs, nor are they to be construed to amend the Boulder Canyon Project Act.<sup>289</sup>

It should be noted that this legislation has the effect of making available to the Fund amounts realized from the repayment of emergency moneys expended under the public works program during the preceding years. But these projects had not then reached a state of completion sufficient to commence repayment, and in 1941 such large projects as the Grand Coulee and Central Valley Projects were being completed with reimbursable funds advanced from the general funds of the Treasury.<sup>290</sup> In the same year, Congress added to the projects so financed a number of others, since construction progress was being delayed by the limited amounts available in the Reclamation Fund.<sup>291</sup>

It is informative to note that, at close of the fiscal year end-

<sup>286</sup> Act of May 9, 1938, § 1, 52 Stat. 291, 322-323, 43 U. S. C. 391a-1, 392a.

<sup>287</sup> § 1, 52 Stat. 322, 43 U. S. C. 391a-1. For the specific amounts, see ANNUAL REPORT OF THE SECRETARY OF THE INTERIOR, p. 59 (1938).

<sup>288</sup> § 1, 52 Stat. 322, 43 U. S. C. 392a. See ANNUAL REPORT OF THE SECRETARY OF THE INTERIOR, p. 59 (1938).

<sup>289</sup> *Id.*

<sup>290</sup> See RECLAMATION HANDBOOK, Department of the Interior, Bureau of Reclamation, p. 52 (1942). See also ANNUAL REPORT OF THE SECRETARY OF THE INTERIOR, p. 207 (1939).

<sup>291</sup> Act of June 28, 1941, 55 Stat. 303, 336; RECLAMATION HANDBOOK, Department of the Interior, Bureau of Reclamation, p. 52 (1942).

ing June 30, 1949, the total amount in the Fund was \$41,136,791.<sup>292</sup>

**REPAYMENT AND RETURN OF REIMBURSABLE COSTS.**—As earlier noted, repayment of construction costs into the Reclamation Fund was a basic principle of the 1902 Act.<sup>293</sup> “This principle has been maintained, although from time to time repayment periods have been lengthened to meet changing conditions.”<sup>294</sup> The evolution of these changes may best be portrayed by their review in three categories, those concerning the nature of the repayment obligation assumed, those concerning the identity of the obligor, and those concerning the repayment period. In addition, we shall then refer to certain other aspects of repayment provisions, and to some administrative interpretations which have been applied.

*Nature of Repayment Obligation.*—Under the 1902 Act each water user was required to assume a charge per acre determined with a view of returning to the Reclamation Fund the “estimated cost of construction,” in not to exceed 10 annual installments.<sup>295</sup> Under that Act, title did not pass to the homesteader until final payment, with the result that his credit was restricted and he was unable to dispose of any part of his land.<sup>296</sup> A statute remedying this situation in 1912 included a requirement that every patent and water-right certificate expressly reserve to the United States a prior lien on the land.<sup>297</sup>

The foregoing repayment provision encompassed all of the “estimated cost of construction,” without distinction as to the purpose served. The total obligation for project costs was thus imposed upon the water users.

<sup>292</sup> ANNUAL REPORT OF THE SECRETARY OF THE INTERIOR, table 15, p. 71 (1949).

<sup>293</sup> Act of June 17, 1902, § 4, 32 Stat. 388, 389, 43 U. S. C. 419, 461.

<sup>294</sup> NATIONAL IRRIGATION POLICY—ITS DEVELOPMENT AND SIGNIFICANCE, Sen. Doc. No. 36, 76th Cong., 1st sess., p. 30 (1939). See also Hearings before the House Committee on Irrigation and Reclamation on H. R. 6773 and H. R. 6984, 76th Cong., 1st sess., p. 20 (1939), the latter becoming the Reclamation Project Act of 1939.

<sup>295</sup> Act of June 17, 1902, § 4, 32 Stat. 388, 389, 43 U. S. C. 419, see 43 U. S. C. 461.

<sup>296</sup> See Sen. Rep. No. 608, 62d Cong., 2d sess., pp. 1-2 (1912).

<sup>297</sup> Act of August 9, 1912, § 2, 37 Stat. 265, 266, 43 U. S. C. 542.

Correspondingly, revenues derived from project operations were covered into the Reclamation Fund and credited to the project. For example, when Congress authorized the lease of surplus power or power privilege at reclamation projects, it required that the moneys derived be covered into the Reclamation Fund and placed to the credit of the project.<sup>298</sup> A like requirement was specified in a statute authorizing contracts to supply water "for other purposes than irrigation."<sup>299</sup> Similarly covered into the Reclamation Fund for the credit of the project are the proceeds from sales of lands acquired or withdrawn, but no longer needed for project purposes.<sup>300</sup>

In 1924, Congress directed that, whenever the water users take over project operation and maintenance, net profits from "operation of project power plants, leasing of project grazing and farm lands, and the sale or use of town sites" be credited to the project.<sup>301</sup> Such profits may then be used by the water users to be credited annually, first to the construction charge, second to operation and maintenance charges, and third "as the water users may direct."<sup>302</sup>

By the 1938 Hayden-O'Mahoney amendment, as previously noted, Congress directed that all moneys received in connection with irrigation projects, "including the incidental power features thereof," be covered into the Reclamation Fund, except where provision had been made by law or contract for the use of such revenues for the benefit of the water users.<sup>303</sup> It was

<sup>298</sup> Act of April 16, 1906, § 5, 34 Stat. 116, 117, as amended, 43 U. S. C. 522.

<sup>299</sup> Act of February 25, 1920, 41 Stat. 451, 43 U. S. C. 521.

<sup>300</sup> Act of February 2, 1911, § 3, 36 Stat. 895, 43 U. S. C. 374; Act of May 20, 1920, § 3, 41 Stat. 605, 606, 43 U. S. C. 375.

<sup>301</sup> Act of December 5, 1924, § 4, subsection I, 43 Stat. 672, 703, 43 U. S. C. 501.

<sup>302</sup> *Id.* See also Act of May 25, 1926, § 45, 44 Stat. 636, 648.

<sup>303</sup> Act of May 9, 1938, § 1, 52 Stat. 322, 43 U. S. C. 392a. In the case of the Boise and Shoshone Projects, Congress had in 1929 directed in effect that net power revenues be applied to repayment of costs of project power development, and thereafter covered into the Reclamation Fund. Act of March 4, 1929, 45 Stat. 1562, 1590, 1592. Similarly, Congress in 1937 made provision for relieving the water users of the obligation of making payment of the construction costs "chargeable to the development of power" of the Elephant Butte Dam in the amount determined as equitable by the Secretary. Act of August 9, 1937, 50 Stat. 564, 593.

provided, however, that after the net power revenues have repaid construction costs "allocated to power" and are no longer required to meet contractual obligations, the net power revenues shall be covered into the General Treasury.<sup>304</sup>

With respect to projects under the 1939 Reclamation Project Act, costs are classed as "probably" repayable or "probably" returnable to the United States in allocations under the Act's project-authorization procedure.<sup>305</sup> Such costs are thus repayable or returnable in the case of allocations to irrigation, power, municipal water supply and other miscellaneous purposes, and nonreimbursable in the case of navigation and flood control. Nonreimbursable allocations for the preservation and propagation of fish and wildlife were expressly authorized in 1946.<sup>306</sup>

It should also be noted that, in practice under the Act, costs allocable to irrigation but beyond the water-users' ability to repay are assigned for return from revenues from power or from furnishing water for municipal water supply or miscellaneous purposes.<sup>307</sup> Moreover the Act has been construed as permitting the application of interest, collected as a component of power rates, to the return to the United States of irrigation costs to be borne by power.<sup>308</sup> Under these provisions, therefore, the irrigation water-users' obligation is then limited to whatever part of the construction costs be allocated to irrigation and assigned for repayment by them.

The 1939 Act also provides an alternative method for return to the United States, except as to distribution system cost, of the construction cost connected with water supply and allocated to irrigation.<sup>309</sup> Under this alternative, the Secretary may enter into either short-term or long-term contracts to furnish water for irrigation purposes, for periods not exceeding 40 years. Such water-service contracts must provide such rates as will produce revenues at least sufficient to cover "an appropriate

<sup>304</sup> § 1, 52 Stat. 291, 322, 43 U. S. C. 392a.

<sup>305</sup> Act of August 4, 1939, § 9, 53 Stat. 1187, 1193, 43 U. S. C. 485h.

<sup>306</sup> Act of August 14, 1946, § 2, 60 Stat. 1080, 16 U. S. C. 662.

<sup>307</sup> H. Doc. No. 172, 79th Cong., 1st sess., p. 6 (1945). See Act of August 4, 1939, § 9(c), 53 Stat. 1187, 1194, 43 U. S. C. 485h(c).

<sup>308</sup> See *infra*, pp. 295-296.

<sup>309</sup> § 9(e), 53 Stat. 1196, 43 U. S. C. 485h(e).

share of the annual operation and maintenance cost and an appropriate share of such fixed charges as the Secretary deems proper, due consideration being given to that part of the cost of construction of works connected with water supply and allocated to irrigation." Payment must be made yearly in advance of delivery of water.

A unique feature of the 1939 Act is its optional basis for calculating annual repayment contract installments. It applies to projects on which there are construction charges payable to the United States. Known as the "normal and percentages plan," it permits variable payments based on the percentage of normal crop returns by which annual returns exceed or are less than normal returns.<sup>310</sup> Its operation has been explained by the Commissioner of Reclamation as follows:<sup>311</sup>

The normal and percentages plan operates in this way. Each year a census of crop returns is taken. The normal returns for each year will be determined by looking over the annual returns of that year and the 12 preceding years and throwing out the returns of the 3 low years. This will be done to prevent unusually poor crop years from being reflected in the average that makes up the normal. The average of the remaining 10 years is the normal returns. Against this normal returns for the year there will be compared the annual returns of the current year. If the annual returns are 25 percent less than the normal returns, then a reduction of twice that percentage, that is 50 percent, will be made in the installment of that year. For every 1 percent that the current year's crop returns are lower than the normal for that year, there would be a 2 percent reduction in the installment. A floor, below which reductions could not go, is 15 percent of the installment.

Following the war years with their high crop values, Congress in 1945 amended the formula for computing the annual

<sup>310</sup> §§ 4, 9(d)(5), 53 Stat. 1189, 1196, as amended, 43 U. S. C. 485c, 485h(5).

<sup>311</sup> Hearings before the House Committee on Irrigation and Reclamation on H. R. 6773 and H. R. 6984, 76th Cong., 1st sess., p. 24 (1939).



installment to provide a ceiling of between 150 and 200%, as determined by the Secretary, of the amount of the base installment for any year.<sup>212</sup>

Furthermore, the 1939 Act directs the Secretary to investigate the repayment problems of existing projects where he deems a contract under the Act would not provide an economically sound adjustment.<sup>213</sup> In such cases, he may negotiate a contract providing "fair and equitable treatment of the repayment problems" in keeping with the purposes of the Act.<sup>214</sup> Such negotiated contracts become effective only after approval by Congress.<sup>215</sup> A number of such negotiated contracts have been so approved.<sup>216</sup>

*Identity of Obligor.*—Initially, the repayment obligation rested with the individual water user.<sup>217</sup> It was soon evident that this method of multiple, individual water-right contracts on the various projects would prove difficult of administration.<sup>218</sup> Water-users' associations were voluntarily formed under state law for the purpose, among others, of collecting project water charges from individual members and paying them over to the Government.<sup>219</sup> In 1914, Congress expressly authorized the Secretary to designate water-users' associations or irrigation districts to act as fiscal agents in the collection of annual payments.<sup>220</sup> In some cases, associations undertook the additional role of guarantor of repayments.<sup>221</sup>

As we earlier noted, irrigation districts formed under state laws were usually equipped with statutory power of assessing

<sup>212</sup> Act of April 24, 1945, § 1, 59 Stat. 75, 43 U. S. C. 485c(d), see 485f(c), 485b note following.

<sup>213</sup> Act of August 4, 1939, § 7(a), 53 Stat. 1187, 1192, 43 U. S. C. 485f(a).

<sup>214</sup> *Id.*

<sup>215</sup> § 7(c), 53 Stat. 1192, as amended, 43 U. S. C. 485f(c).

<sup>216</sup> For example, see the several contracts approved by Act of May 6, 1949, 63 Stat. 62, —.

<sup>217</sup> Act of June 17, 1902, § 4, 32 Stat. 388, 389, 43 U. S. C. 419, 461.

<sup>218</sup> SECOND ANNUAL REPORT OF THE RECLAMATION SERVICE, p. 31 (1903).

<sup>219</sup> *Id.* pp. 31, 76; FIFTEENTH ANNUAL REPORT OF THE RECLAMATION SERVICE, pp. 600-601 (1916).

<sup>220</sup> Act of August 13, 1914, § 7, 38 Stat. 686, 688, 43 U. S. C. 477; see also *supra*, pp. 170-174.

<sup>221</sup> LANDOWNERSHIP SURVEY ON FEDERAL RECLAMATION PROJECTS, Department of the Interior, p. 33 (1946).

lands to enforce collections.<sup>822</sup> In 1922, Congress authorized the Secretary to contract with such districts, dispensing with the necessity for individual water-right contracts and releasing the liens thereunder.<sup>823</sup> In 1926, such district repayment contracts became mandatory before delivery of water from a new project or a new division of a project.<sup>824</sup> The 1939 Reclamation Project Act similarly requires repayment contracts with "an organization, satisfactory in form and powers to the Secretary."<sup>825</sup> The contract must also be in a form satisfactory to the Secretary and must provide for, among other things, inclusion of that part of the construction costs allocated to irrigation in "a general repayment obligation of the organization."<sup>826</sup> Under these provisions, therefore, repayment contracts with individual water users disappeared entirely. Also, the organization's obligation continues without regard to individual defaults.

*Repayment Period.*—Repayment under the 1902 Act could not exceed 10 annual installments.<sup>827</sup> In 1914, this was extended to a maximum 20-year period.<sup>828</sup> Five percent of the construction charge constituted the initial payment, and the balance was required to be paid in 15 annual installments commencing five years after the initial payment.<sup>829</sup> The period was further extended in 1926 in the case of any new project or new division of a project, when Congress authorized the Secretary to fix the number of years not to exceed 40, from the date of notice announcing the actual availability of water.<sup>830</sup> Finally, in the case of projects under the 1939 Act, a period of 40 years is again authorized.<sup>831</sup> But here the Secretary may fix a "development period" of not to exceed 10 years and the repayment

<sup>822</sup> See *supra*, pp. 171-174.

<sup>823</sup> Act of May 15, 1922, §§ 1, 2, 42 Stat. 541, 542, 43 U. S. C. 511, 512.

<sup>824</sup> Act of May 25, 1926, § 46, 44 Stat. 636, 649, 43 U. S. C. 423e.

<sup>825</sup> Act of August 4, 1939, § 9(d), 53 Stat. 1187, 1195, 43 U. S. C. 485h(d).

<sup>826</sup> *Id.*

<sup>827</sup> Act of June 17, 1902, § 4, 32 Stat. 388, 389.

<sup>828</sup> Act of August 13, 1914, § 1, 38 Stat. 686, 43 U. S. C. 472.

<sup>829</sup> *Id.*

<sup>830</sup> Act of May 25, 1926, § 46, 44 Stat. 636, 649, 43 U. S. C. 423e.

<sup>831</sup> Act of August 4, 1939, § 9(d), 53 Stat. 1187, 1195, 43 U. S. C. 485h(d).

obligation may be spread in annual installments over not to exceed 40 years exclusive of the development period.<sup>333</sup> Still longer repayment periods have since been authorized for individual projects by special statute.<sup>333</sup>

*Other Aspects of Repayment.*—In the case of contracts under the 1939 Act to furnish water for municipal water supply or miscellaneous purposes, costs allocated thereto may be recovered through imposition of a capital repayment obligation payable over a period of not exceeding 40 years, with interest not exceeding 3½% per annum “if the Secretary determines an interest charge to be proper.”<sup>334</sup> Or such contracts may be made for periods not to exceed 40 years at rates calculated to produce revenues at least sufficient to cover “an appropriate share of the annual operation and maintenance cost and an appropriate share of such fixed charges as the Secretary deems proper,” payments to be made annually in advance of delivery of water.<sup>335</sup> The Act also prescribes a formula for the sale of electric power or lease of power privileges. Contracts may not exceed 40 years and shall be at such rates as in the Secretary’s judgment will produce power revenues at least sufficient

<sup>333</sup> *Id.*

<sup>334</sup> See Lewiston Orchards Project, not exceeding 50 years (Act of July 31, 1946, 60 Stat. 717) ; Paonia Project, not exceeding 68 years (Act of June 25, 1947, § 1, 61 Stat. 181) ; Mancos Project, extended to 60 years (Act of June 25, 1947, 61 Stat. 176) ; Gila Project, not exceeding 60 years (Act of July 30, 1947, § 5, 61 Stat. 628, 629, 43 U. S. C. 613d (Supp. III)) ; Deer Creek and Aqueduct Divisions, Provo River Project, 40 years to begin after indeterminate postponement (Act of March 29, 1948, 62 Stat. 92) ; Kennewick Division, Yakima Project, not exceeding 66 years (Act of June 12, 1948, § 3, 62 Stat. 382) ; Preston Bench Project, not exceeding 74 years (Act of June 15, 1948, 62 Stat. 442) ; Eden Project, not exceeding 60 years (Act of June 28, 1949, § 1, 63 Stat. 277) ; Fort Sumner Project, within useful life of the project (Act of July 29, 1949, 63 Stat. 483) ; Weber Basin Project, not exceeding 60 years (Act of August 29, 1949, § 2, 63 Stat. 677, —) ; Buffalo Rapids Project, not exceeding 60 years (Act of October 10, 1949, § 1, 63 Stat. 725) ; Vermejo Project, consistent with maximum repayment ability (Act of September 27, 1950, 64 Stat. 1072) ; Northside Pumping Division, Minidoka Project, not exceeding 50 years (Act of September 30, 1950, 64 Stat. 1083).

<sup>335</sup> Act of August 4, 1939, § 9(c), 53 Stat. 1187, 1194, 43 U. S. C. 485h(c).

<sup>336</sup> *Id.*

to cover "an appropriate share of the annual operation and maintenance cost, interest on an appropriate share of the construction investment at not less than three per centum per annum, and such other fixed charges as the Secretary deems proper."<sup>336</sup> None of these provisions is applicable to existing contract provisions for the use of power and miscellaneous revenues "for the benefit of users of water" from the project.<sup>337</sup>

Provisions recently made applicable in the case of the Missouri River Basin Project also merit notice. Congress directed that the reclamation and power developments to be undertaken by the Secretary be governed by Reclamation Law, subject to the "basin-wide findings and recommendations regarding the benefits, the allocations of costs and the repayments by water users" set forth in specified documents.<sup>338</sup>

Another aspect affecting repayment is the timing of opening to entry of reclamation lands. Under the 1902 Act, the Secretary was directed to give public notice of the lands irrigable, the limit of the area per entry, and the charges per acre.<sup>339</sup> In 1910, Congress prohibited entrymen from going upon the land until the Secretary should establish the unit of acreage, fix the water charges and date when water could be applied, and make public announcement of the same.<sup>340</sup> A 1911 statute authorized him to withdraw any public notice theretofore issued, and permitted him to agree to modifications of water-right applications or contracts with water-users' associations.<sup>341</sup> In 1914, Congress directed that no increase in construction charges be made after they had been fixed by special notice, except by agreement with a majority of the water-right applicants and

<sup>336</sup> *Id.* See also *infra*, pp. 295-296.

<sup>337</sup> *Id.*

<sup>338</sup> Act of December 22, 1944, § 9(c), 58 Stat. 887, 891. This provision specifically excepted irrigation of Indian trust and tribal lands and repayment therefor, requiring that they be in accordance with the laws relating to Indian lands. The documents specified are: H. Doc. No. 475, Sen. Doc. No. 191, Sen. Doc. No. 247, all 78th Cong., 2d sess. (1944).

<sup>339</sup> Act of June 17, 1902, § 4, 32 Stat. 388, 389, 43 U. S. C. 419.

<sup>340</sup> Act of June 25, 1910, § 5, 36 Stat. 835, 836, as amended, 43 U. S. C. 436. See also *Roberts v. Spencer*, 40 L. D. 306 (1911).

<sup>341</sup> Act of February 13, 1911, § 1, 36 Stat. 902, 43 U. S. C. 468.

entrymen affected.<sup>342</sup> It was also provided in 1924 that construction charges be made payable in annual installments based on the productive power of the land, in accordance with a prescribed formula, but this provision was repealed two years later.<sup>343</sup>

In general, Reclamation Law requires that water-user repayment contracts be executed in advance of delivery of water.<sup>344</sup> Under the Bureau's general practice, such contracts are consummated even in advance of project construction.<sup>345</sup> And this has been required by statute in the case of certain projects.<sup>346</sup>

Provision is made for payment of penalties or interest for delinquencies in payment.<sup>347</sup> But Congress has sometimes relaxed repayment requirements under contracts to meet changing economic conditions. For example, it authorized the Secretary in 1924 to defer payments of charges until March 1, 1927.<sup>348</sup> Moreover, as more attractive repayment provisions were prescribed for new projects, provision was usually included authorizing amendment of existing contracts to bring them under the new provisions.<sup>349</sup> As might be expected, the need to meet problems experienced on existing projects often led to amenda-

<sup>342</sup> Act of August 13, 1914, § 4, 38 Stat. 686, 687, 43 U. S. C. 469. For a somewhat similar provision whereby water-user agreements to repay an increased cost over that earlier fixed were made a condition of undertaking the work involved, see Act of March 3, 1915, 38 Stat. 822, 861.

<sup>343</sup> Act of December 5, 1924, § 4, subsection F, 43 Stat. 672, 702, repealed by Act of May 25, 1926, § 47, 44 Stat. 636, 650.

<sup>344</sup> See, *e. g.*, Act of May 25, 1926, § 46, 44 Stat. 636, 649, 43 U. S. C. 423e; Act of August 4, 1939, § 9(d), 53 Stat. 1187, 1195, 43 U. S. C. 485h(d).

<sup>345</sup> See Hearings before a Subcommittee of the House Committee on Appropriations, on the Interior Department Appropriation Bill for 1949, 80th Cong., 2d sess., Part 3, p. 887 (1948).

<sup>346</sup> Act of December 21, 1928, § 4(b), 45 Stat. 1057, 1059, 43 U. S. C. 617c(b); Act of April 9, 1938, 52 Stat. 211, see 43 U. S. C. 600a.

<sup>347</sup> See, *e. g.*, Act of August 13, 1914, § 3, 38 Stat. 686, 687, as amended, 43 U. S. C. 478.

<sup>348</sup> Act of May 9, 1924, 43 Stat. 116, 43 U. S. C. 384.

<sup>349</sup> See, *e. g.*, Act of August 13, 1914, §§ 2, 14, 38 Stat. 686, 687, 690, as amended, 43 U. S. C. 475; Act of December 5, 1924, § 4, subsection F, 43 Stat. 672, 702, repealed by Act of May 25, 1926, § 47, 44 Stat. 636, 650; Act of May 25, 1926, § 50, 44 Stat. 636, 650, 43 U. S. C. 423g; Act of August 4, 1939, § 3, 53 Stat. 1187, 1188, 43 U. S. C. 485b.

tory or supplementary legislation.<sup>350</sup> An example expressly in point is the Reclamation Project Act of 1939.<sup>351</sup>

*Administrative Interpretation of Repayment Provisions.*— In the course of recent congressional hearings, administrative interpretations of various aspects of repayment provisions of Reclamation Law were presented in a memorandum prepared by the Bureau's Chief Counsel.<sup>352</sup> We shall summarize here portions of that memorandum to cast further light on administrative views upon this somewhat complicated aspect of Reclamation Law.

In projects governed by the Omnibus Adjustment Act of 1926, an irrigation district must assume, prior to delivery of water, a repayment obligation in the amount of the " 'cost of constructing' " the project or division, which means the actual cost.<sup>353</sup> Usually, however, the Bureau requires execution of contracts in advance of or concurrently with the commencement of construction.<sup>354</sup> This necessitates amendatory repayment contracts as construction progresses where actual costs exceed the obligation assumed in prior contracts.<sup>355</sup>

In the case of contracts where the water users undertake to repay on completion the actual cost, but not in excess of a stated maximum, when the amount of expenditure equals or exceeds the amount of the obligation assumed, the United States

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<sup>350</sup> See, *e. g.*, REPAYMENT OF THE CONSTRUCTION COSTS OF FEDERAL AND INDIAN RECLAMATION PROJECTS, H. Doc. No. 673, 75th Cong., 3d sess. (1938).

<sup>351</sup> "That for the purpose of providing for United States reclamation projects a feasible and comprehensive plan for an economical and equitable treatment of repayment problems and for variable payments of construction charges which can be met regularly and fully from year to year during periods of decline in agricultural income and unsatisfactory conditions of agriculture as well as during periods of prosperity and good prices for agricultural products, and which will protect adequately the financial interest of the United States in said projects, obligations to pay construction charges may be revised or undertaken pursuant to the provisions of this Act." Act of August 4, 1939, § 1, 53 Stat. 1187, 43 U. S. C. 485.

<sup>352</sup> Hearings before a Subcommittee of the House Committee on Appropriations on the Interior Department Appropriation Bill for 1949, 80th Cong., 2d sess., Part 3, pp. 871-887 (1948).

<sup>353</sup> *Id.* p. 876.

<sup>354</sup> *Id.* p. 877.

<sup>355</sup> *Ibid.*

is not obligated to complete construction.<sup>356</sup> But the particular contract may provide that in such a situation the project shall be deemed completed, and the water users would then be entitled to receive the benefits of the project so far as completed, and are obligated to pay the amount of the expenditure.<sup>357</sup> If additional expenditures are made, the waters users may receive the benefit of water delivery from the additional works only upon assumption of the additional repayment obligation.<sup>358</sup>

If the repayment contract conditions payment upon project completion, the repayment obligation comes into being only when the project is completed.<sup>359</sup> While this remains true even where expenditures exceed the amount of the assumed repayment obligation, water cannot be delivered until assumption of an obligation for the additional cost.<sup>360</sup>

In projects governed by the 1939 Act, the entire expenditure must be returned, excepting any amounts allocated to navigation and flood control.<sup>361</sup> Such return must therefore be accomplished regardless of the total estimated cost set forth in the feasibility finding, and regardless of the amounts stated in such finding to be properly allocable to reimbursable purposes and probably returnable.<sup>362</sup> With respect to a multiple-purpose project, no problem arises if the actual cost does not exceed the cost allocated to irrigation within the water-users' repayment ability plus the amount derivable from other sources including power revenues assigned for return of irrigation cost beyond such water-users' repayment ability.<sup>363</sup>

It may not reasonably be presumed that war-time cost increases were contemplated by Congress when it enacted the 1939 Act.<sup>364</sup> Nevertheless, a problem arises as to what must be done when actual expenditures, plus the amount estimated

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<sup>356</sup> *Id.* p. 879.

<sup>357</sup> *Ibid.*

<sup>358</sup> *Ibid.*

<sup>359</sup> *Ibid.*

<sup>360</sup> *Ibid.*

<sup>361</sup> *Id.* p. 885.

<sup>362</sup> *Ibid.*

<sup>363</sup> *Ibid.*

<sup>364</sup> *Id.* p. 886.

to complete the project, exceed the aggregate of the amount allocable to irrigation within the water-users' repayment ability and the amount derivable from other sources including power revenues assigned for return of irrigation cost beyond the water-users' repayment ability.<sup>365</sup> If the view be taken that there must be a full return of all reimbursable costs, then the only course open is for the Bureau to present the problem to Congress for solution.<sup>366</sup> For the situation is not covered by existing law.<sup>367</sup> Or it might be argued that the Act's repayment provisions require reimbursement of only the amounts allocated in the feasibility findings.<sup>368</sup> But this would mark such a wide departure from the statutory requirements as to reimbursement prior to the 1939 Act that such a view is not acceptable.<sup>369</sup>

Where the entire project cost is allocated to irrigation, the legal requirement respecting the amount of the water-users' obligations under the 1939 Act does not differ substantially from that under earlier statutes.<sup>370</sup> As to multiple-purpose projects, the 1939 Act requires a contract assuring repayment by water users before delivery of water on the land, or in lieu thereof a water-service contract.<sup>371</sup> However, if a majority of the land to be irrigated is owned by the United States, no repayment contract is required until close of the development period. But it has been the policy of the Bureau to require a repayment contract in advance of or concurrently with the beginning of construction.<sup>372</sup> In this situation, where irrigation-water users and users for power and other purposes repay costs, a water-service contract may be made and it need not assure full return at the outset, but only that the rates for water rental be adequate to accomplish the return within the maximum period permitted by law.<sup>373</sup> The situation as to manner

<sup>365</sup> *Id.* p. 835.

<sup>366</sup> *Ibid.*

<sup>367</sup> *Ibid.*

<sup>368</sup> *Id.* pp. 835-836.

<sup>369</sup> *Id.* p. 836.

<sup>370</sup> *Ibid.*

<sup>371</sup> *Id.* pp. 836-837.

<sup>372</sup> *Id.* p. 837.

<sup>373</sup> *Id.* pp. 836-837.



and timing of repayment assurances is the same where the entire project cost is allocated to irrigation.<sup>374</sup> It was also concluded that if the United States permits construction costs repayable by water users to exceed the amount of assumed obligations under existing contract, the situation as to water-users' benefits and obligations is the same under the 1939 Act as under the 1926 Act.<sup>375</sup>

In some instances, Congress has enacted provisions applying to specific projects which expressly limit the water-users' repayment obligation to a fixed dollar maximum.<sup>376</sup>

**OPERATION OF PROJECTS.**—Congress has enacted many laws governing various aspects of operation of irrigation projects. As we shall group them for review, they relate to settlement and development of projects, acreage limitations and anti-speculation, operation and maintenance charges, disposal of power, flood control and navigation, rehabilitation and betterment, and nonfederal operation of projects by water-users' organizations.

*Settlement and Development of Projects.*—In order to provide for the creation of homes and of opportunities for successful living, as the ultimate objective of reclamation work, the Bureau supervises the development and settlement of project lands.<sup>377</sup> As earlier noted, both public and privately owned lands may be included in reclamation projects.<sup>378</sup> Privately owned land is subject to the applicable provisions of Reclamation Law when covered by a water-right application or a subscription for stock in a water-users' association,<sup>379</sup> or is in-

<sup>374</sup> *Id.* p. 887.

<sup>375</sup> *Ibid.*

<sup>376</sup> *Id.* p. 881. See also Act of July 12, 1943, 57 Stat. 451, 477.

<sup>377</sup> RECLAMATION HANDBOOK, Department of the Interior, Bureau of Reclamation, p. 44 (1942). "The responsibility of the Bureau does not cease with the assumption of operation and maintenance operations by local organizations. Through cooperation with county agricultural agencies and through the recently established division of soil and moisture conservation operations, it seeks to aid project farmers in agricultural development and in improving irrigation practices." *Ibid.*

<sup>378</sup> See *supra*, p. 45.

<sup>379</sup> RECLAMATION HANDBOOK, Department of the Interior, Bureau of Reclamation, p. 46 (1942).

cluded in an irrigation district which has contracted with the United States.<sup>380</sup>

The 1902 Act authorized the withdrawal from entry of public lands useful for projects.<sup>381</sup> It required entrymen, prior to patent, to reclaim for agricultural purposes at least one-half of the irrigable area of the entry.<sup>382</sup> In 1910, Congress prohibited entry before public announcement of the unit of acreage established, the water charges fixed, and the date when water could be applied.<sup>383</sup>

A basis for the screening of entrymen was established by Congress in 1924.<sup>384</sup> The Secretary was thereby authorized to require of each public-land entry applicant, including preference-right veterans, such qualifications as to "industry, experience, character, and capital" as he deems necessary to give assurance of success by the settler.<sup>385</sup>

The general preference entry rights of World War I veterans have expired.<sup>386</sup> Veterans of World War II must be given at least a ninety days' preference right of entry.<sup>387</sup> Implementing regulations provide that when reclamation farm units are open for entry, a drawing shall be held initially open only to vet-

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<sup>380</sup> *Ibid.* The inclusion of public lands in irrigation districts was conditionally authorized. Act of August 11, 1916, § 2, 39 Stat. 506, 507, as amended, 43 U. S. C. 622.

<sup>381</sup> Act of June 17, 1902, § 3, 32 Stat. 388, 43 U. S. C. 416.

<sup>382</sup> § 5, 32 Stat. 389, 43 U. S. C. 439.

<sup>383</sup> Act of June 25, 1910, § 5, 36 Stat. 835, 836, as amended, 43 U. S. C. 436.

<sup>384</sup> Act of December 5, 1924, § 4, subsection C, 43 Stat. 672, 702, 43 U. S. C. 433.

<sup>385</sup> The implementing regulations require that applicants be possessed of honesty, temperate habits, thrift, industry, seriousness of purpose, a record of good moral conduct, and a bona fide intent to engage in farming. They must also have good health, and at least two years of farm experience. An examining board can require any amount of clear capital or its equivalent in livestock, farming equipment or other assets which it thinks useful in the development and operation of a new irrigated farm, which amount is announced with each notice opening public lands to entry. 43 C. F. R. 401.8.

<sup>386</sup> Act of June 12, 1930, 46 Stat. 580, as amended, 43 U. S. C. 186. An exception is provided in the case of the Boulder Canyon Project Act. Act of March 6, 1946, 60 Stat. 36, see 43 U. S. C. 617h. See also 43 C. F. R. 401.3-401.6.

<sup>387</sup> Act of September 27, 1944, § 4, 58 Stat. 747, 748, 43 U. S. C. 282.

erans.<sup>393</sup> After two drawings, any unit not disposed of goes to the first qualified applicant.<sup>394</sup>

Still other statutory provisions aid settlement. Such is the 1906 authorization for the establishment of town sites within irrigation projects and for furnishing water to such towns.<sup>395</sup> Another example is the 1914 authorization for the Secretary to reserve lands for country parks, public playgrounds, and community centers on reclamation projects.<sup>396</sup>

Cooperation with other agencies in aid of settlement has also been authorized. The Secretary may enter into agreements with states for the cooperative promotion of the settlement of projects and in securing and selecting settlers.<sup>397</sup>

In 1944 and subsequently, Congress has provided funds for giving information and advice to settlers and water-users' organizations in the selection of lands, equipment, and livestock; the classification of lands; the preparation of land for irrigation; the selection of crops; methods of irrigation and agricultural practices; and general farm management.<sup>398</sup> In this connection, the Bureau cooperates with state agricultural colleges and with agencies of the Department of Agriculture.<sup>399</sup>

Certain unique provisions of the Columbia Basin Project Act merit notice here.<sup>400</sup> While we shall later mention in more detail its antispeculation and acreage-limitation provisions,<sup>401</sup>

<sup>393</sup> 43 C. F. R. 401.18, 401.20.

<sup>394</sup> 43 C. F. R. 401.20(c).

<sup>395</sup> Act of April 16, 1906, §§ 1, 4, 34 Stat. 116, 43 U. S. C. 561, 567.

<sup>396</sup> Act of October 5, 1914, 38 Stat. 727, 43 U. S. C. 569.

<sup>397</sup> Act of May 25, 1926, § 46, 44 Stat. 636, 649, 43 U. S. C. 423e.

<sup>398</sup> Act of June 28, 1944, 58 Stat. 463, 488. Similar provision has been made in subsequent appropriation acts. See, *e. g.*, Act of September 6, 1950, 64 Stat. 595, —.

<sup>399</sup> See, *e. g.*, Memorandum of Understanding between Bureau of Reclamation and the State College of Washington, dated January 12, 1950; Memorandum of Understanding between The Wyoming Agricultural Experiment Station and Bureau of Plant Industry, Soils, and Agricultural Engineering; Agricultural Research Administration; Soil Conservation Service; Bureau of Agricultural Economics, Department of Agriculture, and the Bureau of Reclamation, Department of the Interior, dated April 3, 1950.

<sup>400</sup> Act of March 10, 1943, 57 Stat. 14, see 16 U. S. C. 835-835i.

<sup>401</sup> See *infra*, pp. 232-234.

an indication of the scope of the intent to aid settlement appears in the following provision: <sup>397</sup>

For the purposes of assisting in the permanent settlement of farm families, protecting project land, facilitating project development, and preventing speculation in project lands, the Secretary is authorized to administer public lands of the United States in the project area and lands acquired under this section; to sell, exchange, or lease such lands; to establish town sites on such lands; to dedicate portions of such lands for public purposes in keeping with sound project development; to acquire in the name of the United States, at prices satisfactory to him, such lands or interest in lands, within or adjacent to the project area, as he deems appropriate for the protection, development, or improvement of the project; to accept donations of real and personal property for the purposes of this Act; and to disseminate information by appropriate means and methods. Any moneys realized on account of donations for purposes of this Act shall be covered into the Treasury as trust funds.

The plan of development contemplates inclusion within the project of public lands and the acquisition and sale of privately owned lands, all to conform to appropriate farm units.<sup>398</sup> In the investigations initiated by the Bureau in 1939 to plan for settlement and development of the project area, more than 40 agencies participated, including federal, state, and local governments, educational institutions, private industries, and local civic organizations.<sup>399</sup> That investigation anticipated that the area will support from 350,000 to 400,000 people on farms and related urban settlements.<sup>400</sup>

*Acreeage Limitations and Antispeculation Provisions.*—The 1901 presidential message to Congress, which enunciated prin-

<sup>397</sup> § 4(a), 57 Stat. 18, see 16 U. S. C. 835c(a).

<sup>398</sup> §§ 2-4, 57 Stat. 14-18, see 16 U. S. C. 835a-835c(b).

<sup>399</sup> RECLAMATION HANDBOOK, Department of the Interior, Bureau of Reclamation, p. 47 (1942).

<sup>400</sup> *Ibid.*

ciples later incorporated in the 1902 Reclamation Act, stated that the people as a whole would profit from a reclamation program, "for successful home-making is but another name for upbuilding of the Nation."<sup>401</sup> Similarly, during debate on the legislative proposal, it was said that:<sup>402</sup>

The bill is drawn exclusively for the protection of the settler and actual home builder, and every possible safeguard is made against speculative ownership and the concentration of the lands or water privileges into large holdings \* \* \*.

The Act itself, as we shall shortly see, contained provisions implementing the establishment of farm homes. Indeed, the first head of the Reclamation Service characterized the making of homes as the "primary objective" of the 1902 Act, saying:<sup>403</sup>

The object of the Reclamation Act is not so much to irrigate the land as it is to make homes. President Theodore Roosevelt in his message to this Congress today, and in every previous message to this Congress and to the Congress of the United States, has emphasized again and again that the primary objective of the law was to make homes. It is not to irrigate the lands which now belong to large corporations or to small ones; it is not to make these men wealthy; but it is to bring about a condition whereby that land shall be put into the hands of the small owner, whereby the man with a family can get enough land to support that family, to become a good citizen, and to have all the comforts and necessities which rightly belong to an American citizen.

To this end, Section 3 of the 1902 Act, defining conditions upon which entry could be made upon public lands in a project, stipulates that:<sup>404</sup>

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<sup>401</sup> H. Doc. No. 1, 57th Cong., 1st sess., p. XXIX (1901).

<sup>402</sup> 35 CONG. REC. 6758 (1902).

<sup>403</sup> F. H. Newell's message to the National Irrigation Congress in 1905, LANDOWNERSHIP SURVEY ON FEDERAL RECLAMATION PROJECTS, Department of the Interior, p. 91 (1946).

<sup>404</sup> Act of June 17, 1902, § 3, 32 Stat. 388, as amended, 43 U. S. C. 434.

public lands which it is proposed to irrigate by means of any contemplated works shall be subject to entry only under the provisions of the homestead laws in tracts of not less than forty nor more than one hundred and sixty acres \* \* \*

But benefits under the Act were not confined to public lands, and a corollary provision with respect to private lands is prescribed by Section 5 which requires that: <sup>405</sup>

No right to the use of water for land in private ownership shall be sold for a tract exceeding one hundred and sixty acres to any one landowner, and no such sale shall be made to any landowner unless he be an actual bona fide resident on such land, or occupant thereof residing in the neighborhood of said land, and no such right shall permanently attach until all payments therefor are made.

It will be noted that the provisions of Sections 3 and 5 both establish a maximum limitation of 160 acres, and Section 3 a minimum of 40 acres. The legislation was accordingly construed as permitting the Secretary to establish units of different sizes even on the same project.<sup>406</sup>

As already noted, a practice soon developed whereby water-users' associations composed of project landowners aided the Government in applying certain provisions of Reclamation

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<sup>405</sup> § 5, 32 Stat. 389, 43 U. S. C. 431. During debate in the House on the proposal, it was pointed out that "Under nearly every project undertaken by the Government there will undoubtedly be some lands in private ownership; and it would be manifestly unjust and inequitable not to provide water for these lands, providing their owners are willing to comply with the conditions of the act; and in order that no such lands may be held in large quantities or by nonresident owners it is provided that no water right for more than 160 acres shall be sold to any land owner, who must also be a resident or occupant of his land. This provision was drawn with a view of breaking up any large land holdings which might exist in the vicinity of the Government works and to insure occupancy by the owner of the land reclaimed." 35 Cong. Rec. 6678 (1902).

<sup>406</sup> "The only limitation upon the power of the Secretary is that the lands must be entered, under the provisions of the homestead law, in tracts of not less than 40 nor more than 160 acres." Instructions of the Secretary of the Interior, 32 L. D. 237, 239 (1903).

Law.<sup>407</sup> In such situations, each individual landowner subscribing for stock in an association was permitted to subscribe for shares covering all his land, irrespective of the amount of acreage, upon condition that the land owned by him in excess of 160 acres would subsequently be transferred to an individual eligible to apply for a water right.<sup>408</sup> To enforce that condition, owners of excess lands were required to execute a trust deed or contract authorizing the association or a third person to sell such land to persons qualified to apply for a water right under the Act.<sup>409</sup> Upon failure of the owner to dispose of the excess land as required, and upon failure of the trustee to enforce the trust deed, the Secretary was authorized to designate a third person to dispose of the land.<sup>410</sup>

A simpler and more direct means for enforcement of provisions limiting acreage was afforded by the water-right application whereby the landowner would apply to the United States for water from the project.<sup>411</sup> The application included an affidavit requiring disclosure of other lands subject to a water-right application.<sup>412</sup> Also, the applicant was required to furnish information as to the nature of his interest in the land, the application being denied if his interest would not ripen into a fee simple title before the due date of the last construction charge payment.<sup>413</sup> In the event of a transfer to an individual not qualified to apply for a water right, the United States could cancel the application and declare payments theretofore made forfeited.<sup>414</sup> Finally, the application also provided that ultimate evidence of title to a water right would not issue, even

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<sup>407</sup> LANDOWNERSHIP SURVEY ON FEDERAL RECLAMATION PROJECTS, Department of the Interior, p. 33 (1946). See also *supra*, pp. 169, 206-207.

<sup>408</sup> *Id.* p. 34.

<sup>409</sup> *Ibid.*

<sup>410</sup> Instructions of the Secretary of the Interior, 33 L. D. 202, 204-205 (1904).

<sup>411</sup> LANDOWNERSHIP SURVEY ON FEDERAL RECLAMATION PROJECTS, Department of the Interior, p. 34 (1946); Regulations Relating to the Reclamation of Arid Lands by the United States, 38 L. D. 620, 637, 639 (1910).

<sup>412</sup> LANDOWNERSHIP SURVEY ON FEDERAL RECLAMATION PROJECTS, Department of the Interior, p. 34 (1946).

<sup>413</sup> *Ibid.*

<sup>414</sup> *Id.* pp. 34-35.

upon final construction charge payment, if the then owner of the property held land in excess of 160 acres subject to Reclamation Law.<sup>415</sup>

It should be noted that, while Section 5 precludes the sale of water rights for land in private ownership in excess of 160 acres, it does not expressly preclude the accumulation of land in single ownership beyond 160 acres after water-right application has been made by a properly qualified person. Hence, so far as the provisions of the water-right application provided for continuing enforcement of excess-land restrictions until payment of construction charges, the requirement was based upon administrative interpretation.<sup>416</sup> But in 1912, Congress expressly prohibited the issuance of a patent or water-right certificate:<sup>417</sup>

until all sums due the United States on account of such land or water right at the time of issuance of patent or certificate have been paid.

Thereafter, a water-right application was not accepted unless it described all of the land for which an application could be made, with the result that the owners were required to dispose of holdings in excess of 160 acres as a condition precedent to the securing of water.<sup>418</sup>

The water-right application also served as a means to insure compliance with the requirement of Section 5 that the owner of private lands "be an actual bona fide resident of such land, or occupant thereof residing in the neighborhood." However, residence within 50 miles of the project was administratively deemed to be "in the neighborhood."<sup>419</sup> Furthermore, it was similarly determined in 1916 that residence and occupancy were necessary only at the time of application for a water right.<sup>420</sup> And this residence requirement was omitted entirely from the 1926 Act in which Congress required that repayment contracts

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<sup>415</sup> *Id.* p. 35.

<sup>416</sup> *Ibid.*

<sup>417</sup> Act of August 9, 1912, § 1, 37 Stat. 265, as amended, 43 U. S. C. 541.

<sup>418</sup> Departmental Regulation No. 54, 40 L. D. 664 (1912).

<sup>419</sup> Departmental Regulation No. 44, 38 L. D. 637 (1910).

<sup>420</sup> Bureau of Reclamation Circular Letter No. 557, April 25, 1916.



be made with irrigation districts instead of the individual contracts under the 1902 Act.<sup>421</sup>

Problems also arose in connection with the enforcement of the excess land provisions with respect to public lands which had been entered.<sup>422</sup> A 1910 statute permitted entrymen on project public lands who had completed the residence requirements of the homestead laws to assign or sell their entries.<sup>423</sup> But since it made the assignment subject to the provisions of Reclamation Law, the excess-land restrictions were applicable to the assigned entries. Accordingly, it was administratively required that the assignee supply an affidavit stating that the total area of land owned by him, including the assigned farm unit, did not exceed 160 acres.<sup>424</sup> This permitted acquisition of a water right for a farm unit of entered public lands and additional privately owned lands up to a maximum of 160 acres. The aforementioned 1912 legislation, however, forbade the acquisition of a water right for land in addition to a farm unit of entered public lands under Reclamation Law before payment of all charges on account of such land or water right.<sup>425</sup>

Acreege-limitation provisions evoked a number of administrative rulings with respect to holdings by individual landowners within a family. For example, when forced to relinquish a portion of his entry to conform it with an acreage limitation as established by the Secretary, a husband was permitted to assign a portion of the entry to his wife.<sup>426</sup> But the wife was required to show that the assignment was paid for out of her separate money, in which her husband had no interest or claim, and that the conveyance actually had been made.<sup>427</sup> When applicants for water owned land jointly, or as tenants in common, each was charged with only his frac-

<sup>421</sup> Act of May 25, 1926, § 46, 44 Stat. 636, 649, 43 U. S. C. 423e.

<sup>422</sup> LANDOWNERSHIP SURVEY ON FEDERAL RECLAMATION PROJECTS, Department of the Interior, p. 36 (1946).

<sup>423</sup> Act of June 23, 1910, § 1, 36 Stat. 592, as amended, 43 U. S. C. 441.

<sup>424</sup> Departmental Regulation No. 35, 40 L. D. 660 (1912).

<sup>425</sup> Act of August 9, 1912, § 1, 37 Stat. 265, as amended, 43 U. S. C. 541.

<sup>426</sup> Instructions of the Secretary of the Interior, 39 L. D. 504 (1911); *Sadie A. Hawley*, 43 L. D. 364 (1914).

<sup>427</sup> Departmental Regulation No. 41, 45 L. D. 394 (1916).

tional interest in the land.<sup>428</sup> And if husband and wife owned property to the extent of 320 acres, they might receive water for that area if the property is owned by them as joint tenants, or tenants in common, or as community property.<sup>429</sup> Significant also is an early ruling that an owner of more than 160 acres of privately owned land could transfer the excess to his wife or minor children, entitling all of them to receive project water.<sup>430</sup>

Additional questions arose with respect to corporate holdings. An early ruling permitted a corporation otherwise competent, to acquire a water right under the statute, a decision which has been construed as requiring that the land of the corporation for which application is made, together with that of the stockholders subject to Reclamation Law, may not exceed 160 acres.<sup>431</sup> A short while later the Secretary ruled that a corporation was not qualified to make a water-right application, saying:<sup>432</sup>

I am satisfied that Congress did not intend that these reclaimed lands, upon which the Government is expending the money of all the people, should be the subject of corporate control. These lands are to be the homes of families. This seems to be established conclusively by the fact that we are authorized to fix the farm unit on the basis of the amount of land that will support a family.

However, corporations having acquired a water right prior to July 11, 1913, were allowed to continue without interference.<sup>433</sup> Charitable corporations were later exempted from this ruling.<sup>434</sup>

<sup>428</sup> Bureau of Reclamation Circular Letter No. 565, June 13, 1916.

<sup>429</sup> Department of the Interior Solicitor's Opinion No. M-34172, August 21, 1945.

<sup>430</sup> Instructions of the Secretary of the Interior, 32 L. D. 647 (1904).

<sup>431</sup> *Williston Land Co.*, 37 L. D. 428 (1909); *LANDOWNERSHIP SURVEY ON FEDERAL RECLAMATION PROJECTS*, Department of the Interior, p. 37 (1946).

<sup>432</sup> Instructions of the Secretary of the Interior, 42 L. D. 250 (1913); *Pleasant Valley Farm Co.*, 42 L. D. 253 (1913).

<sup>433</sup> *Ibid.*

<sup>434</sup> Unpublished Departmental Decision, Department of the Interior, December 5, 1916.

Likewise, corporations were later permitted to purchase land with appurtenant water rights where an application had already been made by a properly qualified person.<sup>435</sup> But when Congress in 1926 made contracts with irrigation districts the medium for repayment, the enabling legislation in effect defined excess land as "irrigable land held in private ownership by any one owner" in excess of 160 irrigable acres.<sup>436</sup> This provision has been construed to permit corporate holdings within that limit.<sup>437</sup>

Difficulties in obtaining credit were encountered prior to 1912 by private landowners and entrymen.<sup>438</sup> A purchaser of private land for which a water-right application had been made was required to execute a supplemental water-right application, and his application would not be accepted unless he qualified as a nonexcess landowner.<sup>439</sup> Any loan secured by land, the productivity of which depended upon project water, was accordingly hazardous since, on foreclosure, the lender might become an excess landowner and therefore ineligible to receive water.<sup>440</sup> The situation was even more difficult for an entryman. In addition to the foregoing difficulty, the land itself could not be offered as security since the 1902 Act permitted patent to issue only after payment of the construction charges against the land.<sup>441</sup>

Partial remedies for these conditions were provided by a 1912 statute.<sup>442</sup> Among other things, it permitted retention for two years of excess land acquired in good faith by descent, by will, or by foreclosure of any lien.<sup>443</sup> This provided

<sup>435</sup> Unpublished Departmental Decision, Re *Santaquin Lime & Quarry Co.*, Department of the Interior, December 6, 1916.

<sup>436</sup> Act of May 25, 1926, § 46, 44 Stat. 636, 649, 43 U. S. C. 423e.

<sup>437</sup> LANDOWNERSHIP SURVEY ON FEDERAL RECLAMATION PROJECTS, Department of the Interior, p. 38 (1946).

<sup>438</sup> *Ibid.*

<sup>439</sup> Departmental Regulation No. 50, May 31, 1910, 38 L. D. 638.

<sup>440</sup> Departmental Regulation No. 35, 40 L. D. 660 (1912).

<sup>441</sup> Act of June 17, 1902, § 5, 32 Stat. 388, 389.

<sup>442</sup> Act of August 9, 1912, 37 Stat. 265, as amended, 43 U. S. C. 541-546.

<sup>443</sup> § 3, 37 Stat. 266, 43 U. S. C. 544. Irrigation districts and water-users' associations have been held not to come within the limitation imposed by that part of Section 3 requiring disposition of excess land within two years after acquisition. They may receive project water for the excess land

a partial alleviation of the credit problem. As to the entryman, the statute entitled him to a patent before payment of construction charges upon prescribed proof of residence, reclamation, and cultivation.<sup>444</sup>

The foregoing 1912 legislation also tended to reinforce the acreage-limitation provisions of the 1902 Act. For it prohibited delivery of project water to land in excess of 160 acres, or in excess of a farm unit as established by the Secretary, until payment in full of all installments of construction costs on such excess lands.<sup>445</sup>

The 1912 statute also provided for inclusion in patents and water-right certificates of a detailed provision for forfeiture of

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acquired if it is disposed of within a reasonable period of time. *Glenn L. Kimmel and Goshen Irr. Dist.*, 53 I. D. 658 (1932); *James P. Balkwill*, 55 I. D. 241 (1935).

<sup>444</sup> § 1, 37 Stat. 265, 43 U. S. C. 541.

<sup>445</sup> § 3, 37 Stat. 266, 43 U. S. C. 544.

Under this section, the Associate Solicitor of the Department of the Interior has determined that payment in full of the charges under a water-right application, except operation and maintenance charges, removes the lands for which the water right is acquired from the excess-land restrictions. And it was likewise determined that payment in full of construction costs due under a joint-liability contract with an irrigation district relieves the land receiving water under such contract from the excess-land restrictions. Department of the Interior Solicitor's Opinion No. M-35004, October 22, 1947.

Under this opinion, the Bureau's Chief Counsel has advised that, where it is possible to identify the portion of the joint-liability construction charge allocable against an individual ownership, the owner may free his land from the acreage limitation by full payment of his share of the construction charge, even though the general repayment obligation of the organization has not been discharged and even though the land involved is subject to a contingent liability for amounts representing possible defaults in payment of construction charges on other lands. Memorandum from the Chief Counsel, Bureau of Reclamation, to the Commissioner of Reclamation, September 3, 1948.

It has been judicially determined that lands susceptible of irrigation within a district and benefited by the project to the enhancement of their value are properly included within the district and assessable accordingly, independently of ownership conditions or of the inability under federal law of the owner to receive water for more than 160 acres. *Shoshone Irrigation District v. Lincoln Land Co.*, 51 F. 2d 128 (D. C. Wyo. 1930). See also statement by the Bureau's Chief Counsel, Hearings before a Subcommittee of the Senate Committee on Public Lands on S. 912, 80th Cong., 1st sess., pp. 1270-1281 (1947).

such excess land holdings.<sup>446</sup> A question has recently arisen as to whether title to land now privately owned is subject to forfeiture under this provision, in a case where it is within an irrigation district which has executed a contract with the Government. A recent expression of administrative views points out that the statute applies only to original patents and water-right applications, and then only if the forfeiture provision is included in the patent or water-right application.<sup>447</sup> No record has been found where the forfeiture provision has been invoked.<sup>448</sup>

In addition to the foregoing problems respecting acreage limitations, speculation in lands posed problems in the administration of Reclamation Law. Speculators would buy arid lands with no intention of ever cultivating them, and then sell them to the actual farmers at prices enhanced greatly by the construction of an irrigation project.<sup>449</sup> It became evident that specific legislation would be needed to cope with this situa-

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<sup>446</sup> Act of August 9, 1912, § 3, 37 Stat. 265, 266, 43 U. S. C. 543, 544.

In part, Section 3 provides that, except as otherwise provided in the statute, no person shall acquire, own, or hold irrigable land covered by reclamation entry or water-right application before final payment of all construction and betterment charges on account of land in excess of one farm unit as fixed by the Secretary as the limit of area per entry of public land or per single ownership of private land for which a water right may be purchased respectively, nor in any case in excess of 160 acres. It also prohibits furnishing of water for such excess, with a specified exception permitting the holding for two years of excess lands acquired in good faith. Finally, the section provides that "every excess holding prohibited as aforesaid shall be forfeited to the United States by proceedings instituted by the Attorney General for that purpose in any court of competent jurisdiction; and this proviso shall be recited in every patent and water-right certificate issued by the United States under the provisions of this act." § 3, 37 Stat. 266, 43 U. S. C. 544.

<sup>447</sup> Memorandum from Regional Counsel, Region No. 2, Bureau of Reclamation, dated March 31, 1949, concurred in by the Bureau's Chief Counsel.

<sup>448</sup> In this connection, see *LANDOWNERSHIP SURVEY ON FEDERAL RECLAMATION PROJECTS*, Department of the Interior, p. 41 (1946).

<sup>449</sup> Hearings before a Subcommittee of the Senate Committee on Public Lands on S. 912, 80th Cong., 1st sess., pp. 202-203 (1947). Information assembled from various projects prior to 1914 reflects increases of from 75% to 5,390% in the value of unimproved land upon announcement of intention to construct a project. *Id.* p. 204.

tion and to expedite the breaking up of excess lands on new projects.<sup>450</sup>

Congress dealt affirmatively with this problem by two provisions in a 1914 statute. One imposed a penalty of a 5% increase in construction charges for each year's delay in making a water-right application for privately owned land.<sup>451</sup> The second provision required:<sup>452</sup>

That before any contract is let or work begun for the construction of any reclamation project hereafter adopted the Secretary of the Interior shall require the owners of private lands thereunder to agree to dispose of all lands in excess of the area which he shall deem sufficient for the support of a family upon the land in question, upon such terms and at not to exceed such price as the Secretary of the Interior may designate; and if any landowner shall refuse to agree to the requirements fixed by the Secretary of the Interior, his land shall not be included within the project if adopted for construction.

In the administration of this latter provision, owners were required to convey their excess land to a trustee who, in turn, was to convey to a third person at a price not in excess of that fixed by the Secretary.<sup>453</sup> Administrative provision was also made for a forced sale within a fixed period after issuance of public notice.<sup>454</sup> But an evident weakness in this device lay in the failure of the trust deed to provide for control of sales by purchasers from middlemen, who were free to sell without restriction.<sup>455</sup>

<sup>450</sup> *Id.* pp. 202-203.

<sup>451</sup> Act of August 13, 1914, § 9, 38 Stat. 686, 689, 43 U. S. C. 464.

<sup>452</sup> § 12, 38 Stat. 689, 43 U. S. C. 418. "If this provision shall be adopted speculation in lands under reclamation projects will be reduced to a minimum and the burdens of the real farmer who undertakes to reclaim and cultivate the lands, and for whose benefit the reclamation law was enacted primarily, can be kept normal." H. Rep. No. 505, 63d Cong., 2d sess., p. 2 (1914).

<sup>453</sup> LANDOWNERSHIP SURVEY ON FEDERAL RECLAMATION PROJECTS, Department of the Interior, p. 42 (1946).

<sup>454</sup> *Ibid.*

<sup>455</sup> *Ibid.*

As time passed, direct contractual relationships between the Government and individuals were replaced by contracts between the Government and water-users' organizations, as already noted.<sup>455</sup> Significant in this respect was the 1922 Act authorizing the Secretary to enter into contracts with irrigation districts for repayment of construction charges.<sup>456</sup> This eliminated the necessity for contracts with individual water users. Moreover, such districts usually possessed power to make assessments against lands, as we previously pointed out.<sup>457</sup> The sponsor of the 1922 proposal stated, during debate on the floor of the House, that:<sup>458</sup>

The speculative feature is eliminated, land owners speculatively inclined being taxed for the cost and operation of the works, are unable profitably to "hold on."

Permissible under the 1922 legislation, a repayment contract with an irrigation district organized under state law became mandatory in 1926.<sup>459</sup> With the disappearance of direct contractual relationships between the United States and landowners under these shifts in financing procedure, primary responsibility for determination of the eligibility of landowners under Reclamation Law was transferred to the irrigation district. Correspondingly, certain provisions were made for assuring fulfillment of that responsibility by legislative and contractual standards. Thus, Section 46 of the 1926 Act, which is the latest excess-land and antispeculation legislation of general applicability, provides that:<sup>460</sup>

No water shall be delivered upon the completion of any new project or new division of a project until a contract or contracts in form approved by the Secretary of the Interior shall have been made with an irrigation district or irrigation districts organized under State law \* \* \*. Such contract or contracts \* \* \*

<sup>455</sup> See *supra*, pp. 206-207.

<sup>456</sup> Act of May 15, 1922, § 1, 42 Stat. 541, 43 U. S. C. 511.

<sup>457</sup> See *supra*, pp. 171-174.

<sup>458</sup> 62 CONG. REC. 3588 (1922).

<sup>459</sup> Act of May 25, 1926, § 46, 44 Stat. 636, 649, 43 U. S. C. 423e.

<sup>460</sup> *Id.*

shall further provide that all irrigable land held in private ownership by any one owner in excess of one hundred and sixty irrigable acres shall be appraised in a manner to be prescribed by the Secretary of the Interior and the sale prices thereof fixed by the Secretary on the basis of its actual bona fide value at the date of appraisal without reference to the proposed construction of the irrigation works; and that no such excess lands so held shall receive water from any project or division if the owners thereof shall refuse to execute valid recordable contracts for the sale of such lands under terms and conditions satisfactory to the Secretary of the Interior and at prices not to exceed those fixed by the Secretary of the Interior; and that until one-half the construction charges against said lands shall have been fully paid no sale of any such lands shall carry the right to receive water unless and until the purchase price involved in such sale is approved by the Secretary of the Interior and that upon proof of fraudulent representation as to the true consideration involved in such sales the Secretary of the Interior is authorized to cancel the water right attaching to the land involved in such fraudulent sales \* \* \*.

Under this provision, the district and not the United States delivers water to the individual users. The district agrees that it will withhold project water from land "in excess of 160 irrigable acres" held in private ownership, unless the owner agrees in a "recordable contract" to sell such land under terms and conditions satisfactory to the Secretary and at prices not to exceed those fixed by him.<sup>462</sup>

<sup>462</sup> On May 15, 1944, in a telegram to the *Tulare Daily Times*, Tulare, California, the then Secretary stated that Section 46 denied him the power, in the absence of consent of the water users, to establish the limit of land in private ownership on any new project at less than 160 acres. But see Act of August 9, 1912, § 3, 37 Stat. 265, 266, 43 U. S. C. 544; Act of August 13, 1914, § 12, 38 Stat. 636, 639, 43 U. S. C. 418; see *supra*, n. 446, p. 226, and p. 277.

The provision in Section 46 for a "recordable contract" to insure eligibility for water service is somewhat similar to the earlier administrative requirement that excess landowners sign trust deeds for the sale of excess



In this connection, a question recently arose as to whether Section 46 prohibits the furnishing of a commingled supply of project and nonproject water to excess land covered by a recordable contract where a river in which the district has its water rights affords the most convenient means of transporting supplemental project water to the district. It was administratively determined that, if a quantity of commingled water at least equal to the amount of project water put into the river were used solely on nonexcess land, the acreage limitation would not be violated by application of the remainder of the commingled water on excess land.<sup>463</sup>

It should also be noted that Section 46 does not prohibit the district from furnishing project water to as much as 160 acres of land owned by each landowner, even if he owns additional irrigable land and refuses to sell it. It thus differs from the 1914 requirement, already discussed, which prohibited even the letting of a construction contract until landowners executed agreements to dispose of their excess lands, and if such a landowner refused, his land could not be included within the project.<sup>464</sup>

Section 46 also seeks to combat speculation. It provides that, until one-half of the construction charges against lands have been paid, no sale of such land shall carry the right to receive water unless the land be sold at a price approved by the Secretary.<sup>465</sup> In practice, approval will not be given if

lands before they could subscribe for stock in a water-users' association and thus acquire a water right. See *supra*, p. 220. It is also somewhat akin to the provision in the 1914 statute, referred to above, that the Secretary shall require the owners of lands "to agree to dispose of all lands in excess of the area which he shall deem sufficient for the support of a family upon the land in question, upon such terms and at not to exceed such price" as he may designate. § 12, 38 Stat. 686, 689, 43 U. S. C. 418.

<sup>463</sup> Department of the Interior Solicitor's Opinion No. M-36011, September 23, 1949.

<sup>464</sup> Act of August 13, 1914, § 12, 38 Stat. 686, 689, 43 U. S. C. 418.

As a matter of administration, however, water is denied on some projects under the 1926 Act, as to excess or nonexcess land, unless a recordable contract for the sale of the excess land is signed. **LANDOWNERSHIP SURVEY ON FEDERAL RECLAMATION PROJECTS**, Department of the Interior, p. 47 (1946).

<sup>465</sup> Department of the Interior Solicitor's Opinion No. M-21709, March 3, 1927. **LANDOWNERSHIP SURVEY ON FEDERAL RECLAMATION PROJECTS**, Department of the Interior, pp. 47-48 (1946).

the price exceeds actual *bona fide* value excluding incremental value arising from the construction of the project.<sup>466</sup> "Incremental value" has been defined in practice as the amount realized from the sale of land in excess of the original appraisal, plus the appraised value of improvements, plus construction charges paid, plus twice the amount of any previous payments to the district.<sup>467</sup>

Reference to the administrative implementation of Section 46 in the case of the Central Valley Project, California, will be informative. Here, the form of contract with irrigation districts requires that excess land be appraised by a board of three appraisers, one selected by the Secretary, one by the district, and a third by the other two.<sup>468</sup> If the board cannot agree, appraisal must be made by a designated California Appellate Court Justice.<sup>469</sup> Reappraisal to reflect changes in land values or improvements may be requested by the United States or the landowner.<sup>470</sup>

The recordable contract form approved for the Central Valley Project gives the owner 10 years to sell excess land at a price not exceeding the appraised value.<sup>471</sup> If the excess land has not been sold at that time, the Secretary has a power of attorney to sell at not less than appraised value.<sup>472</sup>

Under the Central Valley Project contract form, irrespective of whether an owner of excess land signs a recordable contract, he must designate 160 acres upon which he desires to receive

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<sup>466</sup> See, e. g., Contract of May 20, 1949, between the United States and the Orange Cove Irrigation District, Symbol No. 175r-1672, Art's 24(a), 25(a), 25(b) (1) ; Contract of September 12, 1950 between the United States and the Terra Bella Irrigation District, Symbol No. 175r-2446, Art's 18(a), 19(a), 19(b) (1).

<sup>467</sup> LANDOWNERSHIP SURVEY ON FEDERAL RECLAMATION PROJECTS, Department of the Interior, p. 48 (1946).

<sup>468</sup> See, e. g., Contract of May 20, 1949 between the United States and the Orange Cove Irrigation District, Symbol No. 175r-1672, Art. 25.

<sup>469</sup> *Ibid.*

<sup>470</sup> *Id.* Art. 25(c), 25(d).

<sup>471</sup> Memorandum from Commissioner of Reclamation to Secretary of the Interior, April 13, 1948, with attached form of contract, see Art. 14.

<sup>472</sup> *Ibid.*

project water, any balance of irrigable land being excess.<sup>473</sup> Such excess land is denied project water if no recordable contract is signed, and in the hands of a purchaser is ineligible to receive project water unless the Secretary shall have approved the sale price.<sup>474</sup> If an owner of excess land fails to designate the portion he desires to be nonexcess within 30 days after a request to do so, such designation may be made by the district, or by the Secretary if the district fails to act within a reasonable time.<sup>475</sup> With the Secretary's permission, an owner may redesignate his nonexcess land, whereupon an equivalent acreage becomes excess.<sup>476</sup>

Control over speculation has been imposed by special statute for some projects.<sup>477</sup> In certain instances, such control has been extended by administrative action to other projects under the Secretary's authority to make rules and regulations.<sup>478</sup> A method thus frequently employed is to require individual owners to pay the district or the United States 50% of any "incremental value" realized in sales of nonexcess land, to be applied to the construction-cost obligation applicable to the land.<sup>479</sup>

Because of its recency and uniqueness, legislation governing the Columbia Basin Project merits note here. Replacing the 1937 Columbia Basin Antispeculation Act, Congress in 1943 enacted the Columbia Basin Project Act, which con-

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<sup>473</sup> See, e. g., Contract of May 20, 1949, between the United States and the Orange Cove Irrigation District, Symbol No. 175r-1672, Art. 26.

<sup>474</sup> *Ibid.*

<sup>475</sup> *Ibid.*

<sup>476</sup> *Ibid.*

<sup>477</sup> See, e. g., Act of March 3, 1925, 43 Stat. 1141, 1166-1170; Act of April 9, 1938, 52 Stat. 211; Act of March 10, 1943, 57 Stat. 14.

<sup>478</sup> Act of June 17, 1902, § 10, 32 Stat. 388, 390, as amended, 43 U. S. C. 373. See *Terra v. Pinney and Owyhee Irrigation District*, Circuit Court of Malheur County, Oregon, opinion dated January 27, 1937, unreported but printed in *The Reclamation Era*, Vol. 27, Nos. 6-7, pp. 123-130 and 150-151, respectively (June and July 1937).

<sup>479</sup> LANDOWNERSHIP SURVEY ON FEDERAL RECLAMATION PROJECTS, Department of the Interior, p. 48 (1946). Cf. Act of May 27, 1937, § 1, 50 Stat. 208, 209, providing for such a payment of 50% of "incremental value" where payment is made within one month of the sale, the percentage to be increased by 1% for each month's delay in payment.

tains elaborate provisions dealing with excess lands and anti-speculation.<sup>480</sup> When this latter legislation was proposed, the then Commissioner of Reclamation gave the following summary of the principal reasons for a complete substitution for the 1937 Act:<sup>481</sup>

The principal reasons for suggesting a complete substitution were these: (1) The existing provisions of law dealing with the land-speculation problems are not regarded as fully effective; (2) the burden of penalties for sales in excess of the appraised value under the existing law would have fallen, in the first instance, almost wholly on the purchaser, and as often as not he would have been without further practical remedy against his vendor, with the result that he whom the law was designed to protect would have to bear the burden of the penalty; (3) the provisions of the existing law on the size of land holdings are regarded as too inflexible and not in keeping with what have since, as the result of a series of studies on the project, been concluded to be the desirable maximum size of unit for the support of a family at a suitable level of living. These provisions are the heart of the present law. Since drastic changes in each seems desirable and since additional important provisions in aid of development and settlement of the project are considered desirable also, it was concluded best to recommend a complete restatement of all of the present statute.

The 1943 Act contains provisions of especial significance here. For example, the Secretary may establish "farm units of sufficient acreage for the support of an average-sized family at a suitable living level, having in mind the character of the soil, topography, location with respect to the irrigation system," and other relevant factors.<sup>482</sup> With specified exceptions,

<sup>480</sup> Act of May 27, 1937, 50 Stat. 208; Act of March 10, 1943, 57 Stat. 14, 16 U. S. C. 835 *et seq.*

<sup>481</sup> Hearings before the House Committee on Irrigation and Reclamation on H. R. 6522, 77th Cong., 2d sess., p. 41 (1942).

<sup>482</sup> Act of March 10, 1943, § 2(b) (i), 57 Stat. 14, 15, 16 U. S. C. 835a(b) (i).

units are to be not less than 10 nor more than 160 acres.<sup>483</sup> A landowner may receive water for only one unit.<sup>484</sup> The term "landowner" denotes any "person, corporation, joint-stock association, or family," the latter including a husband and wife together with their children under 18 years of age.<sup>485</sup>

As a condition to receiving project water, the landowner must execute a recordable contract agreeing to dispose of excess land at appraised prices and giving the United States an option to buy such excess land.<sup>486</sup> In addition, such contract must provide that for a five-year period neither excess nor nonexcess lands will be sold at more than appraised prices.<sup>487</sup> Provision is also made for suit by a purchaser to recover amounts paid in excess of the appraised value.<sup>488</sup> And criminal penalties are provided for fraudulent misrepresentation as to the true consideration involved in a sale of land covered by a recordable contract.<sup>489</sup> Noteworthy also is the fact that the statute prohibits delivery of water from the Project until the State of Washington consents to all its provisions so far as they come within the scope of state jurisdiction or apply to state lands.<sup>490</sup> Such legislation was enacted by the State in 1943.<sup>491</sup>

In addition to the foregoing excess-land and antispeculation provisions of general and special reclamation legislation, similar provisions in two other statutes should be noted. The 1911 Warren Act authorizes the Secretary to provide storage and carriage of water in project works when capacity exists beyond project needs.<sup>492</sup> Water involved "shall not be used otherwise than as prescribed by law as to lands held in private owner-

<sup>483</sup> *Id.*

<sup>484</sup> § 2(b) (iii), 57 Stat. 15, 16 U. S. C. 835a(b) (iii).

<sup>485</sup> § 2(b) (v), 57 Stat. 16, 16 U. S. C. 835a(b) (v).

<sup>486</sup> § 2(c) (i), 57 Stat. 16, 16 U. S. C. 835a(c) (i). Such recordable contract must be executed within six months from the date of execution of a contract between the United States and the district within which the land is located. This time was extended in certain cases to December 1, 1951, by the Act of September 26, 1950, 64 Stat. 1036, —.

<sup>487</sup> § 2(c) (ii), 57 Stat. 16, 16 U. S. C. 835a(c) (ii).

<sup>488</sup> § 3(b), 57 Stat. 18, 16 U. S. C. 835b(b).

<sup>489</sup> § 3(a), 57 Stat. 18, 16 U. S. C. 835b(a).

<sup>490</sup> § 7, 57 Stat. 20, 16 U. S. C. 835c-3.

<sup>491</sup> REMINGTON'S REV. STATS. OF WASH. ANN., 1947 SUPP. §§ 7525-5—7525-12.

<sup>492</sup> Act of February 21, 1911, 36 Stat. 925, 43 U. S. C. 523-525.

ship within the Government reclamation projects.”<sup>493</sup> Moreover, in authorizing the Secretary to cooperate with irrigation districts and others for the construction of such reservoirs, canals, or ditches as may be advantageously used by the Government and water users for irrigation purposes, this 1911 statute provides that water shall not be furnished thereby “to any one landowner in excess of an amount sufficient to irrigate one hundred and sixty acres.”<sup>494</sup>

Relevant provisions also appear in the amended Wheeler-Case Act which authorizes the construction of small water-conservation and utilization projects.<sup>495</sup> Repayment contracts must provide that the Secretary shall establish farm units of a size sufficient “for the support of a family on the lands to be irrigated.”<sup>496</sup> Such contract must require that water may not be delivered to or for more than one farm unit owned by a single landowner.<sup>497</sup> And no water shall be delivered to or for any land sold within a specified period at a price exceeding the appraised value as determined by the Secretary.<sup>498</sup>

Through the years, Congress has exempted three projects from the excess-land limitations.<sup>499</sup> Recent attempts to ex-

<sup>493</sup> § 1, 36 Stat. 925, 43 U. S. C. 523.

<sup>494</sup> § 2, 36 Stat. 926, 43 U. S. C. 524. Although the limitation here is in terms of water, it has been construed as a limitation on the quantity of land which may be irrigated by project water and not a limitation on water alone. Department of the Interior Solicitor's Opinion No. M-21709, March 3, 1927.

<sup>495</sup> Act of August 11, 1939, 53 Stat. 1418, as amended, 16 U. S. C. 590y-590z-11 (Supp. III).

<sup>496</sup> § 4(c) (5), 54 Stat. 1122, 16 U. S. C. 590z-2(c) (5).

<sup>497</sup> *Id.*

<sup>498</sup> *Id.*

<sup>499</sup> *Colorado-Big Thompson Project*: In 1938, Congress provided that “the excess land provisions of the Federal reclamation laws shall not be applicable to lands which now have an irrigation water supply from sources other than a Federal reclamation project and which will receive a supplemental supply from the Colorado-Big Thompson Project.” Act of June 16, 1938, 52 Stat. 764, 43 U. S. C. 386. In recommending this exemption, the Acting Secretary of the Interior said: “The Colorado-Big Thompson project will furnish a supplemental water supply to approximately 615,000 acres of land on the eastern slope of Colorado. This land has been settled for more than 50 years and is already being irrigated and is at present divided into more than 6,400 separate farm units, the average individual landownership being 96 acres. Although there are, of course, some farms

empt additional projects have not been successful. Thus, in 1944, the House adopted an amendment to a River and Harbor Bill which would exempt the Central Valley Project from the excess-land provisions.<sup>500</sup> But this provision was eliminated by the Senate Committee on Commerce.<sup>501</sup> In 1947, a Subcommittee of the Senate Committee on Public Lands held extensive hearings on a bill providing that the land-limitation provisions should not apply to the San Luis Valley Project, Colorado, the Valley Gravity Canal Project, Texas, and the Central Valley Project, California.<sup>502</sup> But the bill was never reported out.

Still more recently, Congress passed a bill to raise the 160-acre limitation to 480 acres in the case of the San Luis Project, Colorado.<sup>503</sup> But President Truman pocket vetoed the bill saying, in a memorandum of disapproval:<sup>504</sup>

in the area of acreages exceeding 160 acres, they are relatively few in number. Many of these larger farms are held by loan companies and Federal credit agencies which in time probably will liquidate their holdings in small parcels, as more intensive cultivation in the area develops with the increased water supply furnished by the Colorado-Big Thompson project. The same tendency toward subdivision will probably occur with respect to those larger farms held by individuals." H. Rep. No. 2620, 75th Cong., 3d. sess. (1938).

*Truckee River Storage Project and Humboldt Project:* The excess-land provisions were here made inapplicable to certain lands irrigated from these projects. Act of November 29, 1940, 54 Stat. 1219. During debate on this proposal on the floor of the Senate, it was said that, "The two projects which are involved in this bill are situated in a place in Nevada where 160 acres are not enough. A person must have more land than 160 acres in order to farm successfully and carry on livestock feeding operations." 86 Cong. Rec. 13681 (1940). Similarly, when the measure was before the House, it was said that, "In areas of high altitude and early frosts where hay for livestock is the chief crop, it has been found very difficult to limit one person's holding to 160 acres as an economic unit." 86 Cong. Rec. 13646 (1940).

<sup>500</sup> See H. Rep. No. 63, 79th Cong., 1st sess., p. 1 (1945).

<sup>501</sup> *Ibid.*

<sup>502</sup> Hearings before a Subcommittee of the Senate Committee on Public Lands on S. 192, 80th Cong., 1st sess. (1947).

<sup>503</sup> S. 1385, 81st Cong., 1st sess. (1949).

<sup>504</sup> 95 Cong. Rec., unbound ed., p. A7128 (November 4, 1949). The President also said that, "In the meantime, I hope that the Congress will consider legislation amending the excess-land provisions of the reclamation laws so as to authorize appropriate adjustments in maximum acreages,

One great objective of the Federal reclamation program is to foster the establishment and maintenance of farm homes throughout those portions of our country where agricultural operations cannot rely solely upon nature for a water supply. The excess-land provisions of the law provide the legal mechanism for assuring that the benefits of the irrigation systems will inure to family-size farming enterprises. This is true whether the purpose of the particular project is to open up new land for settlement by providing an original water supply, or to stabilize an existing irrigation economy as in the case of the San Luis Valley project. In the absence of requirements designed to channel the water to those who are striving to build or conserve farm homes for their families, the heavy investments of interest-free funds being made for the reclamation program would lose much of their justification.

*Operation and Maintenance Charges.*—The Reclamation Fund was established by the 1902 Act for, among other express purposes, the “maintenance of irrigation works.”<sup>505</sup> Correspondingly, that Act directed the Secretary to use the Fund for “the operation and maintenance” of reservoirs and irrigation works constructed under its provisions.<sup>506</sup> The Supreme Court of the United States has construed the 1902 Act as authorizing assessment of maintenance costs against lands benefited during the period of government operation and the return to the Fund of such amounts.<sup>507</sup>

In 1914, Congress required that an operation and maintenance charge be assessed against all irrigable lands for each acre-foot of water delivered.<sup>508</sup> It also provided a discount of 5% for prompt payment and prohibited delivery of water to lands in arrears for more than one year, fixing a penalty for

where necessary, under carefully worked-out standards, which could be applied not only to the San Luis Valley project, but also to other projects in which some adjustment may be warranted.” *Ibid.*

<sup>505</sup> Act of June 17, 1902, § 1, 32 Stat. 388, as amended, 43 U. S. C. 391.

<sup>506</sup> § 6, 32 Stat. 389, 43 U. S. C. 491.

<sup>507</sup> *Swigart v. Baker*, 229 U. S. 187, 193 (1913).

<sup>508</sup> Act of August 13, 1914, § 5, 38 Stat. 686, 687, 43 U. S. C. 492, 499.



delinquency.<sup>509</sup> Provision was also made for furnishing water at a "reasonable charge" prior to public notice fixing construction charges whenever water became available and it proved impracticable to apportion operation and maintenance charges.<sup>510</sup>

By the 1924 Fact-Finders' Act, it was provided that all contracts for new projects and new divisions of projects shall require payment in advance of all operation and maintenance charges.<sup>511</sup> A 1926 statute authorizes the Secretary to extend the time for payment of operation and maintenance charges for a period not exceeding five years, with interest at 6%.<sup>512</sup> At the same time, Congress prohibited delivery of water from any new project or new division of a project until execution of a contract providing, among other things, for payment of the cost of operating and maintaining the works while they are in control of the United States.<sup>513</sup>

The Reclamation Project Act of 1939 added a number of additional provisions respecting operation and maintenance. For example, it authorizes the Secretary to fix the time for payment under contracts authorized by that Act in relation to the time when water users receive crop returns.<sup>514</sup> In connection with contracts relating to construction charges, the Secretary is also empowered to require provisions: <sup>515</sup>

to secure the adoption of proper accounting, to protect the condition of project works and to provide for the proper use thereof, and to protect project lands against deterioration due to improper use of water. Any such contract shall require advance payment of adequate operation and maintenance charges.

<sup>509</sup> § 6, 38 Stat. 688, as amended, 43 U. S. C. 479, 493-498.

<sup>510</sup> § 11, 38 Stat. 689, 43 U. S. C. 465.

<sup>511</sup> Act of December 5, 1924, § 4, subsection N, 43 Stat. 672, 704, 43 U. S. C. 493.

<sup>512</sup> Act of May 25, 1926, § 45, 44 Stat. 636, 648, 43 U. S. C. 423d. See also Act of May 10, 1926, 44 Stat. 453, 479.

<sup>513</sup> § 46, 44 Stat. 649, 43 U. S. C. 423e.

<sup>514</sup> Act of August 4, 1939, § 5, 53 Stat. 1187, 1191, 43 U. S. C. 485d. The Act also provides for a yearly crop census. § 4(c), 53 Stat. 1189, 43 U. S. C. 485c(c).

<sup>515</sup> § 6, 53 Stat. 1191, 43 U. S. C. 485e.

Moreover, he may provide penalties for delinquencies, and contracts must require that no water be delivered in case of delinquency.<sup>516</sup>

Where a water-service contract is made for water service under the 1939 Act, the rate fixed must include a component for operation and maintenance.<sup>517</sup> The same is true of rates fixed under contracts for furnishing water for municipal water supply or miscellaneous purposes, and of rates for the sale of power or lease of power privileges.<sup>518</sup> During the development period under the 1939 Act, water is furnished upon payment of an advance charge at a rate per acre-foot.<sup>519</sup> After the close of such period, any excess of such payments over actual cost of operation and maintenance shall be credited to the construction cost.<sup>520</sup>

In connection with nonreimbursable construction-cost allocations to navigation, flood control, or preservation and propagation of fish and wildlife, it should be noted that no provision is made for nonreimbursability of operation and maintenance costs for such purposes.

*Disposal of Power.*—Reference has already been made to authorizations for the sale of power and lease of power privileges.<sup>521</sup> Like reference was made to power rates in connection with the recovery of construction costs under the provisions of the Reclamation Project Act of 1939.<sup>522</sup> Still other matters relating to the disposal of power in connection with the operation of projects should be mentioned.

For example, the 1906 statute authorizing the lease of surplus power or power privilege prescribes a maximum period of 10 years.<sup>523</sup> While the Act specifies that proceeds shall be cov-

<sup>516</sup> *Id.*

<sup>517</sup> § 9 (e), 53 Stat. 1196, 43 U. S. C. 485h (e).

<sup>518</sup> § 9 (c), 53 Stat. 1194, 43 U. S. C. 485h (c).

<sup>519</sup> § 9 (d) (1), 53 Stat. 1195, 43 U. S. C. 485h (d) (1).

<sup>520</sup> *Id.*

<sup>521</sup> See *supra*, n. 281, p. 200, pp. 208-209.

<sup>522</sup> See *supra*, pp. 204, 208-209, and see *infra*, pp. 295-296.

<sup>523</sup> Act of April 16, 1906, § 5, 34 Stat. 116, 117, as amended, 43 U. S. C. 522. A maximum period of 50 years was later authorized for the Rio Grande Project. Act of February 24, 1911, 36 Stat. 930, see 43 U. S. C. 522.

ered into the Reclamation Fund, no requirement is specified as to rates.<sup>524</sup> Preference is provided to "municipal purposes."<sup>525</sup> No lease may impair the "efficiency of the irrigation project."<sup>526</sup>

Under the 1939 Act, power sales and leases must provide preference "to municipalities and other public corporations or agencies; and also to cooperatives and other nonprofit organizations" financed by REA loans.<sup>527</sup> No power contract may be made if the Secretary deems it will "impair the efficiency of the project for irrigation purposes."<sup>528</sup> It may be noted, incidentally, that this latter provision obtains with respect to contracts under the 1939 Act for the furnishing of water for municipal water supply or miscellaneous purposes.<sup>529</sup>

There is no blanket provision under Reclamation Law for the construction or acquisition of transmission lines. In repeated instances in appropriation legislation, however, Congress has expressly recognized that transmission facilities constitute parts of reclamation projects authorized by Congress.<sup>530</sup>

*Flood Control and Navigation.*—As earlier noted, the 1939 Act authorizes allocations for flood control or navigation.<sup>531</sup> In the event of such an allocation, the Act requires that the Secretary of the Interior operate the project for the purpose of flood control or navigation, to the extent justified by such allocation.<sup>532</sup> However, since 1944 the Secretary of the Army has had the duty of prescribing regulations for the use of storage allocated to flood control or navigation at all reservoir projects constructed wholly or in part with federal funds provided on the basis of such purposes, and the operation of projects must accord with those regulations.<sup>533</sup>

<sup>524</sup> *Id.*

<sup>525</sup> *Id.*

<sup>526</sup> *Id.*

<sup>527</sup> Act of August 4, 1939, § 9(c), 53 Stat. 1187, 1194, 43 U. S. C. 485h(c).

<sup>528</sup> *Id.*

<sup>529</sup> *Id.*

<sup>530</sup> See, *e. g.*, Act of June 29, 1948, 62 Stat. 1112, 1126, 1128; Act of October 12, 1949, 63 Stat. 765.

<sup>531</sup> See *supra*, p. 195.

<sup>532</sup> § 9(b), 53 Stat. 1194, 43 U. S. C. 485h(b).

<sup>533</sup> Act of December 22, 1944, § 7, 58 Stat. 887, 890, 33 U. S. C. 709.

*Rehabilitation and Betterment.*—As previously noted, early provisions preclude an increase in construction charges once they are announced and in the absence of an agreement by a majority of the water users.<sup>534</sup> A problem thus arose wherever extraordinary maintenance or large replacement expenditures became necessary because of flood or other damage to works, or because of deferred maintenance. Only a partial answer could be found in the Secretary's authority to agree to an increase in the construction obligation which might be undertaken by the water users, such increase to be paid in annual installments beginning after the due date of the last construction-charge payment.<sup>535</sup>

Moreover, many projects have for some time been operated and maintained by water users at their own expense.<sup>536</sup> In such cases, there were no operation and maintenance charges as between the water users and the Government.<sup>537</sup>

During the "depression" and war years, much deferred maintenance had accumulated, and there was a resulting need for major rehabilitation and betterment work on many of the older reclamation projects, involving costs which water users could not currently finance.<sup>538</sup>

In 1949, Congress provided a basis for solution of this problem in a statute defining "Rehabilitation and Betterment" to mean maintenance, including replacements, which cannot be financed currently, but not to include costs of construction.<sup>539</sup> Expenditures of funds for rehabilitation and betterment are permitted but only after the water-users' organization shall have obligated itself for repayment in installments fixed in accordance with its ability to pay, as determined by the Secre-

<sup>534</sup> Act of August 13, 1914, § 4, 38 Stat. 686, 687, 43 U. S. C. 469.

<sup>535</sup> *Id.*

<sup>536</sup> RECLAMATION HANDBOOK, Department of the Interior, Bureau of Reclamation, p. 44 (1942).

<sup>537</sup> *Ibid.*

<sup>538</sup> H. Rep. No. 589, pp. 1-2 and Sen. Rep. No. 501, p. 1, both 81st Cong., 1st sess. (1949).

<sup>539</sup> Act of October 7, 1949, § 1, 63 Stat. 724, 43 U. S. C. 504 (Supp. III), as amended by Act of March 3, 1950, 64 Stat. 11.

tary.<sup>540</sup> No such determination may become effective until 60 days after it has been submitted to the Senate Committee on Interior and Insular Affairs and the House Committee on Public Lands.<sup>541</sup> It may, however, become effective sooner upon written approval by both Committees.<sup>542</sup>

*Nonfederal Operation of Projects by Water-Users' Organizations.*—A significant feature of the 1902 Act is its provision for transfer of the "management and operation" of irrigation works to the owners of the land to be maintained at their expense when payments required by the Act have been made for the major portion of the project lands.<sup>543</sup> But title to and management and operation of the reservoirs and the works necessary for their protection and operation remain in the Government.<sup>544</sup>

In 1914, the Secretary was authorized to transfer to a legally organized water-users' association or irrigation district the "care, operation, and maintenance of all or any part of the project works, subject to such rules and regulations as he may prescribe."<sup>545</sup> A 1924 Act requires that, whenever two-thirds of the irrigable area of any project shall be covered by water-right contracts, a water-users' association or irrigation district shall be required to take over project care, operation, and maintenance, as a condition precedent to receiving certain benefits under the Act.<sup>546</sup> But provision was made two years later for dispensing with this requirement as to certain projects.<sup>547</sup>

RELATED STATUTES.—A number of statutes are related to but not a part of Reclamation Law. Several of these we have already mentioned. Others merit more than passing note.

<sup>540</sup> *Id.* An appropriation had previously provided funds for "Rehabilitation and Betterment" work. Act of June 29, 1948, 62 Stat. 1112, 1128.

<sup>541</sup> *Id.*

<sup>542</sup> Act of March 3, 1950, 64 Stat. 11. Provision is also made for approval when Congress is not in session.

<sup>543</sup> Act of June 17, 1902, § 6, 32 Stat. 388, 389, 43 U. S. C. 498.

<sup>544</sup> *Id.*

<sup>545</sup> Act of August 13, 1914, § 5, 38 Stat. 636, 637, 43 U. S. C. 499.

<sup>546</sup> Act of December 5, 1924, § 4, subsection G, 43 Stat. 672, 702, 43 U. S. C. 500.

<sup>547</sup> Act of May 25, 1926, § 45, 44 Stat. 636, 648, 43 U. S. C. 423d.

*Water-Conservation and Utilization Projects.*—Under the heading “Bureau of Reclamation,” the Interior Department Appropriation Act for 1940 contained a special provision for the construction of “water conservation and utilization projects” in the Great Plains and arid and semiarid areas of the United States.<sup>548</sup> An amount of \$5,000,000 of reimbursable funds was made allocable by the President to federal agencies to be designated by him; labor and supplies from the Works Progress Administration were similarly made available, expenditures from WPA funds to be reimbursable as the President might determine.<sup>549</sup>

This authorization arose from a need to provide assistance in rehabilitating people and land in the “dust bowl” and other arid and semiarid regions, and to stem the exodus of thousands of farm families, under conditions where the cost of irrigation works was too great to be financed by the water users, or to be fully repaid if undertaken by the United States.<sup>550</sup> Such a combination of expenditures from relief and general funds was designed not only to provide unemployment relief, but also to offer opportunities for subsistence in the future.<sup>551</sup>

But complications soon arose.<sup>552</sup> It was held that allocations for investigations and surveys could not be authorized.<sup>553</sup> The Act was regarded as not furnishing a continuing legislative authorization.<sup>554</sup> Moreover, it was deemed to require the Bureau of Reclamation to handle all of the project costs out

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<sup>548</sup> Act of May 10, 1939, 53 Stat. 685, 719.

<sup>549</sup> *Id.*

<sup>550</sup> Hearings before a Subcommittee of the House Committee on Appropriations, Interior Department Appropriation Bill for 1941, 76th Cong., 3d sess., pp. 523–524 (1940).

<sup>551</sup> *Id.* p. 523.

<sup>552</sup> *Id.* p. 525.

<sup>553</sup> Decision of the Comptroller General, B-9240, May 2, 1940. *Of* Hearings before a Subcommittee of the Senate Committee on Appropriations on H. R. 8745, 76th Cong., 3d sess., pp. 75–76 (1940).

<sup>554</sup> Hearings before a Subcommittee of the House Appropriations Committee on Interior Department Appropriation Bill for 1942, 77th Cong., 1st sess., p. 780 (1941).

of the single \$5,000,000 appropriation without creating an obligation for future years.<sup>565</sup>

The program thus initiated was more fully authorized later in 1939 by the Water Conservation and Utilization Act.<sup>566</sup> A 1940 statute making funds available expressed a policy that, in the opening of newly irrigated lands to entry, preference should be given to families who had been forced to abandon other farms through no fault of their own.<sup>567</sup>

In the fall of 1940, the enabling legislation was substantially amended and broadened.<sup>568</sup> The objects were to substitute statutory procedure for what previously had depended upon interdepartmental courtesy, and to define interdepartmental lines of responsibility.<sup>569</sup> To facilitate project investigation and construction, the amended legislation prescribed measures of feasibility and procedures similar to those under Reclamation Law.<sup>560</sup> While continuing authority for project construction and operation and maintenance in the Secretary of the Interior, the amendments provided for participation by the Secretary of Agriculture through cooperative agreements with the Secretary of the Interior.<sup>561</sup> Provision was also made for participation by the Works Projects Administration, Civilian Conservation Corps, the Bureau of Indian Affairs, and other federal agencies, as well as state and local agencies.<sup>562</sup>

<sup>565</sup> *Id.*; Hearings before a Subcommittee of the Senate Committee on Appropriations on H. R. 8745, 76th Cong., 3d sess., p. 45 (1940).

<sup>566</sup> Act of August 11, 1939, 53 Stat. 1418, as amended, 16 U. S. C. 590y-590z-11 (Supp. III). In approving the bill, the President noted that amendments would be needed to make the basic legislation fully effective. H. Rep. No. 2944, 76th Cong., 3d sess., p. 3 (1940).

<sup>567</sup> Act of June 18, 1940, 54 Stat. 406, 439.

<sup>568</sup> Act of October 14, 1940, 54 Stat. 1119, see 16 U. S. C. 590y-590z-11.

<sup>569</sup> H. Rep. No. 2944, 76th Cong., 3d. sess., p. 2 (1940). See also 86 Cong. Rec. 12568-12569 (1940).

<sup>560</sup> H. Rep. No. 2944, 76th Cong., 3d sess., p. 3 (1940). §§ 3-4, 54 Stat. 1120-1122, as amended, 16 U. S. C. 590z-1, 590z-2.

<sup>561</sup> §§ 3, 5-6, 54 Stat. 1120-1121, 1122-1124, as amended, 16 U. S. C. 590z-1, 590z-3, 590z-4. In connection with the duties of the Secretary of Agriculture, see *infra*, p. 379.

<sup>562</sup> § 2, 54 Stat. 1120, 16 U. S. C. 590z. The Works Progress Administration became Works Projects Administration on July 1, 1939. Reorganization Plan No. 1, effective July 1, 1939, § 306, 53 Stat. 1423, 1428, 5 U. S. C. 133t note following.

It should be noted that this legislation has not been considered to constitute an amendment of or a supplement to Reclamation Law.<sup>563</sup>

Although operations of the WPA and CCC were terminated in 1943,<sup>564</sup> there was an increasing need for irrigation projects for expansion of agricultural production to meet the wartime food shortage.<sup>565</sup> A further amendment of the Act permitted its application to the so-called "Great Plains Projects" for the purpose of orderly administration and accounting.<sup>566</sup> This amendment also permitted the expenditure of appropriated funds on projects on a nonreimbursable basis, in lieu of WPA and CCC assistance theretofore available, upon a finding by the Secretary of the Interior, after consultation with the Secretary of Agriculture and approval by the President, that the expenditure was justifiable as an aid in the production of needed agricultural products.<sup>567</sup> By its terms, this provision became ineffective six months after the officially declared cessation of hostilities.<sup>568</sup> After the lapse of that provision in 1947, no new projects have been undertaken under the Water Conservation and Utilization Act.

*Water Facilities Act.*—We shall refer later to the details of this 1937 statute which is related to irrigation in that it is designed "to assist" in providing facilities for water storage and utilization in arid and semiarid areas.<sup>569</sup>

<sup>563</sup> See unpublished Opinion of the Solicitor, Department of the Interior, No. M-34062, dated August 9, 1945; see also LANDOWNERSHIP SURVEY ON FEDERAL RECLAMATION PROJECTS, Department of the Interior, p. 51 (1946).

<sup>564</sup> As to CCC, see Act of July 2, 1942, 56 Stat. 562, 569, and Act of July 12, 1943, 57 Stat. 494, 498. As to WPA, see 45 C. F. R., ch. III, p. 10492 (1943 Cum. Supp.).

<sup>565</sup> Sen. Rep. No. 365, 78th Cong., 1st sess., p. 1 (1943).

<sup>566</sup> Act of July 16, 1943, 57 Stat. 566, 16 U. S. C. 590y, 590z-1, 590z-2, 590z-3; Sen. Rep. No. 365, 78th Cong., 1st sess., p. 4. (1943).

Terminology adopted by the Bureau of Reclamation designates as "Great Plains Projects" those constructed under the Interior Department Appropriation Act for 1940, and as "Water Conservation and Utilization Projects" those constructed under the Act of August 11, 1939, as amended. Bureau of Reclamation Circular Letter No. 2892, dated January 6, 1942.

<sup>567</sup> § 5, 57 Stat. 567, 16 U. S. C. 590z-2.

<sup>568</sup> *Id.*; Proclamation No. 2714, December 31, 1946, 61 Stat. 1048.

<sup>569</sup> Act of August 28, 1937, 50 Stat. 869, as amended, 16 U. S. C. 590r-590x. See also *infra*. nn. 377-379.



*Bankhead-Jones Act Amendment.*—Under this 1949 legislation, provision was made for extending loan assistance to homestead entrymen and purchasers of lands on reclamation projects.<sup>570</sup> Its purpose was to enable settlers to obtain additional capital needed for farm development and purchase.<sup>571</sup>

## Indian Irrigation

As we earlier noted, the Southwest bears testimony to the practice of irrigation by Indians even in ancient times.<sup>572</sup> Acting through the Bureau of Indian Affairs of the Department of the Interior, the Federal Government has long been engaged in numerous activities connected with irrigation of Indian lands.<sup>573</sup> Confined to areas within Indian reservations and primarily for the benefit of Indians, this activity is separate from the irrigation responsibilities of the Bureau of Reclamation, already discussed.<sup>574</sup> The Government's "first venture in irrigation construction" was provided for in 1867 by an appropriation of funds for the construction of a canal for irrigating the Colorado River Reservation in Arizona.<sup>575</sup> With

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This program was designed to provide wells for stock, farmstead and farm-garden use, and for irrigation of crops, stock ponds and stock tanks, diversions and water spreaders, and small dams and reservoirs. Most of the projects are on individual farms and ranches and cost less than \$1,000 each, although facilities for small groups are also provided. Hearings before the House Committee on Irrigation and Reclamation on H. R. 10122, 76th Cong., 3d sess., p. 45 (1940).

<sup>570</sup> Act of October 19, 1949, 63 Stat. 883, 7 U. S. C. 1006a-1006b (Supp. III). See also *infra*, p. 380.

<sup>571</sup> H. Rep. No. 478, 81st Cong., 1st sess., p. 4 (1949).

<sup>572</sup> See *supra*, pp. 175-176.

<sup>573</sup> Cohen, *HANDBOOK OF FEDERAL INDIAN LAW*, p. 248 (1945); Hearings before a Subcommittee of the Senate Committee on Appropriations on H. R. 3123, 80th Cong., 1st sess., p. 637 (1948).

<sup>574</sup> Hearings before a Subcommittee of the Senate Committee on Appropriations on H. R. 3123, 80th Cong., 1st sess., p. 637 (1948). But see Hearings before a Subcommittee of the House Committee on Appropriations on Interior Department Appropriation Bill, 1936, 74th Cong., 1st sess., pp. 819-820 (1936).

<sup>575</sup> Cohen, *HANDBOOK OF FEDERAL INDIAN LAW*, p. 248 (1945); Act of March 2, 1867, 14 Stat. 492, 514-515; *ANNUAL REPORT OF THE SECRETARY OF THE INTERIOR*, p. 377 (1940).

respect to the need for such federal activity, the Secretary has stated:<sup>576</sup>

Permanent rehabilitation of the Indians on the Great Plains, in fact almost everywhere west of the one hundredth meridian, requires that the productivity of the relatively small amounts of land remaining available for their use be increased by providing irrigation facilities.

The irrigation activities of the Bureau embrace about 838,000 acres of land, and include a dozen major projects together with a number of subsistence garden tracts.<sup>577</sup>

INDIANS AND THE FEDERAL GOVERNMENT.—Before turning to the details of federal activities respecting Indian irrigation, we should take preliminary note of the relationship between the Indians and the Federal Government. The Supreme Court of the United States has said that, "It is thoroughly established that the Congress has plenary authority over the Indians and all their tribal relations, and full power to legislate concerning their tribal property."<sup>578</sup> As to the nature and origin of this authority, the Court has observed that:<sup>579</sup>

<sup>576</sup> ANNUAL REPORT OF THE SECRETARY OF THE INTERIOR, p. 377 (1940).

<sup>577</sup> ANNUAL REPORT OF THE SECRETARY OF THE INTERIOR, p. 350 (1949); COHEN, HANDBOOK OF FEDERAL INDIAN LAW, pp. 250-252 (1945); see 25 C. F. R., Part 130.

For reference to subsistence garden tracts, see Hearings before a Subcommittee of the House Committee on Appropriations on Interior Department Appropriation Bill for 1941, 76th Cong., 3d sess., Part II, p. 291 (1940). See also Hearings before a Subcommittee of the Senate Committee on Appropriations on H. R. 6958, 75th Cong., 1st sess., p. 245 (1937).

For an indication of the broad and varied activities of the Government directly connected with Indian irrigation, see, *e. g.*, Act of June 29, 1948, 62 Stat. 1112, 1119; Act of October 12, 1949, 63 Stat. 765, —.

<sup>578</sup> *Winton v. Amos*, 255 U. S. 373, 391 (1921).

<sup>579</sup> *Board of Commissioners v. Seber*, 318 U. S. 705, 715 (1943).

In connection with the last sentence of the quoted excerpt, see Act of June 18, 1934, 48 Stat. 984, 25 U. S. C. 461 *et seq.* That Act "provides that each tribe, if it chooses, may establish the machinery to exercise all of its inherent powers: the right to adopt a constitution, to operate its machinery of government, to determine membership or citizenship in the tribe, to levy taxes, to administer law and order, to regulate domestic relations, to veto the disposition of tribal assets, and increasingly to assume a political and economic control over its internal affairs similar to that of an

This power is not expressly granted in so many words by the Constitution, except with respect to regulating commerce with the Indian tribes, but its existence cannot be doubted. In the exercise of the war and treaty powers, the United States overcame the Indians and took possession of their lands, sometimes by force, leaving them an uneducated, helpless and dependent people, needing protection against the selfishness of others and their own improvidence. Of necessity, the United States assumed the duty of furnishing that protection, and with it the authority to do all that was required to perform that obligation and to prepare the Indians to take their place as independent, qualified members of the modern body politic.

This obligation has led to a relationship of the United States toward the Indians generally described as a "guardianship."<sup>580</sup> Under the direction of the Secretary of the Interior, and agreeably to such regulations as the President may prescribe, the Commissioner of Indian Affairs has "the management of all Indian affairs and of all matters arising out of Indian relations."<sup>581</sup> An important objective in the fulfillment of this responsibility is the protection of Indian property and its development to full utilization.<sup>582</sup> And this extends to land and water rights.<sup>583</sup> Moreover, for the purpose of providing lands for Indians, the Secretary is authorized to acquire interests in lands, water rights, or surface rights to lands within or with- incorporated municipality." ANNUAL REPORT OF THE SECRETARY OF THE INTERIOR, p. 419 (1941). See also Act of April 16, 1934, 48 Stat. 596, as amended, 25 U. S. C. 452-455.

<sup>580</sup> "Congress alone has the right to determine the manner in which the guardianship of the United States over the Indians shall be carried on." *United States v. McGowan*, 302 U. S. 535 (1938). See also *United States v. Minnesota*, 95 F. 2d 468, 470-471 (C. A. 8, 1938).

<sup>581</sup> R. S. § 463, from Act of July 9, 1832, § 1, 4 Stat. 564, and Act of July 27, 1868, § 1, 15 Stat. 228, 25 U. S. C. 2; R. S. § 465, from Act of June 30, 1834, § 17, 4 Stat. 735, 738, 25 U. S. C. 9; R. S. § 441, from Act of March 3, 1849, 9 Stat. 395, as amended, 5 U. S. C. 485.

<sup>582</sup> ANNUAL REPORT OF THE SECRETARY OF THE INTERIOR, p. 338 (1949).

<sup>583</sup> *Id.* pp. 341, 351. See also Hearings before a Subcommittee of the Senate Committee on Appropriations on H. R. 9621, 75th Cong., 3d sess., pp. 210-211 (1938).

out existing reservations, title to such lands or rights to be held by the United States in trust for the Indians or tribes of Indians concerned.<sup>584</sup>

**WATER RIGHTS.**—Protection of Indian water rights as well as encouragement of their use are integral parts of federal Indian irrigation activity.<sup>585</sup>

Upon establishment of certain Indian reservations from territorial lands, the Supreme Court has held that rights to use of water for the irrigation of the reservation lands have been impliedly reserved.<sup>586</sup> Moreover, the water right reserved is not limited in quantity to that necessary for irrigation at the time the reservation was established.<sup>587</sup>

Where tribal lands, the waters of which had been expressly reserved for the benefit of the tribe, had been allotted and waters distributed to individual Indians to whom fee patents to the lands were later issued, conveyance of such land by an Indian owner passed the right to use reserved waters essential to cultivation of the land.<sup>588</sup>

It should also be noted that state law cannot be invoked to limit rights in lands granted by the United States to Indians except so far as the United States has given its consent.<sup>589</sup>

More specifically, it has been held that neither state nor federal laws respecting appropriation of water for irrigating lands has application where water is appropriated to a public use by the Federal Government in an exercise of its sovereign authority over Indian tribes.<sup>590</sup> Moreover, it has been held that a state court has no jurisdiction to adjudicate water rights for reservation lands held by the United States for allottees under trust

<sup>584</sup> Act of June 18, 1934, § 5, 48 Stat. 984, 985, 25 U. S. C. 465

<sup>585</sup> ANNUAL REPORT OF THE SECRETARY OF THE INTERIOR, p. 351 (1949).

<sup>586</sup> *Winters v. United States*, 207 U. S. 564, 576-577 (1908). See *United States v. Walker River Irr. Dist.*, 104 F. 2d 334, 336 (C. A. 9, 1939).

<sup>587</sup> *Conrad Inv. Co. v. United States*, 161 Fed. 829, 832 (C. A. 9, 1908); *Skeem v. United States*, 273 Fed. 93, 95-96 (C. A. 9, 1921); *United States v. Walker River Irr. Dist.*, 104 F. 2d 334, 340 (C. A. 9, 1939).

<sup>588</sup> *United States v. Powers*, 305 U. S. 527 (1939).

<sup>589</sup> *United States v. Forness*, 125 F. 2d 928, 932 (C. A. 2, 1942). See also *Worcester v. Georgia*, 6 Pet. 515, 560 (U. S. 1832).

<sup>590</sup> *United States v. Morrison*, 203 Fed. 364, 366 (C. C. Colo. 1901).

patents, when the United States is not a party, since the right to use the water appurtenant to these lands is the property of the United States.<sup>591</sup> And the state court has no jurisdiction in the case of water rights of former allotted reservation lands to which fee patents had been issued and later conveyed to non-Indians, where the title to other reservation lands riparian to the same stream was still in the United States.<sup>592</sup>

In practice, the Bureau of Indian Affairs files with offices of state engineers statements of what Indian rights are, not as applications but merely to record the facts in such offices.<sup>593</sup>

**FEDERAL PROJECTS.**—The Secretary is authorized to regulate use of waters for irrigation to secure a “just and equal distribution” among Indians residing upon a reservation.<sup>594</sup> In addition, where he deems it in the best interests of the Indians, the Secretary may include allotted nonreservation Indian lands within an irrigation project, but no lien or construction, operation, or maintenance charge may be created thereby against such land.<sup>595</sup>

**Authorization.**—The major Indian irrigation projects have been developed under several series of legislative acts for particular projects.<sup>596</sup> In addition to general appropriations for irrigation in 1884 and 1892, Congress beginning in 1893 annually made general appropriations under the heading “Irrigation, Indian Reservations” for such purposes as were not provided for by specific appropriation.<sup>597</sup> Since 1910, however, no new irrigation project may be constructed on Indian lands without the specific authorization of Congress if the cost exceeds \$35,000.<sup>598</sup> Nor may any such project be undertaken until surveys and maximum cost estimates have been made and

<sup>591</sup> *Anderson v. Spear-Morgan Livestock Co.*, 107 Mont. 18, 26-27, 79 P. 2d 667, 669 (1938).

<sup>592</sup> *Ibid.*

<sup>593</sup> Hearings before a Subcommittee of the Senate Committee on Appropriations on H. R. 9621, 75th Cong., 3d sess., p. 211 (1938).

<sup>594</sup> Act of February 8, 1887, § 7, 24 Stat. 388, 390, 25 U. S. C. 381.

<sup>595</sup> Act of March 3, 1909, 35 Stat. 798-799, see 25 U. S. C. 382.

<sup>596</sup> Cohen, *HANDBOOK OF FEDERAL INDIAN LAW*, p. 250 *et seq.* (1945).

<sup>597</sup> *Id.* p. 248.

<sup>598</sup> Act of April 4, 1910, § 1, 36 Stat. 269, 25 U. S. C. 383.

approved by the Commissioner of Indian Affairs and the Secretary.<sup>600</sup> In 1921, Congress authorized expenditure of moneys appropriated for extension, improvement, operation, and maintenance of existing projects and for development of water supplies.<sup>600</sup>

*Repayment of Costs.*—The provisions applicable here differ widely from those obtaining in connection with projects of the Bureau of Reclamation.<sup>601</sup>

Until 1914, costs of irrigation works on Indian reservations were borne by the United States.<sup>602</sup> In that year, however, Congress made both maintenance and construction charges reimbursable in accordance with regulations of the Secretary.<sup>603</sup> This statute made reimbursement of all moneys expended dependent upon the ability of the Indians to pay assessments.<sup>604</sup> By a 1920 statute, the Secretary was directed to require the beginning of partial reimbursement of construction charges.<sup>605</sup> Nevertheless, practically all assessments collected under the 1914 and 1920 legislation were paid by non-Indian landowners on Indian projects.<sup>606</sup>

Under the 1932 Leavitt Act, the Secretary was directed to adjust or eliminate reimbursable charges then existing as debts against individual Indians or tribes.<sup>607</sup> Moreover, this statute contained a significant proviso requiring that future construction-cost assessments against any Indian-owned lands within any government irrigation project be deferred so long as the Indian retained title.<sup>608</sup>

While the Leavitt Act relieved the Indian of liability for construction costs, current assessments for operation and maintenance remained chargeable under the 1914 statute with re-

<sup>600</sup> *Id.*

<sup>601</sup> Act of November 2, 1921, 42 Stat. 208, 25 U. S. C. 13.

<sup>602</sup> See *supra*, pp. 202-214, 237-239.

<sup>603</sup> Cohen, *HANDBOOK OF FEDERAL INDIAN LAW*, p. 249 (1945).

<sup>604</sup> Act of August 1, 1914, 38 Stat. 582, 583, as amended, 25 U. S. C. 385. For the present departmental regulations, see 25 C. F. R. 130.1 *et seq.*

<sup>605</sup> *Id.*

<sup>606</sup> Act of February 14, 1920, § 1, 41 Stat. 408, 409, 25 U. S. C. 386.

<sup>607</sup> Cohen, *HANDBOOK OF FEDERAL INDIAN LAW*, p. 249 (1945).

<sup>608</sup> Act of July 1, 1932, 47 Stat. 564, 25 U. S. C. 386a.

<sup>609</sup> *Id.*

imbursement dependent upon his ability to pay.<sup>609</sup> Moreover, Congress in 1928 provided that reimbursable charges for operation and maintenance be apportioned on a per-acre basis, with unpaid charges to be designated as a first lien against the lands.<sup>610</sup>

Since 1936, the Secretary may adjust, defer, or cancel construction and operation and maintenance charges against non-Indian landowners on Indian projects.<sup>611</sup> And he may declare such lands permanently nonirrigable, or temporarily nonirrigable with no assessment of charges for limited periods.<sup>612</sup> But the foregoing proceedings become effective only upon approval by Congress.<sup>613</sup>

In practice, operation and maintenance charges are assessed against lands on Indian projects on a per-acre basis.<sup>614</sup>

Where water users do not have ready cash to pay these charges, they have been permitted to receive water upon certification by the project superintendent of their inability to pay, their unpaid assessments being entered on the books as a lien against their lands.<sup>615</sup> As regards land in a tribal status, the project officials look to the tribe for all operation and maintenance assessments, and it is presumed that the tribe is financially able to pay.<sup>616</sup>

The line of distinction between "construction costs" and other types of costs such as "operation and maintenance" or "repair and rehabilitation" costs has been said to be artificial,

<sup>609</sup> Cohen, *HANDBOOK OF FEDERAL INDIAN LAW*, p. 250 (1945).

<sup>610</sup> Act of March 7, 1928, 45 Stat. 200, 210, see 25 U. S. C. 387 note following. See also 25 C. F. R. 130.6.

<sup>611</sup> Act of June 22, 1936, § 1, 49 Stat. 1803, 25 U. S. C. 389.

<sup>612</sup> § 2, 49 Stat. 1804, 25 U. S. C. 389b, 389a.

<sup>613</sup> § 6, 49 Stat. 1804, 25 U. S. C. 389e.

<sup>614</sup> Office of Indian Affairs, Circular Letter, Irrigation 9001-36-F, June 6, 1941. See 25 C. F. R. 130.1 *et seq.*

<sup>615</sup> *Id.* With respect to performance of labor in lieu of collection, see Hearings before a Subcommittee of the House Committee on Appropriations on Interior Department Appropriation Bill, 1939, 75th Cong., 3d sess., Part II, p. 226 (1938). See also Hearings before a Subcommittee of the House Committee on Appropriations on Interior Department Appropriation Bill, 1945, 78th Cong., 2d sess., Part II, p. 94 (1944).

<sup>616</sup> Office of Indian Affairs, Circular Letter, Irrigation 9090-36-F, October 11, 1939.

and even arbitrary.<sup>617</sup> Thus, it seems to be the practice during the period of construction to carry even operation and maintenance charges into construction costs, and this was expressly provided for in legislation governing the Flathead Irrigation Project.<sup>618</sup>

*Miscellaneous.*—Except where treaty or statute provides otherwise, allotted reservation lands are subject to acreage limitations, with differing limitations for irrigable and nonirrigable land.<sup>619</sup>

Another aspect of federal activity in connection with Indian irrigation projects is the performance of so-called "subjugation" work, the preparation of raw land for agricultural use.<sup>620</sup> A 1921 statute has been construed to provide the necessary authority.<sup>621</sup>

The foregoing summary reflects basic differences underlying legislation for Indian irrigation projects. Numerous others might be mentioned beyond the scope of our survey. For example, Indians frequently have lacked equipment or resources to clear the brush and level the land, or build farm ditches for irrigation.<sup>622</sup> Likewise, they are generally not commercial farmers, usually raising only subsistence crops.<sup>623</sup> In addition, Indian lands are often extremely poor.<sup>624</sup> And it has been deemed wiser to assist the Indians to raise their own subsistence instead of furnishing them rations.<sup>625</sup> Finally, Indians

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<sup>617</sup> Hearings before a Subcommittee of the Senate Committee on Appropriations on H. R. 6335, 79th Cong., 2d sess., pp. 914, 916 (1946).

<sup>618</sup> *Ibid.*

<sup>619</sup> Act of February 8, 1887, § 1, 24 Stat. 388, as amended, 25 U. S. C. 331.

<sup>620</sup> See Hearings before a Subcommittee of the Senate Committee on Appropriations on H. R. 6335, 79th Cong., 2d sess., pp. 913-918 (1946).

<sup>621</sup> *Ibid.*; Act of November 2, 1921, 42 Stat. 208, 25 U. S. C. 13. See also *supra*, p. 251.

<sup>622</sup> See Hearings before a Subcommittee of the House Committee on Appropriations on Interior Department Appropriation Bill, 1946, 79th Cong., 1st sess., Part II, p. 116 (1945).

<sup>623</sup> See Hearings before a Subcommittee of the House Committee on Appropriations on Interior Department Appropriation Bill, 1945, 78th Cong., 2d sess., Part II, p. 95 (1944).

<sup>624</sup> See Coolidge, *THE RAINMAKERS*, p. 44 (1929).

<sup>625</sup> *Id.* See also ANNUAL REPORT OF THE SECRETARY OF THE INTERIOR, p. 378 (1940); H. Doc. No. 673, 75th Cong., 3d sess., p. 27 (1938).



such as the Navajos possess a deep attachment for tribal lands, no matter how poor these may be.<sup>626</sup>

### Summary

Irrigation is the artificial application of water to soil for the purpose of supplying the water essential to plant growth. Of the total land irrigated in the United States, nearly 95% lies in the 17 Western States. Federal responsibility for and participation in irrigation undertakings has assumed increasingly larger proportions since passage of the Reclamation Act in 1902.

**WATER RIGHTS.**—A water right is a right to the use of water, not to the corpus of the water itself. There are two fundamentally divergent doctrines of state water law which separately or in varying combination govern the rights to use water.

The English or common-law riparian doctrine, prevailing in the East, recognizes the right of a riparian owner to make reasonable use of a stream's waters, but only on his riparian lands. And all riparian owners are entitled to the continued natural flow of the stream. Rights under the riparian doctrine are not lost by failure to use the water.

On the other hand, the appropriation doctrine rests on the proposition that beneficial use of the water is the basis, measure, and limit of the appropriative right. The first in time is prior in right. Water rights are not limited to land riparian to a stream and may be lost by abandonment. The appropriation doctrine is recognized in all 17 of the Western States, sometimes in combination with various aspects of the riparian doctrine.

Rights to the use of ground water have received increasing attention as the quantity of unappropriated waters has diminished. There are indications of a trend toward conservation of ground water on a reasonable-use basis and toward applying to ground water the principles of use and administration applicable to surface waters.

<sup>626</sup> See *THE NAVAJO*, Report of the Secretary of the Interior, p. VII (March 1948); *Arizona Highways*, p. [3] (December 1949).

Another increasingly important aspect of water law concerns the right to return flow, the right of the original diverter of waters to reuse them. There is a considerable lack of uniformity in the law respecting return flow. But the trend is toward its widest practicable use.

**IRRIGATION WATER COMPANIES AND IRRIGATION DISTRICTS.**—As the opportunities for use of simpler irrigation structures were exhausted, larger and more complex works were built to take water farther from the stream. The larger cost involved was often met through the formation of irrigation companies. The earlier companies were usually either mutual irrigation companies or quasi-public companies organized for profit. These types were largely superseded by the irrigation districts. Each of the 17 Western States has an irrigation district statute. The powers and liabilities of such districts differ from state to state, an important feature frequently being the permission to part of the residents of an area to incur indebtedness for which all lands therein would be liable.

**EARLY IRRIGATION IN THE WEST.**—The early practices of miners, Mormons, and Spanish missionaries contributed to the formation and development of the modern appropriation doctrine. In any event, nature suggests that the dominant factor was the aridity generally prevailing in the West, together with quantitatively disproportionate, highly irregular, and maldistributed stream flows. Thus, judicial opinions have said that the riparian doctrine was not suited to the conditions and needs of the Western States.

The impact of the appropriation doctrine was early reflected in federal legislation in 1866, 1870, and 1877. Another early statute of importance to irrigation was the Carey Act of 1894. It provided for grants to each public-land state of up to a maximum of one million acres of desert land to aid the states in the reclamation of the land and in its sale in small tracts to actual settlers.

**RECLAMATION LAW.**—By the passage of the Reclamation Act in 1902, Congress established irrigation in the West as a

national policy. With its many supplements and amendments, this Act constitutes Reclamation Law. Under the supervision of the Secretary of the Interior, activities under Reclamation Law are performed by the Bureau of Reclamation.

By the 1902 Act, the Secretary is directed to make examinations and surveys for the location of irrigation works. The scope of these investigations was broadened from time to time and especially by the 1939 Reclamation Project Act. Today, facts are collected concerning project feasibility, including cost estimates and cost allocations, and general economic and engineering matters. Provision is made for cooperation with international and interstate agencies, federal and state agencies, and interdepartmental and intradepartmental agencies. It has been provided since 1902 that reports on surveys and examinations be submitted to Congress.

In the 1939 Act, provision is made for the automatic authorization of projects upon submission of a report and prescribed findings to the President and Congress. Such authorization was made contingent, in 1944, on approval of plans and proposals by "affected" states and the Secretary of the Army.

It was originally considered that the revolving Reclamation Fund would finance new irrigation works. The Fund was established by the 1902 Act by reserving, setting aside, and appropriating moneys received from the disposal of public lands in the 16 Western States and Territories named in the Act. It has since been augmented by income from various other sources.

Repayment of construction costs into the Reclamation Fund was a basic principle of the 1902 Act. With modifications, it has persisted ever since. In recent years, some project costs have been made nonreimbursable. These include allocations to navigation, flood control, and preservation and propagation of fish and wildlife. Power revenues are used to return part of the irrigation costs. Under the 1939 Act, the irrigation water-users' obligation is limited to whatever part of the construction costs may be allocated to irrigation and assigned for repayment by them.

Under the 1939 Act, there must be a repayment contract with an organization satisfactory in form and powers to the Secre-

tary. Over the years, the original 10-year repayment period has been increased until today when a 40-year period plus a 10-year development period is provided. Still longer periods have been provided for particular projects. In general, Reclamation Law requires that water-user repayment contracts be executed in advance of delivery of water. The Bureau's usual practice has been to consummate contracts in advance of project construction.

Congress has enacted many laws governing various aspects of operation of irrigation projects. The Bureau supervises development and settlement of project lands, screens applicants for settlement, and advises project settlers concerning improved farming techniques.

The "primary objective" of the 1902 Act has been described as the establishment of farm homes. The Act limited entry of irrigated lands to a maximum of 160 acres. In 1912, it was required that any water-right applicant dispose of holdings in excess of 160 acres as a condition precedent to the securing of water. The acreage limitation has been construed, however, to permit 320 acres to be held jointly by man and wife. Moreover, the law does not preclude combined farming endeavor by any number of owners, members of a family or otherwise, so long as each owns no more than the acreage limit for any one owner.

In addition to acreage limitations, Congress has enacted various provisions designed to curb speculation in irrigated lands. Under a 1926 statute applicable today, the irrigation district withholds project water from land "in excess of 160 irrigable acres" unless the owner agrees in a "recordable contract" to sell the excess land under terms and conditions satisfactory to the Secretary. In addition, there are special acts which seek to prevent speculation in particular areas.

Operation and maintenance charges are assessed against irrigated lands during the period of government operation.

In addition to irrigation, permissible multiple purposes of reclamation projects include power, navigation, flood control, preservation and propagation of fish and wildlife, and municipal water supply and other miscellaneous purposes.

A number of statutes are related to but are not a part of Reclamation Law. For example, under the Water Conservation and Utilization Act, the Bureau of Reclamation has constructed small reclamation projects, primarily as a means of assisting and rehabilitating people and land. Provision is made for participation in this program by the Secretary of Agriculture, the Bureau of Indian Affairs, and other federal and state and local agencies. Other statutes relating to irrigation activities include the Water Facilities Act and the amended Bankhead-Jones Act.

INDIAN IRRIGATION.—As one aspect of its special relationship to Indians, the Federal Government has long aided in irrigation operations on Indian lands. The nature of that relationship has led to many provisions of law concerning irrigation undertakings which differ widely from those summarized above.

# Power and Multiple-Purpose Projects

The ever-increasing urge to derive maximum benefits from natural resources in water and land made inevitable the transition from single-purpose to multiple-purpose projects. Early developments were frequently designed to meet a single pressing need, and related possibilities were frequently overlooked. Indeed, the resulting physical structure often foreclosed related uses. But the advance of scientific knowledge soon proved that a single structure could do double duty or better, yielding optimum benefits at minimum cost when integrated with other developments under a comprehensive plan for the river basin. Such were the principles forged in the effort to correlate the satisfaction of regional needs for water supply, irrigation, flood control, navigation, power, and associated demands upon water resources.

Correspondingly, the drive to make economical use of capital investment has placed growing emphasis upon power as the principal and often the only feasible means for recovering project costs. Beyond providing substantial "economic justification" through reimbursement of such costs, power attains even greater significance through its economic and social influence upon regional growth, its widespread impact being exerted directly and indirectly. Moreover, most water-resource developments so impound water as to provide the necessary head, making them naturally susceptible of power generation.

In the course of this process of multiplying benefits while minimizing costs, the history of power development portrays much of the growth of the multiple-purpose concept. Accordingly, we shall treat power and multiple-purpose projects together. Because of its scope and to underscore its importance,

however, we shall treat later and separately the acceptance in legislation of the recognized necessity for comprehensive river-basin development, the conjunctive sequel to the multiple-purpose concept.<sup>1</sup>

The interference with navigation by early mill dams and later hydroelectric developments evoked a large body of law concerning riparian rights principally in the East. Similarly, man's dependence upon water for drinking, mining, and irrigation in the arid and semiarid parts of the West induced other complicated and varied legal rules affecting the use of waters. The ensuing collisions between private and public interests, local conflicts among water users, relationships between local and national interests, and the overriding disregard of state boundaries by interstate streams—all served to broaden the multiplicity of considerations affecting use of water.

With this came a parallel enlargement of legislative and judicial concepts of water control in which power development has played an important role. Congress has legislated with an increasing awareness of the national aspects of development, use, and conservation of water resources. In so doing, however, it has sought to accommodate local interests and to encourage the cooperation of the states and local agencies, apparently recognizing that the nature and sheer magnitude of the task solicit coordination of actions and integrated assumption of responsibilities. And although regularly recognizing the supremacy of federal power where it exists, the courts have generally found nothing objectionable in such coordinate arrangements.

The principal conflicts between claims to rights acquired under state law and assertions of federal power have concerned the navigability of streams; the use and control of water in streams; and the use and control of lands lying beneath or riparian to both navigable and nonnavigable streams. As already noted, the Supreme Court early held that, following the Revolution, the people themselves became sovereign and held absolute right to all their navigable waters and the soils under them for their common use, subject to rights since sur-

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<sup>1</sup> See *infra*, pp. 384-491.

rendered by the Constitution.<sup>2</sup> But the Supreme Court has also made it plain that this does not mean that navigable waters are capable of private ownership, holding such an idea "inconceivable."<sup>3</sup> Indeed, another court has said that "running water in natural streams is not property and never was."<sup>4</sup> Nevertheless, there may be limited property rights in certain uses of running water, and such usufructuary rights continue to be the subject of many legal controversies.<sup>5</sup> But private rights to use are subordinate to valid assertions of federal authority over waters including control over or use of water power.<sup>6</sup>

We have seen that, as an incident of expressly granted powers, the United States has certain constitutional authority to control nonfederal development of water power, or to develop such power itself. Thus, on streams subject to its jurisdiction under the Commerce Clause, Congress may grant or deny the privilege of nonfederal development.<sup>7</sup> Or it may direct federal development of power as a part of commerce improvement or regulation in legislating for navigation and flood control.<sup>8</sup> Likewise, in its control over lands of the United States, Congress may authorize nonfederal or federal development of power by virtue of its proprietary authority to dispose of and make rules respecting property of the United States.<sup>9</sup> From this latter proprietary authority is derived the right of the United States to transmit and sell the electric power which it generates.<sup>10</sup> Also pertinent here are prior references to other federal authority stemming from the War and Treaty powers.<sup>11</sup> In addition, it should again be noted that Congress has the

<sup>2</sup> *Martin v. Waddell*, 16 Pet. 367, 410 (U. S. 1842); see *supra*, pp. 12, 25-29.

<sup>3</sup> *United States v. Chandler-Dunbar Co.*, 229 U. S. 53, 69 (1913); see *supra*, pp. 20, 26-27.

<sup>4</sup> *Syracuse v. Stacey*, 169 N. Y. 231, 245, 62 N. E. 354, 355 (1901); BL. COM., II, pp. 14, 18.

<sup>5</sup> See, e. g., *United States v. Gerlach Live Stock Co.*, 339 U. S. 725 (1950); and see *supra*, pp. 19-23, 32-50.

<sup>6</sup> See *supra*, pp. 19-29, 50-52.

<sup>7</sup> See *supra*, pp. 21-23.

<sup>8</sup> See *supra*, pp. 19-21.

<sup>9</sup> See *supra*, pp. 29-32.

<sup>10</sup> See *supra*, pp. 50-52.

<sup>11</sup> See *supra*, pp. 54-57.



power to tax and appropriate for the general welfare, an authority which the Supreme Court has recently described as "limited only by the requirement that it shall be exercised for the common benefit as distinguished from some mere local purpose."<sup>22</sup>

The year 1879 marks the real beginning for power and multiple-purpose projects.<sup>23</sup> Congress then authorized the Secretary of the Army to lease water power at Moline to a private company upon agreed terms and conditions "if the same can be done consistently with the interests of the Government of the United States."<sup>24</sup> And in the same year, it gave the Mississippi River Commission duties requiring combined consideration of navigation and flood control.<sup>25</sup>

In 1884 came the first specific authorization for construction of a private power development on a navigable stream.<sup>26</sup> This and some 30 similar special statutes enacted prior to the 1906 General Dam Act,<sup>27</sup> while subject to alteration or repeal, were perpetual in their terms and without significant restriction except for varying protection of navigation.<sup>28</sup> Furthermore, in providing for a federal navigation improvement in 1888, Congress empowered the Secretary of the Army to lease the use of power in waters surplus to the needs of navigation, with rates, conditions, and periods deemed by him to be "just, equitable and expedient."<sup>29</sup> In that same year, while enactment of general reclamation legislation was still 14 years away, Con-

<sup>22</sup> *United States v. Gerlach Live Stock Co.*, 339 U. S. 725, 738 (1950); see *supra*, pp. 57-58.

<sup>23</sup> For an outline of state and colonial regulation of water power, see THE FEDERAL POWER COMMISSION, SERVICE MONOGRAPHS OF THE UNITED STATES GOVERNMENT, No. 17, Institute for Government Research, pp. 1-15 (1923).

<sup>24</sup> Act of March 3, 1879, § 1, 20 Stat. 377, 387. Water power was apparently developed here to serve the purposes of the military arsenal at Rock Island. See Act of June 27, 1866, 14 Stat. 75; J. Rea. of March 2, 1867, 14 Stat. 573.

<sup>25</sup> Act of June 28, 1879, § 4, 21 Stat. 37, 38, as amended, 33 U. S. C. 647. See also *Oklahoma v. Atkinson*, 313 U. S. 508, 516-517 (1941).

<sup>26</sup> Act of July 5, 1884, 23 Stat. 154.

<sup>27</sup> See *infra*, p. 265.

<sup>28</sup> See FIRST ANNUAL REPORT OF THE FEDERAL POWER COMMISSION, p. 48 (1921).

<sup>29</sup> Act of August 11, 1888, § 1, 25 Stat. 400, 417.

gress anticipated the advantage of multiple-use possibilities in authorizing federal surveys contemplating combined irrigation and flood-control projects.<sup>20</sup>

The 1890-1900 period saw further noteworthy developments. In the 1890 River and Harbor Act, Congress adopted a general prohibition against the building of dams and other structures in navigable waters without the permission of the Secretary of the Army.<sup>21</sup> The prohibition, of course, extended to power dams. That same statute contained a special authorization for him to grant leases, "not to exceed the period of twenty years," of power in waters of the Green and Barren Rivers surplus to the needs of navigation, with rates, conditions, and periods deemed by him to be "just, equitable, and expedient."<sup>22</sup> Another type of limitation was specified in a novel 1896 statute authorizing the Secretary of the Interior to permit the use of rights-of-way to the extent of 25 feet, and necessary ground "not exceeding 40 acres" upon public lands and forest reservations for generating, manufacturing, or distributing electric power.<sup>23</sup> In 1897, Congress declared that all reservoir sites, reserved or to be reserved, shall be open to use under the 1891 right-of-way statute, by states, individuals, or private corporations.<sup>24</sup> Charges for water from such sites were made subject to state control. The years 1898 and 1899 also furnished examples of special legislation authorizing non-federal power development with provision for installation of navigation facilities, a principle sometimes appearing in such early special legislation and soon to be carried over into general

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<sup>20</sup> Act of October 2, 1888, 25 Stat. 505, 526. See also Act of March 2, 1889, § 1, 25 Stat. 939, 960 (making a further appropriation); Act of August 30, 1890, § 1, 26 Stat. 371, 391 (repealing a portion of the 1888 statute providing for the withdrawal of lands selected for sites, and providing instead that grants of patents should include a reservation of a right-of-way for federally constructed ditches and canals); Act of March 3, 1891, §§ 17, 18, 26 Stat. 1095, 1101 (limiting lands to those necessary for reservoir sites and providing for grants of rights-of-way to canal and ditch companies).

<sup>21</sup> Act of September 19, 1890, § 7, 26 Stat. 426, 454.

<sup>22</sup> § 1, 26 Stat. 447.

<sup>23</sup> Act of May 14, 1896, 29 Stat. 120.

<sup>24</sup> Act of February 26, 1897, 29 Stat. 599.

legislation.<sup>25</sup> Furthermore, in an 1899 repetition and strengthening of the prohibition of the 1890 River and Harbor Act, Congress absolutely forbade the construction of obstructive dams and other structures in navigable waters without its consent and the approval of plans by the Chief of Engineers and the Secretary of the Army.<sup>26</sup> But from the requirement of Congressional consent, it excepted state-authorized structures to be built in waters, the navigable portions of which lie wholly within the state.

The ensuing 20 years record a number of pertinent events of significance as signposts leading to enactment of the 1920 Federal Water Power Act.<sup>27</sup> In the first place, many valuable power sites on public lands had already gone to patent before 1901 without federal attention to their peculiar value.<sup>28</sup> In 1901, however, Congress delegated broad authority to the Secretary of the Interior to permit use of rights-of-way across public lands and forest and other reservations, "for electrical plants, poles, and lines for the generation and distribution of electrical power," and for dams and reservoirs used to promote irrigation or to supply water for domestic, public,

<sup>25</sup> Act of March 5, 1898, § 1, 30 Stat. 253; Act of February 27, 1899, § 1, 30 Stat. 904, 905 (provision also made for "suitable fishways."). See *infra*, pp. 265-266.

<sup>26</sup> Act of March 3, 1899, § 10, 30 Stat. 1121, 1151, 33 U. S. C. 403.

<sup>27</sup> See FIRST ANNUAL REPORT OF THE FEDERAL POWER COMMISSION, pp. 44-50 (1921); Kerwin, FEDERAL WATER-POWER LEGISLATION, ch. 5 (1926).

<sup>28</sup> "Prior to the act of February 15, 1901, there was no legislation on the subject at all; water-power sites, went to patent unmolested either as parts of homesteads or by purchase, and were given no Federal attention whatever. Under this procedure a large number of the power sites on the public domain were frittered away and have passed into private ownership beyond regulation, beyond control. As we look back on this procedure it seems like criminal neglect. Many of the valuable water-power sites of the country passed as fast as eager private concerns and persons could grab them under the several lax laws then in existence. These are now forever, in part, to be enjoyed by the few who at will may practice extortion and monopoly upon the consuming public, subject only to inadequate State regulation where the business is intrastate and with little or no regulation where the concern is doing an interstate business. The titles to these sites have forever passed out of the hands of the Federal Government and the people." WATER POWER DEVELOPMENT AND USE OF PUBLIC LANDS, H. Rep. No. 16, 64th Cong., 1st sess., p. 8 (1916).

or any other beneficial uses.<sup>29</sup> But while granting him wide power to prescribe general regulations, the statute did not expressly stipulate requirements or standards directly either as to charges or terms of rights-of-way. Shortly thereafter, Congress in 1905 transferred the forest reserves to the Department of Agriculture.<sup>30</sup> In so doing, it also made a blanket grant of rights-of-way for dams and similar works "for municipal or mining purposes, and for the purposes of the milling and reduction of ores, during the period of their beneficial use," subject to regulations prescribed by the Secretary of the Interior and also to the laws of the state where the reserves are situated.<sup>31</sup> In 1906, Congress supplemented the 1902 Reclamation Act by authorizing the lease of surplus power or power privilege at irrigation works for periods not exceeding ten years, "giving preference to municipal purposes."<sup>32</sup> However, that maximum was soon enlarged to 50 years in the case of the Rio Grande irrigation project.<sup>33</sup> Under a 1910 statute, effective today, the President is authorized to withdraw any public lands and reserve them for water-power sites, irrigation, or other stated uses.<sup>34</sup> Legislation in 1911 authorized the granting of rights-of-way for transmission lines over public lands, national forests and reservations, leaving the details of administration for the discretion of the head of the department concerned.<sup>35</sup>

Limited legislative progress was also made during this 20-year period in the matter of development of power on streams subject to the jurisdiction of Congress. Some measure of uniformity was attained in the 1906 General Dam Act, which prescribed conditions for general application to nonfederal power developments thereafter authorized by Congress.<sup>36</sup> Among

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<sup>29</sup> Act of February 15, 1901, 31 Stat. 790, 791.

<sup>30</sup> Act of February 1, 1905, 33 Stat. 628, 16 U. S. C. 524.

<sup>31</sup> § 4, 33 Stat. 628, 16 U. S. C. 524.

<sup>32</sup> Act of April 16, 1906, § 5, 34 Stat. 116, 117, as amended, 43 U. S. C. 522.

<sup>33</sup> Act of February 24, 1911, 36 Stat. 930, 931, see 43 U. S. C. 522.

<sup>34</sup> Act of June 25, 1910, § 1, 36 Stat. 847, 43 U. S. C. 141.

<sup>35</sup> Act of March 4, 1911, 36 Stat. 1235, 1253-1254; 43 C. F. R. 245; 36 C. F. R. 251.50-251.64.

<sup>36</sup> Act of June 21, 1906, 34 Stat. 386.

such conditions, approval of plans by the Chief of Engineers and the Secretary of the Army was made prerequisite, and these officials were authorized to require at any time the construction and operation of navigation facilities by the grantee.<sup>87</sup> Provision was also made for fishways. But no provision was made for charges, and no time limit was placed on the duration of the grant. Since, however, the right to alter or repeal without liability was expressly reserved, the grantee's investment was insecure.

In the main, the provisions of the 1906 statute were repeated in the 1910 General Dam Act. The latter Act, however, limited grants to 50 years and reserved the right to revoke them at any time for public use but only upon payment of reasonable value of the works, exclusive of the value of the grant.<sup>88</sup> In addition, the 1910 Act provided for certain charges, including compensation for benefits from federal headwater improvements.<sup>89</sup> But still no provision was made for imposition of a charge for the privilege itself. Nor was provision made for disposition of the properties upon termination of the grant.

Some consistency was achieved for special grants adopted after passage of the 1906 and 1910 statutes.<sup>90</sup> But considerable variations may be noted in conditions of such grants, both before and after the 1906 and 1910 legislation, especially as to disposition of properties.<sup>91</sup> Some of them required transfer of

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<sup>87</sup> § 1, 34 Stat. 386.

<sup>88</sup> Act of June 23, 1910, § 4, 36 Stat. 593, 595.

<sup>89</sup> § 1, 36 Stat. 593, 594.

<sup>90</sup> In the ten years following enactment of the 1906 Act, Congress adopted 20 special acts subject to its provisions, and 16 new or amended special grants in the two years following the 1910 amendment. *FIRST ANNUAL REPORT OF THE FEDERAL POWER COMMISSION*, pp. 48-49 (1921). Under these two statutes, only eight dams were actually completed, developing a total of 140,000 horsepower. H. Rep. No. 61, 66th Cong., 1st sess., p. 3 (1919).

<sup>91</sup> See, e. g., Act of April 26, 1904, § 4, 33 Stat. 309 (grantee to give lock and dam to the United States free of cost, but to have use of water power for 99 years); Act of February 9, 1905, § 1, 33 Stat. 712 (upon grantee's completion of dam, lock, and related facilities, United States to have ownership of lock and related facilities); Act of March 3, 1905, § 1, 33 Stat. 1117, 1133 (upon expiration of 40-year right to grantee to collect navigation tolls, United States to assume possession of locks without compensation, but

the dam and navigation works upon completion to the United States, while others contained differing or no comparable provisions.

This pre-1920 period is also marked by sporadic attention to provisions governing the development and use of power at federal projects. For example, arrangements for the use or lease of power available at specific projects included scant but widely varied restrictions.<sup>42</sup> Foreshadowing later general legislation, the 1909 River and Harbor Act, in appropriating for certain surveys, directed that full information be obtained as to the feasibility of developing water power for commercial purposes as an incident of navigation development, but restricted consideration to specified relationships to navigation.<sup>43</sup> "In order

"without in any way impairing the right or ownership of the water power and dams"); Act of June 28, 1906, § 1, 34 Stat. 536 (Secretary of the Army to fix "reasonable charges" for use of power); Act of June 29, 1906, § 4, 34 Stat. 628, 629 (grantee to give completed lock and dam to the United States and to have use of water power for 99 years); Act of March 4, 1907, § 2, 34 Stat. 1288 (grantee to have use of any government land for construction and maintenance of dam and to convey land to the United States for locks and approaches which it may construct); Act of March 3, 1909, § 8, 35 Stat. 815, 819 (upon completion, dam to become property of the United States, and grantee to maintain works in accordance with 1906 General Dam Act); Act of February 27, 1911, § 1, 36 Stat. 933, 939, 940 (upon grantee's completion of dam partially constructed by the United States, dam to become property of the United States, and grantee to have use of water power for 50 years; provision made for a charge beginning in 1925).

<sup>42</sup> See, e. g., Act of June 28, 1902, 32 Stat. 408, 409 (Secretary of the Army to grant leases "to the highest responsible bidder," with rates, conditions, and periods of time as seem to him "expedient."); Act of March 2, 1907, § 1, 34 Stat. 1073, 1103 (authorizing the Secretary of the Army to permit a named company to construct a power station in connection with a federal dam, with no significant provisions excepting protection of navigation); Act of March 3, 1909, § 9, 35 Stat. 815, 819 (rates, conditions, and periods of time in leases to be such as seem "just, equitable, and expedient" to the Secretary of the Army, but for a "period not exceeding 20 years."); § 12, 35 Stat. 821 (authority for development of power "for direct use of the United States" or by lease through the Secretary of the Army "upon such terms and conditions as shall be best calculated in his judgment to insure the full development" of power, provided that "just and adequate compensation" be paid for the use and that the period not exceed "30 years."); Act of June 25, 1910, § 1, 36 Stat. 630, 659 (leases to provide "reasonable compensation" to the United States, with rates fixed to be "subject to revision by Congress").

<sup>43</sup> Act of March 3, 1909, § 13, 35 Stat. 815, 822.

to make possible the economical future development of water power," the Secretary of the Army in 1912 was authorized under legislation effective today to provide, in the permanent parts of any authorized navigation dam, such works as may be desirable "for the future development of its water power."<sup>48</sup> And in 1913, continuing legislation required that reports on examinations and surveys of proposed navigation improvements include data concerning the development and utilization of water power for industrial and commercial purposes.<sup>49</sup> Unlike its 1909 predecessor, this statute did not confine consideration of such data merely to navigation relationships, extending also "to their relation to the development and regulation of commerce."<sup>50</sup>

Examination of the legislative developments of the 1900-1920 period is enlightened by consideration of certain government reports and presidential veto messages which strongly emphasized the power and multiple-purpose aspects of water-resource developments. Outstanding in this respect is the 1908 Preliminary Report of the Inland Waterways Commission.<sup>51</sup> Pointing out the necessity for combined consideration of power, navigation, and other uses, this Commission asserted that water power is a permanent asset "which should be utilized for the benefit of the people of the country."<sup>52</sup> Moreover, from facts ascertained in certain cases, it found basis for the claim that "the value of the power would pay the costs of all engineering and other works required in such cases to control the streams for navigation and other uses."<sup>53</sup> But it cautioned that "appropriation of water power offers an unequalled opportunity for monopolistic control of industries," and that in certain circumstances it would entail, unless regulated, "monopolistic control of the daily life of our people in an unprecedented degree."<sup>54</sup> Taking cognizance of enumerated multiple uses,

<sup>48</sup> Act of July 25, 1912, § 12, 37 Stat. 201, 233, 33 U. S. C. 609.

<sup>49</sup> Act of March 4, 1913, § 3, 37 Stat. 801, 825, 33 U. S. C. 545.

<sup>50</sup> *Id.*

<sup>51</sup> Sen. Doc. No. 325, 60th Cong., 1st sess. (1908).

<sup>52</sup> *Id.* p. 22.

<sup>53</sup> *Ibid.*

<sup>54</sup> *Ibid.*

the Commission recommended that future plans take account of all uses and benefits, and that federal agencies cooperate with states and local entities and individuals "with a view to an equitable distribution of costs and benefits."<sup>51</sup>

Similarly, the 1909 Report of the National Conservation Commission pointed out the need for development of power in coordination with other uses "to reduce the drain on other resources" and to aid in controlling streams for navigation and other uses.<sup>52</sup> Likewise, the 1910 Preliminary Report of the National Waterways Commission, composed of 12 members of Congress, emphasized the need for consideration of multiple uses in planning navigation improvements, recommending "greatest care in the conservation of water power for the use of the people."<sup>53</sup> And its Final Report in 1912 noted the increase in practicability of flood-control reservoirs when associated with the development of power and aid to navigation, and that reasonable charges should be assessed for grant of the "special privilege" for development of water power.<sup>54</sup> It also asserted that there can be no doubt "that the authority of Congress reaches to the remotest sources in the mountains of every navigable stream."<sup>55</sup> In that same year, a Senate subcommittee forcefully reported on the Government's "undoubted" right to generate power at a navigation dam, and to "lease or sell such power on such terms and for such compensation as it may deem just."<sup>56</sup>

<sup>51</sup> *Id.* pp. 22-23, 25.

<sup>52</sup> Sen. Doc. No. 676, 60th Cong., 2d sess., vol. 1, p. 24 (1909).

<sup>53</sup> See FINAL REPORT OF THE NATIONAL WATERWAYS COMMISSION, Sen. Doc. No. 469, 62d Cong., 2d sess., App. I, p. 85 (1912). This document contains an informative collection of federal water-power legislation prior to 1912. *Id.* App. VIII, pp. 323-454.

<sup>54</sup> *Id.* pp. 27, 61.

<sup>55</sup> *Id.* p. 47. Strangely enough, the report elsewhere concluded that there is no federal authority to engage in works intended primarily for flood prevention or power development. *Id.* p. 27.

<sup>56</sup> POWER OF THE FEDERAL GOVERNMENT OVER THE DEVELOPMENT AND USE OF WATER POWER, Sen. Doc. No. 246, 64th Cong., 1st sess., pp. 17-18 (1916). See also 48 CONG. REC. 11568-11577 (1912). For other relevant reports of this period, see REPORT ON WATER POWER DEVELOPMENT IN THE UNITED STATES, Commissioner of Corporations (1912); LIMITATION OF FEDERAL CONTROL OF WATER POWERS, Sen. Doc. No. 721 62d Cong., 2d sess. (1912);



Equally important were the veto messages. Almost a half century ago, in vetoing a bill granting consent for private construction of a power dam at Muscle Shoals, President Theodore Roosevelt took the position that power should be developed at, and should aid in financing federal navigation improvements, saying: <sup>57</sup>

It does not seem right or just that this element of local value should be given away to private individuals of the vicinage, and at the same time the people of the whole community should be taxed for the local improvement.

Concluding that the entire matter of granting privileges should be considered in a comprehensive way, he said they should be disposed of "after full competition in such a way as shall best conserve the public interests." President Roosevelt was even more explicit in stating his views in veto messages on the Rainy River and James River bills granting broad rights for nonfederal development.<sup>58</sup> Among other things, he noted that natural resources should not be granted and held in an undeveloped condition; that a definite time limit should be fixed in grants, permitting the public to retain control; that charges for the privilege should be imposed; and that in approving plans, maximum development of navigation and power should be assured. Later, President Taft voiced similar considerations when he vetoed bills to permit private construction of power dams on the White and Coosa Rivers.<sup>59</sup>

Not to be overlooked is the Waterways Commission, created by Congress in 1917.<sup>60</sup> For the mere statement of its functions and duties signifies the broad importance of its assigned mission to power and multiple-purpose projects, both federal and

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FEDERAL CONTROL OF WATER POWER (Papers submitted to Senate Committee on Commerce), 62d Cong., 3d sess. (1913); ELECTRIC POWER DEVELOPMENT IN THE UNITED STATES, Sen. Doc. No. 316, 64th Cong., 1st sess. (1916).

<sup>57</sup> 36 CONG. REC. 3071 (1908).

<sup>58</sup> Sen. Doc. No. 438, 60th Cong., 1st sess. (1908); 42 CONG. REC. 4698, and H. Doc. No. 1350, 60th Cong., 2d sess. (1909); 43 CONG. REC. 978-980.

<sup>59</sup> H. Doc. No. 899, 62d Cong., 2d sess. (1912); 48 CONG. REC. 10313, and Sen. Doc. No. 949, 62d Cong., 2d sess. (1912); 48 CONG. REC. 11796.

<sup>60</sup> Act of August 8, 1917, § 18, 40 Stat. 250, 269. For a more detailed discussion of this legislation, see *infra*, pp. 403-405.

nonfederal. Congress authorized it to bring into "coordination and cooperation the engineering, scientific, and constructive services, bureaus, boards, and commissions"<sup>61</sup> of the several executive departments and commissions created by Congress that relate to numerous specified aspects of water resources and related subjects, and to report to Congress a comprehensive plan for development of the waterways and water resources of the United States.<sup>62</sup> In so doing, the Commission was directed to give consideration to matters to be undertaken by the United States alone or in cooperation with states and local entities and individuals, with a view to "assigning" to each such portions as belong to their respective "jurisdictions, rights, and interests."<sup>63</sup>

But the efficacy of the foregoing approach was never tested. Despite its objectives, the Waterways Commission had very restricted powers, being nebulously "authorized" to bring into "coordination and cooperation" the various agencies. Moreover, the possible success of the venture was qualified by an appended requirement that nothing in the arrangement should be construed to interfere with navigation improvements theretofore or thereafter authorized or with legislative action on reports theretofore or thereafter submitted. Any attempt to evaluate this plan adopted during World War I would have to be entirely academic, since the seven members authorized for the Commission were never appointed.<sup>64</sup> And during the legislative history of the 1920 Federal Water Power Act, defeat greeted efforts to have the functions of the Waterways Commission transferred to the Federal Power Commission or preserved but assigned to different personnel.<sup>65</sup> Indeed, the 1920 Act as passed included a provision expressly repealing the legislation creating the Waterways Commission.<sup>66</sup>

An informative legislative history of the Federal Water

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<sup>61</sup> *Id.*

<sup>62</sup> *Id.* For the exact language of the statute, see *infra*, pp. 403-405.

<sup>63</sup> *Id.*

<sup>64</sup> See 59 CONG. REC. 1173-1176, 7773.

<sup>65</sup> 59 CONG. REC. 1173-1176; *id.* pp. 1535, 7770-7773; H. Rep. No. 910, 66th Cong., 2d sess., pp. 13-14 (1920).

<sup>66</sup> Act of June 10, 1920, § 29, 41 Stat. 1063, 1077.

Power Act would embrace many of the foregoing developments of the 1900-1920 period. Sharp were the conflicts among views as to the proper means for development of hydroelectric power in streams and on lands subject to the jurisdiction of Congress. During the period from 1913 to 1917, many power bills dealing with navigable waters and many dealing with public lands were actively and often heatedly debated in Congress without passage.<sup>67</sup> Shortly after the beginning of World War I, President Wilson sought a coordination of executive and legislative attack on the problem, focusing attention in 1918 on the "Administration Bill" which combined both the land and water jurisdictional bases.<sup>68</sup> Despite extensive consideration of this and related legislative proposals, the 65th Congress adjourned without adoption of any bill.<sup>69</sup> But the 66th Congress finally enacted the Federal Water Power Act of 1920, which in many respects corresponds with the 1918 "Administration Bill."<sup>70</sup>

Elaborate attention would be required to measure the degree to which this Act represents a compromise between the zealous contentions of the early "conservationists" and those of their equally zealous opponents, each group having long persevered for general acceptance of its views. Suffice it for present purposes to say that beginning with this legislation we may best summarize existing law relating to both nonfederal and federal development and operation. As we discuss these two main divisions, we shall continue simultaneously to treat the growth of the multiple-purpose concept in relation to individual projects.

## Nonfederal Development and Operation

As we have seen, Congress until 1920 generally gave direct legislative authorization on a project-by-project basis for nonfederal development of power on streams under its jurisdiction. Restrictive conditions in grants were few and incon-

<sup>67</sup> See Kerwin, *FEDERAL WATER-POWER LEGISLATION*, ch. IV (1926).

<sup>68</sup> *Id.* ch. V; H. R. 8716, 65th Cong., 2d sess. (1918).

<sup>69</sup> Kerwin, *op. cit.*, *supra*, n. 67, at p. 253.

<sup>70</sup> *Id.* pp. 261-263; Act of June 10, 1920, 41 Stat. 1063.

sistent. And many of the grants were perpetual in their terms. With rare exception, they included no provision for imposition of a charge for the privilege itself, or for disposition of properties. But with the uncertainty of a grantee's tenure and investment under grants subject to termination, private development had moved slowly.

Seeking to remedy this situation, Congress in 1920 passed the Federal Water Power Act, regularizing and facilitating federal permission for nonfederal development through a licensing system. The Act's history reflects a legislative purpose to encourage nonfederal development while safeguarding the public interest and making possible ultimate public ownership.<sup>71</sup> And as we shall see, the Act itself reserves a right to ultimate public ownership of licensed projects and also holds the door open to direct federal development by prohibiting the issuance of licenses whenever the Federal Power Commission determines that development should be undertaken by the United States.

The statute created the Federal Power Commission, composed of the Secretaries of the Army, the Interior, and Agriculture.<sup>72</sup> Federal development of power, it will be remembered, is a responsibility principally assigned to the Army Engineers, under the supervision of the Secretary of the Army, and to the Bureau of Reclamation, under the supervision of the Secretary of the Interior.<sup>73</sup> These two Secretaries, therefore, had dual power responsibilities for a time. In 1930, Congress made the Commission an independent agency consisting of five members.<sup>74</sup> In 1935, the 1920 Act was made Part I of the

<sup>71</sup> Sen. Rep. No. 179, 65th Cong., 2d sess. (1917); H. Rep. No. 61, 66th Cong., 1st sess., p. 3 (1919); Sen. Rep. No. 180, 66th Cong., 1st sess., p. 3 (1919). Senator Jones, Chairman of the Senate Committee on Commerce, discussing the proposed legislation which ultimately became the Federal Power Act, said, "It will thus be seen that under the terms of the act the Federal Government has, through its commission, the first right to develop any of the water powers under its jurisdiction. Should the Federal Government elect not to do so, then States and municipalities are accorded a preference right to licenses on even terms over citizens, associations of citizens, or corporations organized under the laws of the United States or any of the States thereof." 59 CONG. REC. 246 (1919).

<sup>72</sup> § 1, 41 Stat. 1063.

<sup>73</sup> See *supra*, pp. 103, 109-110, 141, 147, 239-240.

<sup>74</sup> Act of June 23, 1930, § 1, 46 Stat. 797, see 16 U. S. C. 792.

Federal Power Act, which added provisions for the regulation of electric utilities engaged in interstate commerce, as well as procedural and administrative provisions for licenses and public utilities.<sup>75</sup>

It may be noted preliminarily that the total estimated cost of all major projects under Federal Power Commission license is just under one billion dollars.<sup>76</sup> Also, of the 282,698,-214,000 kilowatt-hours total 1948 electric generation in the United States, 82,469,742,000 kilowatt-hours, or approximately 30%, was generated at hydroelectric plants. Of this latter figure, nonfederal hydroelectric generation was 49,741,-069,000 kilowatt-hours, or approximately 60%.<sup>77</sup>

INVESTIGATIONS AND SURVEYS.—Examination of the Commission's broad investigative powers and duties will aid our later consideration of its many other responsibilities. Thus, especial significance attaches to its wide authority to make investigations and collect data concerning the "utilization of the water resources in any region to be developed, the water-power industry and its relation to other industries and to interstate or foreign commerce, and concerning the location, capacity, development costs, and relation to markets of power sites."<sup>78</sup> And also whether power from federal dams can be "advantageously used by the United States for its public purposes," and what is a fair value of such power.<sup>79</sup> In such investigations, it may cooperate with state and federal agencies.<sup>80</sup> The data thus collected the Commission may make public in the form and manner "best adapted for public information and use."<sup>81</sup>

Furthermore, the Commission has extensive investigative

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<sup>75</sup> Federal Power Act; Act of June 10, 1920, 41 Stat. 1063, amended by Act of August 26, 1935, 49 Stat. 838, as amended, 16 U. S. C. 791a-825f.

<sup>76</sup> TWENTY-NINTH ANNUAL REPORT OF THE FEDERAL POWER COMMISSION, p. 3 (1949).

<sup>77</sup> PRODUCTION OF ELECTRIC ENERGY AND CAPACITY OF GENERATING PLANTS, Federal Power Commission, S-70, 1948.

<sup>78</sup> § 4(a), 41 Stat. 1065, as amended, 16 U. S. C. 797(a).

<sup>79</sup> *Id.*

<sup>80</sup> § 4(c), 41 Stat. 1065, 16 U. S. C. 797(c).

<sup>81</sup> § 4(d), 49 Stat. 840, 16 U. S. C. 797(d). Originally before amendment designated § 4(d), 41 Stat. 1065.

power to secure information as a basis for recommending legislation.<sup>82</sup> "So far as practicable," it must secure and keep current information regarding the ownership, operation, management, and control of "all facilities" for generation, transmission, distribution, and sale of electric energy, however produced. So also as to the "capacity and output of such facilities and the relationship between the two; the cost of generation, transmission, and distribution; the rates, charges, and contracts in respect of the sale of electric energy and its service to residential, rural, commercial, and industrial consumers by private and public agencies." Moreover, this duty to secure and keep current information includes the relation of the foregoing facts to "the development of navigation, industry, commerce, and the national defense."

**MULTIPLE USES AND COMPREHENSIVE DEVELOPMENT.**—The nature and scope of the Commission's authority with respect to investigations and surveys indicate a legislative expectation that the functions delegated to the Commission would require its consideration of multiple uses of projects and comprehensive development.<sup>83</sup> Moreover, preference among applicants for a license depends in part upon which has plans best adapted to develop, conserve, and utilize in the public interest the water resources of the region.<sup>84</sup>

Other provisions leave no room for doubt as to the importance under the Act of multiple use and comprehensive development.

For example, the project adopted must be such as in the judgment of the Commission will be: <sup>85</sup>

best adapted to a comprehensive plan for improving or developing a waterway or waterways for the use or benefit of interstate or foreign commerce, for the improvement and utilization of waterpower development, and for other beneficial public uses, including recreational purposes.

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<sup>82</sup> § 311, 49 Stat. 859, 16 U. S. C. 825j.

<sup>83</sup> See *infra*, pp. 276-281.

<sup>84</sup> See *infra*, pp. 281-282.

<sup>85</sup> § 10 (a), 41 Stat. 1068, as amended, 16 U. S. C. 803 (a).

On the other hand, the Act may not be construed as affecting rights acquired under state laws relating to the "control, appropriation, use, or distribution of water used in irrigation or for municipal or other uses, or any vested right acquired therein."<sup>86</sup> Otherwise, "the detailed provisions of the Act providing for the federal plan of regulation leave no room or need for conflicting state controls."<sup>87</sup>

A number of provisions assure special consideration of navigation interests. For example, no license may be issued affecting the navigable capacity of navigable waters without approval of plans by the Chief of Engineers and the Secretary of the Army.<sup>88</sup> Without expense to the United States, a licensee may be required to construct locks, booms, sluices, or other structures for navigation purposes.<sup>89</sup> If such structures are not made part of the original construction, the licensee may be later required to convey to the United States such lands and right of passage, and to permit such control of pools as may be required for the United States to complete such navigation facilities.<sup>90</sup> Also, the licensee may be required to furnish free power for operation of navigation facilities.<sup>91</sup> If the Commission finds that navigation needs require construction of navigation structures which cannot, consistent with a reasonable investment cost to the licensee, be provided at its expense, the Commission may grant the license upon condition that the licensee install such structures "if the Government fails to make provision therefor" within a time fixed in the license.<sup>92</sup> The Commission must report the facts to Congress with recommendations concerning the participation of the United States in the cost.<sup>93</sup>

<sup>86</sup> § 27, 41 Stat. 1077, 16 U. S. C. 821.

<sup>87</sup> *First Iowa Hydro-Electric Cooperative v. Federal Power Commission*, 328 U. S. 152, 181 (1946); *State of Iowa v. Federal Power Commission*, 178 F. 2d 421, 426-427 (C. A. 8, 1949), cert. den., 339 U. S. 979 (1950); see § 9(b), 41 Stat. 1068, 16 U. S. C. 802.

<sup>88</sup> § 4(e), 49 Stat. 840, 16 U. S. C. 797(e). Originally before amendment designated § 4(d), 41 Stat. 1065.

<sup>89</sup> § 11(a), 41 Stat. 1070, 16 U. S. C. 804(a).

<sup>90</sup> § 11(b), 41 Stat. 1070, 16 U. S. C. 804(b).

<sup>91</sup> § 11(c), 41 Stat. 1070, 16 U. S. C. 804(c).

<sup>92</sup> § 12, 41 Stat. 1070, 16 U. S. C. 805.

<sup>93</sup> *Id.*

Furthermore, the licensee must construct and operate at its own expense such lights and signals as may be directed by the Secretary of the Army.<sup>94</sup> Likewise, the operation of all project navigation facilities is subject to such rules as the Secretary of the Army may make "in the interest of navigation."<sup>95</sup> The licensee must maintain the project works in a condition of repair "adequate for the purposes of navigation" as well as for their efficient operation for power, and it must also make necessary renewals and replacements and establish and maintain adequate depreciation reserves for such purposes.<sup>96</sup> Moreover, it must maintain and operate the works "so as not to impair navigation."<sup>97</sup> On the other hand, in any valuation of the property for rate making, there must be included the cost to the licensee of the construction of required "aids of navigation."<sup>98</sup> Noteworthy also is the provision that a portion of the proceeds derived from annual charges be reserved as a "special fund" to be expended under the direction of the Secretary of the Army in the maintenance and operation of federal navigation structures, or in the construction, maintenance or operation of "headwater or other improvements of navigable waters."<sup>99</sup>

Under other provisions, consideration of uses in addition to power and navigation is necessary. Provision is made for fishways and for consideration of the effect of proposed projects on fish and wildlife.<sup>100</sup> Licenses must be so conditioned as to protect adequately and not interfere with the purposes of any reservation of the United States.<sup>101</sup> Likewise, when the Commission deems a contemplated improvement "desirable and justified in the public interest" for improving a waterway for the "use or benefit of interstate or foreign commerce," it shall in-

<sup>94</sup> § 18, 41 Stat. 1073, as amended, 16 U. S. C. 811.

<sup>95</sup> *Id.*

<sup>96</sup> § 10 (c), 41 Stat. 1069, as amended, 16 U. S. C. 803 (c).

<sup>97</sup> *Id.*

<sup>98</sup> § 20, 41 Stat. 1073, 16 U. S. C. 813.

<sup>99</sup> § 17, 41 Stat. 1072, as amended, 16 U. S. C. 810.

<sup>100</sup> § 18, 41 Stat. 1073, as amended, 16 U. S. C. 811; Act of August 14, 1946, § 2, 60 Stat. 1080, see 16 U. S. C. 662.

<sup>101</sup> § 4 (e), 49 Stat. 840, as amended, 16 U. S. C. 797 (e). Originally before amendment designated § 4 (d), 41 Stat. 1065.



clude a finding to that effect in its records.<sup>102</sup> Also, in emergency cases requiring protection of "navigation, life, health, or property" a licensee may make certain alterations in approved plans.<sup>103</sup>

In addition, we should mention here certain legislation designed to protect lands of the United States suitable for power development against disposal or use for other purposes. To this end, Congress has enacted a number of statutes authorizing withdrawal of such lands.<sup>104</sup> The Federal Power Act itself withdraws lands included within any application for a preliminary permit or license.<sup>105</sup> Furthermore, it authorizes the Commission to permit the release of power withdrawals or to permit nonpower uses of withdrawn lands, where it finds that their future power value will not be injured or destroyed, and to impose suitable restrictions on the interim nonpower use.<sup>106</sup>

ISSUANCE OF LICENSES.—As amended in 1935, the Act makes unlawful the construction, operation, or maintenance of power dams or incidental works in navigable waters, or upon public lands or reservations, or the utilization of surplus water or power from any government dam, except as authorized by a license under the Act, or a pre-1920 permit.<sup>107</sup>

Also, it requires the filing with the Commission of a declaration of intention to construct dams or other project works in waters other than "navigable waters, and over which Congress has jurisdiction under its authority to regulate commerce."<sup>108</sup> If the Commission after investigation finds that the "interests of interstate or foreign commerce" would be affected by such construction, a license must be obtained.<sup>109</sup>

<sup>102</sup> *Id.*

<sup>103</sup> § 10(b), 41 Stat. 1068, as amended, 16 U. S. C. 803(b).

<sup>104</sup> See Act of February 15, 1901, 31 Stat. 790; Act of June 25, 1910, § 1, 36 Stat. 847; Act of March 4, 1911, 36 Stat. 1235, 1253. Of these, the 1910 statute is principally relied upon and is codified in 43 U. S. C. 141.

<sup>105</sup> § 24, 41 Stat. 1075, as amended, 16 U. S. C. 818 (Supp. III).

<sup>106</sup> *Id.*

<sup>107</sup> § 23(b), 49 Stat. 846, 16 U. S. C. 817. Cf. the general prohibition of the 1899 River and Harbor Act, discussed *supra*, pp. 116-117.

<sup>108</sup> *Id.*

<sup>109</sup> *Id.*

The Commission is authorized to issue licenses for the construction, operation, and maintenance of dams or other project works "necessary or convenient for the development and improvement of navigation and for the development, transmission, and utilization of power" in streams over which Congress has commerce authority, or upon public lands and reservations.<sup>120</sup>

It may also issue licenses "for the purpose of utilizing the surplus water or water power" from a government dam.<sup>121</sup> Voluntary transfers of licenses without Commission approval are prohibited.<sup>122</sup>

"For the purpose" of enabling an applicant for a license to secure certain project data and evidence of compliance with state law, as required by the Act, the Commission is authorized to issue "preliminary permits."<sup>123</sup> When issued, such a permit is nontransferable and is for "the sole purpose" of maintaining priority of application for such time as the Commission deems necessary, not exceeding three years.<sup>124</sup>

In connection with the Commission's licensing authority, it should be observed that it is also empowered to order an investigation of any occupancy of, or evidenced intention to occupy public lands, reservations, or waters under the commerce authority of Congress, "for the purpose of developing electric power."<sup>125</sup> Thereupon, it may issue such order as it finds "appropriate, expedient, and in the public interest to conserve and utilize the navigation and water-power resources of the region."<sup>126</sup> Exercising this authority, the Commission may

<sup>120</sup> § 4(e), 49 Stat. 840, 16 U. S. C. 797(e). Originally before amendment designated § 4(d), 41 Stat. 1065. See also Act of March 3, 1921, 41 Stat. 1353 repealing so much of the 1920 Federal Water Power Act as authorized licensing specified uses of "existing national parks and national monuments."

<sup>121</sup> *Id.*

<sup>122</sup> § 8, 41 Stat. 1068, 16 U. S. C. 801.

<sup>123</sup> § 4(f), 49 Stat. 841, 16 U. S. C. 797(f). Originally before amendment designated § 4(e), 41 Stat. 1066.

<sup>124</sup> § 5, 41 Stat. 1067, as amended, 16 U. S. C. 798.

<sup>125</sup> § 4(g), 49 Stat. 841, 16 U. S. C. 797(g).

<sup>126</sup> *Id.*

require licensing of a project constructed in navigable waters before enactment of the statute.<sup>117</sup>

In issuing a license for a "minor part" of a complete project, undefined in the Act, or for a complete project of not more than 100 horsepower installed capacity, the Commission has discretion to waive the conditions required by the Act, except the license period of 50 years.<sup>118</sup>

Specific provisions protect permits and grants obtained prior to the Act's passage.<sup>119</sup> Moreover, as already noted, Congress stipulated that the Act shall not be construed as interfering with certain state laws relating to water.<sup>120</sup>

Under the Act, provision is made for a mandatory preference which is especially important in any contest between plans for nonfederal development and plans for federal development.<sup>121</sup> For if in the judgment of the Commission the "development of any water resources for public purposes" should be undertaken by the United States, it is directed not to approve any application for "any project affecting such development."<sup>122</sup> In such case, it must prepare certain data and submit its findings to Congress with recommendations concerning the proposed development.<sup>123</sup> While the Commission has joined the Army Engineers in certain recommendations relating to federal navigation and flood-control projects,<sup>124</sup> no record has been found of Commission action taken directly pursuant to the foregoing requirements.<sup>125</sup> With the widening of federal interest under

<sup>117</sup> *Pennsylvania Water & Power Co. v. Federal Power Commission*, 123 F. 2d 155, 163 (1941), *cert. den.*, 315 U. S. 806 (1942).

<sup>118</sup> § 10(i), 41 Stat. 1070, as amended, 16 U. S. C. 803(i). This authority does not extend to annual charges for use of lands within Indian reservations.

<sup>119</sup> See *supra*, pp. 262-267.

<sup>120</sup> § 27, 41 Stat. 1077, 16 U. S. C. 821; *First Iowa Hydro-Electric Cooperative v. Federal Power Commission*, 328 U. S. 152, 170 (1946).

<sup>121</sup> Recent examples of such a contest will be discussed *infra*, pp. 439-442.

<sup>122</sup> § 7, 41 Stat. 1067, as amended, 16 U. S. C. 800.

<sup>123</sup> *Id.*

<sup>124</sup> See *supra*, n. 162, p. 103, and p. 141.

<sup>125</sup> But presently pending for Commission action are exceptions filed to a decision by a Presiding Examiner on December 19, 1949, ordering that an application for nonfederal development of the International Rapids Section of the St. Lawrence River be not approved, and that the matter be submitted to Congress with a recommendation for federal development. *Re The*

legislation for navigation, flood-control and reclamation undertakings, the duty of the Commission correspondingly increases in importance. Yet the relevance of this duty to a definition of the respective spheres of federal and nonfederal power development is limited by the fact that it is merely a part of the Commission's administration of the licensing provisions of the Act, a purpose of which was the encouragement of nonfederal development, as already noted.<sup>126</sup>

If the Commission finds that any government dam may be "advantageously used by the United States for public purposes in addition to navigation, no license therefor" may be issued until two years after it reports the relevant facts to Congress.<sup>127</sup> Here again, no record has been found of Commission action taken pursuant to this requirement. In this connection, it will be remembered that the Commission is specifically authorized to collect data showing whether power from "Government dams can be used advantageously by the United States for its public purposes," and what is the fair value of such power.<sup>128</sup>

**PREFERENCES.**—In issuing preliminary permits or licenses, the Commission must give preference to applications by states and "municipalities," defined by the Act to include cities, counties, irrigation districts, drainage districts, or other political subdivisions or agencies of a state competent under the laws

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*Power Authority of the State of New York*, Project No. 2000, 15 F. R. 946 (1950). In the case of the Clark Hill project on the Savannah River, the Commission in 1928 granted a license for nonfederal development, which was surrendered with Commission consent in 1932. In 1939, the Commission directed a letter to the President recommending early federal construction of the project. Subsequently and after congressional authorization of federal construction and appropriation of funds, the Commission dismissed an application for nonfederal development, an action affirmed on judicial review. *Savannah River Electric Co. v. Federal Power Commission*, 164 F. 2d 408 (C. A. 4, 1947). See also *Re White River Power Co.*, 6 F. P. C. 734 (1947).

<sup>126</sup> See *supra*, p. 273.

<sup>127</sup> § 4(e), 49 Stat. 840, 16 U. S. C. 797(e). Originally before amendment designated § 4(d), 41 Stat. 1065. This provision does not apply to dams constructed prior to June 10, 1920. A "Government dam" means a dam or other work constructed or owned by the United States for government purposes with or without contribution from others. § 3, 41 Stat. 1063, as amended, 16 U. S. C. 796(10).

<sup>128</sup> See *supra*, p. 274.

thereof to carry on the business of developing, transmitting, utilizing, or distributing power.<sup>129</sup> But such preference applies only if the plans submitted are deemed by the Commission equally well adapted to "conserve and utilize in the public interest the water resources of the region," or may be made equally well adapted within a reasonable time fixed by the Commission.<sup>130</sup> As between other applicants, the Commission "may" give preference to an applicant with plans best adapted to "develop, conserve, and utilize in the public interest the water resources of the region."<sup>131</sup>

**TERM OF LICENSE.**—The Act provides that licenses shall be issued for a period "not exceeding 50 years."<sup>132</sup> Exception to this requirement is not permitted even in the case of "minor part" licenses, or those for a complete project of not more than 100 horsepower installed capacity, with respect to which the Commission is authorized to waive certain other requirements.<sup>133</sup>

Time-limit provisions are stipulated respecting the commencement and completion of construction.<sup>134</sup> So also as to termination of a license on failure to commence construction within the prescribed time, and as to revocation where construction is begun but not completed within the prescribed time.<sup>135</sup> In addition, provision is made for approval of power contracts extending beyond the termination date of the license, "whenever the public interest requires or justifies" such action.<sup>136</sup>

Although Congress expressly reserved the right to alter the Act, it stipulated that no such alteration shall affect licenses theretofore issued under the Act, or a licensee's rights thereunder.<sup>137</sup> But expressly reserved is the right of the United States or of any state or municipality to take over a licensed

<sup>129</sup> § 7, 41 Stat. 1067, as amended, 16 U. S. C. 800; § 3, 41 Stat. 1063, as amended, 16 U. S. C. 796(7).

<sup>130</sup> *Id.*

<sup>131</sup> *Id.*

<sup>132</sup> § 6, 41 Stat. 1067, as amended, 16 U. S. C. 799.

<sup>133</sup> § 10(1), 41 Stat. 1070, as amended, 16 U. S. C. 808(1).

<sup>134</sup> § 13, 41 Stat. 1071, 16 U. S. C. 806.

<sup>135</sup> *Id.*, and § 26, 41 Stat. 1076, 16 U. S. C. 820.

<sup>136</sup> § 22, 41 Stat. 1074, 16 U. S. C. 815.

<sup>137</sup> § 28, 41 Stat. 1077, 16 U. S. C. 822.

project at any time by condemnation proceedings upon payment of just compensation.<sup>138</sup> In this connection, it may be noted that the Act specifies certain circumstances in which a licensee may exercise the right of eminent domain.<sup>139</sup>

**IMPOSITION OF CHARGES.**—In the case of projects on streams under the commerce authority of Congress, the Act makes no provision for imposition of a charge for the license privilege, as such, except for nonfederal power plants at government dams. This, it will be remembered, was one of the most controversial issues of the 1900–1920 period.

The Act does require, however, that the licensee pay reasonable annual charges for reimbursing the United States for the costs of administering the licensing provisions, and for recompensing it for the occupancy of its lands or other property.<sup>140</sup> Also, annual charges must include an amount for expropriation to the Government of “excessive profits” until the respective states make provision for preventing excessive profits or for expropriation thereof to themselves, or until the period of amortization is reached.<sup>141</sup> In fixing annual charges, the Commission must seek to avoid increasing the price to the consumers of power by such charges.<sup>142</sup> Special provisions are included for the fixing of charges in the case of use of government dams or Indian tribal lands.<sup>143</sup>

State and municipal licensees are granted an exemption from payment of annual charges if the power “is sold to the public

<sup>138</sup> § 14, 41 Stat. 1071, as amended, 16 U. S. C. 807.

<sup>139</sup> § 21, 41 Stat. 1074, 16 U. S. C. 814.

<sup>140</sup> § 10(e), 41 Stat. 1069, as amended, 16 U. S. C. 803(e). For the formulae employed by the Commission, see 18 C. F. R. 11.20, 11.21.

<sup>141</sup> *Id.*

<sup>142</sup> *Id.*

<sup>143</sup> *Id.* A Commission regulation stipulates that, with certain exceptions, charges in the case of government dams “will be based upon the estimated value for power purposes of the properties and privileges.” 18 C. F. R. 11.22. However, its published opinions do not give the method followed in all details in arriving at the actual charge. See, *e. g.*, licenses for the London and Marmet power plants on the Kanawha River, West Virginia, Project No. 1175, **FOURTEENTH ANNUAL REPORT OF THE FEDERAL POWER COMMISSION**, p. 147 (1935).

without profit" or is used for state or municipal purposes.<sup>144</sup> The Commission has been sustained in its practice of refusing such exemptions to state and municipal licensees whose account records disclose a balance of receipts over costs for the period.<sup>145</sup> Such licensees are also granted an exemption from the payment of annual charges for projects "primarily designed to provide or improve navigation."<sup>146</sup> No record has been found of exemptions granted on this ground.

Notwithstanding the foregoing provisions, the Act requires that in no case may a license be issued free of charge for the development or utilization of power created by any federal dam.<sup>147</sup>

In addition to the foregoing requirements, the Act provides for payment by licensees for benefits received from construction work of other licensees, permittees, or the United States, such as headwater improvements.<sup>148</sup> Also, provision is made for payments by owners of unlicensed projects for benefits which they receive from work of licensees, permittees, or the United States.<sup>149</sup>

**PROCEEDS FROM CHARGES.**—Proceeds from charges imposed to reimburse the United States for the cost of administering the license provisions are paid into the Treasury and credited to miscellaneous receipts. Also, proceeds from Indian reservations are placed to the credit of the Indians of such reservations.<sup>150</sup>

Other proceeds from charges are paid into the Treasury subject to the following distribution: (a) 12½% to Treasury and credited to miscellaneous receipts; (b) 50% of charges for use of

<sup>144</sup> *Id.* This provision does not apply where the project occupies tribal lands within an Indian reservation, or is located at a government dam. See also 18 C. F. R. 11.24.

<sup>145</sup> *Central Nebraska Public Power & Irrigation Dist. v. Federal Power Commission*, 160 F. 2d 782, 783 (C. A. 8, 1947), cert. den., 332 U. S. 765 (1947).

<sup>146</sup> § 10(e), 41 Stat. 1069, as amended, 16 U. S. C. 803(e). See also 18 C. F. R. 11.24.

<sup>147</sup> *Id.*

<sup>148</sup> § 10(f), 41 Stat. 1070, as amended, 16 U. S. C. 803(f).

<sup>149</sup> *Id.*

<sup>150</sup> § 17, 41 Stat. 1072, as amended, 16 U. S. C. 810.

public lands and national forests, to the Reclamation Fund;<sup>151</sup> (c) 37½% of charges for use of public lands and national forests to the state in which such lands are located; and (d) 50% of charges from all other licenses, to a "special fund" for expenditure under the direction of the Secretary of the Army in the maintenance and operation of federal navigation structures or "in the construction, maintenance, or operation of headwater or other improvements of navigable waters."<sup>152</sup> It is apparent that this distribution provision involves some mathematical confusion.<sup>153</sup>

**RATES AND SERVICES.**—Part I of the Act provides for regulation of services and securities of public-service licensees in some circumstances by states, and in others by the Commission.<sup>154</sup> Provisions are likewise included in Part I for regulation of both intrastate and interstate rates, it being stipulated that the latter must be just, reasonable, and nondiscriminatory.<sup>155</sup>

The interstate rate standard thus provided is in almost identical words the same as that to be applied under the 1935 provisions of Part II in fixing the interstate wholesale rate of an interstate electric "public utility," as defined in that Part, except as we mention below.<sup>156</sup> A licensee coming within the definition of a "public utility" is not exempted from regulation under Part II.<sup>157</sup> The Supreme Court has construed a rate standard substantially identical with the one involved here to free regulatory commissions from adherence to any particular formula in rate regulation.<sup>158</sup> The rate provisions of Part II are applicable only to interstate wholesale rates, while the interstate rate provisions of Part I are not limited to wholesale rates. The sole rate-base difference be-

<sup>151</sup> See *supra*, pp. 198-202.

<sup>152</sup> § 17, 41 Stat. 1072, as amended, 16 U. S. C. 810.

<sup>153</sup> In this connection, see 1 Comp. Gen. 49 (1921).

<sup>154</sup> § 19, 41 Stat. 1073, 16 U. S. C. 812; § 20, 41 Stat. 1073, 16 U. S. C. 813.

<sup>155</sup> *Id.*; *infra*, p. 288. See *Safe Harbor Water Power Corp. v. Federal Power Commission*, 179 F. 2d 179 (C. A. 3, 1949), *cert. den.*, 339 U. S. 957 (1950).

<sup>156</sup> 179 F. 2d 186-187.

<sup>157</sup> 179 F. 2d 184-185.

<sup>158</sup> *Federal Power Commission v. Hope Natural Gas Co.*, 320 U. S. 591, 602 (1944).



tween the provisions of Parts I and II is that those of Part I restrict the rate base to an amount not in excess of "net investment" or "fair value," whichever is the lower.<sup>160</sup> "Net investment" in a project is defined as the "actual legitimate original cost," less certain deductions.<sup>160</sup> No such limitation appears in the rate provisions of Part II.

It should also be noted that the Act prohibits agreements and arrangements to limit the output of electrical energy, to restrain trade, or to fix, maintain, or increase prices therefor.<sup>161</sup>

**DISPOSITION OF PROJECTS.**—During the 1900–1920 period, there were vigorous arguments over proposals as to the disposition of nonfederal works constructed under federal authorization. A number of earlier special grants, it will be remembered, provided for transfer of the works to the United States upon completion.<sup>162</sup> The 1920 Act provides for a maximum license period of 50 years, and then for an option under which the United States may, at the end of that period, take over and operate the licensed project at an acquisition price limited to "fair value" or "net investment," whichever is lower.<sup>163</sup> To enable the Commission to determine the net investment in a licensed project, it is authorized to require detailed cost statements by the licensee and to have access to its records.<sup>164</sup>

If the United States does not take over the project at the end of the license period, the Commission may, subject to provisions of law and regulations then existing, issue a new license to the original licensee, or to a new licensee.<sup>165</sup> Absent a take-over, a license to a new licensee, or a license "upon reasonable terms" to the original licensee—the Commission "shall" issue from year to year an annual license to the "then

<sup>160</sup> § 20, 41 Stat. 1073, 16 U. S. C. 813; § 14, 41 Stat. 1071, as amended, 16 U. S. C. 807.

<sup>161</sup> § 3, 41 Stat. 1063, as amended, 16 U. S. C. 796(13). See also 179 F. 2d 187, 193–194.

<sup>162</sup> § 10(h), 41 Stat. 1070, as amended, 16 U. S. C. 803(h).

<sup>163</sup> See *supra*, n. 41, pp. 266–267.

<sup>164</sup> § 14, 41 Stat. 1071, 16 U. S. C. 807; § 6, 41 Stat. 1067, 16 U. S. C. 799.

<sup>165</sup> § 4(b), 49 Stat. 839, 16 U. S. C. 797(b). Originally before amendment designated § 4(a), 41 Stat. 1065. See also § 10(d), 41 Stat. 1068, as amended, 16 U. S. C. 803(d), concerning amortization reserves.

<sup>166</sup> § 15, 41 Stat. 1072, 16 U. S. C. 808.

licensee" under the terms and conditions of the original license.<sup>166</sup>

Furthermore, when in the opinion of the President the safety of the United States demands it, temporary possession of a project may be taken "for the purpose of manufacturing nitrates, explosives, or munitions of war, or for any other purpose involving the safety of the United States."<sup>167</sup> In so doing, the United States must pay "just and fair compensation" as fixed by the Commission under a prescribed formula.<sup>168</sup>

REGULATION OF INTERSTATE UTILITIES.—As already stated, Congress in 1935 made the 1920 legislation Part I of the Federal Power Act and added provisions for the regulation of interstate electric utilities, as well as procedural and administrative provisions for licensees and public utilities.<sup>169</sup>

Especially relevant to our survey is the 1935 inclusion of a direction to the Commission to divide the country into regional districts for "voluntary" interconnection and coordination of electric facilities:<sup>170</sup>

For the purpose of assuring an abundant supply of electric energy throughout the United States with the greatest possible economy and with regard to the proper utilization and conservation of natural resources \* \* \*.

Within and between such districts, it is the "duty of the Commission to promote and encourage such interconnection and coordination." The Commission has not yet established such districts.<sup>171</sup>

With respect to a "public utility" as defined in the 1935 Act,<sup>172</sup> the Commission may order interconnections under certain circumstances.<sup>173</sup> But it may not compel the enlargement of generating facilities for such purposes, nor impair the public

<sup>166</sup> *Id.*

<sup>167</sup> § 16, 41 Stat. 1072, 16 U. S. C. 809.

<sup>168</sup> *Id.*

<sup>169</sup> See *supra*, pp. 273-274.

<sup>170</sup> § 202(a), 49 Stat. 848, 16 U. S. C. 824a(a).

<sup>171</sup> For a Commission order tentatively dividing the country into power districts and power regions, see 1 F. R. 562 (1936).

<sup>172</sup> § 201(e), 49 Stat. 848, 16 U. S. C. 824.

<sup>173</sup> § 202(b), 49 Stat. 848, 16 U. S. C. 824a(b).

utility's ability to render adequate service to its customers.<sup>174</sup> Also included are requirements for temporary emergency interconnection of facilities.<sup>175</sup>

Moreover, the provisions added in 1935 extend a number of other regulatory requirements to electric companies coming within the Act's definition of a "public utility." These include such matters as regulation of rates,<sup>176</sup> issuance of securities and assumption of liabilities,<sup>177</sup> furnishing of adequate service,<sup>178</sup> ascertainment of cost of property,<sup>179</sup> and cooperation with states.<sup>180</sup>

Certain of the procedural and administrative provisions also should be mentioned. For example, authority is conferred upon the Commission whereby it has established its Uniform System of Accounts Prescribed for Licensees and Public Utilities.<sup>181</sup> Likewise, it is authorized to fix proper and adequate rates of depreciation of the several classes of property of licensees and public utilities.<sup>182</sup> In specified circumstances, the Act prohibits officials from dealing in securities and makes interlocking directorates unlawful.<sup>183</sup>

In considering both nonfederal and federal development of power, significance attaches to another provision of the 1935 legislation. All agencies of the United States engaged in the generation and sale of electric energy for ultimate distribution to the public, as to facilities used and energy sold, are required to comply with the accounting provisions and regulations issued

<sup>174</sup> *Id.*

<sup>175</sup> § 202(c), (d), 49 Stat. 849, 16 U. S. C. 824a(c), (d).

<sup>176</sup> § 205, 49 Stat. 851, 16 U. S. C. 824d, and § 206, 49 Stat. 852, 16 U. S. C. 824e.

<sup>177</sup> § 204, 49 Stat. 850, 16 U. S. C. 824c.

<sup>178</sup> § 207, 49 Stat. 853, 16 U. S. C. 824f.

<sup>179</sup> § 208, 49 Stat. 853, 16 U. S. C. 824g.

<sup>180</sup> § 209, 49 Stat. 853, 16 U. S. C. 824h.

<sup>181</sup> § 301(a), 49 Stat. 854, 16 U. S. C. 825; § 304(a), 49 Stat. 855, 16 U. S. C. 825c(a); § 309, 49 Stat. 858, 16 U. S. C. 825h; § 3, 41 Stat. 1063, as amended, 16 U. S. C. 796(13); § 4(b), 49 Stat. 838, 16 U. S. C. 797(b). Originally before amendment designated § 4(a), 41 Stat. 1065. See also § 208, 49 Stat. 853, 16 U. S. C. 824g; § 302, 49 Stat. 855, 16 U. S. C. 825a. For the uniform system, see 18 C. F. R. 101.00-1 *et seq.*

<sup>182</sup> § 302(a), 49 Stat. 855, 16 U. S. C. 825(a).

<sup>183</sup> § 305, 49 Stat. 856, 16 U. S. C. 825(d).

thereunder, including the uniform system.<sup>184</sup> But this obligation applies only "so far as may be practicable."<sup>185</sup>

**RURAL ELECTRIFICATION ADMINISTRATION.**—In 1936, Congress established this agency to make loans for rural electrification.<sup>186</sup> Under the general direction and supervision of the Secretary of Agriculture, the Administrator is empowered to make loans:<sup>187</sup>

for the purpose of financing the construction and operation of generating plants, electric transmission and distribution lines or systems for the furnishing of electric energy to persons in rural areas who are not receiving central station service \* \* \*

"Rural area" is defined as "any area of the United States not included within the boundaries of any city, village, or borough having a population in excess of fifteen hundred inhabitants, and such term shall be deemed to include both the farm and the nonfarm population thereof."<sup>188</sup>

Loans may be made to persons, corporations, public bodies, and cooperatives, but preference must be given to "States, Territories, and subdivisions and agencies thereof, municipalities, peoples utility districts, and cooperative, nonprofit, or limited dividend associations."<sup>189</sup> Loans are made at an interest rate of 2% with a maximum amortization period of 35 years.<sup>190</sup> Loans have been made under this legislation for construction of hydroelectric plants, some of them licensed under the Federal Power Act.<sup>191</sup>

<sup>184</sup> § 303, 49 Stat. 855, 16 U. S. C. 825(b).

<sup>185</sup> *Id.*

<sup>186</sup> Act of May 20, 1936, 49 Stat. 1363, 7 U. S. C. 901 *et seq.* Authorizations for loans by REA amounted to \$1,830,318,858 as of June 30, 1949. Customers connected as of that date totaled 2,778,180. H. Rep. 2908, 81st Cong., 2d sess., p. 4 (1950).

<sup>187</sup> Act of May 20, 1936, § 4, 49 Stat. 1363, 1365, as amended, 7 U. S. C. 904 (Supp. III).

<sup>188</sup> § 13, 49 Stat. 1367, 7 U. S. C. 913.

<sup>189</sup> § 4, 49 Stat. 1365, as amended, 7 U. S. C. 904 (Supp. III).

<sup>190</sup> Act of September 21, 1944, §§ 502 (b), 503, 58 Stat. 734, 739, 740, see 7 U. S. C. 904, 905.

<sup>191</sup> See, e. g., *Re Dairyland Power Cooperative, Flambeau River Project, Wisconsin*, Project No. 1960. See also H. Rep. No. 2908, 81st Cong., 2d sess., p. 26 (1950).

## Federal Development and Operation

As the desirability of increased conservation and utilization of water resources and the necessity for greater flood protection have become more generally recognized, Congress has extended legislative authorizations toward more and larger power plants, and toward comprehensive development under river-basin plans. Moreover, the Supreme Court has sustained federal development of power as desirable for utilizing water resources in development for other purposes such as navigation and flood control.<sup>192</sup> And when Congress authorized construction of a steam-electric plant to assist in the operation of TVA hydroelectric plants, it was stated by the House Committee first reporting the item to be justified "if the Government is to make full utilization of the natural resources and of its investment in that area."<sup>193</sup>

Of a total of 82,469,742,000 kilowatt-hours hydroelectric generation in the United States during 1948, the output of federal hydroelectric plants amounted to 32,728,673,000 kilowatt-hours, or approximately 40%.<sup>194</sup>

Pertinent provisions of law relevant to federal development fall logically into three groups. Here again, power and multiple use generally go hand-in-hand. First, we shall consider those concerning federal development of power and multiple use, and next those concerning the marketing of power. Finally, we shall consider those special enactments relating to specific projects or prescribed areas.

**MULTIPLE-USE PROJECTS AND FEDERAL DEVELOPMENT OF POWER.**—In general legislation concerning multiple-use projects and federal development of power, Congress has relied largely upon the Army Engineers, the Department of the Interior, and the Federal Power Commission. Since we have

<sup>192</sup> *United States v. Chandler-Dunbar Co.*, 229 U. S. 53, 73 (1913); *Ashwander v. Tennessee Valley Authority*, 297 U. S. 288, 334-335 (1936).

<sup>193</sup> H. Rep. No. 111, 81st Cong., 1st sess., p. 6 (1949); Act of May 24, 1949, § 1, 63 Stat. 76, 80. See also ANNUAL REPORT OF THE TENNESSEE VALLEY AUTHORITY, p. 52 (1949).

<sup>194</sup> PRODUCTION OF ELECTRIC ENERGY AND CAPACITY OF GENERATING PLANTS, Federal Power Commission, S-70 (1948).

already touched upon most of the laws relevant here, we need only recapitulate.<sup>196</sup>

In connection with navigation improvements, a number of laws contemplate or provide for federal development of power. Congress in 1912 delegated discretionary authority to the Secretary of the Army to include in the permanent parts of navigation dams such foundations, sluices, and other works as may be desirable for the future development of water power.<sup>197</sup> And since 1913, the Army Engineers have been continuously required to include in examination and survey reports, information regarding the development and utilization of water power for industrial and commercial purposes.<sup>197</sup> Also important are the comprehensive "308 Reports" embracing plans on streams throughout the country for navigation improvement in combination with "development of the potential water power," control of floods, and the needs of irrigation.<sup>198</sup> Moreover, with respect to dams authorized in River and Harbor Acts since 1945, with one possible exception, Congress has directed the installation of penstocks and other facilities adaptable to future use for development of power, when approved by the Secretary of the Army upon recommendation of the Chief of Engineers and the Federal Power Commission.<sup>199</sup>

The situation is much the same in the case of flood-control projects, since the foregoing 1912 and 1913 requirements apply here also. In addition, under 1917 legislation, examinations

<sup>196</sup> See *supra*, pp. 103, 141, 239-240, 274-281.

<sup>197</sup> See *supra*, p. 141.

<sup>198</sup> See *supra*, p. 93.

<sup>199</sup> See *supra*, pp. 92-93.

<sup>200</sup> Act of March 2, 1945, § 2, 59 Stat. 10, 11; Act of July 24, 1946, § 1, 60 Stat. 634. This provision was omitted from the 1948 River and Harbor Act, but that Act did not authorize any dams. Act of June 30, 1948, title I, 62 Stat. 1171. And although the provision itself is omitted from the 1950 River and Harbor Act, it seems clear that it applies to dams authorized therein. Act of May 17, 1950, title I, 64 Stat. 163. For the provision, as included in § 204 of the 1950 Flood Control Act, directs the installation of penstocks in dams "authorized in this Act." The 1950 River and Harbor Act is title I of the Act of May 17, 1950, of which the 1950 Flood Control Act is title II.

Moreover, the word "Act" was deliberately substituted for "title." As passed by the House, the provision read "in this title." The Senate Committee on Public Works changed this to read, "in this Act." The Conferees concurred. H. Rep. No. 1968, 81st Cong., 2d sess., p. 17 (1950).

and surveys must include data relating to the possible economical development and utilization of power and other properly related uses.<sup>200</sup> Furthermore, we have already noted the upsurge of federal interest in flood control and the national developmental program growing since 1936. So far as federal power development is concerned, it is therefore important to note that in authorizing flood-control projects since 1938, Congress has provided for the installation of penstocks and other facilities, just as in the 1945 and 1946 River and Harbor Acts.<sup>201</sup>

In legislating for reclamation projects in the West, Congress has made provision for development of power in addition to the control of water for other purposes and uses. The development of power at irrigation projects was expressly recognized in a 1906 supplement.<sup>202</sup> Similarly, the 1939 Reclamation Project Act contemplates that surveys and studies of prospective reclamation projects will take into account the possible development of power and other project uses, including municipal water supply, flood control, and navigation.<sup>203</sup> Such is the character of those surveys and studies as to require consideration of both existing and potential developments on the stream from which any proposed project will draw its supply. This in turn necessitates basin-wide surveys and basin-wide planning.

In addition, it has already been indicated that the Federal Power Act authorizes the Federal Power Commission to carry on continuing surveys of waterpower potentialities in river basins throughout the United States.<sup>204</sup> The scope of that authority measures the importance of that function to federal as well as nonfederal development. For such authority comprehends investigation of the possibilities of utilizing water resources, the relation of waterpower development to other electric-power generation and transmission, the electric-power requirements of economic regions, power-load variations and

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<sup>200</sup> See *supra*, pp. 134-135.

<sup>201</sup> See *supra*, p. 141.

<sup>202</sup> Act of April 16, 1906, § 5, 34 Stat. 116, 117, as amended, 43 U. S. C. 522.

<sup>203</sup> Act of August 4, 1939, § 9(a), 53 Stat. 1187, 1193, 43 U. S. C. 485h(a).

<sup>204</sup> See *supra*, pp. 274-275.

sources of supply, and existing and possible interconnections between power plants and power systems, both public and private.<sup>205</sup>

Also, in federal development as in nonfederal development, existing law makes specific provision for consideration of fish and wildlife resources.<sup>206</sup>

**MARKETING OF FEDERAL POWER.**—At the outset, it should be borne in mind that federal power-marketing operations are confined almost entirely to the wholesaling of power.<sup>207</sup> Account must be taken of this fact in the following examination of legislation concerning power-market surveys, rates, transmission lines, preferences, and marketing agencies.

*Power-Market Surveys.*—As already noted, the Federal Power Commission makes continuing surveys and technical studies of market areas within economic transmission distance of proposed hydroelectric plants to determine their usable capacity, possible rate of development, and type of load for which they are suitable.<sup>208</sup> These studies are made not only in connection with proposed federal power developments but are also conducted as a part of the Commission's studies of the electric industry generally, including analysis of power markets, transmission networks, interconnections, and related matters under Part II of the Federal Power Act.<sup>209</sup> As a part of their power-

<sup>205</sup> Noteworthy in this connection is a 1934 preliminary report transmitted to Congress by President Franklin Roosevelt, concerning a comprehensive plan for the improvement and development of rivers of the United States and contemplating legislation providing for flood control, navigation, irrigation, and development of hydroelectric power. *DEVELOPMENT OF THE RIVERS OF THE UNITED STATES*, H. Doc. No. 395, 73d Cong., 2d sess., p. 54 (1934). See also a discussion of multiple uses in *REPORT OF THE NATIONAL RESOURCES BOARD*, pp. 263-265 (1934).

<sup>206</sup> See *infra*, pp. 327-330.

<sup>207</sup> In the case of TVA, however, the Board has "power to construct transmission lines to farms and small villages that are not otherwise supplied with electricity at reasonable rates." Act of May 18, 1933, § 10, 48 Stat. 58, 64, as amended, 16 U. S. C. 831i.

<sup>208</sup> See, e. g., *MISSOURI BASIN POWER MARKET STUDY, NOVEMBER 1947; POWER MARKET SURVEY, NEW ENGLAND, AUGUST 1949; POWER MARKET SURVEY, SOUTHWESTERN REGION, JUNE 1950*, Federal Power Commission.

<sup>209</sup> *Id.*



marketing activities, studies of power needs and resources are also conducted by the Bureau of Reclamation, Bonneville Power Administration, Southwestern Power Administration, Southeastern Power Administration, and Tennessee Valley Authority, each for its particular region.<sup>210</sup> In addition, the National Security Resources Board has conducted power surveys.<sup>211</sup>

*Rates.*—By a 1944 statute, it is required that surplus power and energy generated at reservoir projects under the control of the Secretary of the Army be turned over to the Secretary of the Interior for marketing.<sup>212</sup> Such power must be marketed so “as to encourage the most widespread use thereof at the lowest possible rates to consumers consistent with sound business principles.” While Congress has not required that costs allocated to flood control and navigation be reimbursable, it has required that power-rate schedules be drawn “having regard to the recovery \* \* \* of the cost of producing and transmitting such electric energy, including the amortization of the capital investment allocated to power over a reasonable period of years.” It should also be noted that costs incurred in preparing definite planning reports, called Definite Project Reports, for authorized flood-control and navigation projects are included in the cost of such projects, al-

<sup>210</sup> Bureau of Reclamation (see, *e. g.*, POWER MARKET SURVEY, COLORADO RIVER STORAGE PROJECT, Bureau of Reclamation, February 1949, revised 1950); Bonneville Power Administration (Department of the Interior Order No. 2115, par. 3, October 16, 1945); Southwestern Power Administration (Department of the Interior Order No. 2135, Part II, par. 2, November 21, 1945); Southeastern Power Administration (Department of the Interior Order No. 2557, par. 3d(1), March 21, 1950); Tennessee Valley Authority (see, *e. g.*, Hearings, Independent Offices, House Appropriations Committee, January 19, 1950, pp. 984-1042; ANNUAL REPORT OF THE TENNESSEE VALLEY AUTHORITY, p. 48, 1949).

<sup>211</sup> See, *e. g.*, THIRD NATIONAL ELECTRIC POWER SURVEY, National Security Resources Board (April 1950).

<sup>212</sup> Act of December 22, 1944, § 5, 58 Stat. 887, 890, 16 U. S. C. 825a. But Congress later expressly directed that surplus energy generated at the new hydroelectric power plant, Saint Marys River, Michigan, shall be leased by the Secretary of the Army upon such terms and conditions as he shall determine. Act of March 2, 1945, § 2, 59 Stat. 10, 20.

though the costs of preliminary examinations and surveys are not so included.<sup>213</sup>

The 1944 statute specifies that rate schedules shall become effective upon "confirmation and approval" by the Federal Power Commission. But the Commission is given neither continuing supervision over such rates, nor authority to require changes if it deems proposed rates too high or too low. Proceeds from sales of power from Army dams are deposited in the Treasury as miscellaneous receipts.

In the case of reclamation projects, the marketing of power is also under the control of the Secretary of the Interior. He is generally authorized under the Reclamation Project Act of 1939 to enter into contracts for not exceeding 40 years for the sale of power, or the lease of power privileges.<sup>214</sup> But no power contract may be made if the Secretary deems that it will "impair the efficiency of the project for irrigation purposes."<sup>215</sup> The statutory power-rate standard requires rates to be set so as to produce power revenues at least sufficient to cover "an appropriate share" of the operation and maintenance costs, 3% per annum on "an appropriate share" of the construction investment, and "such other fixed charges as the Secretary deems proper."<sup>216</sup> The general practice of the Secretary is to set power rates so as to return annual operation, maintenance and replacement costs, plus amortization of the power investment in not to exceed 50 years, with interest at the rate of 3% per annum on the unamortized balance of the power investment.<sup>217</sup> Also, costs incurred in investigating a potential reclamation project which are directly attributable to that project, generally become a part of the costs included

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<sup>213</sup> See, e. g., THE DEFINITE PROJECT REPORT OF THE ARMY CORPS OF ENGINEERS, BUGGS ISLAND DAM AND RESERVOIR, ROANOKE RIVER, NORTH CAROLINA AND VIRGINIA, pp. 30-31, App. XII-3 (February 1, 1946).

<sup>214</sup> Act of August 4, 1939, § 9(c), 53 Stat. 1187, 1194, 43 U. S. C. 485h(c).

<sup>215</sup> *Id.*

<sup>216</sup> *Id.*

<sup>217</sup> See, e. g., AVERAGE RATE AND REPAYMENT STUDIES FOR POWER SYSTEMS ON BUREAU OF RECLAMATION PROJECTS, Department of the Interior, Bureau of Reclamation, pp. 1-5 (January 1950).

in those constituting the construction investment, if the project is eventually authorized.<sup>218</sup>

The power-rate standard is a minimum rate provision. The Act has a separate provision for allocation of project costs repayable or returnable to the United States.<sup>219</sup> Costs allocable to irrigation but beyond the water users' ability to repay may be assigned for return from power revenues. The provision for allocating repayable or returnable project costs makes no mention of interest. And the Act has been administratively construed as permitting the application of interest, collected as a component of power rates, to the return to the United States of irrigation costs to be borne by power.<sup>220</sup> Wherever revenues representing the interest component are so applied, they constitute a subsidy to assist in repaying irrigation costs.<sup>221</sup>

With specified exceptions, proceeds from the disposition of power at reclamation projects are covered into the Reclamation Fund in the Treasury.<sup>222</sup> It may also be noted that, while allocations to navigation and flood control are authorized, they are treated as nonreimbursable.<sup>223</sup>

Under the supervision of the Secretary of the Interior, the Bureau of Indians Affairs operates two hydroelectric and one diesel plant, and purchases power for distribution. On the

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<sup>218</sup> For a number of years, appropriation legislation has specified that interests requiring an investigation by the Bureau of Reclamation advance at least 50% of the estimated cost thereof. See, *e. g.*, Act of June 29, 1948, 62 Stat. 1112, 1126; see also *supra*, pp. 188-189.

<sup>219</sup> § 9(a), 53 Stat. 1193, 43 U. S. C. 485h(a).

<sup>220</sup> Unpublished opinion of the Solicitor of the Department of the Interior concerning power-rate schedules and minimum-revenue requirements for Grand Coulee, Opinion M-33473, January 29, 1944, and its supplement of September 10, 1945. In this connection, see the so-called Hayden-O'Mahoney Amendment, Act of May 9, 1938, § 1, 52 Stat. 291, 322, 43 U. S. C. 392a.

<sup>221</sup> Thus, the revenues representing the interest component are applied toward the repayment of the irrigation investment assigned for return from power revenues. See, *e. g.*, AVERAGE RATE AND REPAYMENT STUDIES FOR POWER SYSTEMS ON BUREAU OF RECLAMATION PROJECTS, Department of the Interior, Bureau of Reclamation, pp. 1-5 (January 1950).

<sup>222</sup> Act of May 9, 1938, § 1, 52 Stat. 291, 322, 43 U. S. C. 392a. For details as to the Reclamation Fund, see *supra*, pp. 198-202.

<sup>223</sup> Act of August 4, 1939, § 9, 53 Stat. 1187, 1193.

Flathead Indian Reservation in Montana, the Bureau operates a power plant for pumping irrigation water and purchases a substantial block of power from the Montana Power Company's Kerr Plant which is located on the Reservation and is operated under a Federal Power Commission license.<sup>224</sup> Such power is sold at the lowest rates which, in the judgment of the Secretary of the Interior, will repay power costs and certain irrigation costs.<sup>225</sup> Power at the Coolidge Dam is used for irrigation pumping and distribution on the San Carlos Indian Reservation in Arizona, in addition to power from a small diesel plant.<sup>226</sup> Here, power revenues are used to repay power costs and irrigation costs, and to make improvements on the irrigation project.<sup>227</sup> Such power revenues may also be used to liquidate the cost of transmission lines.<sup>228</sup> None of the rates for power sales by the Bureau is subject to review by the Federal Power Commission.

*Transmission Lines.*—In the marketing of power generated at reservoir projects under the control of the Department of the Army, the Secretary of the Interior has authority: <sup>229</sup>

to construct or acquire, by purchase or other agreement, only such transmission lines and related facilities as may be necessary in order to make the power and energy generated at said projects available in wholesale quantities for sale on fair and reasonable terms and conditions to facilities owned by the Federal Government, public bodies, cooperatives, and privately owned companies.

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<sup>224</sup> Act of April 23, 1904, § 14, 33 Stat. 302, 305, as amended by Act of May 10, 1926, 44 Stat. 453, 464; Act of March 7, 1928, § 1, 45 Stat. 200, 210, 212, 213, see 25 U. S. C. 387 note following. The FPC license is *Montana Power Company*, Project No. 5, which was specially authorized in the Act of March 7, 1928, § 1, 45 Stat. 200, 212.

<sup>225</sup> Act of May 25, 1948, §§ 2(g), 2(h), 62 Stat. 269, 270, 271.

<sup>226</sup> Act of June 5, 1924, 43 Stat. 390, 401, as amended by Act of May 10, 1926, 44 Stat. 453, 464, and Act of May 25, 1948, 62 Stat. 269.

<sup>227</sup> Act of March 7, 1928, § 1, 45 Stat. 200, 211, see 25 U. S. C. 387 note following.

<sup>228</sup> Act of June 22, 1936, 49 Stat. 1822.

<sup>229</sup> Act of December 22, 1944, § 5, 58 Stat. 887, 890, 16 U. S. C. 825s.

The efficacy of the foregoing provision is expressly made dependent upon the availability of "funds to be appropriated by Congress."<sup>230</sup>

In the case of reclamation projects, there is no comparable blanket provision. As already noted, however, authority for the development of power and for the lease of surplus power or power privilege is contained in Reclamation Law.<sup>231</sup> And we have adverted to repeated instances in appropriation legislation where Congress has expressly recognized that transmission facilities constitute parts of reclamation projects authorized by Congress.<sup>232</sup>

While applicable only for prescribed areas, certain additional provisions respecting transmission facilities merit notice here. The Tennessee Valley Authority is authorized "to construct, lease, purchase, or authorize the construction of transmission lines within transmission distance from the place where generated, and to interconnect with other systems."<sup>233</sup> Similarly, it is authorized "to construct transmission lines to farms and small villages that are not otherwise supplied with electricity at reasonable rates" in order "to promote and encourage the fullest possible use of electric light and power on farms" within reasonable distance of its transmission lines.<sup>234</sup> In the case of projects governed by the Bonneville and Fort Peck Project Acts, the Secretary of the Interior is "directed" to provide and maintain such transmission facilities as he finds necessary or appropriate to transmit electric energy to "existing and potential markets," as well as to make interconnections "for the purpose of interchange of electric energy."<sup>235</sup>

*Preferences.*—For many years, various federal statutes related to development of water resources have provided a pref-

<sup>230</sup> *Id.*

<sup>231</sup> See *supra*, pp. 239-240.

<sup>232</sup> See *supra*, p. 240.

<sup>233</sup> Act of May 18, 1933, § 12, 48 Stat. 58, 65, 16 U. S. C. 831k.

<sup>234</sup> § 10, 48 Stat. 64, as amended, 16 U. S. C. 831i.

<sup>235</sup> Act of August 20, 1937, § 2(b), 50 Stat. 731, 732, as amended, 16 U. S. C. 832a (b); Act of May 18, 1938, § 2(b), 52 Stat. 403, 404, 16 U. S. C. 833a (b).

erence for public bodies and cooperatives.<sup>236</sup> In 1944, Congress prescribed generally that, in the marketing of power generated at reservoir projects under control of the Secretary of the Army, preference "shall be given to public bodies and cooperatives,"<sup>237</sup> Likewise, in the case of reclamation projects, preference "shall be given to municipalities and other public corporations or agencies; and also to cooperatives and other nonprofit organizations" financed in whole or in part by REA loans.<sup>238</sup> Similar provisions apply at specific projects and in prescribed areas, as we shall shortly see.<sup>239</sup>

<sup>236</sup> For example, in lease of power from irrigation projects, preference to "municipal purposes" (Act of April 16, 1906, § 5, 34 Stat. 116, 117, as amended, 43 U. S. C. 522); San Francisco prohibited from selling or letting the right to sell or sublet water stored on national park land or the energy therefrom to anyone "except a municipality or a municipal water district or irrigation district" (Act of December 19, 1913, § 6, 38 Stat. 241, 245); FPC to "give preference to applications \* \* \* by states and municipalities" for permits and licenses for power projects, "municipality" being defined to include a "city, county, irrigation district, drainage district, or other political subdivision or agency of a state" competent to develop, utilize, or distribute power (Act of June 10, 1920, §§ 3, 7, 41 Stat. 1063, 1067, as amended, 16 U. S. C. 796(7), 800); contracts for use of energy from Hoover Dam to be let "in conformity with the policy expressed in the Federal Water Power Act as to conflicting applications," with specified exceptions (Act of December 21, 1923, § 5(c), 45 Stat. 1057, 1060, 43 U. S. C. 617d(c)); in sale of power from TVA projects, preference to "states, counties, municipalities, and cooperative organizations of citizens or farmers" not doing business for profit but organized primarily for purpose of supplying electricity to their members (Act of May 18, 1933, § 10, 48 Stat. 58, 64, as amended, 16 U. S. C. 831i); in making REA loans, preference to "States, Territories, and subdivisions and agencies thereof, municipalities, peoples utility districts, and cooperative, nonprofit, or limited dividend associations" (Act of May 20, 1936, § 4, 49 Stat. 1363, 1365, as amended, 7 U. S. C. 904); in disposing of Bonneville Project energy, "preference and priority to public bodies and cooperatives" (Act of August 20, 1937, § 4a, 50 Stat. 731, 733, 16 U. S. C. 832c(a)); in disposing of Fort Peck Project energy, "preference and priority to public bodies and cooperatives" (Act of May 18, 1938, § 4, 52 Stat. 403, 405, 16 U. S. C. 833c); preference prescribed for sale of power from projects constructed pursuant to Water Conservation and Utilization Act (Act of October 14, 1940, § 9, 54 Stat. 1119, 1124, 16 U. S. C. 590z-7); in lease of recreation sites at Army reservoir areas, preference to "Federal, State, or local governmental agencies" (Act of December 22, 1944, § 4, 58 Stat. 887, 889, 16 U. S. C. 460d).

<sup>237</sup> Act of December 22, 1944, § 5, 58 Stat. 887, 890, 16 U. S. C. 825a.

<sup>238</sup> Act of August 4, 1939, § 9(c), 53 Stat. 1187, 1194, 43 U. S. C. 485h(c).

<sup>239</sup> See *infra*, pp. 300-309.

*Marketing Agencies.*—In large measure, marketing of federal power is a responsibility of the Secretary of the Interior. To market power generated at reservoir projects under the control of the Department of the Army, the Secretary of the Interior has created the Southwestern Power Administration to operate in the States of Arkansas, Louisiana, and parts of Kansas, Missouri, Oklahoma, and Texas.<sup>240</sup> For a like purpose, he has created the Southeastern Power Administration to operate in the States of West Virginia, Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Tennessee, and Kentucky.<sup>241</sup> The Bonneville Power Administration has been assigned this responsibility in the Pacific Northwest.<sup>242</sup>

In the case of reclamation projects, the marketing of power is under the control of the Secretary of the Interior and is generally assigned to the Bureau of Reclamation.<sup>243</sup> As already noted, the Secretary also controls the marketing of power from dams of the Bureau of Indian Affairs.

**SPECIAL PROJECTS AND PRESCRIBED AREAS.**—Thus far, we have discussed provisions generally applicable to projects constructed by the two principal construction agencies. However, with respect to the development of multiple-purpose projects and the generation and marketing of power, Congress has frequently legislated particularly for individual projects or prescribed regions. We shall mention here the more significant instances only so far as they concern the development of power and other uses, reserving for later consideration their influence upon comprehensive development.<sup>244</sup>

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<sup>240</sup> See Department of the Interior Order No. 2135, November 21, 1945, 10 F. R. 14527.

<sup>241</sup> See Department of the Interior Order No. 2558, March 21, 1950, 15 F. R. 1901.

<sup>242</sup> See *infra*, p. 304.

<sup>243</sup> Exceptions to this general rule include notably the Grand Coulee Project, where the power-marketing function has been assigned to the Bonneville Power Administration and merged with its like responsibilities for other federal dams in the area. See Ex. O. No. 8526, 5 F. R. 3390 (1940).

<sup>244</sup> See *infra*, pp. 383-491.

*Boulder Canyon Project.*—Statutory authorization for the Boulder Canyon Project marks the initial undertaking by the Federal Government of a truly large-scale, multiple-purpose development.<sup>246</sup> Congress authorized the Secretary of the Interior to construct, operate, and maintain the project for flood control, navigation, reclamation, and other beneficial uses. In addition, the generation of energy was expressly described as a means for making the project a “self-supporting and financially solvent undertaking.”<sup>248</sup>

Unique and extensive provisions are prescribed for facilities constructed, the rights and obligations of the Colorado River Basin States, sale of power, water use, irrigation rights, and approval of the Colorado River Compact. For example, discretionary power is vested in the Secretary of the Interior to lease “units of any Government-built plant, with right to generate electrical energy,” or to lease the use of water for such generation.<sup>247</sup> Moreover, Congress directed that the Secretary make provision by contract for revenues to meet expenses of construction, operation, and maintenance within 50 years from the completion date of the works.<sup>248</sup> A maximum power-contract period of 50 years is prescribed, but an entitlement to renewals is included.<sup>249</sup>

In 1930, the Secretary disposed of the entire output of firm energy to be generated during the 50 years following completion of the dam and reported to Congress that he had obtained the required contracts.<sup>250</sup>

Under requirements adopted by statute in 1940, several changes were made: in lieu of rate adjustments every ten years upon a basis of competitive conditions, rates are stabilized for a period from June 1, 1937 to May 1, 1987; the interest rate is reduced from 4% to 3% and applied to all of the Government's investment except \$25,000,000 allocated to flood control; and

<sup>246</sup> Act of December 21, 1928, 45 Stat. 1057, 43 U. S. C. 617-617t; Act of July 19, 1940, 54 Stat. 774, 43 U. S. C. 618-618a.

<sup>247</sup> Act of December 21, 1928, § 1, 45 Stat. 1057, 43 U. S. C. 617.

<sup>248</sup> § 6, 45 Stat. 1061, 43 U. S. C. 617e.

<sup>249</sup> § 4(b), 45 Stat. 1059, 43 U. S. C. 617c(b).

<sup>250</sup> § 5(a), (b), 45 Stat. 1060, 43 U. S. C. 617d(a), (b).

<sup>251</sup> Sen. Rep. No. 1784, 76th Cong., 3d sess., p. 3 (1940).



contract payments are required to be sufficient to cover costs of operation and maintenance and replacements, an amount equal to 100% of the principal of the Government's investment, plus 3% interest on all but \$25,000,000 allocated to flood control, plus an amount in lieu of taxes to the states wherein the project is located, as well as sums for annual transfer to the Colorado River Development Fund.<sup>251</sup> From this fund, provided for by the 1940 Act, appropriations were authorized during an initial period for studies and investigations for the formulation of a "comprehensive plan," later appropriations being authorized in the same Act for investigation and construction of projects in the Colorado River Basin.<sup>252</sup>

It is also important to note that, under the 1940 Act, the Secretary was authorized to contract for the termination of the existing lease of the power plant and to operate it either directly or through agents.<sup>253</sup> Pursuant to this provision, a contract was consummated in 1941 whereby the lease was terminated and the then lessees became the operating agents of the power plant.<sup>254</sup>

*Fort Peck Project.*—Another special act dealing with the role of power in a multiple-purpose project is that relating to the Fort Peck Project, the completion of which was authorized in 1938.<sup>255</sup> Constructed primarily for improving navigation on the Missouri River, and for "other purposes incidental thereto," the project is maintained and operated by the Army Engineers, but surplus energy is marketed by the Secretary of the Interior through the Bureau of Reclamation.<sup>256</sup>

Rate schedules prepared by the Bureau shall be fixed "with a view to encouraging the widest possible diversified use of

<sup>251</sup> Act of July 19, 1940, 54 Stat. 774, as amended, 43 U. S. C. 618-618o (and Supp. III). See also Sen. Rep. No. 1784, 76th Cong., 3d sess., p. 9 (1940).

<sup>252</sup> § 2(d), 54 Stat. 775, as amended, 43 U. S. C. 618a(d) (Supp. III).

<sup>253</sup> § 9, 54 Stat. 777, 43 U. S. C. 618h.

<sup>254</sup> See *HOOVER DAM POWER AND WATER CONTRACTS AND RELATED DATA*, Department of the Interior, Bureau of Reclamation, pp. 787-813 (1950).

<sup>255</sup> Act of May 18, 1938, 52 Stat. 403, 16 U. S. C. 833-833p.

<sup>256</sup> § 1, 52 Stat. 403, 16 U. S. C. 833; Reorganization Plan No. 3 of 1950, effective May 24, 1950, 15 F. R. 3174; Department of the Interior Order No. 2563, May 2, 1950. See also Sen. Doc. No. 247, 73th Cong., 2d sess., p. 2 (1944).

electric energy," and must provide for uniform rate or rates through prescribed transmission areas to extend the "benefits of an integrated transmission system and encourage the equitable distribution" of Fort Peck energy.<sup>257</sup> They must be drawn having regard to the recovery of the cost of producing and transmitting energy, including amortization of the capital investment over a reasonable period of years, and must be based on an allocation of costs by the Federal Power Commission.<sup>258</sup> And specifically here, as generally in the case of rates for power produced at reservoir projects under the control of the Department of the Army, rates are subject to "confirmation and approval" by the Federal Power Commission,<sup>259</sup> but without continuing supervision over rates or authority to require changes in proposed rates.

Broad authority is provided for the construction and maintenance of transmission lines and appurtenant facilities and their interconnection with other systems, in order, as stated by Congress:<sup>260</sup>

to encourage the widest possible use of all electrical energy that can be generated and marketed and to provide reasonable outlets therefor, and to prevent the monopolization thereof by limited groups.

To insure the operation of Fort Peck generating facilities "for the benefit of the general public, and particularly of domestic and rural consumers," the Bureau is required to give "preference and priority to public bodies and cooperatives."<sup>261</sup>

*Bonneville Power Administration.*—Legislation relating to the Bonneville Power Administration is a further example of special Congressional treatment of the role of power in multiple-purpose projects—in this instance dealing with a series of large dams on one river system, the Columbia.

In 1935, Congress authorized construction of the Bonneville

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<sup>257</sup> § 5, 52 Stat. 405, 16 U. S. C. 833d.

<sup>258</sup> § 6, 52 Stat. 405, 16 U. S. C. 833e.

<sup>259</sup> § 5, 52 Stat. 405, 16 U. S. C. 833d.

<sup>260</sup> § 2(b), 52 Stat. 404, 16 U. S. C. 833a(b).

<sup>261</sup> § 4, 52 Stat. 405, 16 U. S. C. 833c.

Dam by the Army Engineers.<sup>262</sup> The same act authorized the President, through such agent as he might designate, to construct, operate, and maintain the Grand Coulee Project, and the Bureau of Reclamation was so designated.<sup>263</sup> With the impending completion of Bonneville Dam, Congress in 1937 authorized its completion and provided a temporary form of administration, pending establishment of a permanent administration embracing other Columbia Basin projects.<sup>264</sup> Operation of the dam and power house is the responsibility of the Secretary of the Army; marketing of the power is the responsibility of the Bonneville Power Administrator who is responsible to the Secretary of the Interior. As the Grand Coulee Project neared completion, the President, in the absence of further congressional action, assigned responsibility for the marketing of its power to the Bonneville Power Administrator.<sup>265</sup> Operation of the dam itself was left with the Bureau of Reclamation. Subsequently, the Bonneville Power Administrator's marketing responsibilities have been extended to other projects, including principally the Detroit Dam Project,<sup>266</sup> Hungry Horse Project,<sup>267</sup> McNary Project,<sup>268</sup> Lower Snake River Project,<sup>269</sup> and Chief Joseph Project.<sup>270</sup>

<sup>262</sup> Act of August 30, 1935, § 1, 49 Stat. 1028, 1038.

<sup>263</sup> President's letter of January 29, 1936, to the Secretary of the Interior. See BUREAU OF RECLAMATION PROJECT FEASIBILITIES AND AUTHORIZATIONS, p. 415 (April 1949).

<sup>264</sup> Act of August 20, 1937, 50 Stat. 731, as amended, 16 U. S. C. 832-832i.

<sup>265</sup> Ex. O. No. 8526, August 26, 1940, 5 F. R. 3390. In 1943, Grand Coulee was reauthorized as the Columbia Basin Project, subject to specified provisions of Reclamation Law, together with provisions of the reauthorization statute. Act of March 10, 1943, 57 Stat. 14, 16 U. S. C. 835-835i.

<sup>266</sup> Act of June 30, 1948, 62 Stat. 1171; Department of the Interior Order No. 2115, October 16, 1945, 10 F. R. 14211. See also Act of June 23, 1938, 52 Stat. 1215, 1222.

<sup>267</sup> Act of June 5, 1944, 58 Stat. 270, 43 U. S. C. 593a-593b; Department of the Interior Order No. 1994, September 26, 1944, 9 F. R. 11966.

<sup>268</sup> Act of March 2, 1945, § 2, 59 Stat. 10, 21; Department of the Interior Order No. 2115, October 16, 1945, 10 F. R. 14211.

<sup>269</sup> *Id.*

<sup>270</sup> Act of July 24, 1946, § 1, 60 Stat. 534, 637 (therein designated "Columbia River, at Foster Creek"); Department of the Interior Order No. 2237, August 9, 1946, 11 F. R. 8330.

Rate-schedule provisions for the foregoing projects are varied. As to Grand Coulee, provisions of the Reclamation Law are applicable.<sup>271</sup> As to the Detroit Dam and Chief Joseph Projects, the applicable rate-schedule provisions are those generally governing power produced at reservoir projects under the control of the Department of the Army, discussed above.<sup>272</sup> In authorizing the Hungry Horse Project, Congress declared its action for stated multiple purposes "and other beneficial uses primarily in the State of Montana but also in downstream areas."<sup>273</sup> Apart from the possible relevancy of this provision, the statute is silent as to marketing requirements generally. But language used in appropriation acts contains conflicting suggestions as to the applicability of Reclamation Law.<sup>274</sup>

As to Bonneville, McNary, and Lower Snake River Projects, the rate-schedule provisions of the Bonneville Project Act govern.<sup>275</sup> These are substantially the same as those applicable to the Fort Peck Project. In addition, contracts must insure that resale rates to ultimate consumers are reasonable and non-discriminatory.<sup>276</sup> Moreover, the usual provision for preference to public bodies and cooperatives is extensively augmented by requirements allowing time for their creation, organization, and financing.<sup>277</sup>

Authority for the integrated transmission network of the Bonneville Power Administration stems from statutory sources varied on a project basis exactly as in the case of provisions relating to rate schedules for those projects. In other words, in the case of the Bonneville, McNary and Lower Snake River Projects, authority for transmission lines is derived from the

<sup>271</sup> See *supra*, pp. 295-296.

<sup>272</sup> See *supra*, pp. 294-295.

<sup>273</sup> Act of June 5, 1944, § 1, 58 Stat. 270, 43 U. S. C. 593a.

<sup>274</sup> Act of July 3, 1945, 59 Stat. 318, 340-341; Act of December 28, 1945, 59 Stat. 632, 648; Act of July 1, 1946, 60 Stat. 348, 367-368; Act of July 25, 1947, 61 Stat. 460, 475; Act of June 29, 1948, 62 Stat. 1112, 1129. See also Act of August 4, 1939, § 2(c), 53 Stat. 1187, 43 U. S. C. 485a(c).

<sup>275</sup> Act of August 20, 1937, § 6, 50 Stat. 731, 735, as amended, 16 U. S. C. 832e; § 7, 50 Stat. 735, 16 U. S. C. 832f; Act of March 2, 1945, § 2, 59 Stat. 10, 21-22.

<sup>276</sup> § 5, 50 Stat. 734, as amended, 16 U. S. C. 832d.

<sup>277</sup> § 4, 50 Stat. 733, as amended, 16 U. S. C. 832c.

Bonneville Project Act in language substantially the same as in the Fort Peck Act.<sup>278</sup> As noted above, the Hungry Horse Dam Act is silent as to power marketing. As to other projects, the authority is that applying either to reclamation projects or to projects under the control of the Department of the Army.

As we shall later see, the foregoing diversity results from varying statutory efforts toward comprehensive development in the Pacific Northwest.<sup>279</sup> Likewise, we shall reserve for later discussion the obvious possibilities for difficulty in attempting to coordinate such statutory heterogeneity.<sup>280</sup>

*Tennessee Valley Authority.*—Congress accorded unique recognition to the need for coordinating multiple uses of water under comprehensive river-basin development when it established the Tennessee Valley Authority in 1933.<sup>281</sup> Created in the form of a government corporation, it is responsible for constructing such dams and reservoirs as would best serve to promote navigation on the Tennessee River and its tributaries.<sup>282</sup> It is directed to operate its dams and reservoirs to regulate stream flow primarily for navigation and flood control.<sup>283</sup> Moreover, so far as may be consistent with those purposes, it may operate the projects for generation of power.<sup>284</sup> Use of power revenues is authorized to assist in liquidating the cost or to aid in the maintenance of TVA projects, but since 1947 such revenues may not be used in constructing new power-producing projects unless approved by Congress.<sup>285</sup>

<sup>278</sup> § 2b, 50 Stat. 732, 16 U. S. C. 832a(b); § 2(b), 52 Stat. 404, 16 U. S. C. 833a(b). There is no authority to condemn transmission lines in the case of the McNary and Lower Snake River Projects, however. Act of March 2, 1945, § 2, 59 Stat. 10, 21-22.

<sup>279</sup> See *infra*, pp. 463-466.

<sup>280</sup> See Chapter 10, Comparative Summary.

<sup>281</sup> Act of May 18, 1933, 48 Stat. 58, as amended, see 16 U. S. C. 831 *et seq.*

<sup>282</sup> § 4(j), 48 Stat. 61, as amended, 16 U. S. C. 831c(j).

<sup>283</sup> Act of August 31, 1935, § 5, 49 Stat. 1075, 1076, 16 U. S. C. 831h-1.

<sup>284</sup> *Id.*

<sup>285</sup> *Id.*; Act of May 18, 1933, § 26, 48 Stat. 58, 71; Act of July 30, 1947, § 201, 61 Stat. 574, 577, 16 U. S. C. 831h-2 (Supp. III).

But the foregoing are not the only uses of TVA projects. In its integrated operations, TVA must take account of still further aspects of development, utilization, and conservation of water and land resources. These we shall examine in the chapter on Comprehensive Development.<sup>286</sup> Here, our attention is centered upon multiple uses of projects, particularly in relation to the generation and marketing of power.<sup>287</sup>

In that connection, it should first be noted that TVA may make studies, experiments, and determinations "to promote the wider and better use of electric power for agricultural and domestic use, or for small or local industries," and it may cooperate with other agencies in the "application of electric power to the fuller and better balanced development of the resources of the region."<sup>288</sup>

Surplus power may be sold to states, counties, municipalities, corporations, partnerships, or individuals.<sup>289</sup> The contract term may not exceed 20 years, but contracts with private companies or individuals for sale of power which is resold for a profit must reserve the right to cancel upon five years' notice if such power is needed to supply states, counties, or municipalities.<sup>290</sup> Resale rate schedules may be included in the terms and conditions of power contracts.<sup>291</sup>

Extensive authority is included in respect of transmission lines. For example, the Act stipulates that:<sup>292</sup>

In order to promote and encourage the fullest possible use of electric light and power on farms within reasonable distance of any of its transmission lines the board in its discretion shall have power to construct transmission lines to farms and small villages that are not otherwise supplied with electricity at reasonable rates, and to make

<sup>286</sup> See *infra*, pp. 483-486.

<sup>287</sup> Act of May 18, 1933, §§ 10-12, 48 Stat. 58, 64-66, as amended, 16 U. S. C. 831i-831k.

<sup>288</sup> § 10, 48 Stat. 64, as amended, 16 U. S. C. 831i.

<sup>289</sup> *Id.*

<sup>290</sup> *Id.*

<sup>291</sup> *Id.*

<sup>292</sup> *Id.*

such rules and regulations governing such sale and distribution of such electric power as in its judgment may be just and equitable.

And "in order to supply farms and small villages," as contemplated by the Act, existing electric facilities used in supplying them may be acquired.<sup>293</sup>

Likewise, surplus power generated at Muscle Shoals must be distributed "equitably among the States, counties, and municipalities within transmission distance."<sup>294</sup> Congress also declared that TVA projects shall be considered "primarily as for the benefit of the people of the section as a whole and particularly the domestic and rural consumers to whom the power can economically be made available."<sup>295</sup> Sale to and use by industry is specifically made a secondary purpose, to be utilized principally to secure a sufficiently high load factor and revenue returns "which will permit domestic and rural use at the lowest possible rates and in such manner as to encourage increased domestic and rural use of electricity."<sup>296</sup>

In addition, TVA is authorized in specified circumstances to construct, lease, purchase, or authorize the construction of transmission lines within transmission distance from the generating plant, and to interconnect with other systems.<sup>297</sup> And it may lease any such transmission line to any person or corporation.<sup>298</sup> If any state, county, municipality, or electric cooperative constructs or agrees to construct transmission facilities to the generating plant, or to a transmission line owned by the Government or leased by TVA and under its control, TVA is directed to contract for the sale of power to such organization for a term not exceeding 30 years.<sup>299</sup> Contracts with municipalities, political subdivisions, and cooperatives must provide for sale and distribution to ultimate consumers "without dis-

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<sup>293</sup> *Id.*

<sup>294</sup> § 11, 48 Stat. 64, 16 U. S. C. 831j.

<sup>295</sup> *Id.*

<sup>296</sup> *Id.*

<sup>297</sup> § 12, 48 Stat. 65, 16 U. S. C. 831k; see also Act of July 26, 1939, 53 Stat. 1083, 16 U. S. C. 831n-2.

<sup>298</sup> *Id.*

<sup>299</sup> *Id.*

crimination as between consumers of the same class.”<sup>300</sup> A provision for regulation of resale rates must be included in contracts with systems engaged in distribution for profit.<sup>301</sup>

TVA has taken over several steam-electric generating plants, and Congress has on occasions approved the use of funds for construction of steam-electric generating facilities.<sup>302</sup>

Unlike some situations previously mentioned, the Federal Power Commission here has no responsibilities as to cost allocation or as to rates.

### International Waters

A number of treaties and statutes relating to international waters permit or limit their use for power development. For example, Congress has prescribed particularized provisions relating to certain international waters in Northern Minnesota.<sup>303</sup> And we have previously noted the relevant functions of the International Joint Commission,<sup>304</sup> and the International Boundary and Water Commission, United States and Mexico.<sup>305</sup> In connection with the latter, mention should be made of a recent treaty relating to the Colorado and Tijuana Rivers and the Rio Grande.<sup>306</sup> Under its provisions, the Falcon Dam on the Rio Grande is to be built by the latter Commission, for whom the Bureau of Reclamation is preparing the plans and specifications.<sup>307</sup>

At Niagara Falls, diversions for power have long been made under the provisions of agreements between the United States and Canada.<sup>308</sup> On the United States side, power is now de-

<sup>300</sup> *Id.*

<sup>301</sup> *Id.*

<sup>302</sup> H. J. Res. 583, July 31, 1940, 76th Cong., 3d sess. (1940); Pub. Res. 95, 54 Stat. 781; see also *supra*, n. 193, p. 290.

<sup>303</sup> Act of July 10, 1930, 46 Stat. 1020, 16 U. S. C. 577-577b.

<sup>304</sup> See *supra*, pp. 121-122, 148.

<sup>305</sup> See *supra*, pp. 122-123, 148-149.

<sup>306</sup> Effective November 8, 1945, 59 Stat. 1219.

<sup>307</sup> Act of October 5, 1949, 63 Stat. 701.

<sup>308</sup> See Treaty between the United States and Great Britain, Act of January 11, 1909, 36 Stat. 2448; exchange of notes between United States and Canada at Washington on May 20, 1941, 55 Stat. 1276, on October 27 and November 27, 1941, 55 Stat. 1380, and on December 23, 1948, S. Ex. J., 81st Cong., 1st sess. (1949).



veloped under the provisions of a license issued by the Federal Power Commission.<sup>309</sup> A 1950 treaty makes further permanent allocations of Niagara River waters for domestic, navigation, scenic, and power purposes, terminating parts of the 1909 Treaty and replacing temporary agreements.<sup>310</sup> On August 9, 1950, the Senate gave its advice and consent to ratification of the treaty, reserving the right to provide by act of Congress for redevelopment, for public use and benefit, of the United States' share of the waters.<sup>311</sup> This reservation retains in the hands of Congress control over redevelopment for power purposes, rather than allowing it to be governed by the Federal Power Act. The Canadian Government accepted the reservation, and the treaty was ratified on October 10, 1950.<sup>312</sup>

This portion of our survey would be incomplete without a passing reference to St. Lawrence and Passamaquoddy. For over 50 years the United States and Canada have discussed joint development of the St. Lawrence Seaway as a navigation and power project.<sup>313</sup> In 1932, the two Governments signed a treaty to provide a basis for such a development, but it failed of ratification in the Senate in 1934.<sup>314</sup> Subsequently, in 1941, an agreement was signed by the two Governments which was to be made effective by concurrent legislation of the Canadian Parliament and of the United States.<sup>315</sup> A resolution approving this agreement was defeated in the Senate in 1948.<sup>316</sup>

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<sup>309</sup> *Niagara Falls Power Co. v. Federal Power Commission*, 137 F. 2d 787 (C. A. 2, 1943), cert. den., reh. den., 320 U. S. 792, 815 (1943).

<sup>310</sup> See Ex. N, 81st Cong., 2d sess., pp. 6-8 (1950).

<sup>311</sup> 96 CONG. REC. 12294-12296 (unbound ed.); see Ex. Rep. No. 11, 81st Cong., 2d sess., p. 7 (1950).

<sup>312</sup> *New York Times*, October 11, 1950, p. 35, col. 1.

<sup>313</sup> For recent histories of these proposals, see THE ST. LAWRENCE SURVEY, Part I, United States Department of Commerce (1941); Sen. Rep. No. 810, 80th Cong., 2d sess. (1948).

<sup>314</sup> See Ex. C, 72d Cong., 2d sess. (1933); 78 CONG. REC. 4474-4475 (1934). The vote was: 46 yeas, 42 nays, 3 paired, and 5 not voting.

<sup>315</sup> H. Doc. No. 153, 77th Cong., 1st sess. (1941).

<sup>316</sup> Sen. J. Res. 111, 80th Cong., 1st sess. (1947); Sen. Rep. No. 810, 80th Cong., 2d sess. (1948); 94 CONG. REC. 1858 (1948). The vote to recommit was: 57 yeas, 30 nays, 6 paired, and 3 not voting.

A recent proposal would direct the President to negotiate an agreement with New York State for transfer of the power facilities on the United States' side to an agency of the State of New York, such agreement to protect the interests of other States and of the United States.<sup>217</sup> Now pending before the Federal Power Commission are exceptions filed to a decision of the Presiding Examiner ordering dismissal of a license application by The Power Authority of the State of New York, and that the matter be referred to Congress with a recommendation for development by the United States.<sup>218</sup>

In 1935, construction of a power project utilizing tidal power at Passamaquoddy was undertaken briefly and abandoned.<sup>219</sup>

### Summary

Laws respecting the control of water for multiple uses, including development of power, have been influenced by basic factors affecting the life of man—hydrologic conditions, competition among uses of water, and differing economic conditions.

Since 1879, legislative attention to these factors has progressively increased. Thus, 1906 and 1910 legislation supplied generally applicable conditions for nonfederal power development on navigable waters, but made no provision for a charge for the privilege, or for disposition of the properties upon termination of the grant. Restrictive conditions in grants were few and varied. Early government reports emphasized the power and multiple-purpose aspects of water-resource developments. And presidential veto messages reflected views that power should be developed at, and aid in financing, federal navigation improvements, that grants for nonfederal development should contain a definite time limit to permit the public to retain control, and that charges for the privilege should be imposed.

<sup>217</sup> H. J. Res. 271, 81st Cong., 2d sess. Hearings were held before the House Committee on Public Works in April and May 1950, but it has not yet submitted a report.

<sup>218</sup> See *supra*, n. 125, pp. 280-281.

<sup>219</sup> For a recent history, see REPORT TO INTERNATIONAL JOINT COMMISSION ON SCOPE AND COST OF AN INVESTIGATION OF PASSAMAQUODDY TIDAL POWER PROJECT, International Passamaquoddy Engineer Board (March 1950).

**NONFEDERAL DEVELOPMENT AND OPERATION.**—Until 1920, legislative authorizations were on a project-by-project basis and imposed no charge for the privilege granted. Grants were perpetual in terms but subject to termination. With the uncertainty of a grantee's tenure and investment, private development had moved slowly.

In 1920, Congress passed the Federal Water Power Act regularizing federal permission for nonfederal development through a licensing system. The Act and its history reflect a purpose to encourage nonfederal development while safeguarding the public interest and making possible ultimate public ownership.

The Federal Power Commission has broad authority to conduct investigations and surveys, including its power-market studies. This authority and other provisions point to Commission consideration of multiple uses of projects and of comprehensive development.

The Commission's licensing authority extends to waters under the jurisdiction of Congress and generally to public lands. No license may be issued when in the Commission's judgment the development should be undertaken by the United States. Preference is accorded to states and "municipalities." At the end of the license period, which may not exceed 50 years, the United States has an option to take over the project at an acquisition price determined under a prescribed formula. Provision is made for certain charges, but none for the license privilege, as such.

In 1935, provisions were added for certain regulation of interstate electric utilities, including their interstate wholesale rates, securities, and accounting.

**FEDERAL DEVELOPMENT AND OPERATION.**—As the desirability of increased conservation and utilization of water resources and the necessity for greater flood protection have become more generally recognized, Congress has extended legislative authorizations toward more and larger federal multiple-use projects, including development of power—relying principally upon the Army Engineers and the Department of the Interior. In connection with navigation and flood-control improvements, a

number of laws provide for multiple uses and particularly for development of power. So also as to reclamation projects.

Throughout the country, the Federal Power Commission makes power-market surveys. Such surveys are also made by other agencies for particular regions.

Authorizations for marketing of federal power are confined almost entirely to wholesaling. Surplus power generated at Army reservoir projects must be so marketed by the Secretary of the Interior as to encourage widespread use at lowest possible rates consistent with sound business principles. He also controls marketing of power generated at reclamation projects. Here, power may aid in repaying irrigation costs. In marketing of all federal power, preference is generally accorded to public bodies and cooperatives. Federal transmission lines are authorized by statutes with varying limitations.

In addition to the foregoing, Congress has separately provided for multiple-purpose projects and for the generation and marketing of power at particular localities and in prescribed regions. Examples are the Boulder Canyon and Fort Peck Projects. The Bonneville Power Administration is also an example of special treatment of the role of power in multiple-purpose projects, dealing with a series of large dams on one river system, the Columbia. But the governing statutory provisions are varied from project to project within that river system. In the case of TVA, coordinated multiple uses of water under comprehensive river-basin development is largely controlled by a single government corporation under uniform provisions.

The duties of two international commissions concern multiple uses of different international waters, including the development of power.

## Other Public Purposes

In previous Chapters, we examined the evolution of legislation focused on navigation, flood control, irrigation, and power and multiple-purpose projects. In each of these Chapters and particularly in the last, however, that examination comprehended aspects of laws incidentally serving public purposes in addition to the major objectives. Thus, from time to time we noted laws concerning drainage, water supply, fish and wildlife preservation, recreation, refuse matter, and data to be assembled in the course of examinations and surveys. Our endeavor here will be to collect and examine the significant statutes treating each of these incidental matters separately. In addition, we shall consider legislative attention to shore protection, sediment and salinity control, pollution abatement and control, and federal programs independently established for the collection of parts of the basic data prerequisite to efficient development of water resources. While some of these activities are ends in themselves, all of them serve public purposes in the course of development, utilization, and conservation of water resources, including related land uses.

### Drainage

Drainage is a form of land reclamation and thus might be considered in conjunction with other chapters devoted to irrigation, flood control, or uses of land related to water resources. Despite such interrelationships, however, this activity has sufficient identity to warrant its separate consideration here.

Drainage and reclamation of submerged lands have generally been left to private and local interests.<sup>1</sup> With the Swamp

<sup>1</sup> See DRAINAGE OF AGRICULTURAL LANDS, Sixteenth Census of the United States (1940).

Land Acts of 1849 and 1850, came the beginning of federal interest.<sup>2</sup> Under this legislation, responsibility was still local in character. For the Acts granted swamp and overflowed lands to certain states and merely provided that the proceeds, whether from sale or by direct appropriation in kind, be applied "exclusively, as far as necessary, to the purpose of reclaiming said lands by means of 'levees and drains.'"<sup>3</sup> For some time thereafter, Congressional attention to drainage continued to be irregular and localized.<sup>4</sup>

**ARMY ENGINEERS.**—The Flood Control Act of 1936, as we earlier noted, marked the undertaking of federal responsibility on a Nation-wide basis for control of floods.<sup>5</sup> And in 1944, Congress provided that the words "flood control," as used in the declaration of policy in the 1936 statute, shall be construed to include "channel and major drainage improvements."<sup>6</sup> So defined, this function automatically came within the flood-control jurisdiction of the Army Engineers.<sup>7</sup>

**SOIL CONSERVATION SERVICE.**—Other jurisdiction over federal drainage responsibilities is vested in the Soil Conservation Service. Legislating for the prevention of soil erosion, Congress in 1935 declared its policy to provide permanently for the control and prevention of erosion, thereby to:<sup>8</sup>

preserve natural resources, control floods, prevent impairment of reservoirs, and maintain the navigability of rivers and harbors, protect public health, public lands, and relieve unemployment.

At the same time, it authorized the Secretary of Agriculture to conduct investigations and research concerning soil erosion, and

<sup>2</sup> See *supra*, p. 127.

<sup>3</sup> Act of September 28, 1850, § 2, 9 Stat. 519, see 43 U. S. C. 983.

<sup>4</sup> See, e. g., Act of March 12, 1860, 12 Stat. 3, see 43 U. S. C. 988; Act of March 3, 1891, § 18, 26 Stat. 1095, 1101, as amended, 43 U. S. C. 946. See also DRAINAGE OF AGRICULTURAL LANDS, Sixteenth Census of the United States (1940).

<sup>5</sup> See *supra*, pp. 130-131.

<sup>6</sup> Act of December 22, 1944, § 2, 58 Stat. 887, 889, 33 U. S. C. 701a-1.

<sup>7</sup> Act of June 22, 1936, § 2, 49 Stat. 1570, as amended, 33 U. S. C. 701b.

<sup>8</sup> Act of April 27, 1935, § 1, 49 Stat. 163, 16 U. S. C. 590a.

to carry out preventive measures, directing him to establish the Soil Conservation Service to exercise certain powers conferred on him under the statute.<sup>9</sup> To this legislation, provisions were added in 1936 which in sum constitute the Soil Conservation and Domestic Allotment Act, one purpose of which Congress declared to be:<sup>10</sup>

the protection of rivers and harbors against the results of soil erosion in aid of maintaining the navigability of waters and water courses and in aid of flood control.

In addition, the 1938 and 1944 Flood Control Acts provide that:<sup>11</sup>

Federal investigations of watersheds and measures for run-off and waterflow retardation and soil-erosion prevention on watersheds shall be under the jurisdiction of and shall be prosecuted by the Department of Agriculture under the direction of the Secretary of Agriculture, except as otherwise provided by Act of Congress.

Employing the foregoing authority and acting through conservation districts, the Soil Conservation Service makes technical assistance available to individual farmers so that they may carry out drainage operations on their lands.<sup>12</sup> Moreover, direct financial assistance for drainage work is furnished to farmers by the Production and Marketing Administration.<sup>13</sup> This latter aid is a part of the Agricultural Conservation Program, which is entirely separate from the program of the Soil Conservation Service though both are authorized by the 1936 Soil Conservation and Domestic Allotment Act.<sup>14</sup>

<sup>9</sup> *Id.*; § 5, 49 Stat. 164, 16 U. S. C. 590e.

<sup>10</sup> § 7(a), as added by Act of February 29, 1936, § 1, 49 Stat. 1148, as amended, 16 U. S. C. 590g(a).

<sup>11</sup> Act of June 28, 1938, § 1, 52 Stat. 1215, see 33 U. S. C. 701b. Repeated in Act of December 22, 1944, § 2, 58 Stat. 887, 889, 33 U. S. C. 701a-1.

<sup>12</sup> 7 C. F. R. 600.1; REPORT OF THE CHIEF OF THE SOIL CONSERVATION SERVICE, United States Department of Agriculture (1949).

<sup>13</sup> 7 C. F. R. 701.3.

<sup>14</sup> Act of April 27, 1935, 49 Stat. 163, as amended by Act of February 29, 1936, 49 Stat. 1148, as amended, 16 U. S. C. 590a-590q. See also 7 C. F. R. ch. VI and ch. VII.

Excepting direct financial aid, the foregoing drainage responsibilities are therefore divided between the Army Engineers and the Soil Conservation Service. But the division is unclear, for the foregoing statutes make the partition dependent largely upon the meaning of "channel and major drainage improvements." And there is no statutory definition of this term, or of any of its components. Hence, the jurisdictional division seems to be the difference between "major," and whatever is minor.

This lack of statutory clarity apparently underlies a 1948 Memorandum of Understanding, whereby the two agencies agreed that:<sup>15</sup>

The Soil Conservation Service is authorized to provide assistance to soil conservation districts and other State and local instrumentalities acceptable to the Secretary of Agriculture on drainage and related problems in connection with the conservation of soil and water resources, and the Corps of Engineers is authorized to provide channel and major drainage improvements on rivers and other waterways.

In general, drainage for a watershed area consists of two complementary parts; one, the system required to utilize, manage, or remove surplus water from farms or groups of farms and two, the necessary channel and major drainage improvements required to control, carry off, and utilize these surplus waters. Therefore, in soil conservation districts or other State or locally organized areas, the activities of the Corps of Engineers and the Soil Conservation Service, in cooperation with the local districts or agencies provide for consideration of both of these complementary parts of drainage.

**BUREAU OF RECLAMATION.**—The Bureau of Reclamation frequently performs drainage work as a part of irrigation project

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<sup>15</sup> Unpublished Memorandum of Understanding between the Corps of Engineers, Department of the Army, and the Soil Conservation Service, United States Department of Agriculture, with Respect to Drainage Activities (June 1948).



development.<sup>16</sup> Except in the case of certain special acts, Reclamation Law does not expressly deal with drainage.<sup>17</sup> However, Congress has not attempted to enumerate in detail the types of irrigation features which are authorized to be constructed in connection with irrigation projects.<sup>18</sup>

With the beginning of large-scale irrigation operations, drainage works were undertaken in the face of rising water tables and attendant water logging and resulting soil alkalinity on several projects.<sup>19</sup> Extensive drainage investigations and construction continued.<sup>20</sup>

Moreover, it has been specifically held that the "necessity for drainage follows irrigation on an extensive scale almost as a matter of course."<sup>21</sup> Drainage work may be undertaken in connection with federal irrigation projects either as an incident of construction, or as an incident of operation and maintenance.<sup>22</sup> Some 3,500 miles of drains are embraced in the operating program of the Bureau of Reclamation for the fiscal year 1951.<sup>23</sup>

## Water Supply

Generally, the supplying of water for domestic, municipal, stock-watering, and industrial purposes is largely a matter of

<sup>16</sup> For example, during the fiscal year 1912-1913, drainage studies and investigations were carried on in connection with 17 projects, and a substantial amount of drainage construction had been accomplished as a part of projects. TWELFTH ANNUAL REPORT OF THE RECLAMATION SERVICE, pp. 20-21 (1914).

<sup>17</sup> For exceptions, see, *e. g.*, Sen. J. Res. 89, 65th Cong., 1st sess. (1917), 40 Stat. 426; Act of February 14, 1923, 42 Stat. 1246.

<sup>18</sup> See unpublished opinion of the Solicitor of the Department of the Interior concerning authority to prepare lands for irrigation, Opinion M34695, September 24, 1946.

<sup>19</sup> See *supra*, p. 163. For a table showing drainage expenditures by projects through 1914, see *Reclamation Record*, Vol. 5, No. 8, p. 318 (1914).

<sup>20</sup> See, *e. g.*, SIXTEENTH ANNUAL REPORT OF THE RECLAMATION SERVICE, pp. 20-21 (1917).

<sup>21</sup> *Nampa and Meridian Irr. Dist. v. Bond*, 288 Fed. 541 (C. A. 9, 1923), affirmed, 268 U. S. 138 (1925).

<sup>22</sup> *Id.*

<sup>23</sup> THE BUDGET OF THE UNITED STATES GOVERNMENT FOR THE FISCAL YEAR ENDING JUNE 30, 1951, p. 812 (1950).

concern primarily to local interests, public and private.<sup>24</sup> Congress has made possible some assistance to such purposes while legislating for federal and nonfederal development of water resources. We shall focus attention here on these provisions.

Preliminarily, it may be observed that conflicting interests in a common water source are at times a matter of vital concern to two or more states simultaneously. For example, demands for water supply for the New York metropolitan area produced a serious dispute between New Jersey and New York.<sup>25</sup> And it may be noted that water supply is one of the concerns of reciprocal legislation enacted by states in the Delaware River Basin, and of Incodel, an interstate commission.<sup>26</sup> Likewise, the need for large quantities of water for municipal purposes has been a factor contributing to collisions of interests among states both in the East and in the West.<sup>27</sup> Detailed reference

<sup>24</sup> For an inventory of public and private water facilities of the United States in communities having a population of 100 or more, see *INVENTORY OF WATER AND SEWAGE FACILITIES IN THE UNITED STATES, 1945*, Public Health Service (1948).

<sup>25</sup> *New Jersey v. New York*, 283 U. S. 336 (1931).

<sup>26</sup> See *infra*, p. 470.

<sup>27</sup> For examples of such controversies in the East, see *Connecticut v. Massachusetts*, 282 U. S. 660 (1931); *New Jersey v. New York*, 283 U. S. 336 (1931).

In arid and semiarid areas of the West, such problems may become more acute. Thus, the need for large quantities of water for municipal purposes was one of the factors which contributed to the extended controversy over apportionment of waters of the Colorado River. Congress in 1921 authorized Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming to negotiate a Colorado River Compact respecting apportionment of the waters of the Colorado River. Act of August 19, 1921, 42 Stat. 171. *HOOVER DAM DOCUMENTS*, H. Doc. No. 717, 80th Cong., 2d sess., p. A17 (1948). But this Compact was not ratified by Arizona until 1944.

In 1928, the Boulder Canyon Project Act was enacted, approving the Colorado River Compact when it shall have been approved by the legislatures of California and five of the other six Colorado River Basin States. Act of December 21, 1928, § 13, 45 Stat. 1057, 1064, 43 U. S. C. 617l. The effectiveness of that Act was made dependent upon such approval by the States, together with passage by California of an act whereby it would agree irrevocably and unconditionally to limit its aggregate annual consumptive use of Colorado River water to 4,400,000 acre-feet of Compact water, plus not more than one-half of any surplus water unapportioned by the Compact. §§ 4(a), 13, 45 Stat. 1058, 1064, 43 U. S. C. 617c(a), 617l. California enacted such a statute in 1929. Act of March 4, 1929, ch. 16, 48th sess., *STATUTES AND AMENDMENTS TO THE CODE*, pp. 38-39 (1929).

has previously been made to the continuing concern of states over apportionment of waters of interstate streams, evident both in litigation and in compacts.<sup>28</sup>

The Secretary of the Interior is also authorized to enter into contracts for furnishing water for irrigation and domestic uses. § 5, 45 Stat. 1060, 43 U. S. C., 617d.

In 1929, a Presidential Proclamation declared that the Boulder Canyon Project Act had become effective, the Compact having been approved by all of the States except Arizona. Proclamation No. 1882, June 25, 1929, 46 Stat. 3000. Pursuant to authority under the Act, the Secretary of the Interior in 1930 executed a contract with the Metropolitan Water District of Southern California. THE HOOVER DAM POWER AND WATER CONTRACTS AND RELATED DATA, Department of the Interior, Bureau of Reclamation, p. 49 (1950). As amended on September 28, 1931, this contract provides for a water supply, to the extent available under the Compact, in accordance with the California "Seven-Party Water Agreement" of August 18, 1931. Under this Agreement, water to which California might be entitled under the Compact and Project Act was allocated among various agencies in an order of priority. The Metropolitan Water District received a fourth priority of 550,000 acre-feet of water per annum, which with the first three priorities totals 4,400,000 acre-feet, and a fifth priority for an additional 550,000 acre-feet, a total of 1,100,000 acre-feet in all. THE HOOVER DAM POWER AND WATER CONTRACTS AND RELATED DATA, Department of the Interior, Bureau of Reclamation, pp. 49-64, 283-287. Arizona sought unsuccessfully to enjoin both operation of the Compact and performance of contracts made under authority of the Act. *Arizona v. California*, 283 U. S. 423 (1931).

In 1934, construction of Parker Dam was begun by the United States under contract with the Metropolitan Water District of Southern California, which recited, among other things, the execution of contracts for the delivery of water to the District, and construction by the District of an aqueduct for conveying water from the Colorado River to the metropolitan area of Southern California for "domestic, municipal, and other useful purposes." HOOVER DAM DOCUMENTS, H. Doc. No. 717, 80th Cong., 2d sess., p. A689 (1948). When Arizona threatened to use military force to stop the work on the dam, the United States sought to enjoin interference by the State. The Supreme Court denied the injunction, however, on the ground that construction was not properly authorized. *United States v. Arizona*, 295 U. S. 174 (1935). Construction of the Parker Dam was later authorized in the 1935 River and Harbor Act. Act of August 30, 1935, § 2, 49 Stat. 1023, 1039. Arizona approved the Colorado River Compact in 1944. See Act approved February 24, 1944, Ch. 5, 17th Legislature; Session Laws of Arizona, 1944, pp. 427-428.

During the contract year ending May 31, 1950, a total of 188,261.0 acre-feet of water was diverted into the Metropolitan Aqueduct. Monthly Water Diversion Report, Department of the Interior, Bureau of Reclamation (May 1950).

See also S. 75, 81st Cong., 1st sess. (1949) (Central Arizona Project).

<sup>28</sup> See *supra*, pp. 58-64, 65-68.

**RECLAMATION PROJECTS.**—By a 1906 supplement to the Reclamation Act, Congress authorized the Secretary of the Interior to “provide for water rights” for towns established by him in connection with reclamation projects and to contract with such towns and with towns in the immediate vicinity of projects which “shall have a water right from the same source” as the project, for delivery of water supply to some convenient point.<sup>29</sup> Charges must not be less nor upon terms more favorable than those fixed for the irrigation project, and must be paid into the Reclamation Fund.<sup>30</sup>

A 1920 statute empowers the Secretary to contract to supply water “for other purposes than irrigation.”<sup>31</sup> Such a contract may be executed only when there is “no other practicable source of water supply for the purpose,” and when the delivery of such water would not be detrimental to water service from the irrigation project or rights of prior appropriators. Proceeds must be covered into the Reclamation Fund.

Under 1939 reclamation legislation, the Secretary is authorized to enter into contracts to furnish water for “municipal water supply or miscellaneous purposes.”<sup>32</sup> The contract must require repayment of “an appropriate share” of that part of construction costs allocated by the Secretary to “municipal water supply or other miscellaneous purposes,” within not to exceed 40 years and with interest at not exceeding 3½ percent per annum if he deems an interest charge proper. Or the contract must produce revenues at least sufficient to cover an “appropriate” share of annual operation and maintenance costs and fixed charges, within not to exceed 40 years and with annual payments made in advance of delivery of water. Here again, the contract must not impair the efficiency of the project for irrigation purposes.

Special note should be made of the history of the authorization of the Parker Dam, operation of which provides impor-

<sup>29</sup> Act of April 16, 1906, § 4, 34 Stat. 116, 43 U. S. C. 567.

<sup>30</sup> *Id.*

<sup>31</sup> Act of February 25, 1920, 41 Stat. 451, 43 U. S. C. 521.

<sup>32</sup> Act of August 4, 1939, § 9(c), 53 Stat. 1187, 1194, 43 U. S. C. 485h(c).

tantly for water supply, among other uses.<sup>33</sup> Moreover, large tentative allocations to municipal water supply have been made in connection with the Central Valley and the Missouri River Basin Projects.<sup>34</sup>

**ARMY PROJECTS.**—In 1937, Congress made special provision for domestic water supply at flood-control projects. It authorized the Secretary of the Army to receive contributions from states and political subdivisions and expend them in connection with Federal funds appropriated for authorized flood-control work, whenever on recommendation of the Chief of Engineers he deems such work “advantageous in the public interest.”<sup>35</sup> And plans for any reservoir project may be modified to provide additional storage capacity for “domestic water supply or other conservation storage,” if the cost of such increased capacity is contributed by local agencies and they agree to utilize such capacity in a manner consistent with “Federal uses and purposes.”<sup>36</sup>

A 1944 authorization vests broad authority in the Secretary of the Army to contract for surplus water at any reservoir under Army control.<sup>37</sup> Under it, he may contract with states, municipalities, private concerns, or individuals, “at such prices and on such terms as he may deem reasonable, for domestic and industrial uses for surplus water that may be available.” But no such contract may adversely affect “then existing lawful uses of such water.” Proceeds are deposited in the Treasury

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<sup>33</sup> Act of August 30, 1935, § 2, 49 Stat. 1023, 1039. Conf. Rep. No. 1816, 74th Cong., 1st Sess. (1935) which sets forth that Parker Dam is a diversion dam intended to lift water up into the Metropolitan Aqueduct. Also stating that the dam is a “loan and grant project which is to be financed from the sale of bonds of the City of Los Angeles,” p. 21. See also *supra*, n. 27, pp. 320-321.

<sup>34</sup> See AVERAGE RATE AND REPAYMENT STUDIES FOR POWER SYSTEMS ON BUREAU OF RECLAMATION PROJECTS, Department of the Interior, Bureau of Reclamation, second table following p. 13 (January 1950), showing tentative allocations of \$11,721,000 in the case of the Central Valley Project, and \$43,550,000 in the case of the Missouri River Basin Project.

<sup>35</sup> Act of July 19, 1937, § 1, 50 Stat. 515, 518, 33 U. S. C. 701h.

<sup>36</sup> *Id.* When the contributions are in excess of the actual cost of the work contemplated and properly chargeable to such contributions, such excess may be returned to the contributing interests.

<sup>37</sup> Act of December 22, 1944, § 6, 58 Stat. 887, 890, 33 U. S. C. 703.

as miscellaneous receipts. Moreover, since 1944, all River and Harbor and all Flood Control Acts have provided that use for navigation, in connection with operation and maintenance of works therein authorized for construction, of waters arising in states lying wholly or partly west of the ninety-eighth meridian shall be only such use as does not conflict with any beneficial consumptive use, present or future, in states lying wholly or partly west of the ninety-eighth meridian, of such waters for domestic, municipal, stock-water, irrigation, mining, or industrial purposes.<sup>38</sup>

**FPC LICENSED PROJECTS.**—In discussing the Federal Power Act, we pointed out that the project adopted must be best adapted to a comprehensive plan for improving or developing the waterway for commerce, for power, and “for other beneficial public uses.”<sup>39</sup> Pursuant to this requirement, provision has been made against interference with water supply.<sup>40</sup> Also relevant here is the Act’s prohibition against interference with state laws relating to “control, appropriation, use or distribution of water used in irrigation or for municipal or other uses, or any vested right acquired therein.”<sup>41</sup>

**STOCK WATERING.**—Provision of water supply for stock-watering purposes is authorized by the Taylor Grazing Act. It empowers the Secretary of the Interior to issue permits and approve cooperative arrangements for the construction of “fences, wells, reservoirs, and other improvements necessary to the care and management of the permitted livestock.”<sup>42</sup>

Additional provision is made for water supply for stock watering on public lands. Such lands containing “water holes or other bodies of water needed or used by the public for

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<sup>38</sup> See, *e. g.*, Act of December 22, 1944, § 1(b), 58 Stat. 887, 889; Act of March 2, 1945, § 1(b), 59 Stat. 10, 11.

<sup>39</sup> See *supra*, p. 275.

<sup>40</sup> See *Great Northern Power Company*, Project 1105, THIRTEENTH ANNUAL REPORT, FEDERAL POWER COMMISSION, pp. 302, 304 (1933), and final order, FOURTEENTH ANNUAL REPORT, FEDERAL POWER COMMISSION, p. 118 (1934) in which the Federal Power Commission denied the license.

<sup>41</sup> See *supra*, p. 276.

<sup>42</sup> Act of June 28, 1934, § 4, 48 Stat. 1269, 1271, 43 U. S. C. 315c.

watering purposes" shall not be reserved but held open for public use.<sup>43</sup> Furthermore, the Secretary of the Interior may withdraw from entry lands necessary to insure access by the public to reserved "watering places needed for use in the movement of stock."<sup>44</sup> An earlier statute provides that any person, livestock company, or transportation corporation engaged in breeding, grazing, driving, or transporting livestock may construct "reservoirs upon unoccupied public lands" of the United States, not mineral or otherwise reserved, for the purpose of "furnishing water to such livestock," provided that such reservoir shall not be fenced and shall be open to the "free use of any person desiring to water animals of any kind."<sup>45</sup>

**SPECIAL PROVISIONS IN ARID AND SEMIARID AREAS.**—A declared purpose of Congress under the 1937 Water Facilities Act is "to assist in providing facilities for water storage and utilization in the arid and semiarid areas of the United States."<sup>46</sup> Congress announced this purpose in express recognition of the wastage and inadequate utilization of water resources on farm, grazing, and forest lands in the arid and semiarid areas of the United States resulting from inadequate facilities for storage and use. To effectuate this policy, the Secretary of Agriculture is authorized to formulate and keep current a program of projects for the construction and maintenance in those areas of "ponds, reservoirs, wells, check-dams, pumping installations, and other facilities for water storage and utilization, together with appurtenances to such facilities."<sup>47</sup>

Also noteworthy here is the authority vested in the Secretary of the Interior to construct "water conservation and utilization projects in the Great Plains and arid and semiarid areas of the United States," for the declared purpose of "stabilizing water supply and thereby rehabilitating farmers on the land

<sup>43</sup> Act of December 29, 1916, § 10, 39 Stat. 862, 865, as amended, 43 U. S. C. 300.

<sup>44</sup> *Id.*

<sup>45</sup> Act of January 13, 1897, § 1, 29 Stat. 484, as amended, 43 U. S. C. 952.

<sup>46</sup> Act of August 28, 1937, § 1, 50 Stat. 869, 16 U. S. C. 590r.

<sup>47</sup> § 2, 50 Stat. 869, 16 U. S. C. 590s.

and providing opportunities for permanent settlement of farm families.”<sup>48</sup>

**MISCELLANEOUS.**—One of the purposes for the establishment of national forests is declared to be the “securing of favorable conditions of water flows.”<sup>49</sup> Further, all waters within the boundaries of national forests may be used for “domestic, mining, milling, or irrigation purposes,” under the laws of the state wherein such national forests are situated, or under the laws of the United States and the rules and regulations established thereunder.<sup>50</sup>

Of interest is a 1934 statute providing that in case a permittee or lessee strikes water while drilling for oil or gas on public lands and such water is of a quality and quantity to be valuable and usable at reasonable cost for agricultural, domestic, or other purposes, the Secretary of the Interior may purchase the casing in the well.<sup>51</sup>

Also noteworthy is an authorization whereby the Secretary of the Interior may grant certain rights-of-way over public lands for ditches, canals, or reservoirs to be used for purposes of “water transportation” for domestic uses.<sup>52</sup>

No survey concerning water supply would be complete without mention of the potentialities of desalination of sea and other saline water, and also of artificial rainmaking.

Obviously, if a feasible method of converting salt water into fresh water were developed, many water shortages and resultant controversies would be solved. Several bills were introduced in the Eighty-first Congress to provide for research to determine

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<sup>48</sup> Act of August 11, 1939, § 1, 53 Stat. 1418, as amended, 16 U. S. C. 590y. See also *supra*, pp. 243-245.

<sup>49</sup> Act of June 4, 1897, § 1, 30 Stat. 11, 35, 16 U. S. C. 475.

<sup>50</sup> § 1, 30 Stat. 36, 16 U. S. C. 481; 36 C. F. R. 251.9. See also Act of February 1, 1905, § 4, 33 Stat. 628, 16 U. S. C. 524; Act of May 28, 1940, 54 Stat. 224, 16 U. S. C. 552a-552d, providing for protection for purposes of municipal water supply of watersheds within national forests.

<sup>51</sup> Act of February 25, 1920, § 40, 41 Stat. 437, as added by Act of June 16, 1934, 48 Stat. 977, 30 U. S. C. 229a.

<sup>52</sup> Act of May 11, 1898, § 2, 30 Stat. 404, as amended, 43 U. S. C. 951.



the most practical method of desalination of sea or other saline water.<sup>53</sup>

Artificial rainmaking poses several legal problems. These include possible liability arising from personal injury or property damage resulting from the artificially induced precipitation, and possible claim to property rights in weather.<sup>54</sup> There is also the question of the nature and extent of possible governmental control.

### Fish and Wildlife Preservation

Since water and land are both important to wildlife, preliminary note should be made of certain statutory provisions respecting wildlife refuges. For example, in an Act establishing the Federal Aid to Wildlife Fund, Congress has provided that states constructing wildlife refuges which conform to standards fixed by the Secretary of the Interior may receive financial aid under a prescribed formula.<sup>55</sup> Likewise, provision is made for federal acquisition of wildlife refuges under the Migratory Bird Conservation Act.<sup>56</sup> Other statutes authorize federal acquisition and development of specific areas of land and water for wildlife refuges.<sup>57</sup>

Of more direct relevance to our survey are certain protective provisions of statutes concerning federal and licensed nonfederal developments. For example, since 1888 the Secretary of the Army has had discretionary authority to provide "sufficient fishways," whenever navigation improvements are

<sup>53</sup> See, e. g., S. 1300; H. R. 265; H. R. 3123; H. R. 3650—all 81st Cong., 1st sess. (1949).

<sup>54</sup> Because of the recency of the development, precise legal principles have not yet evolved. See Ball, *Shaping the Law of Weather Control*, 58 *YALE L. J.* 213 (1949).

<sup>55</sup> Act of September 2, 1937, 50 Stat. 917, as amended, 16 U. S. C. 669-669L.

<sup>56</sup> Act of February 18, 1929, 45 Stat. 1222, as amended, 16 U. S. C. 715-715d, 715e, 715f-715k, 715l-715r.

<sup>57</sup> See, e. g., Act of June 7, 1924, 43 Stat. 650, as amended, 16 U. S. C. 721-731; Act of April 23, 1928, 45 Stat. 448, as amended, 16 U. S. C. 690-690h; Act of June 12, 1930, 46 Stat. 579, as amended, 16 U. S. C. 691.

found to operate as obstructions to the passage of fish.<sup>58</sup> Similarly, Army Engineer investigations and improvements of waterways must include "a due regard for wildlife conservation."<sup>59</sup> Also, no use of Army reservoir areas is permitted inconsistent with laws for the "protection of fish and game" of the state in which such area is situated.<sup>60</sup> In the management of existing facilities in the upper Mississippi River, the Department of the Army is directed to give full consideration and recognition to the needs of fish and other wildlife resources and their habitat dependent on such waters and it is required generally to operate and maintain pool levels as though navigation were carried on throughout the year.<sup>61</sup>

In the case of nonfederal power developments, Federal Power Commission licensees must construct, maintain, and operate "such fishways as may be prescribed by the Secretary of the Interior."<sup>62</sup>

In the case of the Columbia River and its tributaries, the Secretary of the Interior is directed to conduct such investigations, surveys, and experiments as may be necessary to direct and facilitate conservation of fishery resources.<sup>63</sup> He is also directed to construct and install devices in the Columbia River Basin for the improvement of feeding and spawning conditions for fish, for the protection of migratory fish from irrigation projects, and for facilitating free migration of fish over obstructions.<sup>64</sup>

Conservation of wildlife is also declared to be one of the purposes of national parks, monuments, and reservations.<sup>65</sup> Since national parks and monuments are sanctuaries for wild-

<sup>58</sup> Act of August 11, 1888, § 11, 25 Stat. 400, 425, 33 U. S. C. 608.

<sup>59</sup> Act of June 20, 1938, § 1, 52 Stat. 802, 33 U. S. C. 540.

<sup>60</sup> Act of December 22, 1944, § 4, 58 Stat. 887, 889, as amended, 16 U. S. C. 460d.

<sup>61</sup> Act of March 10, 1934, 48 Stat. 401, as added by Act of June 19, 1948, 62 Stat. 497.

<sup>62</sup> Act of June 10, 1920, § 18, 41 Stat. 1063, 1073, as amended, 16 U. S. C. 811.

<sup>63</sup> Act of May 11, 1938, § 2, 52 Stat. 345, as amended, 16 U. S. C. 756.

<sup>64</sup> *Id.*

<sup>65</sup> Act of August 25, 1916, § 1, 39 Stat. 535, as amended, 16 U. S. C. 1.

life of every sort, protection is afforded in these areas.<sup>66</sup> Likewise, regulations limit hunting and fishing in national forests.<sup>67</sup>

Much broader in effect are provisions for protection of fish and wildlife in other statutes as implemented principally in 1946.<sup>68</sup> In the interest of wildlife conservation and rehabilitation, the Fish and Wildlife Service of the Department of the Interior has authority to provide specified assistance to, and cooperate with federal, state, and public or private agencies.<sup>69</sup> It is also empowered to make surveys and investigations of the "wildlife of the public domain, including lands and waters or interests therein acquired or controlled by any agency of the United States."<sup>70</sup>

Furthermore, whenever any federal agency or private agency under federal permit impounds, diverts, or otherwise controls waters, it must consult with the Fish and Wildlife Service and the head of the state agency concerned with wildlife resources "with a view to preventing loss of and damage to wildlife resources."<sup>71</sup> The reports and recommendations of the Secretary of the Interior and the state agency must be made an integral part of any report submitted by the federal agency responsible for engineering surveys and construction of water-control projects.<sup>72</sup> The cost of planning for and construction and maintenance of facilities for protection of fish and wildlife shall be an integral part of the cost of such projects.<sup>73</sup> Costs allocated to the preservation and propagation of fish and wildlife are made nonreimbursable specifically in the case of reclamation projects.<sup>74</sup>

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<sup>66</sup> 36 C. F. R. 1.9.

<sup>67</sup> 36 C. F. R. 261.8, 261.9.

<sup>68</sup> Act of August 14, 1946, 60 Stat. 1080, 16 U. S. C. 661 *et seq.* The Tennessee Valley Authority is specifically exempted. § 9, 60 Stat. 1082, 16 U. S. C. 666c.

<sup>69</sup> § 1, 60 Stat. 1080, 16 U. S. C. 661.

<sup>70</sup> Act of August 14, 1946, § 1, 60 Stat. 1080, 16 U. S. C. 661.

<sup>71</sup> § 2, 60 Stat. 1080, 16 U. S. C. 662.

<sup>72</sup> *Id.*

<sup>73</sup> *Id.*

<sup>74</sup> *Id.* Cf. the President's message vetoing the Vermejo Project, H. R. 3788, 81st Cong., 1st sess. (1949), printed in H. Doc. No. 316, 81st Cong., 1st sess. (1949).

In addition, whenever waters are controlled by the United States, the projects must make adequate provision consistent with the primary purposes for their use, together with certain related lands or interests therein "for the conservation, maintenance, and management of wildlife resources thereof, and its habitat thereon."<sup>75</sup> In accordance with general plans, such waters and other interests shall be made available without cost for administration by the state agency exercising administration over wildlife resources if migratory birds are not in question.<sup>76</sup> Or if they have value in carrying out the migratory bird-management program, those waters and interests must be similarly made available to the Secretary of the Interior.<sup>77</sup>

Complementing the foregoing provisions is certain investigative authority of the Fish and Wildlife Service and the Bureau of Mines.<sup>78</sup> They may inquire as to the effects of "domestic sewage, mine, petroleum, and industrial wastes, erosion silt, and other polluting substances on wildlife," reporting to Congress thereon with recommendations. Such investigations shall include:

- (1) the determination of standards of water quality for the maintenance of wildlife;
- (2) the study of methods of abating and preventing pollution, including methods for the recovery of useful or marketable products and byproducts of waste; and
- (3) the collation and distribution of data on the progress and results of such investigations for the use of Federal, State, municipal, and private agencies, individuals, organizations, and enterprises.

No provision is made for requiring corrective action.

Noteworthy also are recent statutes making available to states certain financial aid by the United States for wildlife restoration and fish restoration and management projects.<sup>79</sup>

<sup>75</sup> § 3, 60 Stat. 1081, 16 U. S. C. 663.

<sup>76</sup> *Id.*

<sup>77</sup> *Id.*

<sup>78</sup> § 5, 60 Stat. 1081, 16 U. S. C. 665.

<sup>79</sup> Act of September 2, 1937, 50 Stat. 917, as amended, 16 U. S. C. 669-669i; Act of August 9, 1950, 64 Stat. 430.

## Recreation

Water plays an important role in recreation. And Congress has provided many water-resource programs and authorized the construction of many projects suitable for recreation as well as for their primary purposes. Reservoir projects often provide ideal recreation areas. National parks contain many lakes and streams similarly useful. Nor are the national forests to be overlooked.

In the case of reservoir projects under Army control, Congress in 1944 made provision for recreation.<sup>80</sup> The Chief of Engineers is thereby authorized to construct, maintain, and operate public park and recreational facilities. Also, the Secretary of the Army may grant leases of such areas and facilities upon terms he deems reasonable, giving preference to federal, state, or local governmental agencies. These may be made without monetary consideration when the Secretary of the Army determines it to be in the public interest. Similarly, leases are permitted to nonprofit organizations at nominal rentals. Moreover, it is expressly declared that, when determined by the Secretary of the Army not to be contrary to the public interest:

The water areas of all such reservoirs shall be open to public use generally, without charge, for boating, swimming, bathing, fishing, and other recreational purposes \* \* \*

In the case of reclamation projects, there is no corresponding general authorization.<sup>81</sup> However, recreational facilities are available at certain reclamation projects, the facilities being under the control of the National Park Service in some cases, as we shall shortly see.

Also the Federal Power Commission may require licensees

<sup>80</sup> Act of December 22, 1944, § 4, 58 Stat. 887, 889, as amended, 16 U. S. C. 460d.

<sup>81</sup> But see H. R. 4403, 81st Cong., 1st sess. (1949) which passed the House of Representatives August 1, 1949 and made provision for recreational uses at reclamation projects; see H. Rep. No. 918, 81st Cong., 1st sess. (1949).

to make provision for "beneficial public uses, including recreational purposes," in approving project plans.<sup>82</sup>

In the case of the Tennessee Valley Authority, any real property may be conveyed by deed, lease, or otherwise, to any person or persons for the purpose of recreation, or use as a summer residence, or for the operation on such premises of pleasure resorts for boating, fishing, bathing, or any similar purpose.<sup>83</sup>

Of general importance are the authorizations for and activities of the National Park Service. With a specified exception, the fundamental purpose of national parks, monuments, and reservations is declared to be: <sup>84</sup>

to conserve the scenery and the natural historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.

Reserving for later discussion the possibility of conflict between that purpose and the development and use of water resources,<sup>85</sup> it is important to note here that Congress in 1946 included in its statement of purposes for which appropriations for the National Park Service are authorized the: <sup>86</sup>

administration, protection, improvement, and maintenance of areas, under the jurisdiction of other agencies of the Government, devoted to recreational use pursuant to cooperative agreements.

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<sup>82</sup> Act of June 10, 1920, § 10(a), 41 Stat. 1063, 1068, as amended, 16 U. S. C. 803(a). See also *Concord Electric Company*, Project No. 1903, 4 F. P. C. 636, 637; *Wisconsin Public Service Corporation*, Project No. 1940, 5 F. P. C. 550; *First Iowa Hydro-Electric Cooperative*, Project No. 1853, 6 F. P. C. 234; *Pacific Gas and Electric Company*, Project No. 1962, 6 F. P. C. 731; *Georgia Power Company*, Project No. 1951, 6 F. P. C. 809; *Southern California Edison Company*, Project No. 1930, F. P. C. Order of May 18, 1950.

<sup>83</sup> Act of May 18, 1933, § 4(k), 48 Stat. 58, 60, as amended, 16 U. S. C. 831c(k) (a).

<sup>84</sup> Act of August 25, 1916, § 1, 39 Stat. 535, as amended, 16 U. S. C. 1.

<sup>85</sup> See *infra*, Comparative Summary, Chapter 10, pp. 493-643.

<sup>86</sup> Act of August 7, 1946, 60 Stat. 885, 16 U. S. C. 17j-2(b).

Under this authorization, funds are made available to the Service for maintenance of recreational facilities in reservoir areas such as the Lake Mead National Recreation Area and the Coulee Dam National Recreation Area.<sup>87</sup> Use of waters of national parks for recreational purposes is permitted subject to prescribed regulations.<sup>88</sup> Appropriations are also expressly authorized for the:<sup>89</sup>

investigation and establishment of water rights in accordance with local custom, laws, and decisions of courts, including the acquisition of water rights or of lands or interests in lands or interests in rights-of-way for use and protection of water rights necessary or beneficial in the administration and public use of the national parks and monuments.

Recreational uses also find some recognition in legislation concerning national forests. For example, the Secretary of Agriculture has authority to rent or lease to "responsible" persons or corporations, "suitable spaces and portions of ground near, or adjacent to, mineral, medicinal, or other springs, within any national forest reserves," for the purpose of erecting sanitariums or hotels open to the public.<sup>90</sup> He is similarly authorized to permit, for periods not exceeding 30 years, occupancy of national forests "for the construction of summer homes, hotels, stores, or other structures needed for recreation or public convenience, not exceeding five acres to any one person or association."<sup>91</sup> Reference should also be made to the so-called "O and C lands" under the jurisdiction of the Secretary of the Interior.<sup>92</sup> Here, Congress provided for sustained-yield management of timberlands for express purposes, including pro-

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<sup>87</sup> Unpublished Memorandum of Agreement, Bureau of Reclamation and National Park Service, August 29, 1936; Unpublished Memorandum of Agreement, Bureau of Reclamation, National Park Service, and Office of Indian Affairs, December 18, 1946.

<sup>88</sup> 36 C. F. R. 1.4, 1.6, 1.7.

<sup>89</sup> Act of August 7, 1946, 60 Stat. 885, 16 U. S. C. 17j-2(g).

<sup>90</sup> Act of February 28, 1899, § 1, 30 Stat. 908, as amended, 16 U. S. C. 495.

<sup>91</sup> Act of March 4, 1915, 38 Stat. 1086, 1101, 16 U. S. C. 497.

<sup>92</sup> See *infra*, pp. 358-359.

tecting watersheds, regulating stream flow, and "providing recreational facilities."<sup>33</sup>

Moreover, in operations under the Bankhead-Jones Farm Tenant Act, submarginal lands retired as not suitable for cultivation may be made available for recreational purposes.<sup>34</sup>

The foregoing statutory provisions for recreation in connection with federal activities, as we have seen, vary considerably with respect to the recovery of costs of providing such facilities.

### Shore Protection

Functionally, laws concerning protection of shores may be related to those concerning navigation, or flood control, or related uses of land, all considered in other chapters. We shall consider shore-protection legislation separately, however, since it especially seeks to avoid damage by water to coastal shorelands which often serve recreational purposes.

In 1930, Congress authorized and directed the Chief of Engineers under the direction of the Secretary of the Army to cause investigations and studies to be made in cooperation with the appropriate agencies of various coastal and Great Lakes States, and the Territories, with a view to devising effective means of preventing "erosion of the shores of coastal and lake waters by waves and currents."<sup>35</sup> Under this Act, no money may be expended in any state which does not provide for cooperation with the agents of the United States and contribute to the project, funds or services, or both, as the Secretary of the Army may deem appropriate and require. Congress also established a Beach Erosion Board consisting of seven members, four of whom must be officers of the Corps of Engineers and three engineers to be selected with regard to their special fitness by the Chief of Engineers from among the

<sup>33</sup> Act of August 28, 1937, § 1, 50 Stat. 874. For a definition of "sustained-yield management," see *infra*, n. 41, p. 359.

<sup>34</sup> Act of July 22, 1937, § 31, 50 Stat. 522, 525, as amended, 7 U. S. C. 1010-1012; 7 C. F. R. 600.3.

<sup>35</sup> Act of July 3, 1930, § 2, 46 Stat. 918, 945, 33 U. S. C. 426. In this connection see Act of August 30, 1935, § 5, 49 Stat. 1028, 1048, 33 U. S. C. 546a. See also *supra*, pp. 93-94.



cooperating state agencies. This Board is assigned the duty of furnishing technical assistance in the conduct of studies and of reviewing reports of investigations.

Federal participation was broadened by 1945 legislation assigning to the Beach Erosion Board the duty of making general investigations with a view to preventing "erosion of the shores of the United States by waves and currents" and determining the most suitable methods for the "protection, restoration, and development of beaches."<sup>96</sup> Also added was the duty of publishing such useful data and information concerning the erosion and protection of beaches and shore lines as the Board may deem to be of "value to the people of the United States."<sup>97</sup> The costs of these general investigations are borne wholly by the United States.<sup>98</sup> Provisions of existing law relating to examinations and surveys and to works of improvement of rivers and harbors are made applicable, "insofar as practicable," to examinations and surveys and to works of improvement relating to shore protection, except for reference for consideration and recommendation to the Beach Erosion Board instead of to the Board of Engineers for Rivers and Harbors.<sup>99</sup>

The 1945 and subsequent River and Harbor Acts have required that reports of surveys on beach erosion and shore protection specially authorized by Congress shall include an:<sup>100</sup>

estimate of the public interests involved, and such plan of improvement as is found justified, together with the equitable distribution of costs in each case.

Correspondingly, in reporting on cooperative investigations and studies authorized under the 1930 Act, the Beach Erosion Board is required by the 1945 legislation to state its opinion as to:<sup>101</sup>

(a) the advisability of adopting the project;

<sup>96</sup> Act of July 31, 1945, § 1, 59 Stat. 508, 33 U. S. C. 426a.

<sup>97</sup> *Id.*

<sup>98</sup> *Id.*

<sup>99</sup> § 2, 59 Stat. 508, 33 U. S. C. 426b.

<sup>100</sup> See, e. g., Act of March 2, 1945, § 6, 59 Stat. 10, 25.

<sup>101</sup> § 3, 59 Stat. 508, 33 U. S. C. 426c.

(b) what public interest, if any, is involved in the proposed improvement; and

(c) what share of the expense, if any, should be borne by the United States.

One difference between the 1930 and 1945 Acts merits note. In authorizing investigations, the latter Act specifies that they be made with a view not only to preventing erosion, but also to determining the most suitable methods for the "protection, restoration and development of beaches." Similarly, the 1945 Act gave the Board the added duty of publishing information concerning the "erosion and protection of beaches."

Moreover, Congress in 1946 enacted legislation directed specifically toward federal participation in the construction of works for protection of publicly owned shores and the encouragement of recreation, with this declaration of policy:<sup>102</sup>

with the purpose of preventing damage to public property and promoting and encouraging the healthful recreation of the people, it is hereby declared to be the policy of the United States to assist in the construction, but not the maintenance, of works for the improvement and protection against erosion by waves and currents of the shores of the United States that are owned by States, municipalities, or other political subdivisions: *Provided*, That the Federal contribution toward the construction of protective works shall not in any case exceed one-third of the total cost.

This law requires that the plan of protection be authorized by Congress.<sup>103</sup> Also, when the Chief of Engineers shall find that a shore-protection project has been constructed by a local governmental unit in accordance with authorized plans, he shall cause to be paid to such unit the amount authorized by Congress.<sup>104</sup>

<sup>102</sup> Act of August 13, 1946, § 1, 60 Stat. 1056, 33 U. S. C. 426e.

<sup>103</sup> *Id.*

<sup>104</sup> § 2, 60 Stat. 1056, 33 U. S. C., 426f.

## Sediment and Salinity Control

Legislative recognition of these aspects of development, utilization, and conservation of water resources has been infrequent and usually indirect.

Siltation of reservoirs may drastically curtail the useful life of a dam, and interfere with the navigability of waterways.<sup>105</sup> This has been indirectly recognized in extensive legislation for the protection and improvement of navigable waters by the Army Engineers,<sup>106</sup> and more recently and more directly in legislation for erosion control.<sup>107</sup> But sediment's direct impact on developmental programs has otherwise received infrequent attention in statutes of general application. In a number of instances, Congress has authorized particular river-development works in accordance with plans of the Army Engineers and of the Bureau of Reclamation, which take heed of the effect of sedimentation and the need for its control.<sup>108</sup>

Significant also is the duty of the California Débris Commission to adopt such plans as will improve the navigability of the rivers of the Sacramento and San Joaquin systems, deepen their channels, and protect their banks.<sup>109</sup> The plans must be matured with a view to making them effective as against the encroachment of and damage from "débris resulting from mining operations, natural erosion, or other causes."<sup>110</sup>

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<sup>105</sup> In this connection, see *A STUDY OF METHODS USED IN MEASUREMENT AND ANALYSIS OF SEDIMENT LOADS IN STREAMS*, FIARBC, Interdepartmental Committee, p. 11 (1948). See also *INVENTORY OF PUBLISHED AND UNPUBLISHED SEDIMENT-LOAD DATA IN THE UNITED STATES*, FIARBC, Sedimentation Bulletin No. 1 (1949); *PROCEEDINGS OF THE FEDERAL INTER-AGENCY SEDIMENTATION CONFERENCE*, United States Department of the Interior (January 1948).

<sup>106</sup> See *supra*, pp. 87-112.

<sup>107</sup> See *infra*, pp. 366-372.

<sup>108</sup> See, e. g., Fort Peck Project (Act of May 18, 1938, 52 Stat. 403, as amended, 16 U. S. C. 833-833p; Sen. Doc. No. 191, 78th Cong., 2d sess., p. 107, 1944); Boulder Canyon Project (Act of December 21, 1928, 45 Stat. 1057, as amended, 43 U. S. C. 617-617t; Sen. Rep. No. 592, 70th Cong., 1st sess., p. 18, 1928). See also proposed Central Arizona Project (Sen. Rep. No. 832, 81st Cong., 1st sess., pp. 14-15, 1949).

<sup>109</sup> Act of March 1, 1893, § 4, 27 Stat. 507, 33 U. S. C. 664.

<sup>110</sup> *Id.*

Further, the Commission is authorized to make surveys to determine the utility and practicability of storage sites for the storage of debris or water, or as settling reservoirs, with the object of using them to aid in the improvement and protection of the rivers by preventing deposits therein of "debris resulting from mining operations, natural erosion, or other causes."<sup>111</sup>

Legislative attention has also been directed to the need for salinity control. One example is afforded by the authorization of the California Central Valley Project, which includes measures to prevent damage from salt water intrusion.<sup>112</sup> A more recent instance is the proposed Central Arizona Project, approved by the Senate but not by the House during the second session of the Eighty-first Congress.<sup>113</sup> A significant aspect of the proposal concerned the irrigation measures claimed to be necessary for preventing destruction of soil productivity through deposition of salts.<sup>114</sup>

Finally, the 1950 Flood Control Act authorizes a comprehensive study of the Arkansas, White, and Red River Basins with a view to beneficial development and utilization of water resources, including consideration of "recreation uses, salinity and sediment control and pollution abatement."<sup>115</sup>

## Pollution Control

Until recently, the general desire for clean waters has received specific recognition in federal legislation only so far as pollution might interfere with navigation. The earlier legislative enactments dealing with refuse matter and designed to protect navigation have already been set forth in

<sup>111</sup> § 5, 27 Stat. 507, 33 U. S. C. 665.

<sup>112</sup> Act of August 26, 1937, § 2, 50 Stat. 844, 850.

<sup>113</sup> S. 75, 81st Cong., 1st Sess. (1949).

<sup>114</sup> H. Doc. No. 136, 81st Cong., 1st sess., p. 149 (1949). See also, concerning prevention of intrusion of sea waters Mermentau River and Tributaries, and Gulf Intracoastal Waterway (Sen. Doc. No. 231, 79th Cong., 1st sess., pp. 6, 23, 1945); Sacramento River (Sen. Doc. No. 142, 79th Cong., 2d sess., pp. 31-32, 1946); Inland Waterway in Vicinity of Fairfield, N. C. (H. Doc. No. 723, 80th Cong., 2d sess., pp. 22, 33-34, 1948).

<sup>115</sup> Act of May 17, 1950, § 205, 64 Stat. 163, —.

some detail.<sup>116</sup> Likewise, we have referred to the more recent authorization for the Fish and Wildlife Service and the Bureau of Mines to investigate pollution in relation to wildlife.<sup>117</sup> In the main, those statutes skirt the fringes of the real pollution problem as it is commonly understood in association with sewage and industrial waste.

At the same time, it is generally accepted that pollution does or may interfere with use of water resources for purposes of water supply, irrigation, recreation, and fish and wildlife. Repeated attempts to obtain federal legislation for control or abatement of pollution nevertheless met failure. Although since 1944 the Surgeon General has been empowered to conduct research relating to water purification, sewage treatment, and pollution of lakes and streams,<sup>118</sup> not until 1948 did Congress enact general legislation moving in the direction of control and abatement.

Enacting the Water Pollution Control Act in that year, Congress said:<sup>119</sup>

in connection with the exercise of jurisdiction over the waterways of the Nation and in consequence of the benefits resulting to the public health and welfare by the abatement of stream pollution, it is hereby declared to be the policy of Congress to recognize, preserve, and protect the primary responsibilities and rights of the States in controlling water pollution, to support and aid technical research, to devise and perfect methods of treatment of industrial wastes which are not susceptible to known effective methods of treatment, and to provide Federal technical services to State and interstate agencies and to industries, and financial aid to State and interstate agencies and to municipalities, in the formulation and execution of their stream pollution abatement programs.

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<sup>116</sup> See *supra*, pp. 118-119.

<sup>117</sup> See *supra*, p. 330.

<sup>118</sup> Act of July 1, 1944, § 301, 58 Stat. 682, 691, as amended, 42 U. S. C. 241.

<sup>119</sup> Act of June 30, 1948, § 1, 62 Stat. 1155, as amended, 33 U. S. C. 466 (Supp. III).

Responsibility for administration of the program rests with the Surgeon General of the Public Health Service. In cooperation with federal agencies, state agencies, interstate agencies, and with the municipalities and industries involved, he must prepare comprehensive programs "for eliminating or reducing the pollution of interstate waters and tributaries thereof and improving the sanitary condition of surface and underground waters."<sup>120</sup> Due regard must be given to improvements necessary to conserve waters for "public water supplies, propagation of fish and aquatic life, recreational purposes, and agricultural, industrial, and other legitimate uses."<sup>121</sup>

The Surgeon General is directed to collect and disseminate information relating to water pollution and its prevention and abatement, to support and aid certain technical research, and to make available the results of specified work conducted by him and cooperating agencies. Moreover, he must encourage cooperative state action, enactment of uniform state laws, and compacts between states.<sup>122</sup> Blanket consent of Congress is given for negotiation of interstate compacts for prevention and abatement of pollution, and for establishment of agencies to make such compacts effective.<sup>123</sup> To this date there has been no approval of such a compact by Congress, a concluding step required under the Act.<sup>124</sup>

<sup>120</sup> § 2(a), 62 Stat. 1155, 33 U. S. C. 466a(a) (Supp. III).

<sup>121</sup> *Id.*

<sup>122</sup> § 2(b), 62 Stat. 1156, 33 U. S. C. 466a(b) (Supp. III). In this connection, it should be noted that the Public Health Service has recently prepared a suggested state law for water-pollution control which the Council of State Governments endorsed and recommended to the states for favorable consideration. A SUGGESTED STATE WATER POLLUTION CONTROL ACT, and accompanying Explanatory Statement, prepared in the Federal Security Administration by the Public Health Service, October 1950.

<sup>123</sup> § 2(c), 62 Stat. 1156, 33 U. S. C. 466a(c) (Supp. III).

<sup>124</sup> Apart from the Act, it should be noted, however, that several compacts for the control and abatement of pollution have been negotiated. See Tri-State Compact (Connecticut, New Jersey, and New York, Act of August 27, 1935, 49 Stat. 932); Red River of the North Compact (Minnesota, North Dakota, and South Dakota, Act of April 2, 1938, 52 Stat. 150); Ohio River Valley Water Sanitation Compact (Illinois, Indiana, Kentucky, New York, Ohio, Pennsylvania, Tennessee, Virginia, and West Virginia, Act of July 11, 1940, 54 Stat. 752); Potomac River Compact (District of Columbia, Maryland, Pennsylvania, Virginia, and West Virginia, Act of July 11, 1940, 54

Elaborate provisions are prescribed for administrative and legal action.<sup>125</sup> The pollution of interstate waters endangering the health or welfare of persons in a state "other than that in which the discharge originates" is declared by the statute to be a "public nuisance." Whenever the Surgeon General finds such a nuisance occurring, he must give notice to the pollutor and inform the water-pollution agency of the state where the discharge originates. Such notice may outline "recommended" remedial measures. If action "calculated to secure abatement" is not commenced within the prescribed time, this failure must be brought to the attention of the pollutor and the state agency. This second notice to the state agency "may" be accompanied by a recommendation that it initiate suit to abate the pollution.

If the pollution continues and the state fails to act, the Federal Security Administrator may initiate a hearing before a board of five or more persons appointed by him to hear evidence and make recommendations. After reasonable opportunity to the pollutor for compliance with the board's recommendations, the Administrator may, with the "consent" of the water-pollution agency "of the state or states in which the matter causing or contributing to the pollution is discharged," request the Attorney General to initiate suit to secure abatement of the pollution. In which event, it is provided that the court, "giving due consideration to the practicability and to the physical and economic feasibility of securing abatement of any pollution proved," may enter such judgment and orders "as the public interest and equities of the case may require."

The Act makes no provision for enforcement action if consent is not forthcoming from the state where the pollution originates, irrespective of the damage or danger to other states.

In addition to the foregoing, a program of financial assistance is provided. Loans may be made by the Federal Security Administrator to any state, municipality, or interstate agency

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Stat. 748) ; New England Interstate Water Pollution Control Compact (Connecticut, Massachusetts, New York, Rhode Island, and Vermont, Act of July 31, 1947, 61 Stat. 682).

<sup>125</sup> § 2(d), 62 Stat. 1156, 33 U. S. C. 466a(d) (Supp. III).

for the construction of treatment works to prevent the discharge by such state or municipality of untreated or inadequately treated sewage or other waste into interstate waters or tributaries.<sup>128</sup> For this purpose, the statute authorizes appropriation of \$22,500,000 annually in the 1948-1953 period.<sup>127</sup> But no funds have yet been appropriated for this purpose.

A similar authorization of \$1,000,000 per year is included for payments to states for conducting investigations, research, surveys, and studies related to the prevention and control of water pollution caused by "industrial wastes."<sup>128</sup> And a like authorization for a sum of \$1,000,000 is provided for grants to states, municipalities, or interstate agencies to finance engineering, architectural, and economic investigations and other actions preliminary to construction of projects approved by the state agency and the Surgeon General.<sup>129</sup> Noteworthy also is an authorization of appropriations for the erection of research facilities at Cincinnati, Ohio, for the use of the Public Health Service.<sup>130</sup>

Because of its importance both to the subject of pollution and the possibility of its control through interstate compact, reference is made here to the recent decision by the Supreme Court of Appeals in West Virginia, in the case of *State ex rel. Dyer v. Sims*, already discussed in some detail.<sup>131</sup>

### Collection of Basic Data

Successful and efficient water-resource development programs depend in part upon adequate and reliable data. This includes general information such as that relating to population, housing, farming, manufacturing, foreign trade, and commerce collected by the Bureau of the Census and the Bureau of Foreign and Domestic Commerce, as well as data more

<sup>128</sup> § 5, 62 Stat. 1158, as amended, 33 U. S. C. 466d (Supp. III), Reorganization Plan No. 16 effective May 24, 1950.

<sup>127</sup> § 7, 62 Stat. 1159, 33 U. S. C. 466f (Supp. III).

<sup>128</sup> § 8(a), 62 Stat. 1159, as amended, 33 U. S. C. 466g(a) (Supp. III).

<sup>129</sup> § 8(c), 62 Stat. 1159, as amended, 33 U. S. C. 466g(c) (Supp. III).

<sup>130</sup> § 8(b), 62 Stat. 1159, as amended, 33 U. S. C. 466g(b) (Supp. III).

<sup>131</sup> 133 W. Va. —, 58 S. E. 2d 766, decided April 4, 1950; see *supra*, pp. 68-70.



directly pertinent to water-resource programs. To enable collection of data, Congress has legislated extensively.

In the first place, in discussing the operations of the Army Engineers and the Bureau of Reclamation, we noted in some detail legislative provisions whereby each makes its own investigations and surveys in the preparation of projects.<sup>132</sup> Similarly, we referred to the broad investigative authority conferred upon the Federal Power Commission for the collection of data valuable in both federal and nonfederal development. In addition, Congress has made provision for collection of data by a number of other agencies.

**GEOLOGICAL SURVEY.**—Created by Congress in 1879, the Geological Survey was assigned responsibility for the “classification of public lands and examination of the Geological Structure, mineral resources, and products of the national domain.”<sup>133</sup> Under an 1888 act, funds were appropriated for an investigation by the Survey of the arid regions of the United States for “the selection of sites for reservoirs and other hydraulic works necessary for the storage and utilization of water for irrigation and the prevention of floods and overflows.”<sup>134</sup> In an 1894 statute, Congress made funds available to it for “gauging the streams and determining the water supply of the United States, including the investigation of underground currents and artesian wells in arid and semiarid sections.”<sup>135</sup> Subsequent appropriation acts made provisions for the gauging of streams, determining of water supply of the United States, and publishing of reports.<sup>136</sup> A 1942 statute authorizes the Secretary of the Interior to acquire lands or interests therein for use by the Geological Survey in gauging streams.<sup>137</sup>

Classification of public-domain lands as sites valuable for power purposes is a function of the Geological Survey under

<sup>132</sup> See *supra*, pp. 91-95, 134-135, 187-192.

<sup>133</sup> Act of March 3, 1879, § 1, 20 Stat. 377, 394, 43 U. S. C. 31.

<sup>134</sup> Act of October 2, 1888, 25 Stat. 505, 526, as amended, 43 U. S. C. 662.

<sup>135</sup> Act of August 18, 1894, 28 Stat. 372, 398.

<sup>136</sup> Act of June 11, 1896, 29 Stat. 413, 436; Act of May 16, 1902, 32 Stat. 741, as amended, 44 U. S. C. 260.

<sup>137</sup> Act of December 24, 1942, 56 Stat. 1066, 43 U. S. C. 36b.

its 1879 authorization and a supplemental order of the Secretary of the Interior.<sup>138</sup> Such a classification operates as a withdrawal of the lands from all forms of entry under the public land laws, subject to the provisions of Section 24 of the Federal Power Act.<sup>139</sup>

**WEATHER BUREAU.**—Undertaking certain functions previously performed by the Signal Corps of the United States Army,<sup>140</sup> the Weather Bureau was established by Congress in 1890 within the Department of Agriculture.<sup>141</sup> In 1940, the Bureau was transferred to the Department of Commerce, where the following functions are performed under the direction of its Chief: <sup>142</sup>

the forecasting of weather, the issue of storm warnings, the display of weather and flood signals for the benefit of agriculture, commerce, and navigation, the gauging and reporting of rivers, the maintenance and operation of sea-coast telegraph lines and the collection and transmission of marine intelligence for the benefit of commerce and navigation, the reporting of temperature and rain-fall conditions for the cotton interests, the display of frost and cold-wave signals, the distribution of meteorological information in the interests of agriculture and commerce, and the taking of such meteorological observations as may be necessary to establish and record the climatic conditions of the United States, or as are essential for the proper execution of the foregoing duties.

In addition, we have already referred to the 1938 statutory provision for establishment by the Weather Bureau of a cur-

<sup>138</sup> Act of March 3, 1879, § 1, 20 Stat. 377, 394, see 43 U. S. C. 31; Department of the Interior Order No. 2333, June 20, 1947, 12 F. R. 4025.

<sup>139</sup> Act of June 10, 1920, § 24, 41 Stat. 1063, 1075, as amended, 16 U. S. C. 818 (Supp. III).

<sup>140</sup> Act of October 1, 1890, § 1, 26 Stat. 653.

<sup>141</sup> *Id.*, see 15 U. S. C. 311-324.

<sup>142</sup> § 3, 26 Stat. 653, as amended, 15 U. S. C. 313. See 1940 Reorganization Plan No. IV, § 8, effective June 30, 1940, following 5 U. S. C. 133t; see 15 U. S. C. 311 note following.

rent information service on precipitation, flood forecasts, and warnings.<sup>143</sup>

**COAST AND GEODETIC SURVEY.**—Operating under an 1807 statute authorizing a survey of the coasts of the United States, including islands and shoals, with roads or places of anchorage, within twenty leagues of any part of the shores of the United States, the Coast and Geodetic Survey is the oldest of the data-collection agencies.<sup>144</sup> Functioning within the Department of Commerce, the Coast and Geodetic Survey is authorized to conduct various hydrographic and topographic surveys of coastal water and land areas, as well as inland waters the survey of which is not otherwise provided for by statute.<sup>145</sup> Also, it may conduct tide and current observations, geodetic-control surveys, field surveys for aeronautical charts, and measurements, investigations, and observations for determination of variation in latitude and longitude.<sup>146</sup> These authorizations Congress enacted:<sup>147</sup>

to provide charts and related information for the safe navigation of marine and air commerce, and to provide basic data for engineering and scientific purposes and for other commercial and industrial needs.

**DEPARTMENT OF AGRICULTURE.**—Several agencies within the Department of Agriculture are concerned with the collection of basic data.

Under the Soil Conservation and Domestic Allotment Act, the Soil Conservation Service is authorized:<sup>148</sup>

to conduct surveys, investigations, and research relating to the character of soil erosion and the preventive measures needed, to publish the results of any such surveys, investigations, or research, to disseminate information concerning such methods and to conduct

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<sup>143</sup> See *supra*, p. 146.

<sup>144</sup> Act of February 10, 1807, 2 Stat. 413.

<sup>145</sup> Act of August 6, 1947, § 1, 61 Stat. 787, 33 U. S. C. 883a (Supp. III).

<sup>146</sup> *Id.*

<sup>147</sup> *Id.*

<sup>148</sup> Act of April 27, 1935, § 1, 49 Stat. 163, 16 U. S. C. 590a(1).

demonstrational projects in areas subject to erosion by wind or water.

The portion of that Act administered by the Production and Marketing Administration contains additional authority relevant here. For it authorizes surveys, investigations, and research relating to the preservation and improvement of soil fertility, the promotion of economic use and conservation of land; diminution of exploitation and wasteful and unscientific use of national soil resources; and the protection of rivers and harbors against the results of soil erosion in aid of maintaining the navigability of waters and water courses and in aid of flood control.<sup>149</sup>

Also, we have recently referred to the jurisdiction of the Department of Agriculture over federal investigations of watersheds and measures for run-off and water-flow retardation and soil-erosion prevention on watersheds.<sup>150</sup> In predominantly farmland areas, these investigations and measures are carried out by the Soil Conservation Service.<sup>151</sup> The Forest Service conducts similar work concerning the national forests.<sup>152</sup>

Under the Bankhead-Jones Farm Tenant Act, the Secretary of Agriculture is authorized to conduct certain surveys and investigations pertaining to soil erosion, mitigation of floods, impairment of reservoirs, surface and subsurface, moisture, and the protection of watersheds of navigable streams.<sup>153</sup>

In connection with the collection of agricultural data by agencies within the Agricultural Research Administration, it is pertinent to note that the Bureau of Plant Industry, Soils, and Agricultural Engineering conducts research in plant breeding and production and improvement of soils.<sup>154</sup>

<sup>149</sup> Act of February 29, 1936, § 1, 49 Stat. 1148, as amended, 16 U. S. C. 590g(a), 590i.

<sup>150</sup> See *supra*, pp. 316-317.

<sup>151</sup> See *supra*, p. 316 and *infra*, p. 377.

<sup>152</sup> See *infra*, p. 377.

<sup>153</sup> Act of July 22, 1937, §§ 31, 47, 50 Stat. 525, 531, as amended, 7 U. S. C. 1010, 1021.

<sup>154</sup> See Act of March 2, 1901, 31 Stat. 922, 926; Act of May 17, 1935, 49 Stat. 247, 258; Reorganization Plan No. 1, effective July 1, 1947; Secretary of Agriculture Memorandum No. 1197, July 1, 1947.

Other work conducted by this Bureau includes studies of basic physical and chemical properties of soil, and studies of microscopic plant and animal life in the soil and their effect on crops, methods of cultivation, irrigation, and crop rotation.

Additional authority of general importance here stems from the Research and Marketing Act of 1946.<sup>155</sup> It authorizes the Secretary of Agriculture "to conduct and to stimulate research under the laws and principles underlying the basic problems of agriculture in its broadest aspects, including but not limited to: \* \* \* research relating to conservation, development and use of land, forest and water resources for agricultural purposes."

TENNESSEE VALLEY AUTHORITY.—Exceptionally broad is TVA's authority for the collection of basic data. The President is authorized, by such means or methods as he may deem proper, to make such surveys of and general plans for the Tennessee River Basin and adjoining territory as may be useful in guiding and controlling the extent, sequence, and nature of development for the general purpose of fostering an orderly and proper physical, economic, and social development of the area.<sup>156</sup>

RECENT PROPOSALS.—Two bills introduced in the Eighty-first Congress merit notice here. First, the National Water-Resources Basic Data Act of 1950 would:<sup>157</sup>

establish a comprehensive and adequate basic-data program in water resources and provide for its maintenance in order that the full potential of the Nation's water resources may be developed for all beneficial uses and that there may be adequate hydrologic and geologic data for the effective control, prevention, or reduction of the harmful or destructive powers of water.

Under this bill, the activities of the Weather Bureau and the Geological Survey would be greatly accelerated to complete this task within three years.

<sup>155</sup> Act of August 14, 1946, 60 Stat. 1082, as amended, 7 U. S. C. 427 *et seq.*

<sup>156</sup> Act of May 18, 1933, § 22, 48 Stat. 58, 69, 16 U. S. C. 831u.

<sup>157</sup> H. R. 6257, 81st Cong., 2d sess. (1950).

The second bill is the National Surveying and Mapping Act of 1950, which would: <sup>158</sup>

establish accelerated programs of topographic, geologic, geodetic, soil, and hydrographic surveying and mapping of the United States, its Territories and possessions and offshore areas, and the cadastral surveying of the public domain and other Federal public lands.

This program would be accomplished through expansion of work already undertaken by various basic-data agencies within the Departments of Agriculture, Commerce, and the Interior.

### Summary

In the course of legislating for such "primary" purposes as navigation or irrigation, Congress has incidentally provided for a number of additional public purposes. Still other related public purposes have received separate legislative attention.

Provision has been made for federal drainage activities as parts of major programs for flood control, soil conservation, and irrigation. Similarly, most enactments providing for water supply for domestic, municipal, industrial, and stock-watering purposes have evolved as incidents of multiple-purpose programs of development for "primary" purposes.

Both separate and incidental attention has been paid to protection of fish and wildlife. For this purpose, provision is made for federal assistance to and cooperation with state and local agencies. Procedures are also prescribed to assure consideration of this purpose in development of water-resource projects.

In the case of some but not all federal projects, express provision is made for recreational uses. Other provisions enable recreational uses of areas in national parks and forests.

Still other statutes establish procedures for federal participation in shore-protection investigations and in construction

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<sup>158</sup> H. R. 6900, 81st Cong., 2d sess. (1950). In connection with H. R. 6257 and H. R. 6900, see H. Doc. No. 706, 81st Cong., 2d sess. (1950).

of works of improvement. An express purpose of a 1946 act is the prevention of damage to public property and encouragement of healthful recreation. Under it, federal contribution is permitted but may not exceed one-third of total cost.

The need for sediment and salinity control has been recognized in statutes providing for navigation improvement, flood control, irrigation, and soil conservation.

Recently, Congress has enacted a separate program concerning pollution. It seeks to encourage cooperative state action and authorizes some financial assistance. Under the act, measures to enforce abatement of pollution are contingent upon state consent.

A number of statutes authorize collection of basic data as continuing functions of several different federal agencies. These authorizations are in addition to those enabling collection of basic data by the federal construction agencies in the discharge of their statutory responsibilities.

# Related Land Uses

{ The natural interdependence of land and water has been accorded increasing recognition in federal legislative and administrative action. As we have seen, Congress has enacted many laws directed squarely at development, utilization, and conservation of water resources. In addition, it has adopted numerous statutes which, although often referred to as land-use measures, are either expressly aimed at water and land as inseparable resources, or are adaptable to serving both simultaneously. Our purpose here will be to review the more significant of these laws as they deal with such express or implied relationships.

In varying degrees, these statutes share in the fundamental concept that the manner in which land is used directly affects our Nation's water resources. To cite a common example—soil erosion results from, among other causes, such improper use of lands as the destruction of timber, grass, or other protective cover, or from the failure to maintain such cover. Erosion in turn leads to sedimentation of streams, with such harmful results as the curtailing of the useful life of reservoirs and impairing of navigation.}

Land-use legislation has been bottomed on several constitutional bases.<sup>1</sup> Under the Proprietary Clause, the Federal Government has authority to make rules respecting its own lands. It was this authority which was principally invoked in early legislative recognition of the effect of use of land upon water resources. In other instances, such legislation has rested upon commerce authority, tying protection of watersheds to the navigability of streams. An increasing number of land-use programs in recent years involve employment of the power to extend federal funds both to encourage private action to protect

<sup>1</sup> See *supra*, pp. 8-29, 29-54, 57-58.



lands, and to enable federal acquisition of nonfederal lands for proprietary and remedial management.

These laws are the cumulative result of an evolutionary development for over a half century.<sup>2</sup> At the outset, we shall note an 1893 statute which stands apart from all the others in that it applies mandatory restrictions as to specified uses of certain nonfederal lands. Apart from this enactment, federal land-use legislation until the early thirties was concerned almost entirely with forest lands, and principally with forest lands of the United States. Beginning in 1891, Congress took positive action to protect forest lands in the public domain, an action much later extended to other public-domain lands. Other early legislation relevant here concerns national parks and Indian lands. Also important are the direct ties between land and water established early in reclamation legislation, previously considered.<sup>3</sup>

| During the period between 1933 and 1938, however, Congress adopted a number of laws marking a sharp turn in federal interest in use of land as related to water-resource objectives. Many of these measures were initially directed toward relief of unemployment and remedy of social conditions. But they also sought proper land use with corresponding benefits to water resources.<sup>4</sup> In addition, most of these statutes were designed to apply to nonfederal lands as well as to lands of the United States. Some launched programs for federal acquisition of lands and their proprietary management, with varying arrangements for return to private use. A number of them treat land and water resources jointly and inseparably. | Among the programs initiated during this period, we shall consider the TVA

<sup>2</sup> See generally: UNITED STATES DEPARTMENT OF AGRICULTURE YEAR BOOK, pp. 403-404 (1940); Gaus-Wolcott, PUBLIC ADMINISTRATION AND THE UNITED STATES DEPARTMENT OF AGRICULTURE, p. 25 *et seq.* (1940); Van Hise, THE CONSERVATION OF NATURAL RESOURCES IN THE UNITED STATES, p. 214 (1910); AMERICAN CONSERVATION, The American Forestry Association, pp. 46-53, 130-131 (1941); Gustafson, Guise, Hamilton, and Ries, CONSERVATION IN THE UNITED STATES, pp. 249-271 (1949).

<sup>3</sup> See *supra*, pp. 151-258.

<sup>4</sup> Gaus-Wolcott, PUBLIC ADMINISTRATION AND THE UNITED STATES DEPARTMENT OF AGRICULTURE, pp. 142-144 (1940).

program; two national soil-conservation programs; a program for retirement of submarginal lands; the flood-control activities of the Department of Agriculture; and the 1939 program for small water-conservation and utilization projects. Finally, we shall summarize briefly the indirectly relevant but important provisions made for credit facilities, and the extensive and much earlier provisions made for research and education.

### California Débris Commission

Created by Congress in 1893, this Commission has regulatory jurisdiction over hydraulic mining to the extent that it affects navigable waters in the territory drained by the Sacramento and San Joaquin River systems.<sup>5</sup> The legislative outline of the duties and responsibilities of the Commission, discussed earlier, shows an awareness of the direct tie between land-use practices and their influence upon water resources.<sup>6</sup> As a prerequisite to certain mining operations, proprietors of mining land within the Commission's jurisdiction must file with it a petition setting forth facts required by the statute and the rules of the Commission.<sup>7</sup> Moreover, the duties of the Commission contemplate protective measures against encroachment of and damage from débris resulting not only from mining operations, but also from "natural erosion or other causes."<sup>8</sup> Intentional violations of Commission orders directing the methods of mining operations are subject to prescribed penalties.<sup>9</sup>

The regulatory land-use aspects of this legislation distinguish it sharply from all other federal land-use legislation, as we shall see.<sup>10</sup>

<sup>5</sup> Act of March 1, 1893, 27 Stat. 507, 33 U. S. C. 661-685.

<sup>6</sup> See *supra*, pp. 119-120.

<sup>7</sup> § 9, 27 Stat. 508, 33 U. S. C. 669.

<sup>8</sup> § 4, 27 Stat. 507, 33 U. S. C. 664.

<sup>9</sup> § 19, 27 Stat. 510, 33 U. S. C. 679.

<sup>10</sup> It may be noted, however, that Congress has prescribed certain penalties for setting fire to timber or other inflammable material upon the public domain, and also for building and failing to extinguish totally a fire in or near forest lands owned or under the jurisdiction of the United States. Act of March 4, 1909, §§ 52, 53, 35 Stat. 1088, 1098, 18 U. S. C. 106-107.

## Forest Land Legislation

Prior to 1891 congressional action respecting the public lands was largely limited to the objective of placing such lands in private ownership.<sup>11</sup> To mention a few illustrations, disposal was the ultimate goal of the Preemption Act of 1841, the Homestead Act of 1862, the Desert Land Act of 1877, and the Timber and Stone Act of 1878.<sup>12</sup> Moreover, while some contemporary legislation was adopted affecting forested public-domain lands, it was largely concerned with timber supply, and without regard for land conservation or the effect of tree cover on watershed protection.<sup>13</sup>

**NATIONAL FORESTS.**—Against this background, significance attaches to legislation providing for the creation of national forests, now administered by the Secretary of Agriculture.<sup>14</sup> In 1891, Congress authorized the President to establish forest reserves out of specified lands in the public domain.<sup>15</sup> Legislation adopted in 1897 laid the basis for filling in the details of administration for the national forests thus created.<sup>16</sup> The

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<sup>11</sup> UNITED STATES DEPARTMENT OF AGRICULTURE YEAR BOOK, p. 472 (1940); AMERICAN CONSERVATION, The American Forestry Association, pp. 31-33 (1941).

<sup>12</sup> Act of September 4, 1841, 5 Stat. 453; Act of May 20, 1862, 12 Stat. 392; Act of March 3, 1877, 19 Stat. 377, as amended, 43 U. S. C. 321-323; Act of June 3, 1878, 20 Stat. 89, as amended, 43 U. S. C. 311-313. See also Ise, UNITED STATES FOREST POLICY, pp. 49-61 (1920).

<sup>13</sup> See, e. g., Act of March 3, 1873, 17 Stat. 605; Act of March 13, 1874, 18 Stat. 21; Act of June 3, 1878, 20 Stat. 89, as amended, 43 U. S. C. 311-313.

<sup>14</sup> Administration of forest reservations, originally vested in the Secretary of the Interior, was transferred to the Secretary of Agriculture in 1905. Act of February 1, 1905, § 1, 33 Stat. 628, 16 U. S. C. 472. Congress had theretofore provided funds for a division of forestry in the Department of Agriculture. Act of June 30, 1886, 24 Stat. 100, 103.

Public management of publicly owned forested lands was not a new idea, however. The State of New York, for example, had made provision in 1885 for State management of forested lands, creating the Adirondack and Catskill Parks. MCKINNEY'S CONSOLIDATED LAWS OF NEW YORK, Bk. 10, § 63 and note following.

<sup>15</sup> Act of March 3, 1891, § 24, 26 Stat. 1095, 1103, as amended, 16 U. S. C. 471.

<sup>16</sup> Act of June 4, 1897, 30 Stat. 11, 34-36, as amended, 16 U. S. C. 473, 475-482, 551.

history of the 1891 Act reveals references during debate in the House to the desirability of withdrawing forested public lands from entry in order, among other things, to restrain floods and to protect water supply and stream flow.<sup>17</sup> But express recognition of this purpose does not appear in the statute. On the other hand, the 1897 statute specifically prohibits establishment of national forests except to improve and protect the forests within the boundaries, "or for the purpose of securing favorable conditions of water flows," or to furnish a continuous timber supply.<sup>18</sup>

In view of the announced purpose of "securing favorable conditions of water flows," importance attaches to the authority for the issuance of rules and regulations "for the use and occupation" of national forests and the sale of products therefrom.<sup>19</sup> For this authority has formed the basis for the prescribed methods of management of national forests, including those designed to effectuate the Act's purpose to secure "favorable conditions of water flows."<sup>20</sup>

Noteworthy also is the inclusion in the 1897 statute of a provision that:<sup>21</sup>

All waters on such reservations may be used for domestic, mining, milling, or irrigation purposes, under the laws of the State wherein such forest reservations are situated, or under the laws of the United States and the rules and regulations established thereunder.

The 1891 and 1897 laws made provision for national forests only in the Western States since they applied only as to the public domain.

<sup>17</sup> 21 CONG. REC. 2537-2538 (1890) ; 22 CONG. REC. 3613-3614, 3616 (1891).

<sup>18</sup> Act of June 4, 1897, 30 Stat. 11, 35, 16 U. S. C. 475.

<sup>19</sup> Act of June 7, 1924, § 9, 43 Stat. 653, 655, 16 U. S. C. 471 (b).

<sup>20</sup> 36 C. F. R. 211.1-261.15.

<sup>21</sup> 30 Stat. 11, 36, 16 U. S. C. 481. In 1944, Congress authorized appropriations for expenditures by the Forest Service for the "investigation and establishment of water rights, including the purchase thereof or of lands or interests in lands or rights-of-way for use and protection of water rights necessary or beneficial in connection with the administration and public use of the national forests." Act of September 21, 1944, § 213, 58 Stat. 734, 737, 16 U. S. C. 526.

**WEEKS LAW.**—The Weeks Law of 1911 marked an important step in the evolution of land-use policy in that it laid the foundation for a federal forest program on a truly national basis.<sup>22</sup> To this end, it provided broadly for federal acquisition of lands in watersheds of navigable streams for the purpose of managing them as a part of and in the same manner as national forests. In so doing, this statute marked another step away from the earlier legislative encouragement of disposition of public lands into private ownership.

The National Forest Reservation Commission, established by the Weeks Law, consists of the Secretaries of the Army, the Interior, and Agriculture, two members of the Senate, and two members of the House of Representatives.<sup>23</sup> Approval by this Commission is prerequisite to the purchase of lands recommended by the Secretary of Agriculture, who is authorized and directed to recommend for purchase:<sup>24</sup>

such forested, cut-over, or denuded lands within the watersheds of navigable streams as in his judgment may be necessary to the regulation of the flow of navigable streams or for the production of timber \* \* \*

Before the purchase of any lands, they must be examined by the Secretary of Agriculture in cooperation with the Director of the Geological Survey and a report made by them to the Commission showing that federal control of such lands "will promote or protect the navigation of streams."<sup>25</sup> Or a report by the Secretary of Agriculture showing that such control will promote the production of timber thereon.<sup>26</sup>

This legislation prohibits the purchase of lands until the legislature of the state in which the lands lie shall have con-

<sup>22</sup> Act of March 1, 1911, 36 Stat. 961, as amended, 16 U. S. C. 480, 500, 513-519, 521, 552, 563. It should be noted here that Senator Newlands unsuccessfully sought to effect a still closer legislative tie between land and water by amending the bill which became the Weeks Law to incorporate his proposal for a Waterways Commission. See *infra*, p. 404.

<sup>23</sup> § 4, 36 Stat. 962, as amended, 16 U. S. C. 513.

<sup>24</sup> §§ 4, 6, 36 Stat. 962, as amended, 16 U. S. C. 513, 515.

<sup>25</sup> § 6, 36 Stat. 962, as amended, 16 U. S. C. 515.

<sup>26</sup> *Id.*

sented to federal acquisition "for the purpose of preserving the navigability of navigable streams."<sup>27</sup>

The blanket consent of Congress is granted to the states to enter into compacts not in conflict with any law of the United States, "for the purpose of conserving the forests and the water supply of the States entering into such" compact.<sup>28</sup> Although this is apparently the earliest complete blanket authorization given by Congress in advance for joint state action, no record has been found of compacts consummated expressly pursuant to this provision.<sup>29</sup>

Amendments and supplements to the Weeks Law provide for the acquisition of lands for timber production,<sup>30</sup> for exchange of land for land or timber,<sup>31</sup> and for acquisition of lands for flood-control or soil-erosion prevention.<sup>32</sup>

**CLARKE-McNARY ACT.**—In 1924, Congress authorized and directed the Secretary of Agriculture, in cooperation with representatives of states or of suitable agencies, to recommend such systems of forest-fire prevention and suppression as will adequately protect timbered and cut-over lands "with a view to the protection of forest and water resources" and the continuous production of timber on lands suitable therefor.<sup>33</sup> As amended, the Act directs that, in the cooperation extended to the states:<sup>34</sup>

due consideration shall be given to the protection of watersheds of navigable streams, but such cooperation

<sup>27</sup> § 7, 36 Stat. 962, as amended, 16 U. S. C. 516.

<sup>28</sup> § 1, 36 Stat. 961, 16 U. S. C. 552.

<sup>29</sup> In this connection, see Frankfurter and Landis, *The Compact Clause of the Constitution, A Study in Interstate Adjustments* 34 YALE L. J. 685, 743 (1925); Dodd, *Interstate Compacts*, 70 U. S. LAW REV. 557, 561 (1936).

<sup>30</sup> Act of June 7, 1924, § 6, 43 Stat. 653, 654, 16 U. S. C. 515.

<sup>31</sup> Act of March 3, 1925, 43 Stat. 1215, 16 U. S. C. 516. See Act of March 20, 1922, § 1, 42 Stat. 465, and § 2 as added by the Act of February 28, 1925, 43 Stat. 1090.

<sup>32</sup> Act of August 26, 1935, 49 Stat. 866; Act of May 11, 1933, 52 Stat. 347; Act of June 15, 1933, 52 Stat. 699; Act of June 25, 1933, 52 Stat. 1205, as amended by Act of May 26, 1944, 58 Stat. 227; Act of March 5, 1940, 54 Stat. 46; Act of June 11, 1940, 54 Stat. 297; Act of June 11, 1940, 54 Stat. 299; Act of June 17, 1940, 54 Stat. 402.

<sup>33</sup> Act of June 7, 1924, § 1, 43 Stat. 653, 16 U. S. C. 564.

<sup>34</sup> § 2, 43 Stat. 653, as amended, 16 U. S. C. 565 (Supp. III).

may, in the discretion of the Secretary of Agriculture, be extended to any timbered or forest-producing lands or watersheds from which water is secured for domestic use or irrigation within the cooperative States.

Provision is made for federal cooperation with the states in the production and distribution of forest-tree seeds and plants "for the purpose of establishing windbreaks, shelter belts, and farm wood lots upon denuded or nonforested lands within such cooperating States."<sup>35</sup> The Secretary of Agriculture is directed, in cooperation with certain state officials or in his discretion "with other suitable State agencies," to aid farmers in establishing and managing "woodlots, shelter belts, windbreaks and other valuable forest growth," and in harvesting and utilizing products thereof.<sup>36</sup> With the exception of preliminary investigations in the case of the latter provision, the federal expenditure may not exceed the amount of the state expenditure.<sup>37</sup>

This early program enabling federal assistance for conservation work on nonfederal lands has grown to large proportions. For example, \$9,500,000 was appropriated for the fiscal year 1951, indicating the expectancy of a like amount to be furnished by the states.<sup>38</sup>

**McSWEENEY-McNARY ACT.**—In the history of legislative attention to forest lands, a significant development was passage by Congress in 1928 of the McSweeney-McNary Act.<sup>39</sup> In providing for investigations, experiments, and tests by the Secretary of Agriculture, this Act expressly includes, among other forestry purposes, the determination of the best methods "of maintaining favorable conditions of water flow and the prevention of erosion."<sup>40</sup>

**SUSTAINED-YIELD MANAGEMENT.**—In legislation limited to certain federal timber lands in Oregon—the so-called "O and C lands"—Congress in 1937 provided for their sustained-yield

<sup>35</sup> § 4, 43 Stat. 654, as amended, 16 U. S. C. 567 (Supp. III).

<sup>36</sup> § 5, 43 Stat. 654, 16 U. S. C. 568 (Supp. III).

<sup>37</sup> §§ 4, 5, 43 Stat. 654, as amended, 16 U. S. C. 567, 568 (Supp. III).

<sup>38</sup> Act of September 6, 1950, 64 Stat. 595, —.

<sup>39</sup> Act of May 22, 1928, 45 Stat. 699, as amended, 16 U. S. C. 581-581L.

<sup>40</sup> § 1, 45 Stat. 699, 16 U. S. C. 581L.

management<sup>41</sup> by the Secretary of the Interior for specified purposes, including "protecting watersheds," and "regulating stream flow."<sup>42</sup>

A few years later, similar but broader principles appeared in legislation national in scope, the 1944 Sustained-Yield Forest Management Act.<sup>43</sup> In authorizing the Secretaries of Agriculture and the Interior to provide for cooperative sustained-yield forest management of lands under their respective jurisdictions together with privately owned forest land, Congress included among specified forestry objectives, the securing of the benefits of the forests: <sup>44</sup>

in maintenance of water supply, regulation of stream flow, prevention of soil erosion, amelioration of climate, and preservation of wildlife.

Both of these statutes, it should be observed, make provision for cooperative arrangements between the Federal Government and private owners for treatment of federal and nonfederal forested lands. Also, the 1944 Act accords a preference in timber-cutting privileges on federal lands to private owners who agree to carry out prescribed forest-conservation practices on their own lands.<sup>45</sup>

**COOPERATIVE FOREST MANAGEMENT ACT.**—The Secretary of Agriculture is authorized to cooperate with state forest officials to encourage the providing of technical services to private forest landowners and processors of primary forest products with

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<sup>41</sup> "As applied to a policy, method, or plan of forest management, means continuous production with the aim of achieving, in the earliest practicable time, an approximate balance between net growth and harvest, either by annual or somewhat longer periods." **FOREST TERMINOLOGY**, Society of American Foresters, p. 83 (1944).

<sup>42</sup> Act of August 28, 1937, 50 Stat. 874. The Oregon and California lands and Coos Bay Lands in Oregon were originally granted by the United States to a railroad company and to the State of Oregon, respectively, to promote the construction of a railroad and a military wagon road. Act of July 25, 1866, § 2, 14 Stat. 239; Act of March 3, 1869, § 1, 15 Stat. 340. Congress later cancelled these grants, and title was reverted in the United States. Act of June 9, 1916, 39 Stat. 218, and Act of February 26, 1919, § 1, 40 Stat. 1179. See 43 C. F. R. 115.2, 115.7.

<sup>43</sup> Act of March 29, 1944, 58 Stat. 132, 16 U. S. C. 583-583L.

<sup>44</sup> § 1, 58 Stat. 132, 16 U. S. C. 583.

<sup>45</sup> § 2, 58 Stat. 132, 16 U. S. C. 583a.



respect to the management of forest lands and the harvesting, marketing, and processing of forest products.<sup>46</sup> In certain circumstances, he may make such services available to private agencies and persons.<sup>47</sup> Such technical services are to be provided in each state in accordance with a plan agreed upon between the Secretary and the state forest officials, such plan to be carried out so as to encourage utilization of private agencies and individuals furnishing such services. The amount paid to any state may not exceed in any fiscal year the amount expended by the cooperating state.<sup>48</sup>

**FOREST PEST CONTROL ACT.**—In 1947, Congress declared it to be the policy of the Federal Government, independently or through cooperation with states and private timber owners, to protect all forest lands from insects and diseases.<sup>49</sup> The purposes specified include conservation of “forest cover on watersheds.”<sup>50</sup>

The Act directs the Secretary of Agriculture to carry out such measures as he may deem necessary, provided that operations be conducted with the consent of the agency, organization, or person having jurisdiction over the land.<sup>51</sup> He is also authorized to make allocations to federal agencies having jurisdiction over federal lands involved.<sup>52</sup> In the case of nonfederal lands, federal funds may be expended only after agreement upon such contribution as the Secretary may require.<sup>53</sup>

## National Park Service

The National Park Service of the Department of the Interior manages the several national parks and national monuments.<sup>54</sup>

<sup>46</sup> Act of August 25, 1950, § 1, 64 Stat. 473. This Act repeals the Cooperative Farm Forestry Act of 1937, Act of May 18, 1937, 50 Stat. 188, 16 U. S. C. 568b.

<sup>47</sup> *Id.*

<sup>48</sup> *Id.*

<sup>49</sup> Act of June 25, 1947, § 1, 61 Stat. 177, 16 U. S. C. 594-1 (Supp. III).

<sup>50</sup> *Id.*

<sup>51</sup> § 2, 61 Stat. 177, 16 U. S. C. 594-2 (Supp. III).

<sup>52</sup> § 3, 61 Stat. 177, 16 U. S. C. 594-3 (Supp. III).

<sup>53</sup> § 4, 61 Stat. 177, 16 U. S. C. 594-4 (Supp. III).

<sup>54</sup> Act of August 25, 1916, 39 Stat. 535, as amended, 16 U. S. C. 1 *et seq.*

In creating the Service, Congress characterized the "fundamental purpose" of the affected parks, monuments, and reservations as one: <sup>55</sup>

to conserve the scenery and the natural and historic objects and wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.

Because of the interrelationship of water and land, it should be noted that the Secretary of the Interior is expressly authorized to "grant privileges, leases, and permits for the use of land for the accommodation of visitors in the various parks, monuments, or other reservations" for periods not exceeding 20 years.<sup>56</sup> So also as to his authority to grant privileges to graze livestock.<sup>57</sup>

In addition, when Congress in 1946 enumerated authorizations for appropriations for the National Park Service, it included the: <sup>58</sup>

Investigation and establishment of water rights in accordance with local custom, laws, and decisions of courts, including the acquisition of water rights or of lands or interests in lands or rights-of-way for use and protection of water rights necessary or beneficial in the administration and public use of the national parks and monuments.

Of special interest to our survey is the fact that the headwaters of many streams, where land-use measures play an

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<sup>55</sup> § 1, 39 Stat. 535, as amended, 16 U. S. C. 1.

<sup>56</sup> § 3, 39 Stat. 535, as amended, 16 U. S. C. 3.

<sup>57</sup> *Id.*

<sup>58</sup> Act of August 7, 1946, 60 Stat. 885, 16 U. S. C. 17j-2(g). From 1936 until 1950, similar language was included in acts appropriating funds annually for the Department of the Interior. See, e. g., Act of June 22, 1936, 49 Stat. 1757, 1795-1796; H. Rep. No. 1927, 74th Cong., 2d sess., vol. 1, p. 14 (1936). The language does not, however, appear in the General Appropriation Act, 1951. Act of September 6, 1950, 64 Stat. 595.

Another authorization relates to the acquisition of rights-of-way and construction and maintenance of the water supply line partly outside the boundaries of the Mesa Verde National Park. 60 Stat. 886, 16 U. S. C. 17j-2(h).

early and important role, are within areas under the jurisdiction of the National Park Service.<sup>60</sup> And in the exercise of his authority to make rules and regulations for the use and management of such areas, the Secretary of the Interior has made provision for, among other things, forest-fire prevention, erosion control, and water-pollution control.<sup>60</sup>

### Indian Lands

Under the direction of the Secretary of the Interior, and subject to such regulation as the President may prescribe, the Commissioner of Indian Affairs manages Indian affairs and matters arising out of Indian relations.<sup>61</sup> Indian lands are not public lands.<sup>62</sup> They are lands held for varying periods of time by the United States in trust for the Indians, or by the Indians under restricted deeds or patents, and are managed or supervised by the United States.<sup>63</sup>

In addition to irrigation undertakings on Indian lands, already discussed, the supervisory activities of the Bureau of Indian Affairs afford guidance and help to Indians respecting use of lands, including forest and range management, sustained-yield practices, and prevention of erosion.<sup>64</sup>

### Tennessee Valley Authority

The Tennessee Valley Authority Act of 1933 furnishes a unique example of congressional recognition of the interrela-

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<sup>60</sup> See, e. g., ORIGIN OF THE SCENIC FEATURES OF THE GLACIER NATIONAL PARK, Department of the Interior, National Park Service, pp. 20-21 and map following p. 22 (1921).

<sup>61</sup> Act of August 25, 1916, § 3, 39 Stat. 535, as amended, 16 U. S. C. 3; 36 C. F. R. 1.0-27.7.

<sup>62</sup> R. S. § 463, from Act of July 9, 1832, § 1, 4 Stat. 564, and Act of July 27, 1868, § 1, 15 Stat. 228, 25 U. S. C. 2; R. S. § 465, from Act of June 30, 1834, § 17, 4 Stat. 735, 738, 25 U. S. C. 9.

<sup>63</sup> *Ash Sheep Co. v. United States*, 252 U. S. 159, 166 (1920).

<sup>64</sup> Act of February 8, 1887, § 5, 24 Stat. 388, 389, as amended, 25 U. S. C. 348; *Sunderland v. United States*, 266 U. S. 226, 233-235 (1924). See also *Hitchcock v. United States*, 205 U. S. 80 (1907).

<sup>65</sup> See *supra*, pp. 246-254; 25 C. F. R. 61.1-61.30.

tionships of land and water resources.<sup>65</sup> Although restricted in its application to the drainage area of the Tennessee River, certain aspects of this legislation warrant our attention here while others are discussed elsewhere.<sup>66</sup>

Outstanding in this respect are those provisions concerned with the production and distribution of fertilizer. Congress assigned to TVA the operation of the two existing nitrate plants and related facilities at Muscle Shoals and at Sheffield, Alabama.<sup>67</sup> These, together with other experimental laboratories and plants authorized by the Act, TVA is directed to operate for fertilizer experiment and production in time of peace, and for munitions manufacture in time of war.<sup>68</sup>

Detailed provision is made for arrangements with farmers and farm organizations for large-scale practical use of new forms of fertilizers; for cooperation with specified agencies and individuals for use of new forms of fertilizer or fertilizer practices during experimental periods; for "promoting the prevention of soil erosion by the use of fertilizers and otherwise"; and for the distribution of certain fertilizer materials through county demonstration agents, agricultural colleges, or otherwise, for experimentation, education, and introduction of the use of such materials.<sup>69</sup> In effectuation of these provisions, the program evolved by TVA takes account of the relationship between soil practices and the development, utilization, and conservation of water resources.<sup>70</sup>

To aid further the "proper use, conservation and development of the natural resources," the President under the TVA Act is authorized to make certain surveys and plans useful to Congress and the several States:<sup>71</sup>

<sup>65</sup> Act of May 18, 1933, 48 Stat. 58, as amended, 16 U. S. C. 831 *et seq.*

<sup>66</sup> See *supra*, pp. 50-52, 147-148, 306-309; *infra*, pp. 484-486.

<sup>67</sup> § 7(a), 48 Stat. 63, 16 U. S. C. 831f(a); § 5, 48 Stat. 61, as amended, 16 U. S. C. 831d(d).

<sup>68</sup> § 5, 48 Stat. 61, as amended, 16 U. S. C. 831d; § 11, 48 Stat. 64, 16 U. S. C. 831j.

<sup>69</sup> *Id.*

<sup>70</sup> See ANNUAL REPORT OF THE TENNESSEE VALLEY AUTHORITY, pp. 34-45 (1949).

<sup>71</sup> § 22, 48 Stat. 69, 16 U. S. C. 831l.

in guiding and controlling the extent, sequence, and nature of development that may be equitably and economically advanced through the expenditure of public funds, or through the guidance or control of public authority, all for the general purpose of fostering an orderly and proper physical, economic, and social development \* \* \*

In making such surveys and plans, he is authorized to cooperate with states and other agencies and to make such "studies, experiments, or demonstrations" as may be necessary and suitable to that end.<sup>72</sup> The President is also directed to recommend legislation to carry out these general purposes and for bringing about, among other things, "the maximum amount of flood control, \* \* \* the proper use of marginal lands," and the "proper method of reforestation" of lands in the drainage basin "suitable for reforestation."<sup>73</sup> The TVA program embraces a number of activities concerned with forestry, including technical assistance to landowners, distribution of forest-tree seedlings, and woodland management demonstrations.<sup>74</sup>

### Taylor Grazing Act

As we have seen, land-use legislation prior to the thirties was concerned primarily with forest lands. With few exceptions, this legislation was concerned only with lands of the United States. Until 1934, corresponding attention was not directed at federal grazing lands, except as intermingled with forest lands.<sup>75</sup> Congress then authorized the Secretary of the Interior to establish grazing districts from public lands chiefly valuable for grazing and for raising forage crops.<sup>76</sup>

<sup>72</sup> *Id.*

<sup>73</sup> § 23, 48 Stat. 69, 16 U. S. C. 831v. See also Ex. O. No. 6161, June 8, 1933.

<sup>74</sup> See ANNUAL REPORT OF THE TENNESSEE VALLEY AUTHORITY, pp. 42-45 (1949).

<sup>75</sup> It should be noted, however, that in 1930 Congress had appropriated funds to the President for a study of conservation and administration of the public domain generally. Act of April 10, 1930, 46 Stat. 153.

<sup>76</sup> Act of June 28, 1934, 48 Stat. 1269, as amended, 43 U. S. C. 315 *et seq.*

Some direct ties between water and land appear in the statute. For example, Congress expressly empowered the Secretary "to continue the study of erosion and flood control and to perform such work as may be necessary amply to protect and rehabilitate the areas" involved.<sup>77</sup> Also, a grazing preference right is accorded to, among others, "owners of water or water rights."<sup>78</sup> The Secretary may issue permits and approve cooperative arrangements for the construction of fences and "wells, reservoirs, and other improvements" necessary to the care and management of the permitted livestock.<sup>79</sup> Apart from these provisions, the statute does not give the degree of express recognition of the interdependence of land and water to be found in some legislation for forest lands. On the other hand, through the medium of grazing districts and grazing permits and leases, the Bureau of Land Management of the Department of the Interior is carrying out a program aimed at, among other things, erosion prevention, and watershed protection.<sup>80</sup>

Other aspects of the statute have indirect relevance here. Provision is made for classifying public lands and for opening them to entry in accordance with such classification.<sup>81</sup> Also, the Secretary may accept donation of lands to facilitate the administration of the public lands.<sup>82</sup> Likewise, he may cooperate with associations of stockmen, various state agencies, and others, and may accept contributions toward administration, protection, and improvement of the district.<sup>83</sup> Detailed provisions are included respecting the collection of fees and their disposition.<sup>84</sup>

<sup>77</sup> § 2, 48 Stat. 1270, 43 U. S. C. 315a; H. Rep. No. 903, 73d Cong., 2d sess., p. 23 (1934); Sen. Rep. No. 1182, 73d Cong., 2d sess., p. 23 (1934); 78 Cong. Rec. 6366 (1934).

<sup>78</sup> § 3, 48 Stat. 1270, 43 U. S. C. 315b.

<sup>79</sup> § 4, 48 Stat. 1271, 43 U. S. C. 315c.

<sup>80</sup> See 43 C. F. R. 160.1-165.10.

<sup>81</sup> § 7, 48 Stat. 1272, as amended, 43 U. S. C. 315f.

<sup>82</sup> § 8, 48 Stat. 1272, as amended, 43 U. S. C. 315g (b).

<sup>83</sup> § 9, 48 Stat. 1273, as amended, 43 U. S. C. 315h (Supp. III).

<sup>84</sup> §§ 3, 10, 48 Stat. 1270, 1273, as amended, 43 U. S. C. 315b, 315i (Supp. III).

## Mining Laws

While Congress has legislated extensively to protect lands in federal ownership, one aspect of conservation has been left untouched in the process. Under the mining laws of the United States, it is possible for a person meeting specified requirements of law as to entry, to obtain potential mineral lands with unrestricted privilege as to use of the surface, thus permitting denudation of forest cover.<sup>85</sup>

### Soil Conservation and Domestic Allotment Act

Enacted in part in 1935, and in part in 1936, this legislation provides the basis for two national soil-conservation programs.<sup>86</sup> We shall examine the parts in that order after noting briefly the background developments.

In 1933, a Soil Erosion Service was established in the Department of the Interior with responsibility for a program of erosion control and relief of unemployment, an allotment of funds having been made for that purpose by the Federal Emergency Administrator of Public Works.<sup>87</sup> This agency was transferred in 1935 to the Department of Agriculture, and all erosion-control activities of that Department were consolidated.<sup>88</sup>

SOIL CONSERVATION SERVICE PROGRAM.—Soon thereafter, Congress gave direct authorization for an erosion-control program when it passed the National Erosion Control Act in

<sup>85</sup> R. S. § 2319, from Act of May 10, 1872, § 1, 17 Stat. 91, as amended, 30 U. S. C. 22; R. S. § 2322, from Act of May 10, 1872, § 3, 17 Stat. 91, 30 U. S. C. 26; R. S. § 2325, from Act of May 10, 1872, § 6, 17 Stat. 91, 92, as amended, 30 U. S. C. 29.

<sup>86</sup> Act of April 27, 1935, 49 Stat. 163, as amended, 16 U. S. C. 590a *et seq.*

<sup>87</sup> See Act of June 16, 1933, § 202, 48 Stat. 195, 201, 40 U. S. C. 402. Unpublished Memorandum of August 25, 1933, Administrator of Federal Emergency Administration, addressed to Secretary of the Interior, allotting \$5,000,000 for soil-erosion work on public and private lands. See also Ex. O. Nos. 6252, August 19, 1933, and 6929, December 26, 1934.

<sup>88</sup> Unpublished Memorandum of Emergency Administrator of Public Works, March 23, 1935, approved by the President March 25, 1935; unpublished Memorandum of the Secretary of Agriculture, No. 665, March 27, 1935.

1935.<sup>89</sup> In reporting the bill which became the Act, the Senate Committee on Agriculture and Forestry asserted that:<sup>90</sup>

Experiences of recent storms, both flood and wind, demonstrate the necessity to prevent wastage of soil, the conservation of water, and the control of floods. The silting of reservoirs, the maintaining of the navigability of rivers and harbors, the protection of public lands, all justify Federal responsibility for the carrying out of a national erosion-control program.

The 1935 Act declares that:<sup>91</sup>

it is hereby recognized that the wastage of soil and moisture resources on farm, grazing, and forest lands of the Nation, resulting from soil erosion, is a menace to the national welfare and that it is declared to be the policy of Congress to provide permanently for the control and prevention of soil erosion and thereby to preserve natural resources, control floods, prevent impairment of reservoirs, and maintain the navigability of rivers and harbors, protect public health, public lands and relieve unemployment \* \* \*.

The Act directed the Secretary of Agriculture to establish the Soil Conservation Service to exercise the powers which Congress conferred upon him.<sup>92</sup> These include the conducting of surveys, investigations, and research; the carrying out of preventive measures; the furnishing of financial and other assistance to individuals and governmental and other agencies;

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<sup>89</sup> Act of April 27, 1935, § 1, 49 Stat. 163, as amended, 16 U. S. C. 590a-590f. Congress had already recognized the national character of the soil-erosion problem. The 1930 annual appropriation act for the Department of Agriculture appropriated \$160,000 for research and experimental work concerning soil erosion in the "important" agricultural areas of the country. Act of February 16, 1929, 45 Stat. 1189, 1207.

<sup>90</sup> Sen. Rep. No. 466, 74th Cong., 1st sess., p. 2 (1935). See also H. Rep. No. 528, 74th Cong., 1st sess., pp. 1-2 (1935).

<sup>91</sup> § 1, 49 Stat. 163, 16 U. S. C. 590a.

<sup>92</sup> § 5, 49 Stat. 164, 16 U. S. C. 590e. See also Secretary of Agriculture Memorandum No. 673, April 27, 1935, establishing the Soil Conservation Service.



and the acquisition of necessary lands or interests therein.<sup>94</sup> Moreover, these functions are expressly authorized for both lands of the United States and other lands upon obtaining proper consent.<sup>95</sup>

Another provision of the statute merits particular attention. The Secretary is authorized to condition the extending of benefits on nongovernment lands upon (1) enactment and reasonable safeguards for the enforcement of state and local laws "imposing suitable permanent restrictions on the use of such lands and otherwise providing for the prevention of soil erosion;" (2) agreements as to use of lands; and (3) contributions in money, services, materials or otherwise.<sup>96</sup> Administrative provision has been made for carrying out this program through assistance to soil-conservation districts created under state laws.<sup>98</sup> These laws are largely patterned after a standard state soil-conservation districts law.<sup>97</sup> This model, evolving from the cooperative efforts of federal and state representatives, provides means whereby soil-conservation and similar districts may be formed by local farmers and ranchers, such districts to be operated locally, and to serve as vehicles for channeling assistance to individual land operators within the districts.<sup>98</sup> All states have adopted such laws.<sup>99</sup>

<sup>94</sup> § 1, 49 Stat. 163, 16 U. S. C. 590a.

<sup>95</sup> § 2, 49 Stat. 163, 16 U. S. C. 590b.

<sup>96</sup> § 3, 49 Stat. 163, 16 U. S. C. 590c.

<sup>97</sup> Unpublished memorandum entitled "A Statement by the Secretary of Agriculture Concerning Departmental Cooperation with Soil Conservation Districts," dated September 21, 1940. See *MANUAL OF THE SOIL CONSERVATION SERVICE*, as supplemented, vol. IV, § 49110 (1941).

<sup>98</sup> A STANDARD STATE SOIL CONSERVATION DISTRICTS LAW, Department of Agriculture, Soil Conservation Service (1936).

<sup>99</sup> *Id.*

<sup>99</sup> Alabama (CODE OF ALA. 1940, title 2, §§ 658-670); Arizona (ARIZ. CODE ANN. 1939, 1947 CUM. SUPP. §§ 75-1701-75-1714); Arkansas (STAT. OF ARK., POPE'S DIGEST 1937, ch. 151, §§ 11833-11846, as amended); California (CALIF. CODES—PUBLIC RESOURCES CODE, Div. 9, § 9000 *et seq.*); Colorado (COLO. STAT. ANN., 1947 CUM. SUPP., vol. 4, ch. 149B); Connecticut (1945 SUPP. TO CONN. GEN. STAT., ch. 106, §§ 478h-480h, p. 202); Delaware (LAWS OF DEL., 1943, ch. 212, p. 605); Florida (FLA. STAT. ANN., §§ 582.01-582.32); Georgia (CODE OF GA. ANN., title 5, 1947 CUM. SUPP., §§ 5-1801-5-2216); Idaho (IDAHO CODE ANN. 1932, 1940 SUPP., §§ 22-2501-22-2514); Illinois (SMITH-HURD ILL. ANN. STAT., ch. 5, §§ 106-138); Indiana (BURNS IND. STAT. ANN., §§ 15-

The Soil Conservation Service provides technical direction and related services to these locally administered soil-conservation districts.<sup>100</sup>

In 1940, so much of the responsibility for administering the foregoing 1935 legislation as related to lands under the jurisdiction of the Department of the Interior, was transferred to its Secretary.<sup>101</sup>

1801—15-1818); Iowa (CODE OF IOWA 1946, vol. 1, §§ 160.1-160.12); Kansas (GEN. STAT. KANS. 1935, 1945 SUPP., ch. 2, art. 19); Kentucky (KY. REV. STAT. 1948, §§ 262.010-262.660); Louisiana (DAET'S LA. GEN. STAT. 1939, §§ 57.7-57.25); Maine (REV. STAT. OF MAINE 1944, vol. 1, ch. 29, p. 678); Maryland (ANN. CODE OF MD., 1947 CUM. SUPP., art. 2A, §§ 51, 58A); Massachusetts (ANN. LAWS OF MASS., 1947, CUM. SUPP., vol. 4, ch. 128B); Michigan (MICH. STAT. ANN., 1949 CUM. SUPP., §§ 13.1781-13.1798); Minnesota (MINN. STAT. ANN., 1946, ch. 40); Mississippi (MISS. CODE, 1942 ANN., §§ 4940-4958); Missouri (MO. REV. STAT. ANN., 1950 CUM. SUPP., §§ 14431.1-14431.10); Montana (REV. CODES OF MONT., 1935 ANN., 1939 SUPP., ch. 306-B, §§ 3649.18-3649.35); Nebraska (REV. STAT. OF NEBR., 1943, Art. 15, §§ 2-1501-2-1547); Nevada (NEV. COMP. LAWS, 1931-1941 SUPP., §§ 6870.01-6870.18); New Hampshire (N. H. LAWS, 1945, ch. 151, p. 197); New Jersey (REV. STAT. N. J. 1937, title 4, ch. 24; N. J. S. A. Perm. Ed. 4: 24-1-4: 24-38); New Mexico (N. M. STAT. 1941 ANN., 1949 SUPP., §§ 48-504-48-518); New York (McKINNEY'S CONSOL. LAWS OF N. Y. ANN., Bk. 52B, SOIL CONSERVATION DISTRICTS LAW, §§ 1-15); North Carolina (GEN. STAT. OF N. CAR. 1943, §§ 139-1-139-13); North Dakota (N. DAK. REV. CODE OF 1943, vol. 1, §§ 4-2201-4-2246); Ohio (PAGE'S OHIO GEN. CODE ANN., §§ 375-13-375-21); Oklahoma (OKLA. STAT. ANN. 1949 SUPP., title 2, §§ 801-817); Oregon (ORE. COMP. LAWS ANN., vol. 7, §§ 109-301-109-315); Pennsylvania (PURDON'S PA. STAT. ANN. 1949 SUPP., title 3, §§ 849-864); Rhode Island (R. I. PUBLIC LAWS 1943, ch. 1338, p. 167); South Carolina (CODE OF LAWS OF S. CAR., 1942, §§ 5806-101-5806-116); South Dakota (S. DAK. CODE OF 1939, §§ 4.1501-4.1516); Tennessee (WILLIAMS TENN. CODE ANN. 1934, §§ 552.31-552.44); Texas (VERNON'S TEX. CIVIL STAT., title 4, ch. 9, art. 165a-4); Utah (UTAH CODE ANN. 1943, §§ 82A-0-1-82A-0-19); Vermont (LAWS OF VT. 1939, No. 246, p. 288, as amended); Virginia (VA. CODE OF 1950, §§ 21-1-21-112); Washington (REMINGTON'S REV. STAT. OF WASH. ANN., 1949 CUM. SUPP., vol. 11, §§ 10726-1-10726-17); West Virginia (W. VA. CODE OF 1943, 1947 SUPP., §§ 2193(1)-2193(7)); Wisconsin (WISC. STAT. 1945, ch. 92, §§ 92.01-92.17); Wyoming (WYO. COMP. STATS. 1945, §§ 34-1401-34-1417).

<sup>100</sup> Memorandum entitled "A Statement by the Secretary of Agriculture Concerning Departmental Cooperation with Soil Conservation Districts," dated September 21, 1940. See MANUAL OF THE SOIL CONSERVATION SERVICE, as supplemented, vol. IV, § 49110 (1941).

<sup>101</sup> Reorganization Plan No. IV, § 6, effective June 30, 1940, 5 F. R. 2421, 54 Stat. 1234, 5 U. S. C. 133t note following.

With respect to the purpose of Congress under this legislation, it may be noted that subsequent appropriation statutes have contained relevant statements. For example, a recent statute appropriating \$53,900,000 to carry out activities under the Act on nonfederal lands refers to the Act as one providing for "a national program of erosion control and soil and water conservation."<sup>102</sup>

**AGRICULTURAL CONSERVATION PROGRAM.**—As we have seen, the 1935 soil-conservation legislation forms the basis upon which has been built a program of technical assistance to owners of land located within soil-conservation districts or other similar areas. The 1936 legislation, the latter part of the Soil Conservation and Domestic Allotment Act, has been employed to furnish direct but conditional cash payments to cooperating land owners—the Agricultural Conservation Program.<sup>103</sup> Within the Department of Agriculture, responsibility is now vested in the Production and Marketing Administration.<sup>104</sup>

With this addition to the 1935 statute, Congress added these purposes, among others:<sup>105</sup>

- (1) preservation and improvement of soil fertility;
- (2) promotion of the economic use and conservation of land;
- (3) diminution of exploitation and wasteful and unscientific use of national soil resources;
- (4) the protection of rivers and harbors against the results of soil erosion in aid of maintaining the navigability of waters and water courses and in aid of flood control \* \* \*.

Still another purpose is the reestablishment of farmers' purchasing power.<sup>106</sup>

<sup>102</sup> Act of September 6, 1950, 64 Stat. 595, —.

<sup>103</sup> Act of February 29, 1936, 49 Stat. 1148, as amended, 16 U. S. C. 590g-590q. This statute added §§ 7-17, to the Act of April 27, 1935, 49 Stat. 163, 16 U. S. C. 590a-590f. See also 7 C. F. R. 701.0 *et seq.*, including specification of required conservation practices.

<sup>104</sup> Secretary of Agriculture Memorandum No. 1118, August 18, 1945; see also Act of February 29, 1936, § 13, 49 Stat. 1148, 1151, 16 U. S. C. 590m and note following.

<sup>105</sup> § 7(a), 49 Stat. 1148, as amended, 16 U. S. C. 590g(a).

<sup>106</sup> *Id.*

The 1936 legislation provides primarily for a program based on grants-in-aid to those states enacting legislation to effectuate the foregoing provisions.<sup>107</sup> Pending enactment of such state legislation, a provision expressly limited as to time was made for direct conditional cash payments to cooperating land-owners, based on their agreement to carry out soil-conserving practices.<sup>108</sup> Only some of the states having enacted enabling legislation with respect to the grants-in-aid program, the direct-aid program is still in effect on the basis of periodic authorizations by Congress which have extended its time limitation.<sup>109</sup>

The amount of direct payments under this program is measured by, among other things, use of land for "soil restoration, soil conservation, or the prevention of erosion," and also for "changes in the use" of the land.<sup>110</sup> Such measures are required by statute to be construed, in arid and semiarid sections:<sup>111</sup>

to cover water conservation and the beneficial use of water on individual farms, including measures to prevent run-off, the building of check dams and ponds, and providing facilities for applying water to the land.

Two other aspects of the 1936 legislation merit attention. First, the Secretary is authorized to conduct surveys, investigations, and research relating to conditions and factors affecting, and the methods of accomplishing, the policy and purposes set out above.<sup>112</sup> The second concerns funds. The Act carries an authorization for an annual appropriation of \$500,000,000.<sup>113</sup> In recent years, Congress has appropriated amounts up to \$300,000,000 annually.<sup>114</sup> Also, the Act specifies a limitation

<sup>107</sup> § 7(c), 49 Stat. 1148, as amended, 16 U. S. C. 590g(c).

<sup>108</sup> § 8, 49 Stat. 1149, as amended, 16 U. S. C. 590h.

<sup>109</sup> See, e. g., Act of July 25, 1946, 60 Stat. 663, and see 16 U. S. C. 590h note following.

<sup>110</sup> § 8(b), 49 Stat. 1149, as amended, 16 U. S. C. 590h(b).

<sup>111</sup> *Id.*

<sup>112</sup> § 9, 49 Stat. 1150, as amended, 16 U. S. C. 590i.

<sup>113</sup> § 15, 49 Stat. 1151, as amended, 16 U. S. C. 590o.

<sup>114</sup> See, e. g., Act of June 29, 1949, 63 Stat. 324, —; Act of September 6, 1950, 64 Stat. 595, —.

on direct individual payments of \$10,000 per year.<sup>116</sup> Provision is made for division of such payments among landlords, tenants, and sharecroppers. In recent years, the limitation on individual payments has been fixed in appropriation statutes at smaller amounts, that for the 1951 program being \$2,500.<sup>116</sup>

## Price Support

In considering the foregoing programs for soil conservation, reference should also be made to price-support legislation.

Under the Agricultural Act of 1949, the Secretary of Agriculture is directed to provide price support for certain agricultural commodities.<sup>117</sup> But the Act contains no mandatory requirement assuring proper use of land in the interest of soil conservation in the event the price-support program should encourage the growing of certain crops under conditions incompatible with soil-conservation practices.

## Retirement of Submarginal Lands

Under 1937 legislation, the Secretary of Agriculture is directed to develop a program of "land conservation and land utilization, including the retirement of lands which are submarginal or not primarily suitable for cultivation."<sup>118</sup> The express purpose of this legislation is:<sup>119</sup>

to correct maladjustments in land use, and thus assist in controlling soil erosion, reforestation, preserving natural resources, mitigating floods, preventing impairment of dams and reservoirs, conserving surface and subsurface moisture, protecting the watersheds of navigable streams, and protecting the public lands, health, safety and welfare.

<sup>116</sup> § 8, 49 Stat. 1149, as amended, 16 U. S. C. 590h(e).

<sup>116</sup> See, *e. g.*, Act of September 6, 1950, 64 Stat. 595, —.

<sup>117</sup> Act of October 31, 1949, 63 Stat. 1051, 7 U. S. C. 612c, 1301, 1301 note following, 1322, 1328, 1343-1345, 1353-1356, 1421-1431, 1441, 1446-1449 and 12 U. S. C. 1134c, 1134j and 15 U. S. C. 713a-4 (Supp. III).

<sup>118</sup> Act of July 22, 1937, § 31, 50 Stat. 522, 525, as amended, 7 U. S. C. 1010.

<sup>119</sup> *Id.*

To effectuate the program, the Secretary is authorized to acquire and apply protective measures to lands, and to make them available for private use by sale, exchange, lease, or otherwise.<sup>120</sup> Also, upon recommendation of the Secretary, the President is authorized to transfer the lands to federal or state agencies for administration.<sup>121</sup>

This program corresponds in principle with the Weeks Law in that both provide for federal acquisition and public management of lands to achieve conservation results. It differs from the Weeks Law, however, in that it does not require that the lands acquired be located on the watersheds of navigable streams.

Administration of the program has been assigned to the Soil Conservation Service.<sup>122</sup> As of 1945, 11,300,000 acres of land had been acquired.<sup>123</sup> Such lands include both forest and range lands, as well as croplands.<sup>124</sup> Recently, however, Congress has made no appropriations for further purchase, but has continued appropriations for management of the lands.<sup>125</sup> The management function is accomplished under the general statutory authority conferred upon the Secretary to make necessary rules and regulations and to regulate "the use and occupancy" of the property.<sup>126</sup> In this connection, it should be noted that operations are so designed as to influence not only the acquired lands but also adjacent lands, by permitting operators to use acquired lands under permits and leases in such a way as to effect less intensified use of their own lands.<sup>127</sup> Some acquired lands have been transferred for management to the Forest Service,

<sup>120</sup> § 32, 50 Stat. 525, as amended, 7 U. S. C. 1011.

<sup>121</sup> *Id.*

<sup>122</sup> Memorandum of Secretary of Agriculture, No. 785, October 6, 1938; *MANUAL OF SOIL CONSERVATION SERVICE*, vol. I, § 11000 (1941).

<sup>123</sup> *FEDERAL RURAL LANDS*, Bureau of Agricultural Economics, Department of Agriculture, p. 43 (June 1947).

<sup>124</sup> *REPORT OF CHIEF OF SOIL CONSERVATION SERVICE*, pp. 37-38 (1945).

<sup>125</sup> See, e. g., Act of September 6, 1950, 64 Stat. 595.

<sup>126</sup> Act of July 22, 1937, § 32, 50 Stat. 522, 525, as amended, 7 U. S. C. 1011. See also 7 C. F. R. 600.1 *et seq.*

<sup>127</sup> See 7 C. F. R. 600.3-600.5. See also *SOIL CONSERVATION SERVICE MANUAL*, vol. IV, § 44001 (1941), as supplemented.

the Bureau of Land Management, the Fish and Wildlife Service, and to state agencies.<sup>128</sup>

## Flood-Control Legislation

We have previously discussed flood-control legislation, principally in its relation to navigable waters and their tributaries, and in its relation to authorization of drainage operations.<sup>129</sup> Our attention here will be focused upon recognition by Congress that damage from floods may be mitigated through application of measures for run-off and water-flow retardation and soil-erosion prevention on watersheds.

Elsewhere we quoted at length from the congressional declaration of a national flood-control policy in 1936.<sup>130</sup> Suffice it here to repeat that Congress there asserted that flood control on navigable waters or their tributaries is a proper federal activity in cooperation with states, that flood-control investigations and improvements of waterways, "including watersheds thereof," are in the interest of the general welfare.<sup>131</sup> In addition to the jurisdiction assigned to the Army Engineers, the 1936 Flood Control Act directed that "Federal investigations of watersheds and measures for run-off and water-flow retardation and soil erosion prevention on watersheds" shall be under the jurisdiction of the Department of Agriculture.<sup>132</sup>

The 1936 Act, however, authorized only investigations and surveys in specific localities, not works of improvement.<sup>133</sup>

<sup>128</sup> Act of July 22, 1937, § 32, 50 Stat. 522, 525, 7 U. S. C. 1011(c); see, *e. g.*, Secretary of Agriculture Administrative Order, February 4, 1944, 9 F. R. 1538 (Forest Service); Ex. O. No. 10,046, March 24, 1949, 14 F. R. 1375 (Bureau of Land Management); Public Land Order 205, January 27, 1944, 9 F. R. 1536 (Fish and Wildlife Service); REPORT OF THE CHIEF OF THE SOIL CONSERVATION SERVICE, United States Department of Agriculture, Soil Conservation Service, Table 5, p. 18 (1941) (state agencies).

<sup>129</sup> See *supra*, pp. 316-317.

<sup>130</sup> Act of June 22, 1936, § 1, 49 Stat. 1570, 33 U. S. C. 701; see *supra*, p. 131.

<sup>131</sup> *Id.* See also 80 CONG. REC. 7574, 7577, 7579 (1936).

<sup>132</sup> § 2, 49 Stat. 1570, 33 U. S. C. 701b.

<sup>133</sup> § 6, 49 Stat. 1592.

This authorization was extended in 1937 to cover the watersheds of all waterways previously authorized to be surveyed by the Army Engineers.<sup>134</sup> After a "regular or formal report made on any examination or survey," provision is made for "supplemental, additional, or review report or estimate" if authorized by law or by resolution of the Committee on Public Works either of the House or of the Senate.<sup>135</sup>

Works of improvement were first authorized in 1938 when Congress empowered the Department of Agriculture to prosecute, under the direction of its Secretary and in accordance with plans approved by him:<sup>136</sup>

works of improvement for measures of run-off and water-flow retardation and soil-erosion prevention on the watersheds of waterways, for which works of improvement for the benefit of navigation and the control of destructive floodwaters and other provisions have been adopted and authorized to be prosecuted under the direction of the Secretary of War \* \* \*.

The declared purpose of this action was to effectuate the 1936 flood-control policy and:

to correlate the program for the improvement of rivers and other waterways by the Department of War with the program for the improvement of watersheds by the Department of Agriculture.

Although this statute generally authorized prosecution of works "in accordance with plans approved by" the Secretary of Agriculture—unlike the general requirements governing flood-control work of the Army Engineers—the Department of Agriculture nevertheless prepared and submitted to Congress

<sup>134</sup> Act of August 28, 1937, § 3, 50 Stat. 876, 877.

<sup>135</sup> Act of January 19, 1948, § 2, 62 Stat. 4, 33 U. S. C. 701b-7 (Supp. III).

<sup>136</sup> Act of June 28, 1938, § 7, 52 Stat. 1215, 1225, 33 U. S. C. 701b-1. It should be noted here that only a few days earlier Congress directed the Secretary of the Army to make available to the Secretary of Agriculture \$4,000,000 for the prosecution of watershed-treatment works under plans approved by him. Act of June 11, 1938, 52 Stat. 667, 671.



for approval programs for 11 watersheds.<sup>137</sup> These were specifically authorized in the 1944 Flood Control Act.<sup>138</sup> Congress stated that this action was taken: <sup>139</sup>

in the interest of national security and with a view toward an adequate reservoir of useful and worthy public works for the post-war construction program \* \* \*.

With respect to the work thus authorized, the Act directs that state consent be obtained for proposed land acquisitions.<sup>140</sup> Moreover, it also requires that there be paid to the county in which the lands are acquired: <sup>141</sup>

a sum equal to 1 per centum of the purchase price paid for the lands acquired in that county or, if not acquired by purchase, 1 per centum of their valuation at the time of their acquisition.

In flood-control work, the Secretary of Agriculture has certain authority much like that available to him under the 1935 Erosion Control Act.<sup>142</sup> Thus, he is authorized to condition the prosecution of flood-control works on the enactment, and reasonable safeguards for the enforcement, of state and local laws imposing suitable, permanent restrictions on the use of lands involved, "and otherwise providing for run-off and water-flow retardation and soil-erosion prevention."<sup>143</sup>

Also, he may require agreements or covenants as to permanent use of such lands and contributions in money or otherwise.<sup>144</sup> It does not appear that this authority has been invoked to require implementing flood-control legislation, as

<sup>137</sup> See H. Rep. No. 1309, 78th Cong., 2d sess., pp. 51-52 (1944); Sen. Rep. No. 1030, 78th Cong., 2d sess., pp. 26-29 (1944); and see documents designated in Act of December 22, 1944, § 13, 58 Stat. 887, 905. For provisions governing authorization of flood-control work by the Army Engineers, see *supra*, pp. 134, 136-142.

<sup>138</sup> § 13, 58 Stat. 905.

<sup>139</sup> *Id.*

<sup>140</sup> *Id.*

<sup>141</sup> *Id.*

<sup>142</sup> See *supra*, p. 368.

<sup>143</sup> Act of August 28, 1937, § 4, 50 Stat. 876, 877, see 33 U. S. C. 701c.

<sup>144</sup> *Id.*

such. Instead, the Secretary in 1938 announced that preference would "be given to areas located within soil conservation districts already established and functioning" and that after July 1, 1939, such work would be undertaken "only in States which have adopted suitable legislation" along the lines of the model soil conservation districts law.<sup>145</sup>

Within the Department of Agriculture, flood-control responsibilities are divided between two agencies, the Forest Service and the Soil Conservation Service.<sup>146</sup> Activities thus far authorized include not only land-treatment work and some supplemental structural measures, but also the acquisition of forest lands which are managed much as are those acquired under the Weeks Law.<sup>147</sup>

### Water Facilities Act

In 1937, Congress declared its policy "to assist in providing facilities for water storage and utilization in the arid and semi-arid areas of the United States."<sup>148</sup> In so doing, it recognized that the: <sup>149</sup>

wastage and inadequate utilization of water resources on farm, grazing, and forest lands in the arid and semi-arid areas of the United States resulting from inadequate facilities for water storage and utilization contribute to the destruction of natural resources, injuries to public health and public lands, droughts, periodic floods,

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<sup>145</sup> Unpublished memorandum of the Secretary of Agriculture, entitled "Statement Concerning State Legislation for State and Local Cooperation with the Flood Control Program of the Department of Agriculture," October 29, 1938.

<sup>146</sup> Secretary of Agriculture Memorandum No. 1166, June 27, 1946. See also ADMINISTRATIVE REGULATIONS OF THE DEPARTMENT OF AGRICULTURE, title 1, ch. 7, § 1, ch. 395 (1947), directing the Soil Conservation Service and the Forest Service to consult with Bureau of Agricultural Economics and Production and Marketing Administration concerning proposed flood-control programs.

<sup>147</sup> See, *e. g.*, H. Doc. No. 892, 77th Cong., 2d sess., pp. 48-49 (1942) and Act of December 22, 1944, § 13, 58 Stat. 887, 905.

<sup>148</sup> Act of August 28, 1937, § 1, 50 Stat. 869, 16 U. S. C. 590r-590x.

<sup>149</sup> *Id.*

crop failures, decline in standards of living, and excessive dependence upon public relief, and therefore menace the national welfare.

To effectuate this policy, Congress authorized the Secretary of Agriculture to formulate and keep current a program of projects for the construction and maintenance of "ponds, reservoirs, wells, check-dams, pumping installations, and other facilities for water storage or utilization, together with appurtenances to such facilities."<sup>150</sup> The facilities must be so located as to promote proper utilization of lands and as not to encourage cultivation of submarginal lands.<sup>151</sup> In addition, the facilities may be sold or leased "with or without a money consideration."<sup>152</sup> Likewise, the Secretary may enter into agreements with individuals or agencies, or furnish them financial or other assistance.<sup>153</sup> In addition to his authority to acquire lands, the Secretary may also acquire "rights to the use of water."<sup>154</sup>

The statute expressly authorized application of the program to lands owned or controlled by the United States, as well as to other lands upon obtaining necessary rights or interests.<sup>155</sup> In the case of the latter lands, the Secretary may condition assistance upon enactment of state and local laws providing for "soil conserving land uses and practices, and the storage, conservation and equitable utilization of waters."<sup>156</sup> He may also require agreements regarding the maintenance and permanent use of "water, facilities, or lands benefited by such facilities," or upon contributions in money or otherwise.<sup>157</sup>

Administration of this program is assigned to the Farmers Home Administration.<sup>158</sup> The statute contains an unlimited

<sup>150</sup> § 2, 50 Stat. 869, 16 U. S. C. 590s.

<sup>151</sup> *Id.*

<sup>152</sup> *Id.*

<sup>153</sup> *Id.*

<sup>154</sup> *Id.*

<sup>155</sup> § 3, 50 Stat. 869, 16 U. S. C. 590t.

<sup>156</sup> § 4, 50 Stat. 870, 16 U. S. C. 590u.

<sup>157</sup> *Id.*

<sup>158</sup> Secretary of Agriculture Memorandum No. 1171, October 14, 1946, 11 F. R. 12520.

authorization for appropriations, but it should be noted that Congress in 1940 fixed a maximum federal expenditure on any one project of \$50,000, which limit was increased to \$100,000 in 1949.<sup>159</sup>

## Water Conservation and Utilization Act

"For the purpose of stabilizing water supply and thereby rehabilitating farmers on the land and providing opportunities for permanent settlement of farm families," the Secretary of the Interior is authorized, after specified collaboration with the Secretary of Agriculture, to investigate and construct, operate, and maintain certain "water conservation" and utilization projects in the Great Plains and arid and semiarid areas of the United States.<sup>160</sup>

Reference has previously been made to this legislation in our discussion of irrigation.<sup>161</sup> As there indicated, no new projects have recently been initiated under this unique legislation. Its significance here lies in congressional recognition of the direct relationship between land and water. Not only is that true of the provisions referred to above, but also it is evident from other provisions of the Act, including those whereby the Secretary of Agriculture, through cooperative agreements with the Secretary of the Interior, may acquire lands, prepare them for farm use, and aid and supervise their settlement.<sup>162</sup> ||

## Credit Facilities

Indirectly but importantly related to federal interest in conservation practices on nonfederal lands are several enactments providing favorable credit facilities for financing farm ownership and land improvement through private initiative.

<sup>159</sup> § 7, 50 Stat. 870, 16 U. S. C. 590x; Act of October 14, 1940, § 7, 54 Stat. 1119, 1124, as amended by the Act of June 10, 1949, 63 Stat. 171, 16 U. S. C. 590z-5 (Supp. III).

<sup>160</sup> Act of August 11, 1939, § 1, 53 Stat. 1418, as added by Act of October 14, 1940, 54 Stat. 1119, as amended, 16 U. S. C. 590y *et seq.*

<sup>161</sup> See *supra*, pp. 243-245.

<sup>162</sup> § 5, as added by Act of October 14, 1940, 54 Stat. 1119, 1122, as amended, 16 U. S. C. 590z-3.

For example, under the 1937 Bankhead-Jones Farm Tenant Act, as amended, the Secretary of Agriculture is authorized to make loans and to insure mortgages to enable acquisition, repair, or improvement of "family-size farms," or to refinance indebtedness against undersized or underimproved units when loans are being made by the Secretary to enlarge or improve such units.<sup>163</sup> Similarly, he has authority under 1949 legislation to make such loans to homestead entrymen and purchasers of lands in reclamation projects.<sup>164</sup> Provision is made for deferring the first installment for repayment of loans to the owner of a "newly irrigated farm and reclamation project" for a period of not to exceed two years. These programs are administered by the Farmers Home Administration.<sup>165</sup>

Likewise important are other credit facilities available through functions of the Farm Credit Administration and the Reconstruction Finance Corporation.<sup>166</sup>

### Research and Education

Congress has made provisions for several programs of agricultural experimentation, research, and education of interest here.

As early as 1887, the direct tie between land and water was recognized in a statute authorizing agricultural experiment stations to aid in acquiring and diffusing information on agriculture and to promote scientific investigation and experiment concerning agricultural science.<sup>167</sup> It is the duty of such agricultural experiment stations to conduct original researches or verify experiments on, among other things, "the analysis of soils and water."<sup>168</sup>

Similarly, in 1935 legislation providing for the development of agricultural research by the Department of Agriculture, Con-

<sup>163</sup> Act of July 22, 1937, 50 Stat. 522, as amended, 7 U. S. C. 1000-1005d.

<sup>164</sup> Act of October 19, 1949, 63 Stat. 883, 7 U. S. C. 1006a-1006b (Supp. III).

<sup>165</sup> Secretary of Agriculture Order, October 14, 1946, 11 F. R. 12520.

<sup>166</sup> Act of July 17, 1916, 39 Stat. 360, 12 U. S. C. 641 *et seq.*; Act of June 30, 1947, § 4, 61 Stat. 202, 203, 15 U. S. C. 604 (Supp. III).

<sup>167</sup> Act of March 2, 1887, 24 Stat. 440, 7 U. S. C. 362 *et seq.*

<sup>168</sup> § 2, 24 Stat. 440, 7 U. S. C. 363.

gress enumerated many authorized areas of research including, among others, "research relating to the conservation, development, and use of land, forest, and water resources for agricultural purposes."<sup>166</sup> Noteworthy in this connection is the fact that a study recently undertaken pursuant to this statute comprehends water salinity.<sup>170</sup> Legislative provision has also been made for cooperative agricultural extension work between state agricultural colleges and the Department of Agriculture.<sup>171</sup>

### Summary

The interdependence of land and water has been recognized in a number of statutes concerning use of lands. These are aimed at water and land as inseparable resources, or are adaptable to serving both.<sup>1</sup>

Sharply distinguished by its regulatory aspects from succeeding land-use legislation is the 1893 provision for the prescribed jurisdiction of the California Débris Commission over hydraulic mining.

Apart from this enactment, federal land-use legislation until the early thirties was concerned with forest lands, and principally with forest lands of the United States. Here, Congress has recognized the direct ties between land and water. Initiated before the turn of the century, the legislative foundation was broadened in 1911 to provide for a federal forest program on a national basis. Other forestry statutes also recognize the interrelations of land and water resources, some of the more recent being concerned with nonfederal forest lands as well.

Still further recognition appears in legislation concerning national parks, Indian lands, the Tennessee Valley, and federal grazing lands.

Federal interest in land-use practices was expansively broadened by 1935 and 1936 legislation, upon which are based two

<sup>166</sup> Act of June 29, 1935, § 1, 49 Stat. 436, as amended, 7 U. S. C. 427.

<sup>170</sup> Memorandum from the Research Administrator to the Secretary of Agriculture, "Recommended Initial Allotment for the Bankhead-Jones Research Fund, Fiscal Year 1950," Project S. R. F.-3-9, App. p. 2, endorsed by the Undersecretary of Agriculture, July 8, 1949.

<sup>171</sup> Act of May 8, 1914, 38 Stat. 372, as amended, 7 U. S. C. 341 *et seq.*

national soil-conservation programs. One provides for technical assistance to operators of land located within soil-conservation districts established under state laws. The other enables direct but conditional cash payments to cooperating land operators. In providing for retirement of submarginal lands, a later statute also recognizes the effect of land practices on water resources.

[ In 1936, Congress gave the Department of Agriculture jurisdiction over federal investigations of watersheds and measures for run-off and water-flow retardation and soil-erosion prevention on watersheds. This activity is in addition to the flood-control activity of the Army Engineers.

The Water Facilities Act and the Water Conservation and Utilization Act are additional examples of legislative provision for specified interrelationships of land and water.] Congress has also provided for research and educational activities by various federal agencies important in this field. Other statutes provide means for financing land-use work by private initiative.

In this field, most of the activities are under the supervision of the Department of Agriculture. Promotion of conservation measures is sought by financial and other assistance, without employing direct regulation. Only in recent years has the Federal Government assumed broad responsibilities for encouraging proper use of nonfederal land. Emphasis is placed upon federal-state-local cooperation, and much of the work is carried on through local agencies.

# Comprehensive Development

At the outset, "comprehensive development" must be given a fixed meaning. For the term has been so employed, both in statutes and by agencies administering them, as to connote a variety of definitions. Sometimes it is used seemingly to denote a plan of development of a single river for a particular purpose, such as a "comprehensive" flood-control plan. Or at other times, a like basin-wide plan. It has also been used to describe a composite plan related predominantly to the specialized activities of two or more agencies, such as the Army Engineers and the Bureau of Reclamation. Thus, inclusion of a provision that projects be consistent with the "comprehensive development" of a river sometimes leaves unclear whether the term refers to development for a specified principal purpose, such as flood control, or to over-all development to achieve maximum beneficial use for all purposes.

We believe all will agree that there should be coordination of the uses of a river and of the structures in it to fulfill as many as possible of the sometimes conflicting purposes for which waters may be used or controlled, and that such uses should be integrated with land practices in the surrounding watershed. If this be so, comprehensive development, as applied to water resources and related land uses, may be defined as basin-wide development for optimum beneficial uses of a river system and its watershed. Despite the variations in the use of the term "comprehensive development," noted above, it may fairly be said that they all move toward the definition suggested, as we shall see. Since that is so, we shall employ that definition, unless the context dictates otherwise, in order to avoid variables as we trace the growth of the concept.



It should be noted that, for various reasons, two or more basins or one or more basins with adjacent areas have at times been treated as a single unit for development.

Admittedly, there has often been vigorous disagreement as to the manner or means of achieving comprehensive development. It is not our purpose here to suggest which manner or means should be adopted. On the contrary, our purpose is to portray the trend toward comprehensive development, noting also the legislative framework to which must be fitted administrative efforts in the same direction.

There is no single federal policy governing comprehensive development of water and land resources. Some statutes of uniform application separately control various aspects or functions. Others are geared to a comprehensive approach, but focus attention on individual projects, specific areas, or single rivers. But none is comprehensive and nation-wide in application. So far as it may now be achieved, therefore, comprehensive development must depend upon such statutes passed at different times, devoted to individual segments, and administered by separate agencies.

Initially, direct participation of the Federal Government was usually discharged through the construction and operation of individual small projects, each designed for a single purpose. Nonfederal developments authorized by direct action of Congress generally had development of power as their single purpose. A fragmentary legislative approach then seemed adequate. But as the size of river-development structures increased, the potentiality of their use for many integrated purposes became obvious. At the same time, as sheer physical dominion over the rivers was extended, there came a growing recognition of the interrelationship between the various structures on the same river system, of the fact that the storage or release of water at one dam directly affects uses and operations downstream, and of the fact that electrical and hydraulic integration permits a series of dams to do more than the same dams operated independently. And beyond the river itself, there developed an increasing awareness of the inseparable

effect of land practices in the surrounding watershed upon river flows and river structures.

With this evolution there arose a general demand for comprehensive development of our water and land resources, a demand answered by piecemeal and sometimes inconsistent changes in law and administrative practice. Wanting a total answer, the demand continues to find voice in a variety of proposals for further and more complete accommodation of the framework of law to the need for coordination of efforts to meet the physical, economic, and social needs dependent upon water resources and related uses of land.

Any examination of the growth of the comprehensive-development concept suggests mixed problems of policy and law. Through the years, an increasing measure of responsibility has been assumed by the Federal Government in the development, utilization, and conservation of water and related land resources. In addition to pondering whether that measure should now be increased or decreased, one may well inquire what laws are needed today for effectively discharging federal functions at the present stage of our economic, social, and technological development. Or the inquiry might be divided. What part of the total task can the Federal Government undertake? What portions should it undertake?

Our purpose here is not to answer those questions, but rather to lay another part<sup>1</sup> of the foundation for their answers by summarizing the significant historical developments, together with a survey of the principal legal aspects of efforts toward comprehensive development under existing law. As we do so, it must be borne in mind that the Federal Government is one of delegated powers, as we earlier noted. But it should also be remembered that Congress is authorized to make all laws necessary and proper for carrying into execution all of the powers vested in the Federal Government.<sup>2</sup> Our Constitution is not a sterile document appealing to historic interest alone. It is a living charter of government intended and destined to be

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<sup>1</sup> For a discussion of constitutional considerations, see Chapter 2, *supra*, pp. 5-72.

<sup>2</sup> U. S. CONST., Art I, § 8, cl. 18.

effective through social, economic, and technological changes, as our Nation lives and grows. Thus, as the Supreme Court said in 1816:<sup>3</sup>

The instrument was not intended to provide merely for the exigencies of a few years, but was to endure through a long lapse of ages, the events of which were locked up in the inscrutable purposes of Providence.

The powers granted by the people to the Federal Government carried with them inescapable responsibilities. As we have seen in previous chapters, Congress has employed its delegated powers in assuming a variety of responsibilities in relation to the development, utilization, and conservation of water and land resources. Thus, it has exercised its commerce power in regulating, protecting, and improving waterways for navigation use as well as in the control of floods. Its powers under the Property Clause have been utilized in laying the foundation for reclamation projects in the West. Use has also been made of the war, treaty-making, and general-welfare powers. In the exercise of these powers, Congress has additionally provided for the generation of electric power. Similarly, provision has incidentally been made for many other public purposes. And statutes seeking to coordinate land practices with water activities usually have relied, expressly or impliedly, upon a combination of two or more of these powers.

But the enormity of the problem demands, as Congress has frequently recognized, coordination of legislative attention and action by the states and the Federal Government. The rights, interests, and responsibilities of both must be harmonized for effective answers. Similarly, cognizance must be taken of individual rights and interests, and especially of rights to use of water and land derived under state law.<sup>4</sup> Account must also be taken of the possibility of solutions by joint action of two or more states, but with an eye to legal and practical difficulties

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<sup>3</sup> *Martin v. Hunter's Lessee*, 1 Wheat. 304, 326 (U. S. 1816). See also *South Carolina v. United States*, 199 U. S. 437, 448-449 (1905); *United States v. Classic*, 313 U. S. 299, 316 (1941).

<sup>4</sup> See *supra*, pp. 32-50.

such as posed in the recent case of *State ex rel. Dyer v. Sims*.<sup>5</sup> Or if one envisages the possibilities of a federal-state entity, other questions arise. For at least four aspects of existing federal responsibilities would be involved in any attempt to empower such an entity to discharge those responsibilities. These are the expenditure or distribution of federal funds, administration and enforcement of federal statutes, management of federal property, and appointment of federal officials. There is precedent for discharge of each of these types of responsibility by nonfederal entities.<sup>6</sup>

In reviewing the growth of the comprehensive-development idea, we shall first discuss events occurring prior to World War I, a period when interest in conservation became intense and nation-wide. The next period, from World War I to the "depression," evidenced growing attention to basin-wide development for previously recognized major purposes, seeking harmony at the same time with other related uses.

The third period, from 1933 to date, saw a number of new factors come into prominence in the development of river

<sup>5</sup> See *supra*, pp. 68-70.

<sup>6</sup> Expenditure or distribution of federal funds: State officials determine which institutions are to obtain funds under Servicemen's Readjustment Act, Act of June 22, 1944, § 400, 58 Stat. 284, 287, 38 U. S. C. 739, Part VIII of note following.

Administration and enforcement of federal statutes: Federal Employer's Liability Act enforceable through state courts, Act of April 22, 1908, § 6, 35 Stat. 65, 66, as amended, 45 U. S. C. 56. Labor Management Relations Act, 1947, authorizing NLRB to cede certain jurisdiction to state agencies, Act of June 23, 1947, § 10(a), 61 Stat. 136, 146, 29 U. S. C. 160(a) (Supp. III). State may determine necessity for continued federal rent control, Act of March 30, 1949, § 203(h), 63 Stat. 18, 25.

Management of federal property: Federal military equipment managed by state National Guard units, Act of May 29, 1916, § § 82, 83, 87, 39 Stat. 165, 203, 204, as amended, 32 U. S. C. 33, 47. Government housing and property may be transferred to state and local agencies, Act of December 31, 1945, § 502, 59 Stat. 674, as amended, 42 U. S. C. 1572. Sustained-yield forest units placed under cooperative federal-state management agreements, Act of March 29, 1944, § 3, 58 Stat. 132, 133, 16 U. S. C. 583c.

Appointment of federal officials: Federal property and disbursing officer for National Guard appointed by state officials, Act of May 29, 1916, § 67, 39 Stat. 165, 199, as amended, 32 U. S. C. 49. Cf. Rent Control Advisory Boards appointed from nominations submitted by state officials, Act of March 30, 1949, § 203(d) (4), 63 Stat. 18, 22.

basins. In the early "recovery" part of the period, attention was focused upon a new aspect of water-resource development and conservation. Projects were undertaken as a means of relieving unemployment as well as for development and conservation of natural resources. Also, increased attention was given to the public utilization of the completed projects under policies calculated to improve the economic and social welfare of the Nation. Throughout the whole period, increasing attention was given to conservation and public protection of exhaustible resources, and to planning for their development on a basin-wide, all-purpose basis with growing reliance upon multiple-purpose projects.

Moreover, we shall outline the recent accentuation of interest in discovering and correcting deficiencies in organization so far as they relate to comprehensive development.

Finally, since river-basin development has varied from region to region, we shall take note of the more significant aspects of efforts toward comprehensive development in each of the major regions.

## Growth Until World War I

As we saw in preceding chapters, most early river developments were single in purpose.

**EARLY INTERRELATION OF USES.**—Well before the turn of the century, however, specific acts of Congress recognized interconnection between certain functions in the development of rivers. An 1879 example combines navigation and flood control.<sup>7</sup> Likewise, an 1888 statute took cognizance of the interrelationship of irrigation and flood control.<sup>8</sup> Nor did early legislation overlook the possibility of relating navigation im-

<sup>7</sup> See Act of June 28, 1879, § 4, 21 Stat. 37, 38, 33 U. S. C. 647, establishing the Mississippi River Commission and directing it to survey the river and develop plans which would "correct, permanently locate, and deepen the channel and protect the banks of the Mississippi River; improve and give safety and ease to the navigation thereof; prevent destructive floods; promote and facilitate commerce, trade, and the postal service." For later statutory details concerning navigation and flood control, see *supra*, pp. 98, 141-142.

<sup>8</sup> Act of October 2, 1888, 25 Stat. 505, 526.

provement to power development.<sup>9</sup> Noteworthy also is the fact that early legislation for the benefit of flood control related that function to the promotion of the interests of navigation and commerce.<sup>10</sup>

**CALIFORNIA DÉBRIS COMMISSION.**—Another early exception to the single-purpose legislative treatment is an 1893 provision for the California Débris Commission.<sup>11</sup> For Congress here recognized the effect on navigable capacity resulting from the encroachment of débris from mining operations, natural erosion, and other causes. The Commission was directed to adopt plans to improve the navigability of the Sacramento and San Joaquin River systems, deepen their channels and protect their banks. In addition, these plans were to reconcile, as nearly as practicable, the interests of hydraulic mining and navigation. Indeed, the Commission was to examine the practicability of sites for storage of débris or water, or for settling reservoirs: to protect the navigability of the rivers, to afford flood relief, and to provide sufficient water to maintain summer scouring forces therein.<sup>12</sup>

**ASSERTION OF CONTROL OVER ARTIFICIAL OBSTRUCTIONS.**—Moreover, with the increasing number of artificial obstructions to navigation, Congress early decided upon the need for uniform

<sup>9</sup> Act of August 11, 1888, § 1, 25 Stat. 400, 417; Act of September 19, 1890, 26 Stat. 426, 447; Act of June 28, 1902, 32 Stat. 408, 409; see also Act of March 3, 1879, 20 Stat. 377, 387. In addition, the Act of August 11, 1888, also gave the Secretary of the Army discretionary authority to provide "practical and sufficient fish-ways" whenever the improvements obstruct fish passage. § 11, 25 Stat. 425.

<sup>10</sup> Act of September 19, 1890, § 1, 26 Stat. 426, 450, appropriating funds for the Mississippi River Commission to be used "in such manner, to such extent, and in such proportion as in their opinion shall best promote the interests of commerce and navigation." See also Act of March 1, 1917, § 1(a), 39 Stat. 948, see 33 U. S. C. 702; Act of March 3, 1921, 41 Stat. 1354; Act of July 29, 1921, 42 Stat. 146; Act of August 18, 1921, 42 Stat. 171; Act of May 31, 1924, 43 Stat. 249; Act of May 15, 1928, § 10, 45 Stat. 534, 538, 33 U. S. C. 702j.

<sup>11</sup> Act of March 1, 1893, 27 Stat. 507, see 33 U. S. C. 661 *et seq.*

<sup>12</sup> Under a 1938 amendment, the Secretary of the Army may contract to supply storage for and use of outlet facilities from débris storage reservoirs for domestic and irrigation purposes and power development. Act of June 25, 1938, 52 Stat. 1040, see 33 U. S. C. 683.

control. The 1890 River and Harbor Act prohibited the creation of any obstruction, not affirmatively authorized by law, to the navigable capacity of any waters in respect of which the United States has jurisdiction.<sup>13</sup> It also declared unlawful the building of structures in navigable waters, without the permission of the Secretary of the Army.<sup>14</sup> Sustaining the authority thus asserted by Congress, the Supreme Court in 1899 made it clear that the right to control applied not only to navigable waters, but also to any obstruction to navigable capacity, wherever or however done.<sup>15</sup> And in that same year, Congress repeated and strengthened the prohibition which it had established in the 1890 statute.<sup>16</sup>

Another early decision of the Supreme Court recognizing interrelationship of river uses merits notice here. Speaking of the right of the United States to control the use and disposal of water power from a federal navigation works, the Court said, "in such matters there can be no divided empire."<sup>17</sup>

RELATIONSHIP OF FOREST COVER.—Having authorized the President in 1891 to establish forest reserves out of specified lands in the public domain, Congress in 1897 expressly recognized the role of forest cover in affecting water flow when it prohibited establishment of national forests except to improve and protect forests, "or for the purpose of securing favorable conditions of water flows," or to furnish a continuous timber

<sup>13</sup> Act of September 19, 1890, § 10, 26 Stat. 426, 454.

<sup>14</sup> § 7, 26 Stat. 426, 454.

<sup>15</sup> *United States v. Rio Grande Irrigation Co.*, 174 U. S. 690, 708 (1899).

<sup>16</sup> Act of March 3, 1899, § 10, 30 Stat. 1121, 1151, 33 U. S. C. 403. §§ 9-20 of this Act were the result of a report prepared after a study of all then-existing general laws for the maintenance, protection, and preservation of the navigable waters of the United States. H. Doc. No. 293, 54th Cong., 2d sess. (1897). This study had been directed by § 2 of the River and Harbor Act of June 3, 1896, 29 Stat. 202, 234. The 1899 Act provided for control over construction of bridges, dams, dikes, causeways, wharfs, piers, breakwaters, bulkheads, or any other structures in navigable waters; over excavations and fillings; over deposits of certain refuse matter in navigable waters; over sunken vessels and floating of logs; and over the anchoring of vessels as obstructions to navigation.

<sup>17</sup> *Green Bay & Miss. Canal Co. v. Patten Paper Co.*, 172 U. S. 58, 80 (1898), reh. den., 173 U. S. 179 (1899). See *supra*, pp. 19-20.

supply.<sup>18</sup> Moreover, in an act "for the protection of the watersheds of navigable streams," Congress in 1911 authorized the acquisition for national-forest purposes of private lands "located on the headwaters of navigable streams," which may be "necessary to the regulation of the flow of navigable streams."<sup>19</sup>

**THE 1906 GENERAL DAM ACT.**—In the early part of the century, Congress continued to enact special legislation authorizing specific projects for nonfederal water-power development.<sup>20</sup> In 1906, the General Dam Act was passed prescribing conditions for general application to nonfederal power developments thereafter authorized by Congress in navigable waters.<sup>21</sup> It recognized interrelations of power, navigation, and fish preservation, by making provision for the installation of navigation and fish-passage facilities. But these provisions seem designed to serve the passive purpose of preventing obstruction by the dam, rather than affirmatively promoting nonpower uses.

**MULTIPLE USES AT RECLAMATION DAMS.**—Only a few months previously, Congress had expressly recognized the interrelationship of power and irrigation when it supplemented the 1902 Reclamation Act by providing for power development and lease of any surplus power or power privilege at reclamation projects.<sup>22</sup> At the same time, it authorized contracts for water

<sup>18</sup> See *supra*, pp. 354-355.

<sup>19</sup> Act of March 1, 1911, §§ 3, 6, 36 Stat. 961, 962, see 16 U. S. C. 515. Later, this Act was amended to authorize acquisition of lands for promoting the production of timber as well as for protecting navigation. Act of June 7, 1924, § 7, 43 Stat. 653, 654, 16 U. S. C. 569.

<sup>20</sup> See *supra*, p. 262 and n. 41, p. 266.

<sup>21</sup> Act of June 21, 1906, 34 Stat. 386. This Act granted authority to construct and maintain a dam "for water power or other purposes" across any navigable water of the United States after approval of the plans and specifications by the Secretary of the Army and the Chief of Engineers. These officials could impose such conditions and stipulations as they deemed necessary "to protect the present and future interests of the United States," which might include a condition for construction without expense to the United States, of locks, booms, sluices, or any other structure necessary in the interests of navigation. The operator was also required to maintain such lights and other signals thereon and such fishways as the Secretary of Commerce prescribed.

<sup>22</sup> Act of April 16, 1906, § 5, 34 Stat. 116, 117, see 43 U. S. C. 522.



supply with towns on or in the vicinity of the project, having a water right from the same source.<sup>23</sup>

**RAINY RIVER AND JAMES RIVER VETO MESSAGES.**—Of historic importance is the 1908 veto of the Rainy River bill. Having earlier indicated to Congress his views of the need for comprehensive consideration of water-resource problems,<sup>24</sup> President Theodore Roosevelt was explicit in vetoing the Rainy River bill which would have granted extensive privileges for nonfederal development.<sup>25</sup> His message asserted that the navigability of inland waterways should be improved “upon a consistent unified plan by which each part should be made to help every other part.” Slack water for navigation, he said, may be provided by a dam which may “develop power of sufficient value to pay in whole or in part for the improvement of navigation at that point, and if there is any surplus it can be spent upon improvements at other points in accordance with the general plan.”<sup>26</sup>

The President called for substitution of a definite policy which would provide, among other things, for some designated official to have the duty of seeing to it that in approving future plans, the maximum development of navigation and power would be assured. Or at least that developments not be permitted which would ultimately interfere with better utilization of the water or complete development of the power.

<sup>23</sup> § 4, 34 Stat. 116, 43 U. S. C. 567.

<sup>24</sup> In his 1903 veto message relative to a bill granting consent for private construction of a power dam at Muscle Shoals, President Roosevelt asserted that power should be developed at, and aid in, financing federal navigation improvements. Moreover, he stated that the “entire subject of granting privileges of the kind referred to in this bill should be considered in a comprehensive way.” See 36 Cong. Rec. 3071 for text of message vetoing H. R. 14051, 57th Cong., 2d sess. (1903).

<sup>25</sup> Sen. Doc. No. 438, 60th Cong., 1st sess.; 42 Cong. Rec. 4698 (1908). But the bill was passed over the veto. Act of May 23, 1908, 35 Stat. 273.

<sup>26</sup> But he was not recommending federal control over power development solely for the purpose of financing river-improvement works. For in pointing out the power potential of our navigable streams, he declared that “This natural wealth is the heritage of the people. \* \* \* We are now at the beginning of great development in water power. Its use through electrical transmission is entering more and more largely into every element of the daily life of the people.” *Ibid.*

In the following year, President Roosevelt reiterated most of the foregoing considerations when he vetoed a similar bill granting broad rights for nonfederal development on the James River.<sup>27</sup>

**INLAND WATERWAYS COMMISSION.**—Events of the next few years reflect President Theodore Roosevelt's dynamic influence on conservation. In March 1907, he had appointed the Inland Waterways Commission, whose assignment was "to evolve a comprehensive plan designed for benefit of the entire country."<sup>28</sup> This Commission's 1908 Preliminary Report was concerned principally with inland waterways, but devoted much attention to the need for multiple use and comprehensive planning, saying, among other things:<sup>29</sup>

The control of waterways on which successful navigation depends is so intimately connected with the prevention of floods and low waters, and works designed for these purposes; with the protection and reclamation of overflow lands, and works designed therefor; with the safeguarding of banks and maintenance of channels, and works employed therein; with the purification and clarification of water supply, and works designed therefor in conjunction with interstate commerce; with control and utilization of power developed in connection with works for the improvement of navigation; with the standardizing of methods and facilities and the coordinating of waterway and railway instrumentalities; and throughout the larger area of the country with reclamation by irrigation and drainage, and works designed primarily for these purposes—that local and special questions concerning the control of waterways should be treated as a general question of national extent, while local or special projects should be con-

<sup>27</sup> H. Doc. No. 1350, 60th Cong., 2d sess.; 43 CONG. REC. 978-980 (1909).

<sup>28</sup> Sen. Doc. No. 325, 60th Cong., 1st sess., p. iii (1908). Members of the Commission were: Theodore E. Burton, Chairman, J. H. Bankhead, Alexander Mackenzie, W. J. McGee, F. H. Newell, Francis C. Newlands, Gifford Pinchot, Herbert Knox Smith, and William Warner.

<sup>29</sup> *Id.* pp. 22-23.

sidered as parts of a comprehensive policy of waterway control in the interests of all the people.

In addition, the Commission observed that wherever water may be the chief source of power, monopolization of the electric energy generated involves monopoly of: <sup>30</sup>

power for the transportation of freight and passengers, for manufacturing, and for supplying light, heat, and other domestic, agricultural, and municipal necessities, to such an extent that unless regulated it will entail monopolistic control of the daily life of our people in an unprecedented degree. There is here presented an urgent need for prompt and vigorous action by State and Federal governments.

No less emphatic was President Roosevelt's letter transmitting this report to Congress. Observing that the report rested upon the fundamental concept that every waterway should be made "to serve the people as largely and in as many different ways as possible," the President added: <sup>31</sup>

Every stream should be used to its utmost. No stream can be so used unless such use is planned for in advance. When such plans are made we shall find that, instead of interfering, one use can often be made to assist another. Each river system, from its headwaters in the forest to its mouth on the coast, is a single unit and should be treated as such.

The President asserted that it was not "possible to deal with a river system as a single problem" since uses of waterways were dealt with by agencies scattered through four federal departments.<sup>32</sup> Moreover, he observed that the report noted that national policy had theretofore been one of "almost unrestricted disposition and waste of natural resources," and that the report emphasized "the fundamental necessity for conserving these resources upon which our present and future success as a

<sup>30</sup> *Id.* pp. 21-22.

<sup>31</sup> *Id.* p. iv.

<sup>32</sup> *Ibid.*

nation primarily rests.”<sup>33</sup> Remarking upon the urgent need for prompt and decisive action, the President concluded that: <sup>34</sup>

the development of our waterways and the conservation of our forests are the two most pressing physical needs of the country. They are interdependent and they should be met vigorously, together, and at once.

NATIONAL CONSERVATION COMMISSION.—Also of importance to our review is the 1909 Report of the National Conservation Commission.<sup>35</sup> This Commission observed that: <sup>36</sup>

Broad plans should be adopted providing for a system of waterway improvement extending to all uses of the waters and benefits to be derived from their control, including the clarification of the water and abatement of floods for the benefit of navigation; the extension of irrigation; the development and application of power; the prevention of soil wash; the purification of streams for water supply; and the drainage and utilization of the waters of swamp and overflow lands.

To promote and perfect these plans scientific investigations, surveys, and measurements should be continued and extended, especially the more accurate determination of rainfall and evaporation, the investigation and measurement of ground water, the gauging of streams and determination of sediment, and topographic surveys of catchment areas and sites available for control of the waters for navigation and related purposes.

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<sup>33</sup> *Id.* p. v.

<sup>34</sup> *Id.* p. vii.

<sup>35</sup> Sen. Doc. No. 676, 60th Cong., 2d sess. (1909). The President called a conference of governors and later created the National Conservation Commission on June 8, 1908, to study and advise him respecting natural resources and to cooperate with state bodies created for similar purposes, pp. 1, 11. An outgrowth of the conference of governors, the Commission's report of December 7, 1908, is signed by Gifford Pinchot, Chairman; W. J. McGee, Secretary, Section of Waters; Overton W. Price, Secretary, Section of Forests; George W. Woodruff, Secretary, Section of Lands; and J. A. Holmes, Secretary, Section of Minerals. Pp. 1, 26.

<sup>36</sup> Sen. Doc. No. 676, vol. 1, p. 24 (1909). See also BULLETIN No. 4, THE REPORT OF THE NATIONAL CONSERVATION COMMISSION, issued by the Joint Committee on Conservation, pp. 18-19 (1909).

That Report was promptly approved by the Joint Conservation Conference.<sup>37</sup> Delegates to the Conference included governors of 20 states and territories; representatives of 22 state conservation agencies, of 60 national organizations, and of federal agencies; and members of the National Conservation Commission. In addition to generally approving the Commission's Report, the Conference said specifically, "we also especially approve and endorse the proposition that all the uses of the waters and all portions of each waterway should be treated as interrelated."<sup>38</sup>

CONSIDERATION OF RELATED USES IN IMPROVEMENTS FOR NAVIGATION.—In a 1909 statute, Congress acted to assure consideration of river uses in addition to navigation.<sup>39</sup> This Act specified, with regard to river examinations and surveys therein authorized, that reports thereon shall contain such data as it might be practicable to secure regarding terminal and transfer facilities, the "development and utilization of water power for industrial and commercial purposes," and such "other subjects as may be properly connected with such project." But it contained a proviso that consideration of "these questions" shall be given "only" to their bearing upon the improvement of navigation, and to the possibility and desirability of their being coordinated "in a logical and proper manner" with navigation improvements to lessen the cost and to compensate the Government for expenditures made in the interest of navigation. These provisions were repeated in the River and Harbor Acts of 1910 and 1912, the latter however permitting consideration to be given also to the relation of these questions "to the development and regulation of commerce."<sup>40</sup> In 1913, the provisions as modified in 1912 were enacted as general legislation and remain in effect today.<sup>41</sup>

<sup>37</sup> Sen. Doc. No. 676, p. 27.

<sup>38</sup> *Ibid.*

<sup>39</sup> Act of March 3, 1909, § 13, 35 Stat. 815, 822.

<sup>40</sup> Act of June 25, 1910, § 3, 36 Stat. 630, 668; Act of July 25, 1912, § 2, 37 Stat. 201, 231.

<sup>41</sup> Act of March 4, 1913, § 3, 37 Stat. 801, 825, 33 U. S. C. 545. It is not clear whether the proviso limiting the study of "these questions" only to their bearing upon the improvement of navigation, applies to all three

The 1910 and 1912 Acts also include other currently effective provisions relevant here. First, the 1910 River and Harbor Act inaugurated a requirement that surveys must include "such stream-flow measurements and other investigations of the watersheds as may be necessary for preparation of plans of improvement and a proper consideration of all uses of the stream affecting navigation."<sup>42</sup> And whenever permission for construction of dams in navigable streams is granted or is under consideration by Congress, this statute permits such Army Engineer surveys and investigations of the streams affected as "are necessary to secure conformity with rational plans for the improvement of the streams for navigation."<sup>43</sup> Second, the

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subjects to be studied, that is, to terminals, power development, and "other subjects" connected with the project—or whether it applies merely to the "other subjects." The paragraphing of the 1909 and 1910 Acts seems to suggest that it applies to all three, whereas that of the 1912 and 1913 Acts seems to suggest that it applies only to the "other subjects."

None of the committee reports on any of the four Acts sheds light on the question. Only two of these reports mention the survey provisions at all, and neither of them deals with this question. H. Rep. No. 436, 61st Cong., 2d sess. (1910) says, with regard to the 1910 Act: "The terms of the provision are in the usual form, and is intended to extend somewhat the scope of such surveys and investigations considered desirable and necessary in framing and executing proper plans for the improvement of navigable rivers, and also to secure the information necessary for intelligent action on applications for the construction of dams in navigable streams." p. 24. This language may mean that information on power development was to be obtained for its own sake and not merely as an incident to navigation improvement. The Federal Power Commission, with its authority to make investigations concerning the utilization of water resources, had not yet been created. See *infra*, pp. 406-408. H. Rep. No. 395, 62d Cong., 2d sess. (1912) refers to the provision of the 1912 Act as it relates to terminals, saying: "the bill extends somewhat the scope of the investigations heretofore required of the engineers in preliminary and other examinations and reports thereon. Among these are inquiries into both private and public terminals." P. 4.

In any event, under the 1913 Act the Army Engineers must limit the investigation of at least the "other subjects"—those other than navigation works, terminals, and power development—to their relation to navigation improvements and "to the development and regulation of commerce." Cf. the limitation of the "308 Reports" mentioned, *infra*, pp. 408-409.

<sup>42</sup>Act of June 25, 1910, § 3, 36 Stat. 630, 668, 33 U. S. C. 546.

<sup>43</sup>*Id.*

1912 River and Harbor Act permits the inclusion in the permanent parts of authorized navigation dams of "such foundations, sluices, and other works, as may be considered desirable for the future development of its water power." <sup>44</sup>

**THE 1910 GENERAL DAM ACT.**—In 1910, Congress amended the 1906 General Dam Act.<sup>45</sup> As we have seen, the 1906 Act required approval of plans by the Secretary of the Army, and of fishways by the Secretary of Commerce. The 1910 Act added a requirement that in administrative action upon plans, consideration must be given to the bearing of the proposed structure "upon a comprehensive plan for the improvement of the waterway over which it is to be constructed with a view to the promotion of its navigable quality and for the full development of water power."<sup>46</sup>

**THE 1911 ANNUAL REPORT OF THE SECRETARY OF THE INTERIOR.**—Further official recognition of the relationships among water-resource development purposes was given by the Secretary of the Interior in 1911. In recommending congressional consideration of the whole problem of water-power development and control, he pointed out that: <sup>47</sup>

it is increasingly clear that proper development and protection of stream flow for all purposes, including those of navigation, domestic use, irrigation, and power,

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<sup>44</sup> Act of July 25, 1912, § 12, 37 Stat. 201, 233, 33 U. S. C. 609.

<sup>45</sup> Act of June 23, 1910, 36 Stat. 593.

<sup>46</sup> § 1, 36 Stat. 593. Another proviso added by this section directed the collection of charges for the privilege "granted to all dams" authorized under the Act which receive direct benefit from federal headwater storage reservoirs, from the acquisition and maintenance of any forested watershed, or lands "located by the United States" at headwaters of navigable streams, whenever these things be for the benefit of navigation in such streams.

<sup>47</sup> ANNUAL REPORT OF THE SECRETARY OF THE INTERIOR, vol. 1, p. 15 (1911). The report also said: "As a general principle, the revenues derived in this way should be devoted to waterway improvement, with special care for the river system and watershed of the stream from which the revenues are derived \* \* \*. Logically, the revenues derived from the water power may belong to the Nation for its general use, but it would seem that national and local interests can best be reconciled by devoting these revenues to local improvements so far as such improvements are necessary or wise. Such a use removes one of the principal objections to Federal control." *Ibid.*

require that the stream and its branches from sources to mouth should be regarded as essentially a unit.

**NATIONAL WATERWAYS COMMISSION.**—Noteworthy also is the 1912 Final Report of the National Waterways Commission.<sup>48</sup> Created by act of Congress and composed of 12 Congressmen, this Commission had been assigned the duty of investigating “questions pertaining to water transportation and the improvement of waterways.”<sup>49</sup> In its 1910 Preliminary Report, this Commission had already emphasized the need for consideration of multiple uses in planning navigation improvements, recommending “greatest care in the conservation of water power for the use of the people.”<sup>50</sup> And in its Final Report, the Commission pointed out the need for a comprehensive, storage-reservoir system to be utilized simultaneously for flood prevention, navigation, and power development.<sup>51</sup>

<sup>48</sup> Sen. Doc. No. 469, 62d Cong., 2d sess. (1912).

<sup>49</sup> Act of March 3, 1909, § 7, 35 Stat. 815, 818. See also Act of February 27, 1911, § 4, 36 Stat. 933, 956, extending the Commission's life from March 4, 1911 to November 4, 1911, and requiring it to conduct certain additional special investigations. The Senate had earlier sought unsuccessfully to continue it for two years. H. Rep. No. 1488, 61st Cong., 2d sess., pp. 10, 17 (1910).

<sup>50</sup> Sen. Doc. No. 469, App. I, pp. 82, 85.

<sup>51</sup> Sen. Doc. No. 469, pp. 22-28. “A reservoir system, in order to be utilized simultaneously for flood prevention, aiding navigation, and power development, must be controlled or operated by some public authority. \* \* \* Thus far the improvement of rivers in this country, except in the arid regions, has been almost solely for the purpose of navigation. The other purposes have been almost entirely disregarded. The position of the Corps of Engineers, who have supervision over river improvements has been that an increased depth of a stream for navigation could be secured much more cheaply by the use of dams, diverting walls, and other devices than by constructing reservoirs at headwaters, and in this view the engineers have in general been right, particularly when it is recalled that the existing or prospective commerce on few of our streams has justified extensive expenditures for this purpose, and only on a comparatively few streams do suitable reservoir sites exist. When, however, the improvement of a stream is considered from the standpoint of all its beneficial uses, as well as the prevention of damage by floods, the policy of constructing reservoirs may become, in particular cases, more feasible. The combined benefits from flood prevention, from additional power development, and from a more uniform flow of the stream may warrant the adoption of a system of reservoirs which, if intended for any one of these purposes alone, would not be practicable.” *Id.* pp. 24-25; see also p. 174.



Similarly, it noted the need for coordination of forest policies with river-development programs.<sup>52</sup> The Commission asserted that there can be no doubt that the authority of Congress "reaches to the remotest sources in the mountains of every navigable stream."<sup>53</sup> After reviewing numerous decisions of the Supreme Court, it concluded "that the Government may \* \* \* constitutionally extend its jurisdiction to questions more remotely connected with the rights of navigation, or even wholly unrelated."<sup>54</sup> Elsewhere, the Commission made this forecast:<sup>55</sup>

With the increasing unity of our national life and the growing necessity of securing for human needs the maximum beneficial use of the waters of every stream it will become increasingly necessary to treat every stream with all its tributaries as a unit. In the nature of the case so comprehensive a policy could be successfully administered only by the Federal Government, and consequently the eventual desirability of Federal control is easy to predict.

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<sup>52</sup> *Id.* pp. 28-37 and App. V, pp. 205-273.

<sup>53</sup> *Id.* p. 47.

<sup>54</sup> *Id.* p. 44. These were among the excerpts quoted: "Let the end be legitimate, let it be within the scope of the Constitution, and all means which are appropriate, which are plainly adapted to that end, which are not prohibited, but consistent with the letter and spirit of the Constitution, are constitutional." *McCulloch v. Maryland*, 4 Wheat. 316, 421 (U. S. 1819). "It is not a prohibition of any obstruction to the navigation, but any obstruction to the navigable capacity, and anything, wherever done or however done, within the limits of the jurisdiction of the United States which tends to destroy the navigable capacity of one of the navigable waters of the United States, is within the terms of the prohibition." *United States v. Rio Grande Irrigation Co.*, 174 U. S. 690, 708 (1899). "Congress has authority in the exercise of its powers to regulate commerce among the several States, to construct, or authorize individuals or corporations to construct railroads across the States and Territories of the United States." *California v. Central Pacific Railroad Co.*, 127 U. S. 1, 2 (1888). Particular emphasis was also placed upon the two *Green Bay* cases: *Kaukauna Water Power Co. v. Green Bay & Miss. Canal Co.*, 142 U. S. 254 (1891); and *Green Bay & Miss. Canal Co. v. Patten Paper Co.*, 172 U. S. 58 (1898); see *supra*, pp. 19-20.

<sup>55</sup> Sen. Doc. No. 469, p. 52.

**WHITE RIVER AND COOSA RIVER VETOES.**—In 1912, Congress passed a bill authorizing a nonfederal power dam on the White River a short distance upstream from where certain federal navigation improvements had been completed and others were contemplated, and downstream from the point then generally considered to be the “head of high-water steamboat navigation.”<sup>66</sup> The dam would have increased navigable capacity above it, and could have been so constructed as to form a part of an extension of the projected downstream federal improvement. The Army Engineer River and Harbor Board had recommended against present prosecution of the navigation project because of “lack of present commerce,” but the Chief of Engineers had reported that future conditions might lead to an extension of the federal improvement as far as the dam site.

President Taft vetoed the bill, noting three principal objections. First, since the dam was “capable of becoming a part of this general Federal improvement,” he opposed a provision which would have permitted the dam to become the property of the State of Arkansas upon expiration of the federal permit, saying:<sup>67</sup>

To introduce a diversity of title into a series of dams which may all become eventually a part of a single improvement directed at the same end would, in my opinion, be highly objectionable.

Next, he pointed to the conflict between this provision and the policy of the General Dam Act of 1910 which would vest control and title in the Federal Government at the expiration of the permit. And finally, he noted the absence of a provision for imposing a charge for the privilege granted, such charge to be used in the interest of furthering navigation in the River.

Less than three weeks thereafter, President Taft vetoed a bill for nonfederal power development at a point on the Coosa River where “comprehensive plans” by the Army Engineers

<sup>66</sup> H. R. 20347; H. Doc. No. 899, both 62d Cong., 2d sess. (1912), 48 CONG. REC. 10318 (1912).

<sup>67</sup> H. Doc. No. 899, p. 2.

contemplated one of a series of navigation dams, noting in this instance that this bill presented: <sup>58</sup>

a typical case of a river where its development by the Federal Government for navigation should go hand in hand with its development for water power.

He said that the bill contained a "fatal defect" in its failure to provide means for exacting reasonable compensation for the privilege granted, and that this was as improvident as throwing away "any other asset of the Government."

CONSIDERATION OF RELATED USES IN IMPROVEMENTS FOR FLOOD CONTROL.—A few years later, the need for comprehensive study of a river basin was recognized in 1917 flood-control legislation.<sup>59</sup> Congress there provided that "all examinations and surveys of projects relating to flood control shall include a comprehensive study of the watershed."<sup>60</sup> Moreover, it required that reports thereon shall include data in regard to (1) the extent and character of the area to be affected by the proposed improvement, (2) the probable effect upon any navigable water, (3) the possible economical development and utilization of water power, and (4) "such other uses as may be properly related to or coordinated with the project."<sup>61</sup>

<sup>58</sup> S. 7343; Sen. Doc. No. 949, both 62d Cong., 2d sess. (1912); 48 CONG. REC. 11796 (1912).

<sup>59</sup> Act of March 1, 1917, 39 Stat. 948. The House Committee on Flood Control was first established by the 64th Congress in 1916. See 53 CONG. REC. 2338, 2406 (1916).

<sup>60</sup> § 3, 39 Stat. 950, 33 U. S. C. 701.

<sup>61</sup> *Id.* An indication of the effect of this language on the scope of flood-control surveys appears in the following excerpt from an Army Engineer memorandum on the scope of a Sacramento-San Joaquin Basin report of the Army Engineers. "The report of the Chief of Engineers was made pursuant to specific congressional authorizations for surveys for flood control and related water uses. It is not presented or intended as a plan for the development of all of the water resources of the Sacramento-San Joaquin Basin, as it was recognized that ultimate plans for such full development would require additional projects and would extend far into the future, whereas the need for flood control and conservation of flood waters is a present urgent necessity in California. It was also recognized that Federal responsibility for irrigation improvements has been assigned by Congress to the Bureau of Reclamation." H. Doc. No. 367, 81st Cong., 1st sess., pp. IX-X (1949).

**WATERWAYS COMMISSION.**—That same year, 1917, witnessed a significant legislative recognition of the comprehensive-development concept when Congress established the Waterways Commission.<sup>62</sup> It authorized the Commission:

to bring into coordination and cooperation the engineering, scientific, and constructive services, bureaus, boards, and commissions of the several governmental departments of the United States and commissions created by Congress that relate to study, development, or control of waterways and water resources and subjects related thereto, or to the development and regulation of interstate and foreign commerce, with a view to uniting such services in investigating, with respect to all watersheds in the United States, questions relating to the development, improvement, regulation, and control of navigation as a part of interstate and foreign commerce, including therein the related questions of irrigation, drainage, forestry, arid and swamp land reclamation, clarification of streams, regulation of flow, control of floods, utilization of water power, prevention of soil erosion and waste, storage, and conservation of water for agricultural, industrial, municipal, and domestic uses, cooperation of railways and waterways, and promotion of terminal and transfer facilities, to secure the necessary data, and to formulate and report to Congress, as early as practicable, a comprehensive plan or plans for the development of waterways and the water resources of the United States for the purposes of navigation and for every useful purpose, and recommendations for the modification or discontinuance of any project herein or heretofore adopted.

The Commission was also directed to give consideration to matters to be undertaken by the United States alone or in cooperation with states and local entities and individuals, with a view to assigning to each such portions as belong to their respective "jurisdictions, rights, and interests."

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<sup>62</sup> Act of August 8, 1917, § 18, 40 Stat. 250, 269.

Although finally adopted in 1917, the idea of a waterways commission already had an involved and informative history.<sup>63</sup> For over ten years, Senator Newlands of Nevada had sought its adoption in one form or another. In 1907, he introduced an Inland Waterways Commission Bill.<sup>64</sup> His proposal was advanced again in 1910 as an amendment to the Weeks Forestry Bill, and in the 64th Congress, as an amendment to the 1917 flood-control legislation.<sup>65</sup> Finally, in the 65th Congress the Senate Commerce Committee approved the proposal as an amendment to the 1917 River and Harbor Bill after it had been stricken in the House on a point of order.<sup>66</sup> Originally, Senator Newlands had sought a development commission with an authorized annual appropriation of \$60,000,000, for ten years. As adopted, however, the provision made no money available to the Commission to carry out the projects it recommended, giving it instead the wide investigative authority encompassed in the foregoing quoted provision. Moreover, before being offered for vote in the Senate, the language was revised to read as follows, the bracketed words having been added and retained in the bill as passed: <sup>67</sup>

Nothing herein contained shall be construed to delay, prevent, or interfere with the completion of any survey, investigation, project, or work herein or heretofore [or

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<sup>63</sup> In documented detail, this history is set forth in 56 CONG. REC. 9831-9855 (1918).

<sup>64</sup> S. 500, 60th Cong., 1st sess. (1907).

<sup>65</sup> See 45 CONG. REC. 8813-8818, 8897 (1910); 46 CONG. REC. 2587-2595 (1911). The latter proposal was defeated 29-32 after several Senators, including some of its supporters, expressed concern lest the House refuse to accept it and thus jeopardize the entire bill. 54 CONG. REC. 4290-4295 (1917). In addition, it should be noted that a Senate amendment to the 1913 River and Harbor Bill, stricken in conference, would have created a river-regulation commission consisting of four Cabinet officials, two Senators, and two Representatives to make investigations and plans relative to the use of water for navigation and other purposes. H. REP. NO. 1607, 62d Cong., 3d sess., pp. 1, 12 (1913).

<sup>66</sup> Sen. Rep. No. 81, to accompany H. R. 4285, 65th Cong., 1st sess., pp. I, II, and see p. 6 (1917); 55 CONG. REC. 4330-4331 (1917).

<sup>67</sup> 55 CONG. REC. 4330-4331 and compare 55 CONG. REC. 5508 (1917).

hereafter] adopted or authorized upon or for the improvement of any of the rivers or harbors of the United States [or with legislative action upon the reports heretofore or hereafter presented.]

In the Senate, the amendment establishing the Commission was adopted by voice vote without debate.<sup>68</sup> An attempt to delete it was defeated in the House by vote of 207-142.<sup>69</sup>

But the efforts creating the Waterways Commission were in vain. For its members were never appointed, largely because of our participation in World War I.<sup>70</sup> Moreover, the provision creating it was expressly repealed by the 1920 Federal Water Power Act,<sup>71</sup> after the House refused to accept a Senate amendment which would have preserved the Waterways Commission but changed its authorized membership.<sup>72</sup>

<sup>68</sup> 55 CONG. REC. 5508 (1917).

<sup>69</sup> 55 CONG. REC. 5732. The Conference Committee had modified the provision slightly (Sen. Amend. No. 41). See H. Rep. No. 116, 65th Cong., 1st sess., p. 4 (1917). For the debate in the Senate, see 55 CONG. REC. 5701-5705, and in the House, see *id.* pp. 5723-5732. One opponent in the House remarked that the conferees had "provided for the creation of a commission to study territorial conditions in every particular so far as water is concerned except prohibition." He expressed surprise that this had not been included. *Id.* p. 5726.

<sup>70</sup> See 59 CONG. REC. 1173-1176, 7773 (1920).

<sup>71</sup> Act of June 10, 1920, § 29, 41 Stat. 1063, 1077.

<sup>72</sup> Sen. Amend. No. 59, rather than repealing § 18 of the 1917 Act, would have amended it to omit its third and fourth paragraphs and to change the membership of the Commission to the Secretary of the Army, the Secretary of the Interior, the Secretary of Agriculture, Director of Geological Survey, Forester and Chief of the Forest Service, Director and Chief Engineer of the Corps of Engineers. 59 CONG. REC. 1535; see also *id.* pp. 1173-1176 and 7770-7773. This amendment had been adopted in lieu of one which would have transferred all the powers and duties of the Commission to the new Federal Power Commission. See 59 CONG. REC. 1173.

Rejecting the Senate amendment, the Conference Committee said, "In view of the fact that many of the duties imposed upon this Waterways Commission will be assigned to the Water Power Commission under the pending bill and other duties have already been assigned to other governmental agencies under the transportation act of 1920, the House conferees opposed this amendment. The Senate conferees receded, and the amendment has been eliminated." H. Rep. No. 910, 66th Cong., 2d sess., pp. 13-14 (1920).

## From World War I to the "Depression"

So far as concerns our survey of the evolution of the comprehensive-development concept, four enactments during this period merit notice. First is passage of the 1920 Federal Water Power Act, the history of which encompasses many of the events of the preceding period already touched upon. Next are the provisions for the "308 Reports." More limited in scope is the third, the attention paid to multiple uses and basin-wide planning in flood-control legislation. Finally comes the 1928 authorization for the Boulder Canyon Project.<sup>73</sup>

**THE FEDERAL WATER POWER ACT OF 1920.**—The 20-year growth in recognition of the need for comprehensive development had its impact upon the controversy over this licensing system, designed to regularize federal permission for nonfederal power development.<sup>74</sup> Its history and provisions we have already outlined.<sup>75</sup>

Because of their significance here, however, we shall repeat certain aspects of the license requirements included by Congress. For example, the 1920 Act specifically required that the project adopted be best adapted to a "comprehensive scheme of improvement and utilization for the purposes of navigation, of water-power development, and of other beneficial public uses."<sup>76</sup> Similarly, preference among private applicants for a license depends in part upon which has plans best adapted to

<sup>73</sup> It should also be noted that in 1920 Congress authorized the furnishing of water from reclamation projects for other purposes than irrigation, in certain cases. Act of February 25, 1920, 41 Stat. 451, 43 U. S. C. 521.

<sup>74</sup> Act of June 10, 1920, 41 Stat. 1063, as amended by Act of August 26, 1935, 49 Stat. 838, 16 U. S. C. 791a-825r.

<sup>75</sup> See *supra*, pp. 271-289.

<sup>76</sup> § 10(a), 41 Stat. 1068. This provision was derived from the General Dam Act of 1910, which in turn was based upon President Theodore Roosevelt's recommendations in the Rainy River veto message. See 45 Cong. Rec. 5684 (1910). By 1935 amendment, the language of this provision was restated to require that the project adopted will be "best adapted to a comprehensive plan for improving or developing a waterway or waterways for the use or benefit of interstate or foreign commerce, for the improvement and utilization of waterpower development, and for other beneficial public uses, including recreational purposes." § 10(a), 49 Stat. 842, 16 U. S. C. 803(a).

develop, conserve, and utilize in the public interest the water resources of the region."<sup>77</sup>

Moreover, the 1920 Act required that whenever, in the judgment of the Commission, the "development of any project should be undertaken by the United States itself," the Commission shall not approve "any application for such project," but shall cause necessary examinations to be made, and submit its findings and recommendations to Congress concerning "such project."<sup>78</sup> In 1935, this provision was reworded to require that, whenever in the judgment of the Commission, "the development of any water resources for public purposes should be undertaken by the United States itself," the Commission shall not approve any application "affecting such development," but shall report to Congress the findings and recommendations concerning "such development."<sup>79</sup>

Important also is the broad authority of the Commission to make investigations and collect data concerning the:<sup>80</sup>

utilization of the water resources in any region to be developed, the water-power industry and its relation to other industries and to interstate or foreign commerce, and concerning the location, capacity, development cost, and relation to markets of power sites, and whether the power from Government dams can be advantageously used by the United States for its public purposes.

Still broader is the Commission's investigative authority to secure information as a basis for recommending legislation.<sup>81</sup>

In connection with our examination of trends toward comprehensive development, it should be noted that the Federal Power Commission's "primary objective" in river-basin surveys:<sup>82</sup>

<sup>77</sup> § 7, 41 Stat. 1067, as amended, 16 U. S. C. 800(a).

<sup>78</sup> *Id.*

<sup>79</sup> § 7(b), 49 Stat. 842, 16 U. S. C. 800(b). Sen. Rep. No. 621, p. 44; H. Rep. No. 1318, p. 24, both 74th Cong., 1st sess. (1935).

<sup>80</sup> § 4(a), 41 Stat. 1065, as amended, 16 U. S. C. 797(a).

<sup>81</sup> See *supra*, pp. 274-275.

<sup>82</sup> TWENTY-EIGHTH ANNUAL REPORT OF THE FEDERAL POWER COMMISSION, p. 48 (1948); H. Doc. No. 19, 81st Cong., 1st sess., p. 48 (1949).



has been to determine the potential hydroelectric values in the major drainage areas of the country and to be sure that these values are not lost as specific plans for river-basin development are formulated by the construction agencies.

Moreover, the Act contains numerous provisions to assure especial protection of navigation interests.<sup>85</sup>

**"308 REPORTS."**—In 1925, Congress directed the Army Engineers and the Federal Power Commission jointly to prepare and submit an estimate of the cost of making examinations and surveys of those navigable streams and their tributaries "whereon power development appears feasible and practicable."<sup>86</sup> This was directed to be done with a view to formulating "general plans for the most effective improvement of such streams for the purposes of navigation and the prosecution of such improvement in combination with the most efficient development of the potential water power, the control of floods, and the needs of irrigation."<sup>87</sup> The resulting list of streams was submitted to Congress in 1927, and printed in H. Doc. No. 308, whence the designation "308 Reports."<sup>88</sup> By the 1927 River and Harbor Act, Congress authorized the prosecution of these surveys by the Army Engineers.<sup>89</sup> In 1935, it directed that these surveys be supplemented by such additional study or investigation as "necessary to take into account important changes in economic factors as they occur, and additional stream-flow records, or other factual data."<sup>90</sup> Surveys of 191 streams had been completed under these authorizations by June 30, 1949.<sup>91</sup>

While these surveys have frequently been referred to as "comprehensive," it should be noted that the stated statutory

<sup>85</sup> See *supra*, pp. 276-277.

<sup>86</sup> Act of March 3, 1925, § 3, 43 Stat. 1186, 1190. The Colorado River was specifically excluded.

<sup>87</sup> *Id.*

<sup>88</sup> 60th Cong., 1st sess. (1927).

<sup>89</sup> Act of January 21, 1927, § 1, 44 Stat. 1010, 1015.

<sup>90</sup> Act of August 30, 1935, § 6, 49 Stat. 1028, 1048.

<sup>91</sup> ANNUAL REPORT OF THE CHIEF OF ENGINEERS, U. S. ARMY, p. 2647 (1949).

objective is improvement of streams "for purposes of navigation," and for the prosecution of such navigation improvement "in combination with" development for power, flood control, and irrigation. Thus, these surveys are concerned primarily with navigation improvement in much the same way as the Federal Power Commission surveys are concerned with power development.

**MISSISSIPPI RIVER FLOOD CONTROL.**—In legislating for the control of floods in the Mississippi River, Congress in 1928 prescribed requirements moving in the direction of basin-wide, multiple-purpose planning.<sup>90</sup> The Act directed the earliest practicable submission of the "308 Report" for the Mississippi River and its tributaries, and in addition specified that the flood-control reports therein authorized must include:<sup>91</sup>

the effect on the subject of further flood control of the lower Mississippi River to be attained through the control of the flood waters in the drainage basins of the tributaries by the establishment of a reservoir system; the benefits that will accrue to navigation and agriculture from the prevention of erosion and siltage entering the stream; a determination of the capacity of the soils of the district to receive and hold waters from such reservoirs; the prospective income from the disposal of reservoirized waters; the extent to which reservoirized waters may be made available for public and private uses; and inquiry as to the return flow of waters placed

<sup>90</sup> Act of May 15, 1928, 45 Stat. 534, 33 U. S. C. 702-702m.

<sup>91</sup> § 10, 45 Stat. 538, 33 U. S. C. 702j. Suggestions of such provisions had appeared in earlier legislation. In 1921, the Mississippi River Commission was directed to survey the Atchafalaya, Black, and Red Rivers in Louisiana and to specify a plan that "will give the greatest measure of protection to the basins of said rivers from the flood water of the Mississippi River consistent with all other interests of the lower Mississippi Valley." Act of March 3, 1921, 41 Stat. 1354. In the same year, preliminary examinations were authorized for the Yazoo River in Mississippi and the Calaveras River in California in accordance with the provisions of the Act of March 1, 1917. Act of July 29, 1921, 42 Stat. 146; Act of August 18, 1921, 42 Stat. 171. In 1924, such preliminary examinations and surveys were authorized for a number of other streams. Act of May 31, 1924, 43 Stat. 249.

in the soils from reservoirs, and as to their stabilizing effect on stream flow as a means of preventing erosion, siltage, and improving navigation.

**BOULDER CANYON PROJECT.**—To retain continuity in our chronology, we merely mention here the 1928 adoption of the Boulder Canyon Project Act, saving discussion of its provisions for later treatment in connection with development in particular regions.<sup>92</sup>

### From the "Depression" to Date

With the "depression" came a sharp stimulation of interest in development of natural resources and their utilization in projects built as public works. Throughout most of the subsequent period, there has been an acceleration in legislative and administrative acceptance of the principles of comprehensive planning and development.

**TENNESSEE VALLEY AUTHORITY.**—Passage of the unique provisions of the Tennessee Valley Authority Act in 1933 marked the single instance of legislative provision for unity of federal development in a geographic area. We shall treat this legislation in more detail later in our examination of development in particular regions.<sup>93</sup>

**PUBLIC-WORKS PROJECTS.**—The National Industrial Recovery Act of 1933 directed the Public Works Administrator to prepare a "comprehensive" program of public works which was to include among other things control, utilization, and purification of waters; prevention of soil and coastal erosion; development of water power; transmission of electric energy; river and harbor improvements; flood control; and certain drainage improvements.<sup>94</sup> This Act, "with a view to increasing employment quickly," also authorized the President, "through the Administrator or through such other agencies as he may desig-

<sup>92</sup> See *infra*, pp. 460-463.

<sup>93</sup> See *infra*, pp. 481-486.

<sup>94</sup> Act of June 16, 1933, § 202, 48 Stat. 195, 201, 40 U. S. C. 402. The program thus envisaged specifically excluded river and harbor improvements unless "adopted by Congress" or "recommended by the Chief of Engineers."

nate or create," to construct or finance any public-works project included in the program prepared.<sup>95</sup>

A few months later, Congress requested the President to transmit a "comprehensive plan for the improvement and development of the rivers of the United States," for guidance of legislation which would "provide for the maximum amount of flood control, navigation, irrigation, and development of hydroelectric power."<sup>96</sup>

The resulting report, containing plans for ten river basins, consisted primarily of information already at hand.<sup>97</sup> It was a kind of compendium of water projects drawn from the "308 Reports" of the Army Engineers and the experience of the Bureau of Reclamation.<sup>98</sup> The report of the President's Committee on Water Flow pointed out that existing basic data "is fragmentary and scattered among many bureaus and agencies."<sup>99</sup> While emphasizing the need for continued study and the development of more specific plans, the Committee asserted that the basis for a "comprehensive plan for a water policy" lies in:<sup>100</sup>

- (1) adequate facts, maps, and general information in easily accessible and comparable form;
- (2) continuous study and refinement of plans for the full development of river basins with coordination of present agencies

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<sup>95</sup> § 203(a), 48 Stat. 202, 40 U. S. C. 403(a).

<sup>96</sup> Sen. Res. 164, 78 Cong. Rec. 1738 and H. Res. 248, 78 Cong. Rec. 1854, both 73d Cong., 2d sess. (1934).

<sup>97</sup> H. Doc. No. 395, 73d Cong., 2d sess. (1934). The basins selected were, in order of priority: Tennessee Valley, St. Lawrence-Great Lakes Basin, Mississippi-main stem, Missouri including the Platte, Sacramento-San Joaquin, Delaware River Basin, Columbia River Basin, Colorado River Basin, Ohio Valley, Great Salt Lake Basin. *Id.* p. 5.

The report was preliminary in character, being prepared and submitted to the President within less than three months. *Id.* pp. III, 1. The study was organized by the President's Committee on Water Flow, consisting of the Secretaries of Agriculture, the Army, the Interior, and Labor—working through six technical subcommittees, including representatives from the Departments of Agriculture, the Army, and the Interior, and the Federal Power Commission, all coordinated by the National Planning Board. *Id.* p. 3.

<sup>98</sup> WATER PLANNING, National Resources Committee, p. 2 (1938).

<sup>99</sup> H. Doc. No. 395, p. 9.

<sup>100</sup> *Ibid.*

engaged in elements of the work; (3) agreement upon a statement of principles to govern the division of responsibility and costs as among Federal, State, municipal, and private bodies, for various kinds of projects and combinations of projects; (4) agreement upon a statement of principles to govern the extent to which various kinds of projects shall be charged to the users and on methods of apportioning such charges; and (5) agreement upon a statement of the social, economic, physical, and geographical criteria for choice and priority of projects and units.

Although he signed the Committee's report, the Secretary of the Army submitted a supplemental letter stating that he did not concur in it in all respects.<sup>101</sup> Thus, he pointed out that by congressional mandate the work of the Army Engineers in assembling data was "restricted to navigation, hydroelectric power, flood control, and irrigation."<sup>102</sup> If it be desired to include "stream pollution, soil erosion, reforestation, recreation, and sociological plans," the Secretary indicated that they might be superimposed on the data assembled in "308 Reports."<sup>103</sup> However, he expressed doubts as to the wisdom of consolidation in a single plan, saying:<sup>104</sup>

Here is a place where too much coordination, or the coordination of unrelated activities, might prove harmful instead of beneficial.

Many of the river-development projects authorized by the President under the provisions of the National Industrial Recovery Act were additionally authorized later by Congress in the 1935 River and Harbor Act.<sup>105</sup> This Act authorized projects estimated to cost \$590,000,000, of which projects aggregating \$484,000,000 had previously received partial allocations

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<sup>101</sup> *Id.* pp. 10-13.

<sup>102</sup> *Id.* p. 11.

<sup>103</sup> *Ibid.*

<sup>104</sup> *Id.* p. 12.

<sup>105</sup> Act of August 30, 1935, 49 Stat. 1028; H. Rep. No. 424, 74th Cong., 1st sess.; Sen. Rep. No. 893, 74th Cong., 1st sess.; H. Rep. No. 1816, 74th Cong., 1st sess. (all 1935).

from the Administration of Public Works.<sup>106</sup> Among the better-known projects which were authorized in this manner are Fort Peck,<sup>107</sup> Bonneville,<sup>108</sup> Central Valley,<sup>109</sup> Grand Coulee,<sup>110</sup> and Parker Dam.<sup>111</sup> Also, the timing of the construction of Wheeler Dam by the Tennessee Valley Authority was fixed in the interest of relieving unemployment.<sup>112</sup>

MISSISSIPPI VALLEY COMMITTEE.—Concurrently, the Mississippi Valley Committee of the Public Works Administration was engaged in working on water problems of that two-thirds of the Nation in the Mississippi drainage area. Its report added further recognition of the broad problem of social and economic policy inherent in water planning:<sup>113</sup>

Engineering does not exist for its own sake. It is of little use to control rivers if we cannot thereby improve the quality of human living. Therefore, the final and most significant element which the Committee has considered is neither land nor water, but the people who live on the land and are dependent on the water.

NATIONAL RESOURCES BOARD.—Appointed by the President in June 1934, the National Resources Board was directed to prepare a program and plan of procedure dealing with the "physical, social, governmental and economic aspects of public policies for the development and use of land, water, and other national resources."<sup>114</sup> This Board also recommended a pro-

<sup>106</sup> H. Rep. No. 1816, p. 6.

<sup>107</sup> § 1, 49 Stat. 1034; H. Rep. No. 1816, pp. 14-15.

<sup>108</sup> § 1, 49 Stat. 1038; Sen. Rep. No. 893, pp. 7, 80.

<sup>109</sup> § 1, 49 Stat. 1038, Sen. Rep. No. 893, pp. 53-54; see also Act of August 26, 1937, § 2, 50 Stat. 844, 850.

<sup>110</sup> § 2, 49 Stat. 1039; H. Rep. No. 1816, p. 21.

<sup>111</sup> *Id.*

<sup>112</sup> See H. Doc. No. 82, 74th Cong., 1st sess., p. 18 (1935).

<sup>113</sup> REPORT OF THE MISSISSIPPI VALLEY COMMITTEE OF THE PUBLIC WORKS ADMINISTRATION, p. 3; see also p. 24 (1934).

<sup>114</sup> Ex. O. No. 6777, June 30, 1934. The program was to include coordination of projects of federal, state, and local governments with proper division of responsibility. The Mississippi Valley Committee became the Water Planning Committee of the National Resources Board. See WATER PLANNING, National Resources Committee, p. 3 (1938).

gram of comprehensive development along drainage basin lines.<sup>115</sup> Moreover, it emphasized need for an inventory of water resources and brought together data on factors such as rainfall, run-off, stream-flow, and underground water.<sup>116</sup> Eight monographs, each covering a region or group of drainage basins, were prepared and issued as supporting data.<sup>117</sup>

Following the submission of these reports, the Board's Water Planning Committee attempted a first priority rating of construction projects concerning water use and conservation.<sup>118</sup>

**NATIONAL RESOURCES COMMITTEE.**—Organized in 1935,<sup>119</sup> the National Resources Committee, through its Water Resources Committee, later undertook a major study of drainage basin problems.<sup>120</sup> In addition, special studies were made of particular river basins.<sup>121</sup> The Water Resources Committee carried on a "clearing-house for water-storage and land-drainage projects, for P. W. A. water projects, flood control projects, and investigations."<sup>122</sup>

<sup>115</sup> REPORT OF THE NATIONAL RESOURCES BOARD, December 1, 1934:

"That studies for water projects and programs for adoption by Congress be prepared on the basis of drainage basins as wholes and consider a great variety of water and land uses and controls." p. 5.

"The more interdependent we become as individuals and as communities, the more do we need to plan the uses of water with all our interests in mind. What was done on a lake or a stream in one settlement did not much concern other settlements a hundred years ago; it may change living conditions vitally in other districts today, and a hundred years hence the interdependence of interests will be greater than it is at present." p. 26.

"Until the country has some organization responsible for the continuous, systematic study of water uses in all their manifold aspects and in their bearing upon the life of every citizen, it will continue to spend huge sums for inadequate returns in well-being. The costs of such an organization as is suggested would make but a small fraction of the wastes avoided and of the gains secured by its work." p. 29.

<sup>116</sup> *Ibid.* pp. 77, 292-360.

<sup>117</sup> WATER PLANNING, National Resources Committee, p. 3 (1938).

<sup>118</sup> *Ibid.*

<sup>119</sup> EX. O. No. 7065, June 7, 1935.

<sup>120</sup> DRAINAGE BASIN PROBLEMS AND PROGRAMS, National Resources Committee (1936 and 1937 Revision).

<sup>121</sup> WATER PLANNING. National Resources Committee, pp. 3-4 (1938). Forty-five drainage basin committees were organized through the regional offices of the National Resources Committee. *Ibid.* p. 1.

<sup>122</sup> *Ibid.* p. 5.

A 1938 report on *Water Planning* by the National Resources Committee pointed out that sound federal policy should be concerned, not with water by and for itself, but with the promotion of public safety, public health, public convenience and comfort, the economic welfare of the public, and the establishment or maintenance of a high standard of living.<sup>123</sup>

In addition, it observed that such a policy should promote the maximum integrated control and use of water; treat drainage areas as units; observe the rights of the states; hold facts to be indispensable to sound action; assign costs among agencies concerned in general accordance with the distribution of benefits; and relate drainage-basin development to the over-all national development and to the business cycle.<sup>124</sup>

Specifically, the Committee agreed that a:<sup>125</sup>

unified plan of water control and development, in contrast to a medley of unrelated projects, calls for an integrated Federal policy with respect to the various types of water problems in their interlocking relationships in contrast to a collection of more or less unrelated policies.

NAVIGATION AND FLOOD-CONTROL PROJECTS.—In 1936, following disastrous floods in the Mississippi Valley, Congress declared control of floods to be a national problem, expressly recognizing that:<sup>126</sup>

destructive floods upon the rivers of the United States, upsetting orderly processes and causing loss of life and property, including the erosion of lands, and impairing and obstructing navigation, highways, railroads, and other channels of commerce between the States, constitute a menace to the national welfare.

It announced that flood control on navigable waters or their tributaries is a proper federal activity in cooperation with

<sup>123</sup> *Id.* p. 12.

<sup>124</sup> *Id.* pp. 12-16.

<sup>125</sup> *Id.* p. 11.

<sup>126</sup> Act of June 22, 1936, § 1, 49 Stat. 1570, 33 U. S. C. 701a.



states, and their political subdivisions and localities.<sup>127</sup> In addition, it asserted that the Federal Government should "improve or participate in the improvement of navigable waters or their tributaries, including watersheds thereof, for flood control purposes."<sup>128</sup>

Federal investigations and improvements for flood control and allied purposes were assigned to the Army Engineers.<sup>129</sup> On the other hand, federal investigations of watersheds and measures for run-off, for water-flow retardation, and for soil-erosion prevention were assigned to the Department of Agriculture.<sup>130</sup>

A large number of basin-wide, flood-control plans prepared under the authority of the 1936 legislation were authorized in 1938.<sup>131</sup> These include, among others, the Merrimack, Connecticut, Ohio, Upper Mississippi, Missouri, White, Arkansas, and Willamette Rivers. Together with modifications and additions, these plans have formed the basis for extensive flood-control operations by the Army Engineers.<sup>132</sup>

In connection with this recent accentuation of federal flood-control activity, it should be remembered that the requirements of the 1917 Act that all flood-control examinations and surveys must include "a comprehensive study" of the watershed remain

<sup>127</sup> *Id.*

<sup>128</sup> *Id.* In 1944, Congress declared that the term "flood control" as used here shall be construed to include "channel and major drainage improvements." Act of December 22, 1944, § 2, 58 Stat. 887, 889, 33 U. S. C. 701a-1.

<sup>129</sup> § 2, 49 Stat. 1570, as amended, 33 U. S. C. 701b; § 2, 58 Stat. 889, 33 U. S. C. 701a-1.

<sup>130</sup> *Id.* Responsibility for administration of the Department of Agriculture's portion of this program has been assigned to the Forest Service in the case of lands primarily forested, and to the Soil Conservation Service in the case of other lands. The Office of the Secretary is responsible for interdepartmental and interbureau coordination, for establishing over-all program policies, and for approving reports. Secretary of Agriculture Memorandum No. 1166, June 27, 1946.

The jurisdictional assignments to the Army Engineers and to the Department of Agriculture are required by the same statutory provisions not to interfere with work incidental to authorized Bureau of Reclamation projects.

<sup>131</sup> Act of June 28, 1938, § 4, 52 Stat. 1215, 1216.

<sup>132</sup> See ANNUAL REPORT OF THE CHIEF OF ENGINEERS, U. S. ARMY, p. 23 (1949).

in effect.<sup>133</sup> And where the Chief of Engineers approves a smaller structure than authorized in order to complete "a useful improvement within an authorization," such smaller structure must be so located that it will be feasible later to enlarge the work to permit full utilization of the site for "all purposes of conservation such as flood control, navigation, reclamation, the development of hydroelectric power, and the abatement of pollution."<sup>134</sup> In addition, by 1937 legislation, provision is made for use of flood-control projects for the purpose of domestic water supply.<sup>135</sup>

One policy of Congress respecting comprehensive development is expressed in the following provision applicable to flood-control and navigation improvements, which Congress first incorporated in the 1944 Flood Control Act, and which has since been made applicable in each Flood Control and River and Harbor Act:<sup>136</sup>

In connection with the exercise of jurisdiction over the rivers of the Nation through the construction of works of improvement, for navigation or flood control, as herein authorized, it is hereby declared to be the policy of the Congress to recognize the interests and rights of the States in determining the development of the watersheds within their borders and likewise their interests and rights in water utilization and control, as herein authorized to preserve and protect to the fullest possible extent established and potential uses, for all purposes, of the waters of the Nation's rivers; to facilitate the consideration of projects on a basis of comprehensive and coordinated development; and to limit the authorization and construction of navigation works to those in which a sub-

<sup>133</sup> See *supra*, pp. 134-135, 402.

<sup>134</sup> Act of August 18, 1941, § 2, 55 Stat. 638, 33 U. S. C. 701m. See also H. Rep. No. 759, 77th Cong., 1st sess., p. 6 (1941).

<sup>135</sup> Act of July 19, 1937, § 1, 50 Stat. 515, 518, 33 U. S. C. 701h; see also *supra*, pp. 139-140, 323.

<sup>136</sup> Act of December 22, 1944, § 1, 58 Stat. 887; Act of March 2, 1945, § 1, 59 Stat. 10; Act of July 24, 1946, § 1, 60 Stat. 634; Act of July 24, 1946, § 2, 60 Stat. 641; Act of June 30, 1948, §§ 101, 202, 62 Stat. 1171, 1172, 1175; Act of May 17, 1950, §§ 101, 202, 64 Stat. 163, —.

stantial benefit to navigation will be realized therefrom and which can be operated consistently with appropriate and economic use of the waters of such rivers by other users.

As a means of implementing this policy, the Act contained certain requirements for interchange of views between the Army Engineers, the Department of the Interior, and the affected states.<sup>187</sup> It again delineated the flood-control jurisdictions of the Army Engineers and the Department of Agriculture; and it provided for recreation development, for disposal of surplus power and water, for irrigation works at Army projects, and for Army regulation of use of storage allocated to flood control and navigation at all reservoirs constructed with federal funds, with a qualified exception as to flood control in the case of TVA reservoirs.<sup>188</sup> Notwithstanding this policy respecting "comprehensive and coordinated development," Congress in 1950 approved the Army Engineer portion of the Columbia Basin coordinated plan, but tabled the Bureau of Reclamation portion of the same plan.<sup>189</sup>

**RECLAMATION PROJECTS.**—In the Reclamation Project Act of 1939, Congress incorporated provisions expressly recognizing the multiple-use possibilities of reclamation projects. In addition to irrigation, cognizance was there taken of other uses including power, flood control, navigation, and "municipal water supply or other miscellaneous purposes."<sup>190</sup> While recognition of some of these purposes had appeared in earlier reclamation legislation, the 1939 Act for the first time made provision for allocations by the Secretary of the Interior of a part of the project costs to flood control or navigation.<sup>191</sup> To this end, the Act provides for his consultation with the Chief of Engineers and the Secretary of the Army.<sup>192</sup> Later, "the preser-

<sup>187</sup> Act of December 22, 1944, § 1, 58 Stat. 887. See *supra*, pp. 96-97.

<sup>188</sup> § 2, 58 Stat. 889, 33 U. S. C. 701a-1; § 4, 58 Stat. 889, 16 U. S. C. 460d; § 5, 58 Stat. 890, 16 U. S. C. 825s; § 6, 58 Stat. 890, 33 U. S. C. 708; § 7, 58 Stat. 890, 33 U. S. C. 709; § 8, 58 Stat. 891, 43 U. S. C. 390.

<sup>189</sup> Act of May 17, 1950, § 204, 64 Stat. 163, —. See *infra*, pp. 464-466.

<sup>190</sup> Act of August 4, 1939, § 9(a), 53 Stat. 1187, 1193, 43 U. S. C. 485h(a).

<sup>191</sup> § 9b, 53 Stat. 1194, 43 U. S. C. 485h(b); see *supra*, p. 195.

<sup>192</sup> *Id.*

vation and propagation of fish and wildlife" was added as a purpose to which a part of the project costs might be allocated.<sup>143</sup>

This broadened authorization for multiple uses of projects affects the scope of surveys which may be undertaken by the Bureau of Reclamation. It is authorized to conduct surveys for "irrigation works for the storage, diversion, and development of waters, including artesian wells."<sup>144</sup> Or as expressed more recently, for "any reclamation or irrigation project, including incidental features thereof \* \* \* or any project constructed or operated and maintained by the \* \* \* Bureau of Reclamation for the reclamation of arid lands or other purposes."<sup>145</sup> The Secretary of the Interior is also authorized to investigate water-conservation and utilization projects for "the purpose of stabilizing water supply and thereby rehabilitating farmers on the land and providing opportunities for permanent settlement of farm families."<sup>146</sup> These investigations are carried out by the Bureau of Reclamation.<sup>147</sup> Consistently with the emphasis upon irrigation in the foregoing authorizations for surveys and investigations, a representative from the Legal Division of the Bureau told a Senate Subcommittee in 1944 that the Bureau is "required to operate primarily for irrigation."<sup>148</sup>

The General Appropriations Act, 1951, made appropriations to the Bureau of Reclamation for "engineering and economic investigations of proposed Federal reclamation projects and studies of water conservation and development plans."<sup>149</sup> But this appropriation is followed by a proviso that, except as to certain investigations in Alaska, "no part of this appropriation shall be expended in the conduct of activities which are not authorized by law."

<sup>143</sup> Act of August 14, 1946, § 2, 60 Stat. 1080, 16 U. S. C. 662.

<sup>144</sup> Act of June 17, 1902, § 2, 32 Stat. 388, as amended, 43 U. S. C. 411.

<sup>145</sup> Act of August 4, 1939, §§ 2(c), 9(a), 53 Stat. 1187, 1193, 43 U. S. C. 485a(c) and 485h(a); cf. Act of December 22, 1944, § 1(c), 58 Stat. 887, 889.

<sup>146</sup> Act of October 14, 1940, § 1, 54 Stat. 1119, as amended, 16 U. S. C. 590y.

<sup>147</sup> See Sen. Doc. No. 18, 77th Cong., 1st sess., p. VIII (1941).

<sup>148</sup> Statement of Howard R. Stinson, Legal Division, Bureau of Reclamation. Hearings before Subcommittee of Senate Committee on Commerce, on H. R. 3961, 78th Cong., 2d sess., p. 1141 (1944).

<sup>149</sup> Act of September 6, 1950, ch. VII, 64 Stat. 595, —.

In certain specific instances, the Bureau of Reclamation has been authorized to develop more comprehensive plans for water-resource development. Notable examples are the authorizations for the Colorado River Basin, the Missouri Basin, and the Central Valley of California.<sup>150</sup>

FOREST, SOIL, AND WATER CONSERVATION.—Throughout the foregoing discussion, repeated markers have appeared pointing toward the inseparability of land practices in comprehensive development of water resources. In the chapter on "Related Land Uses," we have already discussed in some detail the authorizations whereby the Secretary of Agriculture may undertake, independently or in cooperation with federal, state and local agencies, and private parties, programs of forest conservation, soil conservation, and water conservation.<sup>151</sup>

It will bear repeating, however, that the establishment of the national forests was founded upon purposes which included regulation of stream flow.<sup>152</sup> Likewise, the initial purpose of the soil-conservation program was:<sup>153</sup>

to provide permanently for the control and prevention of soil erosion and thereby to preserve natural resources, control floods, prevent impairment of reservoirs, and maintain the navigability of rivers and harbors, protect public health, public lands and relieve unemployment.

And 1936 amendments added additional purposes, including:<sup>154</sup>

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<sup>150</sup> Act of December 21, 1928, § 15, 45 Stat. 1057, 1065, 43 U. S. C. 617n; Act of July 19, 1940, § 2(d), 54 Stat. 774, 775, as amended, 43 U. S. C. 618a (Supp. III); Act of July 3, 1945, § 1, 59 Stat. 318, 343; Act of October 14, 1949, § 2, 63 Stat. 852, —.

<sup>151</sup> See *supra*, pp. 351–382. It should be noted at this point that the Department of Agriculture has authority to "acquire and to diffuse \* \* \* useful information on subjects connected with agriculture, in the most general and comprehensive sense of that word." R. S. § 520 from Act of May 15, 1862, § 1, 12 Stat. 387, 5 U. S. C. 511.

<sup>152</sup> See *supra*, pp. 354–355.

<sup>153</sup> Act of April 27, 1935, § 1, 49 Stat. 163, 16 U. S. C. 590a.

<sup>154</sup> Act of February 29, 1936, § 1, 49 Stat. 1148, as amended, 16 U. S. C. 590g(a).

(1) preservation and improvement of soil fertility; (2) promotion of the economic use and conservation of land; (3) diminution of exploitation and wasteful and unscientific use of national soil resources; (4) the protection of rivers and harbors against the results of soil erosion in aid of maintaining the navigability of waters and water courses and in aid of flood control; and (5) reestablishment \* \* \* of the ratio between the purchasing power of the net income per person on farms and that of the income of persons not on farms \* \* \*.

Similarly, the Water Facilities Act of 1937 expresses a recognition by Congress that:<sup>155</sup>

the wastage and inadequate utilization of water resources on farm, grazing, and forest lands in the arid and semiarid areas of the United States resulting from inadequate facilities for water storage and utilization contribute to the destruction of natural resources, injuries to public health and public lands, droughts, periodic floods, crop failures, decline in standards of living, and excessive dependence upon public relief, and thereby menace the national welfare.

Still further, Congress stated as the purpose of the sustained-yield forest-management program, administered by the Departments of Agriculture and the Interior:<sup>156</sup>

to promote the stability of forest industries, of employment, of communities, and of taxable forest wealth, through continuous supplies of timber; in order to provide for a continuous and ample supply of forest products; and in order to secure the benefits of forests in maintenance of water supply, regulation of stream flow, prevention of soil erosion, amelioration of climate, and preservation of wildlife.

Not to be overlooked is the Civilian Conservation Corps. Established to provide employment and vocational training to youthful citizens, war veterans and Indians, the CCC was au-

<sup>155</sup> Act of August 28, 1937, § 1, 50 Stat. 869, 16 U. S. C. 590r.

<sup>156</sup> Act of March 29, 1944, § 1, 58 Stat. 132, 16 U. S. C. 583.

thorized to be employed on works of public interest or utility for the protection, development, utilization, maintenance, or enjoyment of "the natural resources of lands and waters, and the products thereof, including forests, and fish and wildlife" on lands controlled by the federal or state governments.<sup>157</sup> The CCC was liquidated in 1943, but its reactivation has been sought in bills introduced recently.<sup>158</sup>

**WATER-POLLUTION CONTROL.**—Following many attempts to secure legislation for control and abatement of pollution, the Water Pollution Control Act was passed by Congress in 1948.<sup>159</sup> Certain aspects of that legislation are relevant here.

For example, it directs the Surgeon General to "prepare or adopt comprehensive programs for eliminating or reducing the pollution of interstate waters and tributaries thereof and improving the sanitary condition of surface and underground waters."<sup>160</sup> Moreover, the statute requires that such programs be prepared in cooperation with federal, state, and interstate agencies, and with the municipalities and industries involved.<sup>161</sup> Joint investigations may be made of the discharges of any sewage, industrial wastes, or substance which may deleteriously affect such waters.<sup>162</sup> Such "comprehensive programs" must be developed with due regard to improvements necessary to conserve waters "for public water supplies, propagation of fish and aquatic life, recreational purposes, and agricultural, industrial, and other legitimate uses."<sup>163</sup>

But here again, these programs are for the limited purpose of "reducing the pollution" and "improving the sanitary condi-

<sup>157</sup> Act of June 28, 1937, §§ 1, 3, 50 Stat. 319, see 16 U. S. C. ch. 3A. As amended by the Act of August 7, 1939, 53 Stat. 1253, the 1937 statute was effective until July 1, 1943.

<sup>158</sup> Concerning the liquidation of CCC, see Act of July 2, 1942, 56 Stat. 562, 569; Act of July 12, 1943, 57 Stat. 494, 498. As to bills, see, *e. g.*, in the 81st Congress: S. 3144, H. R. 7462, H. R. 7463, H. R. 7523, and H. R. 7721 (1950). No action has been taken on any of these bills.

<sup>159</sup> Act of June 30, 1948, 62 Stat. 1155, as amended, 33 U. S. C. 466-466j (Supp. III).

<sup>160</sup> § 2(a), 62 Stat. 1155, 33 U. S. C. 466a (a) (Supp. III).

<sup>161</sup> *Id.*

<sup>162</sup> *Id.*

<sup>163</sup> *Id.*

tions" of waters, and thus are not "comprehensive," as we have used the term.

Encouragement of interagency coordination of water-pollution control is sought by establishment of a Water Pollution Control Advisory Board in the Public Health Service.<sup>164</sup> Composing this Board are the Surgeon General or his representative, as chairman; representatives of the Departments of Agriculture, the Army, and the Interior; and six nonfederal representatives to be appointed annually by the President.<sup>165</sup>

The possibility of achieving basin-wide pollution control or abatement is sharply restricted, however, by the veto power over enforcement action vested in the state in which the offending pollution originates.<sup>166</sup>

**NATIONAL SECURITY RESOURCES BOARD.**—The duties of the National Security Resources Board are sufficiently broad to permit, among other things, formulation of a program of comprehensive development of water resources for war purposes.<sup>167</sup> Its function is to advise the President concerning the coordination of military, industrial, and civilian mobilization, including among other things:<sup>168</sup>

(2) Programs for the effective use in time of war of the Nation's natural and industrial resources for military and civilian needs, \* \* \*

(3) Policies for unifying, in time of war, the activities of the federal agencies and departments engaged in or concerned with production, procurement, distribution, or transportation of military or civilian supplies, materials, and products \* \* \*.

**ADVANCE PLANNING.**—As we have seen, Congress has accorded increasing recognition to the need for comprehensive development. As yet, many of the pieces are unmatched, and

<sup>164</sup> § 6(b), 62 Stat. 1153, as amended, 33 U. S. C. 466e(b) (Supp. III).

<sup>165</sup> *Id.* One of the six appointed by the President must have shown "an active interest in the field of wildlife conservation." Others are to represent state and municipal governments and industry.

<sup>166</sup> See *supra*, p. 341.

<sup>167</sup> Act of July 26, 1947, § 103, 61 Stat. 495, 499, as amended, 50 U. S. C. 404 (Supp. III).

<sup>168</sup> § 103(c), 61 Stat. 499, as amended, 50 U. S. C. 404(c) (Supp. III).



there is no single comprehensive policy. But the existing machinery for projecting construction agency plans six years in advance offers a possibility for relating separate agency segments to comprehensive plans. For all construction agencies of the Government are required to prepare and keep up-to-date "carefully planned and realistic long-range programs" which must be submitted annually to the Bureau of the Budget.<sup>169</sup> The Bureau is required to consolidate these programs and submit to the President an "over-all advance program for the Executive Branch."<sup>170</sup>

This responsibility of the Bureau has been described to Congress by its Director as follows:<sup>171</sup>

The development of long-range programs is not the operating responsibility of the Bureau of the Budget. Rather it is the responsibility of the agencies that have been authorized by Congress to undertake or aid in executing the projects comprising the program. The Bureau of the Budget has the responsibility of insuring that estimates for public works and improvements are based on a carefully thought-out program, that they do not impinge upon or conflict with programs of other Federal agencies, and that the estimates of appropriations recommended to the President for presentation to Congress represent orderly progress in our national development and bear proper relationship to each other.

This practice of requiring federal construction agencies to prepare six-year, advance programs stems from the Employment Stabilization Act of 1931.<sup>172</sup>

<sup>169</sup> Ex. O. No. 9384, October 4, 1943, 8 F. R. 13782.

<sup>170</sup> *Id.* par. 3.

<sup>171</sup> Hearings on H. R. 3598 (First Supplemental National Defense Appropriation Bill for 1944) before Subcommittee of the Senate Committee on Appropriations, 78th Cong., 1st sess., p. 324 (1943). See also *id.*, p. 740, for memorandum concerning the authority of the Bureau of the Budget in relation to public-works programming.

<sup>172</sup> Act of February 10, 1931, § 8, 46 Stat. 1084, 1086, 29 U. S. C. 48g. (The compilers of the United States Code state that this Act "became obsolete upon the abolition of the National Resources Planning Board." However, the Act abolishing the NRPB did not mention the 1931 Act which, in addition to prescribing certain duties that later became vested in the NRPB,

In connection with the use of river-development programs as public-works projects, it may be noted that the flood-control works provided for by the 1944 Flood Control Act were

required federal construction agencies to prepare and submit six-year plans to the Budget Director who "shall report to the President from time to time consolidated plans and estimates." In the memorandum mentioned in the preceding footnote, the Bureau of the Budget says that Ex. O. No. 9384, issued after abolition of the NRPB, was based in part on the Employment Stabilization Act of 1931. The language of the Executive Order states its issuance by virtue of the authority vested in the "President of the United States, and particularly by the Budgeting and Accounting Act of 1921, as amended.")

The purpose of the six-year plans was "to assist in the stabilization of industry through the proper timing" of construction. The Federal Employment Stabilization Board, created by the 1931 Act, was later abolished; and its powers, duties, and functions were transferred to the Federal Employment Stabilization Office, established within the Department of Commerce. Ex. O. No. 6166, § 1, June 10, 1933; Ex. O. No. 6623, March 1, 1934. The last appropriation for this Office was made in 1934. See H. Doc. No. 142, 77th Cong., 1st sess., p. 51 (1941).

In 1936, the President requested the National Resources Committee to assume responsibility for annual revision of the federal six-year program. H. Doc. No. 142, 77th Cong., 1st sess., p. 51 (1941). This Committee had assumed the powers and duties of the National Resources Board, which in turn had succeeded to the powers, duties, and functions of the National Planning Board, established by the PWA Administrator to advise and assist him in the preparation of the comprehensive plan of public works authorized by the National Recovery Act. Act of June 16, 1933, §§ 201, 202, 48 Stat. 195, 200-201. Thus, the foregoing duty of the Federal Employment Stabilization Office and that of the National Resources Committee were substantially the same, that is, responsibility for preparation of comprehensive, public-works programs.

The powers, duties, and functions of both of these agencies were later transferred to the National Resources Planning Board, created in the Executive Office of the President. Reorganization Plan No. I of 1939, §§ 4, 6, effective July 1, 1939, 4 F. R. 2727, 2728, 53 Stat. 1423, 1424, 5 U. S. C. 133t note following. This new Board was directed to develop an orderly program of public works and to list such works "in the order of their relative importance with respect to (1) the greatest good to the greatest number of people, (2) the emergency necessities of the Nation, and (3) the social, economic and cultural advancement of the people of the United States." Ex. O. No. 8248, September 8, 1939, 4 F. R. 3864, 3865. All construction agencies were directed to submit six-year, advance plans and programs of their public-works construction to the NRPB and to the Bureau of the Budget. Ex. O. No. 8455, June 26, 1940, 5 F. R. 2420. For details of the procedure used in developing the six-year programs, see H. Doc. No. 142, 77th Cong., 1st sess., pp. 51-54 (1941).

In 1943, Congress abolished the NRPB and expressly provided that its functions not be transferred to any other agency. Act of June 26, 1943, § 101,

authorized, among other things, "with a view toward providing an adequate reservoir of useful and worthy public works for the post-war construction program."<sup>173</sup>

Furthermore, Congress in 1946 declared it to be the policy and responsibility of the Federal Government to utilize all its plans, functions, and resources for the purpose of creating and maintaining, in a manner calculated to promote the general welfare, conditions of maximum gainful employment.<sup>174</sup> The Council of Economic Advisers has the duty of appraising the various federal programs in light of this policy in order to determine the degree of their conformity with this policy and to make recommendations to the President.<sup>175</sup> But neither this agency nor the Bureau of the Budget has received appropriations for the purpose of enabling their participating directly in planning for comprehensive development, as such.<sup>176</sup>

**PROPOSALS FOR REGIONAL AUTHORITIES.**—As the development of larger and more extensive river-improvement projects was made possible in recent years by advances in engineering methods, as populations in river basins increased, as industry expanded, and as our economy grew more complex—the need for comprehensive development became increasingly apparent. As the scope of the activities of the special-purpose agencies

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57 Stat. 169, 170. The President then issued Ex. O. No. 9384, 8 F. R. 13782, which revoked Ex. O. No. 8455 and directed the federal construction agencies to submit long-range, advance programs to the Bureau of the Budget under regulations prescribed by it. The Bureau was directed to consolidate these programs and report to the President an over-all, advance program for the Executive Branch. Such programs are not the same as the six-year, river-basin programs prepared by the Field Committees of the Departments of Agriculture and the Interior. See *infra*, pp. 436-439.

<sup>173</sup> Act of December 22, 1944, §§ 10, 13, 58 Stat. 887, 891, 905.

<sup>174</sup> Act of February 20, 1946, § 2, 60 Stat. 23, 15 U. S. C. 1021.

<sup>175</sup> § 4, 60 Stat. 24, 15 U. S. C. 1023(c).

<sup>176</sup> However, the Council of Economic Advisers has concluded cooperative agreements with the Department of the Interior whereby it has received funds from the latter Department which have enabled the Council to broaden its studies of the Southwest and New England economies to include resource development. Letters from the Chairman of the Council of Economic Advisers to the Secretary of the Interior, dated June 22, 1950 and June 27, 1950, and letters from the Secretary of the Interior to Chairman of the Council of Economic Advisers, dated June 26, 1950 and June 28, 1950.

was expanded, it was inevitable that their programs would come into conflict. Particularly was this so in the West where water supply is often limited.<sup>177</sup>

Various alternative proposals have been advanced from time to time to lessen or eliminate this conflict. In 1937, President Roosevelt recommended the creation of seven regional authorities or agencies blanketing the United States, saying that:<sup>178</sup>

Apart from the Tennessee Valley Authority, the Columbia Valley Authority, and the Mississippi River Commission, the work of these regional bodies, at least in their early years, would consist chiefly in developing integrated plans to conserve and safeguard the prudent use of waters, waterpower, soils, forests, and other resources of the areas entrusted to their charge.

He indicated his intention to use the National Planning Board to coordinate the development of regional planning to insure conformity with national policy, without giving the Board executive authority over the construction or management of the public works.<sup>179</sup>

Subsequently, the House Committee on Rivers and Harbors held hearings on two bills designed to carry out the President's recommendations. One would have created seven regional planning agencies and authorized the creation of regional power-marketing authorities to operate and maintain hydro-electric power-producing facilities.<sup>180</sup> The other would have established seven regional development authorities similar to TVA.<sup>181</sup>

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<sup>177</sup> See, *e. g.*, Missouri River Basin (H. Doc. No. 475, 78th Cong., 2d sess. (1944); Sen. Doc. No. 191, 78th Cong., 2d sess. (1944)); Central Valley, California (Sen. Doc. No. 113, 81st Cong., 1st sess., pp. 16, 29, 275-277 (1949); H. Doc. No. 367, 81st Cong., 1st sess. (1949)); Columbia River Basin (H. Doc. No. 473, 81st Cong., 2d sess., vol. 1, pp. 23-26, *Italic*, 83-86, *Italic* (1950); H. Doc. No. 531, 81st Cong., 2d sess. (1950)); Colorado River Basin (H. Doc. No. 136, 81st Cong., 1st sess., p. 102 (1949)).

<sup>178</sup> H. Doc. No. 261, 75th Cong., 1st sess., p. 3 (1937).

<sup>179</sup> *Ibid.*

<sup>180</sup> H. R. 7365, 75th Cong., 1st sess. (1937).

<sup>181</sup> H. R. 7863, 75th Cong., 1st sess. (1937). This bill was an amended version of H. R. 7392, which in turn was identical with S. 2555, both 75th Cong., 1st sess. (1937).

As stated in the first section of one of these bills, and in substantially identical words in the other, the purpose was: <sup>182</sup>

to develop, integrate, and coordinate plans, projects, and activities for or incidental to the promotion of navigation, the control and prevention of floods, the safeguarding of navigable waters, and the reclamation of the public lands, in order to aid and protect commerce among the several States, to strengthen the national defense, to conserve the water, soil, mineral, and forest resources of the Nation, to stabilize employment and relieve unemployment, and otherwise to protect commerce among the States, provide for the national defense, and promote the general welfare of the United States.

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<sup>183</sup> The regional plans contemplated by both bills were to include projects and activities, both federal and nonfederal, which would be adapted to the "conservation and integrated development of water, soil and forest resources" for: (1) The promotion of navigation by means of channel improvements, prevention of siltation, regulation of stream flow, development and coordination of navigation facilities and other means. (2) Flood control by means of storage, control and disposition of surplus waters, control and retardation of water run-off, the restoration and improvement of the absorption and infiltration capacity of the soil and other means. (3) Safeguarding the use of navigable waters by means of pollution abatement, provision of water purification and sewage-disposal works and other means. (4) Reclamation of arid or swampy public lands by means of irrigation and drainage, the economic development and use of such lands, and other means. § 6a, H. R. 7365; § 8a, H. R. 7863.

So far as consistent with the above purposes, these plans were to give due regard to: "(1) The present and future development and conservation of water for power, irrigation, and other beneficial uses; (2) the prudent husbandry of soil, mineral, and forest resources and their conservation for recreation, the protection of wild game, and other beneficial uses; (3) the urgency of preventing irreparable waste of the Nation's resources from droughts, winds, dust storms, and soil erosion; (4) the integration and interconnection of projects and activities, the development of their multiple purposes, and the equitable distribution of the benefits thereof; (5) equitable contributions to cost by States and subdivisions and agencies thereof specially benefited by the projects and activities; (6) equitable contributions, from the revenues of a project or otherwise, to compensate States and subdivisions and agencies thereof for special losses, not offset or mitigated by benefits, which may be occasioned by the carrying out of projects; and (7) such economic, social, and cultural values as may be affected or furthered by the projects and activities." § 6b, H. R. 7365; § 8b, H. R. 7863.

Bills similar to these have been introduced in succeeding Congresses, but have never reached the floor of either House.<sup>183</sup>

Nevertheless, much attention was directed toward specific basins. In 1944, after hearings on the Bureau of Reclamation-Army Engineer plan for development of the Missouri River Basin, this plan was authorized.<sup>184</sup> Extensive hearings were held in the following year on a bill to create a Missouri Valley Authority.<sup>185</sup> Hearings were likewise held in 1949 on a proposal for a Columbia Valley Administration.<sup>186</sup> Other proposals introduced during this latter period included bills for the creation of particular valley authorities,<sup>187</sup> bills for the territorial expansion of TVA,<sup>188</sup> bills for comprehensive surveys or planning only,<sup>189</sup> bills for adopting certain basin-wide programs worked out by two or more agencies<sup>190</sup> or by one agency,<sup>191</sup> bills for consolidating existing agencies of government,<sup>192</sup> bills for interstate commissions,<sup>193</sup> and a bill for interstate associations.<sup>194</sup>

<sup>183</sup> See, e. g., H. R. 1824, 79th Cong., 1st sess. (1945); H. R. 894, 81st Cong., 1st sess. (1949).

<sup>184</sup> Hearings before a Subcommittee of the Senate Committee on Irrigation and Reclamation on S. 1915, 78th Cong., 2d sess. (1944); Act of December 22, 1944, § 9, 58 Stat. 887, 891.

<sup>185</sup> See *infra*, pp. 474-475.

<sup>186</sup> Hearings before the House Committee on Public Works on H. R. 4286 and H. R. 4287, and before the Senate Committee on Public Works on S. 1645, both 81st Cong., 1st sess. (1949).

<sup>187</sup> For Columbia: S. 460, 79th Cong., 1st sess. (1945); H. R. 427, H. R. 4286 and S. 1645, 81st Cong., 1st sess. (1949). For Connecticut: H. R. 4701, 81st Cong., 1st sess. (1949). For Merrimack: H. R. 463, 81st Cong., 1st sess. (1949). For Missouri: S. 555, 79th Cong., 1st sess. (1945); S. 1160 and H. R. 3522, 81st Cong., 1st sess. (1949). For Ohio: H. R. 2540, 79th Cong., 1st sess. (1945). For Savannah: S. 64, 81st Cong., 1st sess. (1949).

<sup>188</sup> To include Cumberland Valley: S. 338, 81st Cong., 1st sess. (1949).

<sup>189</sup> For Merrimack and Connecticut Rivers: S. 253, 81st Cong., 1st sess. (1949). For New England-New York: S. 3707, 81st Cong., 2d sess. (1950).

<sup>190</sup> For Columbia Basin: S. 1595 and S. 2180, 81st Cong., 1st sess. (1949).

<sup>191</sup> For Central Arizona Project: S. 75, 81st Cong., 1st sess. (1949).

<sup>192</sup> S. 2833 and S. 3657, 81st Cong., 2d sess. (1950). During debate on the 1944 Flood Control Bill, the Senate defeated an amendment to transfer to the Bureau of Reclamation the functions of the Army Engineers pertaining to western water conservation reservoirs. See 90 Cong. Rec. 8616-8626 (1944).

<sup>193</sup> For Columbia Interstate Commission: H. R. 3636, 81st Cong., 1st sess. (1949); for Susquehanna Watershed Commission: H. R. 9724, 81st Cong., 2d sess. (1950).

<sup>194</sup> For "Interstate Water and Power Users' Associations": S. 3376, 81st Cong., 2d sess. (1950).

## Authority for Interagency Coordination

Many federal agencies have responsibilities connected with, or bearing upon river-basin development.<sup>195</sup> And we have observed the growing acceptance of the need for comprehensive

— These agencies include:

### DEPARTMENT OF AGRICULTURE

Agricultural Research Administration  
 Bureau of Agricultural Economics  
 Bureau of Plant Industry, Soils,  
 and Agricultural Engineering  
 Extension Service  
 Farm Credit Administration  
 Farmers Home Administration  
 Forest Service  
 Production and Marketing Administration  
 Rural Electrification Administration  
 Soil Conservation Service

### DEPARTMENT OF THE ARMY

Corps of Engineers

### DEPARTMENT OF COMMERCE

Bureau of the Census  
 Bureau of Foreign and Domestic  
 Commerce  
 Bureau of Public Roads  
 Civil Aeronautics Administration  
 Coast and Geodetic Survey  
 Inland Waterways Corporation  
 Weather Bureau

### DEPARTMENT OF THE INTERIOR

Bonneville Power Administration  
 Bureau of Indian Affairs  
 Bureau of Land Management  
 Bureau of Mines  
 Bureau of Reclamation  
 Fish and Wildlife Service  
 Geological Survey  
 National Park Service  
 Southeastern Power Administration  
 Southwestern Power Administration

### DEPARTMENT OF JUSTICE

DEPARTMENT OF THE TREASURY  
 Coast Guard

### ATOMIC ENERGY COMMISSION

### COUNCIL OF ECONOMIC ADVISERS

### FEDERAL POWER COMMISSION

FEDERAL SECURITY AGENCY  
 Public Health Service

HOUSING AND HOME FINANCE AGENCY  
 Community Facilities Service

INTERNATIONAL BOUNDARY AND  
 WATER COMMISSION, UNITED  
 STATES AND MEXICO

### INTERNATIONAL JOINT COMMISSION

### INTERSTATE COMMERCE COMMISSION

NATIONAL FOREST RESERVATION COM-  
 MISSION

NATIONAL SECURITY RESOURCES  
 BOARD

RECONSTRUCTION FINANCE CORPORA-  
 TION

SECURITIES AND EXCHANGE COMMIS-  
 SION

TENNESSEE VALLEY AUTHORITY

planning and development to obtain optimum beneficial uses of river systems and their watersheds. But there has yet evolved no all-pervading statutory mandate assuring the requisite coordination of the many federal activities concerned.

Nevertheless, many steps in this direction have been taken. For example, some of the more recent enactments require coordinating action among agencies for specific purposes.<sup>196</sup> In addition to certain statutory requirements, however, a number of administrative steps have been taken to facilitate coordination among and within agencies, as we shall now see.

**FEDERAL INTER-AGENCY RIVER BASIN COMMITTEE.**—To provide for consultation in the preparation of river-basin surveys, an interagency agreement was concluded in 1939 by the Departments of Agriculture, the Army, and the Interior, and concurred in by the National Resources Planning Board.<sup>197</sup> Upon the Board's dissolution in 1943, these Departments together with the Federal Power Commission entered into a similar agreement establishing the Federal Inter-Agency River

<sup>196</sup> See, for example:

Act of August 20, 1937, § 2, 50 Stat. 731, 732, as amended, 16 U. S. C. 832a, requiring the Bonneville Power Administrator to act in consultation with an advisory board composed of representatives of the Secretaries of Agriculture, the Army, the Interior, and of the Federal Power Commission.

Act of March 29, 1944, § 4, 58 Stat. 132, 133, 16 U. S. C. 583c, authorizing agreements between the Secretaries of Agriculture and the Interior relating to sustained-yield forest management.

Act of December 22, 1944, § 1, 58 Stat. 887, in specified circumstances, requiring cooperative action by the Secretaries of the Army and the Interior with affected states and with each other in connection with contemplated navigation, flood-control, and irrigation improvements.

Act of August 14, 1946, § 2, 60 Stat. 1080, 16 U. S. C. 662, in specified circumstances, requiring consultation by federal and nonfederal agencies with the Fish and Wildlife Service and state agencies concerned, for the purpose of preventing loss of and damage to wildlife resources.

Act of June 30, 1948, § 2 (a), 62 Stat. 1155, 33 U. S. C. 466a (a) (Supp. III), directing the Surgeon General to prepare pollution-control programs in cooperation with other agencies.

Act of May 17, 1950, § 205, 64 Stat. 163, —, directing the Army Engineers to coordinate survey of Arkansas-White and Red River Basins with certain named agencies.

<sup>197</sup> SUMMARY REPORT ON FEDERAL INTER-AGENCY RIVER BASIN COMMITTEE AND ITS SUBCOMMITTEES, p. 1 (December 31, 1949 Revision).



Basin Committee (FIARBC).<sup>198</sup> The Department of Commerce became a party to the agreement in 1946, and the Federal Security Agency in 1950.<sup>199</sup> The purpose of this agreement was to permit these agencies "to cooperate more completely in the preparation of reports on multiple-purpose projects and to correlate the results to the greatest practicable extent."<sup>200</sup> A large share of the work of FIARBC is discharged through subcommittees and regional committees.<sup>201</sup>

Although FIARBC has provided an opportunity for inter-agency discussions, its ability to achieve coordination between agency programs is limited in several ways. The Committee is without statutory standing and has no budget.<sup>202</sup> The authority, powers, and financial discretion of the constituent agencies remain with these agencies to be exercised individually by them.<sup>203</sup> As a result, FIARBC's decisions are advisory only and their implementation depends entirely upon the voluntary cooperation and individual consent of its member agencies. Furthermore, an agency's ability to cooperate in effectuating a Committee decision with which it agrees may be limited by the statutory provisions relating to that agency's power and duties.<sup>204</sup>

<sup>198</sup> *Id.* pp. 23-24. For dissolution of the NRPB, see Act of June 26, 1943, § 101, 57 Stat. 169, 170.

<sup>199</sup> *Id.* p. 25 (Commerce); Minutes, FIARBC, July 27, 1950, p. 5 and Exhibits A, B, and C (FSA).

<sup>200</sup> *Id.* p. 23.

<sup>201</sup> *Id.* pp. 4, 5. Four major technical subcommittees are now active: Benefits and Costs, Hydrology, Sedimentation, and Energy-Conservation Procedures. Regional committees have been established for the Missouri Basin, Columbia Basin, Pacific Southwest, and Southwest. *Ibid.* and Minutes, FIARBC, June 12, 1950, Exhibit A.

<sup>202</sup> *Id.* p. 2.

<sup>203</sup> *Ibid.*

<sup>204</sup> *Id.* pp. 2-3. These limiting factors undoubtedly are reflected in FIARBC's unsuccessful efforts to reconcile the California Central Valley reports of the Army Engineers and of the Bureau of Reclamation. A subcommittee appointed to deal with the problem made a point-by-point analysis of the major differences, but did not resolve them. *Id.* pp. 19-20. In analyzing its own accomplishments, FIARBC said merely that "the report of this subcommittee has been extensively used by the two agencies primarily concerned, both in resolving their differences as set forth in the report, and in preparing their final reports." *Id.* p. 20. For one evaluation of FIARBC and its effectiveness, see REPORT OF THE COMMISSION ON ORGANI-

Despite these limitations, FIARBC has achieved some positive results, such as the work of its technical subcommittees.<sup>205</sup>

**REORGANIZATION ACT.**—Not to be overlooked are the broad possibilities of coordination for comprehensive development afforded by the Reorganization Act of 1949.<sup>206</sup> It provides means by which agencies and functions may be consolidated “according to major purposes.”<sup>207</sup> The Act also permits the transfer or other disposition of the records, property, personnel, and unexpended funds affected by any reorganization.<sup>208</sup> But such funds may be used only for the purpose for which they were originally made available.<sup>209</sup>

There is some question, however, as to the extent to which the administrative provisions relating to a particular function would be affected by a reorganization plan consolidating in any single agency the exercise of similar functions previously exercised by more than one agency. For the Act declares that “any statute enacted \* \* \* in respect of or by any agency \* \* \* affected by a reorganization \* \* \*

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ZATION OF THE EXECUTIVE BRANCH OF THE GOVERNMENT, App. L, pp. 25-26 (January 1949). See also *infra*, pp. 456-460.

<sup>205</sup> See, e. g., the studies, reports, and conferences sponsored by the subcommittees on Hydrology and Sedimentation, and another subcommittee's 1949 revision of the Federal Power Commission's GLOSSARY OF IMPORTANT POWER AND RATE TERMS ABBREVIATIONS, AND UNITS OF MEASUREMENT. See SUMMARY REPORT, pp. 8-14, 17-18.

<sup>206</sup> Act of June 20, 1949, 63 Stat. 203, 5 U. S. C. 133z *et seq.* (Supp. III).

<sup>207</sup> § 2(a)(4), 63 Stat. 203, 5 U. S. C. 133z(a)(4) (Supp. III). With specified qualifications, the Act enables accomplishment of: “(1) the transfer of the whole or any part of any agency, or of the whole or any part of the functions thereof, to the jurisdiction and control of any other agency; or (2) the abolition of all or any part of the functions of any agency; or (3) the consolidation or coordination of the whole or any part of any agency, or of the whole or any part of the functions thereof, with the whole or any part of any other agency or the functions thereof; or (4) the consolidation or coordination of any part of any agency or the functions thereof with any other part of the same agency or the functions thereof; or (5) the authorization of any officer to delegate any of his functions; or (6) the abolition of the whole or any part of any agency which agency or part does not have, or upon the taking effect of the reorganization plan will not have any functions.” § 3, 63 Stat. 203, 5 U. S. C. 133z-1 (Supp. III).

<sup>208</sup> § 4, 63 Stat. 204, 5 U. S. C. 133z-2 (Supp. III).

<sup>209</sup> *Id.*

shall, except to the extent rescinded, modified, superseded, or made inapplicable by or under authority of law \* \* \* have the same effect as if such reorganization had not been made."<sup>210</sup>

**FISCAL COORDINATION.**—In connection with the foregoing reorganization possibilities, the Budgeting and Accounting Procedures Act of 1950 provides added authority for certain transfers of appropriations, whenever under authority of law a function of an agency is transferred or assigned from one agency to another.<sup>211</sup> Use of the funds is limited, however, to the purpose for which they were originally available.<sup>212</sup>

The 1932 Economy Act also permits certain transfers of funds between federal agencies as payment for work done or materials furnished by one agency for another.<sup>213</sup>

Also, by the Budgeting and Accounting Procedures Act of 1950, Congress sanctioned the use of a performance budget.<sup>214</sup> Such a budget should facilitate coordination among agencies in carrying out the separate parts of an integrated program.

**DEPARTMENTAL COORDINATION OF ACTION OF SUBORDINATE AGENCIES.**—As we have noted, many executive departments and agencies are participating in river-basin development. Some of these departments have more than one subordinate operating agency involved in such development. Consequently, each of such departments has a special responsibility for coordination.

There are certain limits upon the authority of department heads to transfer responsibilities or enforce coordination among subordinate agencies.<sup>215</sup> The basic authority under which they may delegate or reassign responsibilities reads:<sup>216</sup>

<sup>210</sup> § 9(a) (1), 63 Stat. 206, 5 U. S. C. 133z-7(a) (1) (Supp. III).

<sup>211</sup> Act of September 12, 1950, § 202, 64 Stat. 832, —.

<sup>212</sup> § 202(b), 64 Stat. —.

<sup>213</sup> Act of June 30, 1932, § 601, 47 Stat. 382, 417, as amended, see 31 U. S. C. 686.

<sup>214</sup> Act of September 12, 1950, § 102(a), 64 Stat. 832, —.

<sup>215</sup> For a further discussion of this question, see REPORT OF THE COMMISSION ON ORGANIZATION OF THE EXECUTIVE BRANCH OF THE GOVERNMENT, App. E, p. 27 (January 1949).

<sup>216</sup> R. S. § 161, from Act of July 27, 1789, 1 Stat. 28, as amended, 5 U. S. C. 22.

The head of each department is authorized to prescribe regulations, not inconsistent with law, for the government of his Department, the conduct of its officers and clerks, for distribution and performance of its business, and the custody, use, and preservation of the records, papers and property appertaining to it.

The key words are "not inconsistent with law." Opinions of the Attorney General indicate that, where a statute relating to the powers of an agency within an executive department grants authority directly to such agency, any order transferring such authority would be "inconsistent with law."<sup>217</sup> Until recently, authority was frequently conferred directly upon subordinate agencies or bureaus.<sup>218</sup> In such cases, the authority of the department head was usually "supervisory" in character.<sup>219</sup>

The tendency in recent legislation and reorganization plans, however, is to transfer functions and authority from the subordinate agencies and officials to the department head and to permit reassignment within his department.<sup>220</sup> Such plans

<sup>217</sup> 27 OPS. ATT'Y GEN. 542; 29 OPS. ATT'Y GEN. 247; 30 OPS. ATT'Y GEN. 119; 36 OPS. ATT'Y GEN. 75; 37 OPS. ATT'Y GEN. 364.

<sup>218</sup> See, *e. g.*: Bureau of Indian Affairs (R. S. § 463, from Act of July 9, 1832, § 1, 4 Stat. 564, as amended, 25 U. S. C. 2; and Act of August 8, 1946, 60 Stat. 939, 25 U. S. C. 1a); Bureau of Land Management (1946 Reorganization Plan No. 3, § 403(a), 60 Stat. 1097, 1100, 43 U. S. C. 1 note following); Bureau of Mines (Act of May 16, 1910, § 2, 36 Stat. 369, 370, as amended, 30 U. S. C. 3); Bureau of Reclamation (Act of May 26, 1926, 44 Stat. 657, see 43 U. S. C. 373a); Coast and Geodetic Survey (Act of August 6, 1947, § 1, 61 Stat. 787, 33 U. S. C. 883a (Supp. III)); Geological Survey (Act of March 3, 1879, § 1, 20 Stat. 377, 394, 43 U. S. C. 31); National Park Service (Act of August 25, 1916, § 1, 39 Stat. 535, as amended, 16 U. S. C. 1); Rural Electrification Administration (Act of May 20, 1936, § 1, 49 Stat. 1363, as amended, 7 U. S. C. 901); Soil Conservation Service (Act of April 27, 1935, § 5, 49 Stat. 163, 164, 16 U. S. C. 590e); Weather Bureau (Act of October 1, 1890, § 3, 26 Stat. 653, as amended, 15 U. S. C. 313).

<sup>219</sup> See, *e. g.*, R. S. § 441, from Act of March 3, 1849, 9 Stat. 395, as amended. See 5 U. S. C. 485 (Interior); Act of February 14, 1903, §§ 3, 10, 32 Stat. 825, 826, 829, 5 U. S. C. 596, 599 (Commerce).

<sup>220</sup> See, *e. g.*, these Reorganization Plans set out following 5 U. S. C. 133z-15 (Supp. III): No. 2, 1949, §§ 1, 2, 14 F. R. 5225, 63 Stat. 1065; No. 3, 1949, § 1, 14 F. R. 5225, 63 Stat. 1066; No. 5, 1949, § 2, 14 F. R. 5227, 63 Stat. 1067; No. 6, 1949, § 2, 14 F. R. 5228, 63 Stat. 1069; No. 7, 1949, § 2, 14 F. R. 5228, 63 Stat. 1070; No. 3, 1950, §§ 1, 2, 15 F. R. 3174, 64 Stat. —. But see § 1 of Reorganization Plan No. 7, 1949, *supra*. See also Act of August 10, 1949, § 5, 63 Stat. 578, —.

were effectuated in 1950 for the Departments of Commerce and the Interior, among others, but not for the Department of Agriculture.<sup>221</sup> Apart from the mere fact of transfer of the functions, these plans leave unaffected the statutory provisions governing the manner in which the functions must be administered.<sup>222</sup> To that extent, therefore, administrative coordination of developmental operations is unaided by the reorganization plans.

Some administrative coordination of river-basin activities has nevertheless been achieved within these limitations. We shall confine our discussion here to the Departments of Agriculture and the Interior since each is responsible for a variety of river-basin operations performed by separate subordinate agencies.<sup>223</sup>

*Department of Agriculture.*—Responsibility for the coordination and supervision of the Department's activities "relating to land and water resources" rests with the Assistant Secretary.<sup>224</sup> In addition, Departmental Field Representatives

<sup>221</sup> Interior, see Reorganization Plan No. 3 of 1950, §§ 1, 2, 15 F. R. 3174, 64 Stat. —; Commerce, Inland Waterways Corporation excepted, see Reorganization Plan No. 5 of 1950, §§ 1, 2, 15 F. R. 3174, 64 Stat. —. For defeat of the plan for the Department of Agriculture, Reorganization Plan No. 4 of 1950, see 96 CONG. REC. 7319-7327, unbound ed., May 18, 1950.

<sup>222</sup> See *supra*, pp. 433-434. For discussion of conflicts in such statutes, see *infra*, chapter 10, pp. 493-643.

<sup>223</sup> Coordination among separate parts of a program for a particular basin is not to be confused with the separate problem of adoption of uniform standards for projects. For example, this latter problem is one dealt with by the Board of Engineers for Rivers and Harbors. See *supra*, pp. 99-100.

Moreover, it should be noted that the Department of the Army is largely free from the problem of intradepartmental coordination so far as water-resource functions are concerned. For among its subordinate agencies, the Corps of Engineers alone has relevant duties.

The Department of Commerce has several bureaus concerned with basin development. However, their activities primarily concern data collection and analysis. Thus, the problem of coordination is not acute and consists principally of assignment of jurisdiction rather than continuous coordination of operations. Nevertheless, it has created an intradepartmental Field Committee for the Arkansas-White and Red River Basins. Unpublished letter from Secretary of Commerce to Gustav E. Larson designating him Chairman, June 30, 1950. The Department also has in the Office of the Secretary a program group on area development.

<sup>224</sup> DEPARTMENT OF AGRICULTURE ADMINISTRATIVE REGULATIONS, 1 A. R. 19.

have been appointed for the Pacific Northwest, Missouri River Basin, Pacific Southwest, and Arkansas-White and Red River Basins.<sup>225</sup> Integrated agricultural plans are being prepared for the Pacific Northwest and the Arkansas-White-Red Regions, and such a plan has already been completed for the Missouri Basin.<sup>226</sup>

The scope and objectives of these regional programs are illustrated by the following excerpt from the departmental directive under which the Missouri Basin plan was prepared: <sup>227</sup>

This program will be designed to: Conserve and improve the lands of the Basin; build up and protect the forest resource; protect, enhance and develop the water resource; enlarge and improve the farm plant by irrigation and drainage; reduce flood and sediment damages; enhance recreation and wildlife; and otherwise support, complement and balance the programs of other agencies—particularly the engineering activities being carried out under the "Pick-Sloan" plan.

Field Committees are established in regions in which the Department undertakes the preparation and installation of an integrated agricultural program. The agencies of the Department previously listed are represented on these committees.<sup>228</sup> The Secretary's field representative functions as chairman. These committees are devices for coordination of the planning and execution of the regional programs by joint preparation of

<sup>225</sup> Secretary of Agriculture Memorandum No. 1170, August 1, 1946; Secretary of Agriculture Memorandum No. 1176, October 17, 1946; Secretary of Agriculture Memorandum No. 1250, February 3, 1950; Secretary of Agriculture Memorandum No. 1261, July 17, 1950. Each serves on the Basin Inter-agency Committee, and also serves in the field as liaison and coordinating officer for the Department, with its own agencies in the region, with state and local public agencies, and with other organizations and groups interested in resources development. The agencies of the Department are asked to extend to them "full cooperation and assistance." *Id.*

<sup>226</sup> Secretary of Agriculture Memorandum No. 1220, July 9, 1948, and H. Doc. No. 373, 81st Cong., 1st sess., 1949 (Missouri); Secretary of Agriculture Memorandum No. 1256, May 9, 1950 (Columbia); Secretary of Agriculture Memorandum No. 1261, July 17, 1950 (Arkansas-White-Red).

<sup>227</sup> Secretary of Agriculture Memorandum No. 1220, July 9, 1948.

<sup>228</sup> See *supra*, n. 195, p. 430.

the plan and by joint consideration of annual programs and budgets. The Secretary's field representatives and the agency representatives on the Field Committee do not, however, act in an administrative capacity.

The Land and Water Resources Staff in the Office of the Secretary aids the Assistant Secretary in coordinating the Department's land and water programs.<sup>229</sup>

*Department of the Interior.*—The Department of the Interior has taken similar steps to facilitate interbureau program coordination. Several Field Committees have been established to formulate integrated departmental programs for their respective regions.<sup>230</sup>

<sup>229</sup> DEPARTMENT OF AGRICULTURE ADMINISTRATIVE REGULATIONS, 1 A. R. 25.

<sup>230</sup> Department of the Interior Order No. 2465, August 25, 1948. Field Committees were established for Alaska, Pacific Northwest, Pacific Central, Colorado River-Great Basin, Missouri River Basin, Southwest, and Eastern Regions. While not all of them have yet been organized, some have been functioning for several years. Four of them have formulated comprehensive six-year, advance programs for their respective basins. MISSOURI RIVER BASIN PROJECT, PROGRAM OF THE DEPARTMENT OF THE INTERIOR (February 1949); PACIFIC NORTHWEST NEEDS, RESOURCES AND DEVELOPMENT 1949-1955 (June 1949 Revision); PROPOSAL OF AN INTEGRATED PROGRAM FOR THE DEPARTMENT OF THE INTERIOR IN THE SOUTHWEST REGION, 1950-1956 (Preliminary Draft, March 1950); SIX-YEAR INTEGRATED PROGRAM FOR THE DEPARTMENT OF THE INTERIOR IN ALASKA, 1951-1956 (1950).

An indication of the scope of activity covered can be gained from the Missouri Basin report's table of contents. The chapters deal with: Irrigation Development; Power Development; Municipal, Industrial, and Domestic Water Supply; Basic Data; The Indian in the Missouri Basin; Mineral Resources in the Missouri Basin; Fish and Wildlife; Recreation; The Remaining Public Domain in the Missouri Basin; Problems; The Machinery of Coordination; and Six-Year Program for Missouri River Basin.

The Pacific Northwest report discusses changes in authorization and appropriation provisions, departmental procedures, and organizational machinery, which it says are needed if comprehensive development is to be achieved.

Each of these Field Committees is directed to (a) Formulate its collective concept of a Department-wide, long-range program adequate to meet the requirements of the region; (b) Advise and assist in the preparation of annual appropriation estimates and annual allocations of funds in order to achieve a balanced program for the Department as a whole in the region; (c) Explore the extent of, and recommend steps to remedy overlaps, duplication and gaps in current departmental programs and obstacles to their effectuation; (d) Serve as a focal point for the Department in dealing with other agencies, groups and persons both public and private; (e) Facilitate intra-

The order establishing these committees states, however, that none of its provisions shall:

be construed to authorize a committee chairman, a committee, or its staff to execute, administer or otherwise direct any bureau activity within a region.

As a further means of facilitating coordination of the activities of its subordinate agencies, the Department of the Interior has required that they specify in their budget estimates the extent to which their requests for funds will or will not enable them to carry out their advance programs.<sup>231</sup>

**THE RELATIVE SPHERES OF FEDERAL AND NONFEDERAL DEVELOPMENT.**—The trend toward comprehensive development is complicated, as we have seen, by the distribution of federal functions among many agencies operating under a variety of largely uncoordinated statutes. Other complications arise in the event of a contest between a proposal for nonfederal development and one for federal development in the same area.

departmental coordination and review of reports at the regional level; (f) Receive and interchange information pertinent to the maintenance of a program for the area; (g) Submit recommendations for effecting improvements and economies in administration; (h) Promote the settlement of differences which may occur between bureaus; and (i) Prepare annual and special reports as required. Order No. 2465, pp. 2-3.

A Program Staff in the Secretary's Office examines all policies and programs of the Department with the objective of ascertaining that "(a) they are integrated and internally consistent; (b) they constitute a full utilization of the Department's powers for carrying out the responsibilities of the Department; (c) they are appropriately related to the programs and policies of other agencies of government; and (d) they are in proper context with the current and prospective needs of the national economy." Department of the Interior Order No. 2394, December 16, 1947. A Program Committee consisting of representatives of each agency advises the Program Staff. Department of the Interior Order No. 2421, April 14, 1948.

<sup>231</sup> Department of the Interior Budget and Finance Letter No. 5, March 21, 1950. The request for preliminary estimates for 1952 provided that, "Within limitations of the over-all budget policy, the bureaus and offices will be expected to take into account the program recommendations of the Field Committee in the preparation of their preliminary estimates not only with respect to their own needs but also with respect to the relation of their activities to the programs of other agencies in these areas. Each bureau and office should advise the Division of Budget and Finance of any material deviations in their estimates from the 1952 amounts of the six-year programs developed by the Field Committees and the reasons therefor."



A case now before the Federal Power Commission is illustrative.<sup>232</sup> In 1944, Congress "approved" a general plan of development embracing eleven projects for the Roanoke River Basin for flood control and other purposes, as recommended by the Chief of Engineers in House Document No. 650, 78th Congress, 2d session.<sup>233</sup> The same provision "authorized" construction of two of the eleven projects.<sup>234</sup> In 1948, a private company applied for a Federal Power Commission license to develop Roanoke Rapids, one of the remaining nine projects, and that with the highest benefit-cost ratio.<sup>235</sup>

The Secretary of the Interior, designated by statute as the marketing agent for surplus power from reservoir projects under Army control, is opposing the granting of a license.<sup>236</sup> Among other things, he contends that, in approving the eleven-project plan for the basin, Congress reserved this site for federal development. Furthermore, he maintains that the applicant's plan is not "best adapted to a comprehensive plan" for improving or developing the waterway for the benefit of commerce, "for the improvement and utilization of water-power development, and for other beneficial uses, including recreational purposes," all as required by Section 10(a) of the Federal Power Act.<sup>237</sup> He further argues that the benefits to the public would be less under the applicant's plan than under federal development in accordance with House Document No. 650. And he asserts that unified operation of all eleven dams and an integrated transmission system is necessary to attain maximum power benefits.

On the other hand, the applicant contends that "approval" of the general plan did not constitute a reservation of the site

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<sup>232</sup> *Re Virginia Electric and Power Company*, Project No. 2009, Federal Power Commission.

<sup>233</sup> Act of December 22, 1944, § 10, 58 Stat. 887, 891.

<sup>234</sup> *Id.*

<sup>235</sup> *Re Virginia Electric and Power Company*, Project No. 2009; and H. Doc. No. 650, 78th Cong., 2d sess., pp. 7-8 (1944).

<sup>236</sup> Act of December 22, 1944, § 5, 58 Stat. 887, 890. See briefs of the Secretary of the Interior filed in *Re Virginia Electric and Power Company*, Project No. 2009, Federal Power Commission.

<sup>237</sup> Act of June 10, 1920, § 10(a), 41 Stat. 1063, 1068, as amended, 16 U. S. C. 803(a). See also *supra*, p. 275.

for federal development; that Roanoke Rapids Dam has not been authorized; and that there is no assurance it will be authorized in the near future. Moreover, maintaining that its proposed development is in substantial accord with that recommended for the site by the Army Engineers, the applicant argues that its prompt development of the site and of the power benefits under a license containing the safeguards authorized by Congress would be in the public interest and would meet the requirements of the Federal Power Act. The position of the Commission's Staff is much the same as that of the applicant as regards compatibility of the applicant's project with the general plan of development approved by Congress.<sup>238</sup>

Another point of dispute relates to the necessity for, and availability of, steam support to assure maximum utilization of the hydroelectric potential.

In this case, the Commission had by letter expressed approval of the Army Engineer plan, later printed in House Document No. 650.<sup>239</sup> Thereafter, Congress "approved" that plan.<sup>240</sup> The summation of the questions thus raised is whether the Commission may subsequently authorize nonfederal development of one of the projects comprehended by that plan.

The decision of the Presiding Examiner, which is subject to review by the Commission, ordered that a license be issued.<sup>241</sup>

A somewhat similar question has arisen in connection with the King's River Project in California where an irrigation district and a private company have applied for Federal Power Commission licenses to develop three of the projects comprehended by the Bureau of Reclamation's general plan for de-

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<sup>238</sup> See briefs of Virginia Electric and Power Company, and of the Staff of the Federal Power Commission, filed in *Re Virginia Electric and Power Co.*, Project No. 2009, Federal Power Commission.

<sup>239</sup> H. Doc. No. 650, 78th Cong., 2d sess., p. 2 (1944).

<sup>240</sup> Act of December 22, 1944, § 10, 58 Stat. 887, 891.

<sup>241</sup> Examiner's decision of March 17, 1950. After a rehearing, the Examiner concluded on November 16, 1950 that the order "needs no modification." On November 22, 1950, the Secretary of the Interior filed a motion "for suspension of the 20-day rule for the filing of exceptions, for abbreviation of the record, and for fixing the date for filing exceptions."

velopment of the Central Valley, which has been transmitted to Congress by the Secretary of the Interior, with the approval of the President, under Reclamation Law.<sup>242</sup> The Commission authorized the issuance of licenses, but a rehearing has been ordered and the cases are still pending.

**FEDERAL-STATE COORDINATION.**—Any program for comprehensive development of our water and land resources requires coordination of state and federal interests and responsibilities. Each government has responsibilities in this field and each is engaged in a number of facets of basin development. We shall set forth here some of the more significant provisions of federal law relating to federal-state coordination.

These include provisions for state participation in federal development, provisions for federal-state cooperative agreements for resource management or development, and provisions for federal aid to state development. In addition, other provisions expressly recognize the interests of the states, or reserve specified aspects of basin development to state jurisdiction.

State participation in federal development is provided for in a number of ways. One method is to require that federal plans and reports be submitted to the states for their comments.<sup>243</sup> Another method is to provide for state participation

<sup>242</sup> *Re Fresno Irrigation District*, Project No. 1925 and *Re Pacific Gas and Electric Company*, Project Nos. 175 and 1988, Federal Power Commission.

<sup>243</sup> For example:

California Débris Commission may consult with commission of state engineers. Act of March 1, 1893, § 24, 27 Stat. 507, 511, 33 U. S. C. 684.

Consultation with state fish and wildlife agencies required of any federal agency impounding, diverting, or otherwise controlling water, or of any public or private agency acting under federal permit. Act of August 14, 1946, § 2, 60 Stat. 1080, 16 U. S. C. 662.

Reports for navigation, flood control, or irrigation works must be submitted to affected states for their comments; comments must be included with report; if a state objects, then irrigation project not deemed authorized except by Act of Congress. Act of December 22, 1944, § 1, 58 Stat. 887. For administrative requirements for cooperation antedating this statute, see pars. 503 (b), 504, Orders and Regulations of the Chief of Engineers, dated April 30, 1933.

*Cf.* Notice of any application for a Federal Power Commission license must be given by the FPC to any interested state or municipality. Act of June 10, 1920, § 4, 41 Stat. 1063, 1065, as amended, 16 U. S. C. 797.

in investigation and planning of basin-development programs.<sup>244</sup> Still another is to condition the federal development upon state approval or to require certain state action before the federal development may proceed.<sup>245</sup> Provision has often been made for the creation of advisory boards representing state or local

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<sup>244</sup> For example:

In preparing or adopting "comprehensive programs" for eliminating or reducing pollution, the Surgeon General is to act in cooperation with "State water pollution agencies and interstate agencies, and with municipalities and industries involved." Act of June 30, 1948, § 2(a), 62 Stat. 1155, 33 U. S. C. 466a (Supp. III).

Survey of Arkansas-White and Red Basins to be coordinated with the states. Act of May 17, 1950, § 205, 64 Stat. 163, —.

Survey of New England-New York Area to be coordinated with the states. See President's letters of October 9, 1950, to the Secretary of the Army and others setting up a New York-New England Survey Commission, and Act of May 17, 1950, § 205, 64 Stat. 163, —.

<sup>245</sup> For example:

State legislatures must consent to acquisition of further land by the United States for national forest purposes. Act of March 1, 1911, § 7, 36 Stat. 961, 962, as amended, 16 U. S. C. 516.

State legislature must consent to act authorizing federal aid to states for construction of rural post roads. Act of July 11, 1916, § 1, 39 Stat. 355.

Federal expenditures for certain purposes under Clarke-McNary Act may not exceed the amount expended by the states. Act of June 7, 1924, §§ 2, 4, 5, 43 Stat. 653, 654, as amended, 16 U. S. C. 565, 567, 568 (Supp. III).

State legislature must consent to establishment of fish and game sanctuaries in national forests. Act of March 10, 1934, § 1, 48 Stat. 400, 16 U. S. C. 694.

State must consent before any Rural Electrification Administration loan can be made to construct, operate, or enlarge any generating plant. Act of May 20, 1936, § 4, 49 Stat. 1363, 1365, as amended, 7 U. S. C. 904 (Supp. III).

In certain circumstances, state must provide lands, easements, and rights-of-way for federal flood-control projects, and must agree to maintain and operate projects after completion. See *supra*, pp. 144-146.

No irrigation water may be delivered within Columbia Basin Project until state consents to certain provisions of federal act. Act of March 10, 1943, § 7, 57 Stat. 14, 20, 16 U. S. C. 835c-3.

State where pollution originates must consent before judicial action can be initiated under the statute to abate it. Act of June 30, 1948, § 2(d) (4), 62 Stat. 1155, 1157, 33 U. S. C. 466a (d) (4) (Supp. III).

State legislature must consent to provisions of act relating to fish restoration and management projects, and must pass certain laws before program can be effective in that state. Act of August 9, 1950, § 1, 64 Stat. 430.

interests.<sup>246</sup> Or the statute may authorize programs to be carried out through state agencies.<sup>247</sup>

Provision has often been made for carrying out conservation and development of resources through cooperative federal and state action. This is especially true in the case of forest, fish and wildlife, and land-utilization programs.<sup>248</sup>

<sup>246</sup> For example:

Beach Erosion Board to consist of seven members, three of them selected from among cooperating state agencies. Act of July 3, 1930, § 2, 46 Stat. 918, 945, 33 U. S. C. 426.

Water Pollution Control Advisory Board to include a representative of state government. Act of June 30, 1948, § 6(b), 62 Stat. 1155, 1158, as amended, 33 U. S. C. 466e(b) (Supp. III).

The Federal Inter-Agency River Basin Committee's Subcommittees for the Columbia and the Missouri Basins include representatives of the states involved. See SUMMARY REPORT ON FEDERAL INTER-AGENCY RIVER BASIN COMMITTEE AND ITS SUBCOMMITTEES, pp. 31-35 (1949). The Subcommittee for the Arkansas-White and Red Basins is to invite the State Governors to participate in its meetings. See Minutes, FIARBC, June 12, 1950, Exhibit A, p. 2.

<sup>247</sup> For example:

Federal-aid highway construction to be carried out through state agencies. Act of November 9, 1921, § 12, 42 Stat. 212, 215, as amended, 23 U. S. C. 13.

Secretaries of Agriculture and the Army may utilize the services of federal, state, and other public agencies for carrying out the purposes of the 1936 Flood Control Act as amended and supplemented. Act of June 28, 1933, § 5, 52 Stat. 1215, 1223, as amended, 33 U. S. C. 701b-2.

<sup>248</sup> For example:

Secretary of Agriculture to cooperate with any state, or group of states, when requested to do so, in protection against fire in forested watersheds of navigable streams. Act of March 1, 1911, § 2, 36 Stat. 961, 16 U. S. C. 563.

Secretary of Agriculture may secure the cooperation of state authorities in the construction and maintenance of national-forest roads as parts of state highway systems. Act of March 4, 1913, 37 Stat. 828, 843, as amended, 16 U. S. C. 501.

Secretary of Agriculture to cooperate with states in the construction of rural post roads; state must consent to provisions of the federal act. Act of July 11, 1916, § 1, 39 Stat. 355, as amended.

Federal cooperation with states for forest fire suppression, for production and distribution of forest tree seeds and plants, and for assisting farm owners in establishing and improving "wood lots, shelter belts, windbreaks and other valuable forest growth." Act of June 7, 1924, §§ 1, 4, 5, 43 Stat. 653, 654, as amended, 16 U. S. C. 564, *et seq.* (Supp. III).

Federal cooperation with individuals and public and private agencies in investigations and experiments for reforestation, fire protection, disease control, and utilization of forest products. Act of May 22, 1928, §§ 1, 9, 45

Stat. 699, 702, as amended, 16 U. S. C. 581, 581h (Supp. III) ; see also Act of April 26, 1940, 54 Stat. 168, 16 U. S. C. 594a.

Beach erosion investigations and studies to be made in cooperation with appropriate agencies of various states. Act of July 3, 1930, § 2, 46 Stat. 918, 945, 33 U. S. C. 426. See also Act of July 31, 1945, § 2, 59 Stat. 508, 33 U. S. C. 426b; Act of August 13, 1946, 60 Stat. 1056, 33 U. S. C. 426e-426h.

Tennessee Valley Authority may cooperate with states concerning fertilizer, power, and basin planning. Act of May 18, 1933, §§ 5 (c), 10, 22, 48 Stat. 58, 61, 64, 69, as amended, 16 U. S. C. 831d (c), 831i, 831u.

Secretary of the Interior may cooperate with states in a program of wildlife conservation and rehabilitation. Act of March 10, 1934, § 1, 48 Stat. 401, as amended, 16 U. S. C. 661.

Secretary of Agriculture may cooperate with any person, or governmental or other agency in soil-conservation program. Act of April 27, 1935, § 1, 49 Stat. 163, 16 U. S. C. 590a. See *supra*, n. 99, p. 368.

Cooperative agreements with states in acquisition, development, and management of state forests, and coordination of federal and state forest-management activities. Act of August 29, 1935, 49 Stat. 963, 16 U. S. C. 567a *et seq.*

Sense of Congress to undertake flood-control activity in cooperation with states, their political subdivisions, and localities thereof. Act of June 22, 1936, § 1, 49 Stat. 1570, 33 U. S. C. 701a.

A "comprehensive study" of federal and state public park, parkway, and recreational-area programs to be undertaken in cooperation with and with the consent of state officials having jurisdiction over areas involved; cooperation with states authorized for the purpose of developing "coordinated and adequate public park, parkway, and recreational-area facilities." Act of June 23, 1936, § 1, 49 Stat. 1894, 16 U. S. C. 17k.

Secretary of Agriculture may cooperate with any person, or governmental or other agency, for development of water storage and utilization facilities and may require enactment of certain state laws as a condition to extending benefits under federal act. Act of August 28, 1937, §§ 2, 4, 6, 50 Stat. 869, 870, 16 U. S. C. 590s, 590u, 590w.

Cooperation with State of Oregon for coordinated administration for sustained-yield of "O and C lands" and adjacent lands. Act of August 28, 1937, 50 Stat. 874.

Federal cooperation with states in wildlife restoration projects. Act of September 2, 1937, 50 Stat. 917, as amended, 16 U. S. C. 669 *et seq.*

President authorized to reserve certain national forest lands from entry upon request of municipality which obtains its water supply therefrom; municipality to reimburse United States for resulting loss of revenues. Act of May 28, 1940, §§ 1, 3, 54 Stat. 224, 225, 16 U. S. C. 552a, 552c.

Cooperative sustained-yield forest management agreements with states and private land owners. Act of March 29, 1944, 58 Stat. 132, 16 U. S. C. 583 *et seq.*

Federal policy "to assist in the construction, but not the maintenance, of works for the improvement and protection against erosion by waves and currents" of shores owned by states, municipalities, and other political subdivisions. Act of August 13, 1946, § 1, 60 Stat. 1056, 33 U. S. C. 426e.

Federal aid to state programs has been rendered in a variety of ways. Thus, grants-in-aid or loans are used to help states carry out development programs.<sup>249</sup> Bonds of states and local public agencies are exempted from federal income taxation.<sup>250</sup> Public land and rights-of-way have frequently been granted to states and local agencies.<sup>251</sup> Moreover, state and local public

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Cooperation with states in forest pest control; Secretary of Agriculture may require state contributions. Act of June 25, 1947, 61 Stat. 177, 16 U. S. C. 594-1 *et seq.* (Supp. III).

Federal cooperation with states in fish restoration projects. Act of August 9, 1950, 64 Stat. 430.

Cooperation with states in services to private forests. Act of August 25, 1950, 64 Stat. 473, repealing Act of May 18, 1937, 50 Stat. 188, 16 U. S. C. 568b.

<sup>249</sup> For example:

Federal aid to highways, Act of November 9, 1921, 42 Stat. 212, as amended, 23 U. S. C. 1 *et seq.* (Supp. III).

Tennessee Valley Authority may extend credit to states and municipalities to assist in operation of power facilities. Act of August 31, 1935, § 7, 49 Stat. 1075, 1076, 16 U. S. C. 831k-1.

Federal aid to state wildlife and fish restoration programs. Act of September 2, 1937, 50 Stat. 917, as amended, 16 U. S. C. 669 *et seq.*, Act of August 9, 1950, 64 Stat. 430.

Federal aid to protection of state or municipally owned shores from erosion limited to one-third of the cost; if states or municipalities do the construction, they may be reimbursed by Federal Government. Act of August 13, 1946, §§ 1, 2, 60 Stat. 1056, 33 U. S. C. 426e, 426f.

Reconstruction Finance Corporation loans to states, municipalities and public agencies. Act of June 30, 1947, § 4(a)(3), 61 Stat. 202, 203, as amended, see 15 U. S. C. 604(a)(3) (Supp. III).

Loans and grants to any state, municipality, or interstate agency for construction of sewage-treatment works, and allotments to states and interstate agencies for investigations, research, surveys, and studies related to prevention and control of pollution. Act of June 30, 1948, §§ 5, 8(a), 8(c), 62 Stat. 1155, 1158, 1159, as amended, 33 U. S. C. 466d, 466g(a), 466g(c) (Supp. III).

Federal loans or advances to states, their agencies, and political subdivisions for financing the cost of advance planning and preparation of public works. Act of October 13, 1949, 63 Stat. 841, 40 U. S. C. 451-458 (Supp. III).

<sup>250</sup> Act of February 10, 1939, § 1808(a), 53 Stat. 199, as amended, 26 U. S. C. 1808(a).

<sup>251</sup> For example:

Swamp and overflow lands granted to certain states. Act of March 2, 1849, 9 Stat. 352; Act of September 28, 1850, 9 Stat. 519.

bodies are often given preference in obtaining power, power privileges, water, or recreation sites at federal projects.<sup>252</sup> Federal property and services have frequently been made available to state or local agencies on favorable terms or upon mere request.<sup>253</sup> Various provisions have been made for federal payments to states or local bodies, including payments in lieu of taxes and contribution of proceeds from federally administered lands.<sup>254</sup>

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See generally, 43 U. S. C., chs. 14, 20, 23.

Desert lands granted to certain states for reclamation purposes. Act of August 18, 1894, § 4, 28 Stat. 372, 422, as amended, 43 U. S. C. 641.

Rights-of-way for highways. R. S. § 2477, from Act of July 26, 1866, § 8, 14 Stat. 251, 253, 43 U. S. C. 932; Act of November 9, 1921, § 17, 42 Stat. 212, 216, as amended, see 23 U. S. C. 18.

Rights-of-way for various purposes. Act of February 15, 1901, 31 Stat. 790, as amended, 43 U. S. C. 959; Act of March 4, 1911, 36 Stat. 1235, 1253, 43 U. S. C. 961. See also generally, 43 U. S. C., ch. 22.

Secretary of the Army authorized to grant easements for certain rights-of-way over certain lands under his jurisdiction. Act of July 24, 1946, § 7, 60 Stat. 641, 643, 43 U. S. C. 931b.

<sup>252</sup> See *supra*, n. 236, p. 299.

<sup>253</sup> For example:

Surplus Army road-construction material transferred to states. Act of November 9, 1921, § 5, 42 Stat. 212, 213, 23 U. S. C. 5.

Surgeon General may, upon request of any state water-pollution agency or interstate agency, conduct investigations and research and make surveys concerning any specific problem of water pollution. Act of June 30, 1948, § 3, 62 Stat. 1155, 1157, 33 U. S. C. 466b (Supp. III).

States and local agencies given favorable terms in disposal of surplus federal property. Act of October 3, 1944, § 13, 58 Stat. 765, 770, as amended, 50 U. S. C. App. 1622; repealed by Act of June 30, 1949, 63 Stat. 399.

Federal assistance to state and local governments in major disasters. Act of September 30, 1950, 64 Stat. 1109.

<sup>254</sup> For example:

Twenty-five percent of all moneys received from national forests paid to states for benefit of public schools and roads. Act of May 23, 1908, 35 Stat. 251, 260, 16 U. S. C. 500; Act of March 1, 1911, § 13, 36 Stat. 961, 963, as amended, 16 U. S. C. 500.

Payments to states from Boulder Canyon Project revenues. Act of December 21, 1928, § 4(b), 45 Stat. 1057, 1059, 43 U. S. C. 617c(b); Act of July 19, 1940, §§ 2, 3, 54 Stat. 774, 776, 43 U. S. C. 618a, 618b.

Tennessee Valley Authority payments to states. Act of May 18, 1933, § 13, 48 Stat. 58, 66, 16 U. S. C. 831i.

Fifty percent of "Oregon and California land-grant fund" paid to counties. Act of August 28, 1937, Title II, 50 Stat. 874, 875.



State control over certain aspects of basin development has often been recognized or enabled. This is done through statutes declaring particular waters to be nonnavigable; statutes relating to interstate compacts; statutes concerning water rights under state law; and statutes providing for application of state fish and game regulations.<sup>256</sup> Also, applicants for li-

Seventy-five percent of all moneys received from lease of lands acquired by the United States for flood-control purposes, paid to states for benefit of public schools and roads. Act of August 18, 1941, § 7, 55 Stat. 638, 650, as amended by Act of July 24, 1946, § 5, 60 Stat. 641, 642, 33 U. S. C. 701c-3. See also Act of June 28, 1938, § 4, 52 Stat. 1215, 1222.

One percent of the purchase price or of the value at time of acquisition of lands acquired by Department of Agriculture under 1944 Flood Control Act, to be paid annually to the county in which land is located. Act of December 22, 1944, § 13, 58 Stat. 887, 905.

Financial assistance to states for school purposes in areas affected by federal activities. Act of September 23, 1950, 64 Stat. 967; Act of September 30, 1950, 64 Stat. 1100.

<sup>256</sup> For example:

Waters declared nonnavigable. See 33 U. S. C. 21-55.

For interstate compacts approved, see *supra*, notes 287-292, pp. 65-66.

For a discussion of Acts of 1866, 1870 and 1877 in relation to water rights, see *supra*, pp. 35-42, 178-179.

Proceedings for condemnation of property for river and harbor improvements to be in accordance with state law. Act of April 24, 1888, 25 Stat. 94, 33 U. S. C. 591.

Charges for water from reservoir sites reserved on public lands subject to state control and regulation. Act of February 26, 1897, 29 Stat. 599, 43 U. S. C. 664.

Waters within national forests may be used for certain purposes under state law or under federal law and regulations. Act of June 4, 1897, § 1, 30 Stat. 11, 36, 16 U. S. C. 481.

State civil and criminal jurisdiction over persons upon national forest lands unaffected. Act of June 4, 1897, § 1, 30 Stat. 11, 36, 16 U. S. C. 480; Act of March 1, 1911, § 12, 36 Stat. 961, 963, 16 U. S. C. 480.

Subject to approval of location and plans by the Secretary of the Army and the Chief of Engineers, the state legislature may authorize bridges over waterways, the navigable portions of which lie wholly within that state. Act of March 3, 1899, § 9, 30 Stat. 1121, 1151, 33 U. S. C. 401.

State laws relating to control and use of water unaffected by federal Reclamation Act; Secretary of the Interior to proceed in conformity with such laws. Act of June 17, 1902, § 8, 32 Stat. 388, 390, 43 U. S. C. 383.

Forest Service officials to assist in enforcement of state laws in regard to stock, forest fires, and fish and game. Act of May 23, 1908, 35 Stat. 251, 259, 16 U. S. C. 553.

censes under Federal Power Act must submit evidence of compliance with certain state laws, and public-service licensees are

Blanket consent to interstate compacts for the purpose of "conserving the forests and the water supply;" no further congressional action required. Act of March 1, 1911, § 1, 36 Stat. 961, 16 U. S. C. 552.

Federal condemnation of land in aid of state or state agency, in connection with federal navigation and flood-control improvements. Act of August 8, 1917, § 9, 40 Stat. 250, 267, 33 U. S. C. 593; Act of August 18, 1941, § 6, 55 Stat. 638, 650, 33 U. S. C. 701c-2.

Federal Power Act not to affect or interfere with state laws relating to control and use of water. Act of June 10, 1920, § 27, 41 Stat. 1063, 1077, 16 U. S. C. 821.

Consent of Congress to six midwestern states to negotiate agreement relating to jurisdiction over boundary waters. Act of March 4, 1921, 41 Stat. 1447, 33 U. S. C. 11.

Colorado River Compact approved and operation of Boulder Canyon Project and use of water made subject thereto. Act of December 21, 1928, §§ 8, 13, 45 Stat. 1057, 1062, 1064, 43 U. S. C. 617g, 617l.

Consent to compacts between states relating to certain flood-control works; approval by Congress required. Act of June 22, 1936, § 4, 49 Stat. 1570, 1571, 33 U. S. C. 701d.

Consent to interstate compacts for developing any park, parkway, or recreational area; approval by Congress required. Act of June 23, 1936, § 3, 49 Stat. 1894, 1895, 16 U. S. C. 17m.

Certain state jurisdiction over tributaries of Red River specifically recognized. Act of June 28, 1938, § 4, 52 Stat. 1215, 1219.

Consent to interstate compacts for regulation of certain fishing in inland waters. Act of June 8, 1940, 54 Stat. 261, 16 U. S. C. 667a.

Boulder Canyon Project Adjustment Act not to interfere with "such rights as the States now have" to waters and their control. Act of July 19, 1940, § 14, 54 Stat. 774, 779, 43 U. S. C. 618m.

Recreational use of Army reservoir areas subject to state laws for the protection of fish and game. Act of December 22, 1944, § 4, 58 Stat. 887, 889, as amended, 16 U. S. C. 460d.

Certain employees of Bonneville Power Administration may be covered by state unemployment compensation law. Act of October 23, 1945, § 7, 59 Stat. 546, 548, 26 U. S. C. 1606.

State highway department must approve location and plans of privately owned highway toll bridges authorized by General Bridge Act of 1946. Act of August 2, 1946, § 502(c), 60 Stat. 812, 847, 33 U. S. C. 525.

Consent to interstate compacts for prevention and abatement of water pollution; congressional approval required. Act of June 30, 1948, § 2(c), 62 Stat. 1155, 1156, as amended, 33 U. S. C. 466a(c) (Supp. III).

Secretary of the Interior shall make recommendations for use of water of Central Valley project "in accord with State water laws." Act of October 14, 1949, § 2, 63 Stat. 852, —.

subject to certain state regulation.<sup>256</sup> State law governs the formation and incorporation of the water-users' organizations which distribute water under the Reclamation Law, and of public bodies and cooperatives eligible for Rural Electrification Administration loans.<sup>257</sup> In addition, almost all federal power is distributed by entities organized and largely regulated under state law.

### Progress in Coordination Within Particular Regions

At the outset, we said that there is no single, uniform federal policy governing comprehensive development of water and land resources. We also pointed out, however, that some statutes separately deal with individual projects, specific areas, and single river basins. Under a combination of these latter laws and other legislation of general application, development within different basins has approached varying degrees of comprehensiveness.

Most of these laws are concerned principally or exclusively with the physical aspects of integration. Efforts to provide for coordination have been concerned primarily with integrating groups of engineering projects without a parallel regard for harmonizing the economic and social objectives of such projects. This aspect has been noted by the Hoover Commission and by its Task Force on Natural Resources:<sup>258</sup>

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<sup>256</sup> For example:

Applicant for Federal Power Commission license must comply with state laws relating to bed and banks, to use of water, and right to engage in business. Act of June 10, 1920, § 9, 41 Stat. 1063, 1068, 16 U. S. C. 802.

Public-service licensees under Federal Power Act must abide by certain state regulation of services and charges. Act of June 10, 1920, § 19, 41 Stat. 1063, 1073, 16 U. S. C. 812.

<sup>257</sup> Act of August 4, 1939, § 2(g), 53 Stat. 1187, 1188, 43 U. S. C. 485a(g); Act of May 20, 1936, § 4, 49 Stat. 1363, 1365, as amended, 7 U. S. C. 904 (Supp. III).

<sup>258</sup> DEPARTMENT OF THE INTERIOR, REPORT OF THE COMMISSION ON ORGANIZATION OF THE EXECUTIVE BRANCH OF THE GOVERNMENT, p. 26 (March 1949); REPORT OF THE COMMISSION ON ORGANIZATION OF THE EXECUTIVE BRANCH OF THE GOVERNMENT, App. L, p. 31 (January 1949).

The "function" of river development is a multiple-purpose one, cutting across many of the unifunctional agencies. Experience has shown that parcelling out river development responsibilities among these functional agencies produces endless confusion and conflict. A plan for the development of a river basin cannot be devised by adding together the special studies and the separate recommendations of unifunctional agencies concerned respectively with navigation, flood control, irrigation, land drainage, pollution abatement, power development, domestic and industrial water supply, fishing, and recreation. These varied and sometimes conflicting purposes must be put together and integrated in a single plan of development.

In the following discussion of particular basins, we shall not attempt a detailed description of the existing programs of development. Our purpose will be to show the legal framework under which these programs are progressing and their relationship to comprehensive development.

**ALABAMA-COOSA RIVER BASIN.**—Federal participation in development began here in 1870 when Congress directed the Army Engineers to make an examination and survey of the Coosa River for navigation improvement.<sup>299</sup> Navigation works were authorized in 1876, 1890, and 1892.<sup>300</sup> With the advent of railroads and improved highways, river traffic on the affected reach disappeared and the works were abandoned.<sup>301</sup>

An extensive report on optimum use of the water resources of the basin was prepared by the Army Engineers in 1934.<sup>302</sup> It presented a long-range plan for the ultimate development of the waterways of the system in the coordinated interests of navigation, flood control, hydroelectric power, and other beneficial uses of water.

<sup>299</sup> Act of July 11, 1870, § 2, 16 Stat. 223, 226.

<sup>300</sup> Act of August 14, 1876, § 1, 19 Stat. 132, 134; Act of September 19, 1890, § 1, 26 Stat. 426, 441; Act of July 13, 1892, § 1, 27 Stat. 88, 101.

<sup>301</sup> H. Doc. No. 66, 74th Cong., 1st sess., pp. 69-70 (1935).

<sup>302</sup> H. Doc. No. 66, 74th Cong., 1st sess., a "308 Report" (1935).

In the next few years, various localized flood-control works were constructed.<sup>263</sup> As a result of the continued and rapid expansion of economic activities in the valley, three reviews of the previous report were assigned to the Army Engineers by congressional directives between 1936 and 1939.<sup>264</sup> A single combined report was prepared in response to all three authorizations.<sup>265</sup> An interim report was submitted in 1941 outlining a plan for ultimate development of the basin's water resources, to be accomplished step-by-step over a period of years in accordance with plans being prepared by the Army Engineers.<sup>266</sup> This plan was authorized in 1945.<sup>267</sup>

In response to an authorization in the 1936 Flood Control Act, the Department of Agriculture submitted a report to Congress recommending a program of terracing, reforestation, improved land use, better cropping practices, minor channel improvements, and other measures to improve the soil and reduce erosion and silting in the Coosa River Basin above Rome, Georgia.<sup>268</sup> In 1944, prosecution of this recommended project was authorized.<sup>269</sup>

<sup>263</sup> See *e. g.* Act of June 22, 1936, § 5, 49 Stat. 1570, 1575; Act of August 18, 1941, § 3, 55 Stat. 638, 641.

<sup>264</sup> See H. Doc. No. 414, 77th Cong., 1st sess., p. 3 (1941).

<sup>265</sup> *Ibid.*

<sup>266</sup> H. Doc. No. 414, 77th Cong., 1st sess. (1941). The report stated that the district engineer had developed "a comprehensive plan for navigation, power generation, and flood control" and that at the request of the Federal Power Commission a restudy was being made of this plan to "increase the development of hydroelectric power." But the Board of Engineers for Rivers and Harbors recommended that a comprehensive plan for the ultimate development of the water resources of the Alabama-Coosa River system for "navigation, hydroelectric power, flood control, and other purposes" should be authorized at this time. *Id.* pp. 4-5.

<sup>267</sup> Act of March 2, 1945, § 2, 59 Stat. 10, 17. "Alabama-Coosa River, Alabama: Initial and ultimate development of the Alabama-Coosa River and tributaries for navigation, flood control, power development, and other purposes, as outlined in House Document Numbered 414, Seventy-seventh Congress, is hereby authorized substantially in accordance with the plans being prepared by the Chief of Engineers with such modifications thereof from time to time as in the discretion of the Secretary of War and the Chief of Engineers may be advisable for the purpose of increasing the development of hydroelectric power \* \* \*"

<sup>268</sup> Act of June 22, 1936, § 6, 49 Stat. 1570, 1593; H. Doc. No. 236, 78th Cong., 1st sess. (1943).

<sup>269</sup> Act of December 22, 1944, § 13, 58 Stat. 887, 905.

At the same time, various agencies of the Department of the Interior are responsible for their own separate programs within the Basin. For example, the Southeastern Power Administration is charged with responsibility of marketing surplus power from Army reservoir projects on the River.<sup>270</sup> Likewise, the Fish and Wildlife Service and Bureau of Mines are concerned with their respective responsibilities.<sup>271</sup> The Geological Survey also has its program.<sup>272</sup> And the National Park Service participates in planning for recreational facilities at Army reservoir areas.<sup>273</sup> In addition, the 1936 Park, Parkway, and Recreational Area Study Act established a basis for cooperative recreational planning between the Park Service and the individual states.<sup>274</sup>

Although interdepartmental consultation is not required by statute for this region, arrangement exists for interdepartmental exchange of information through the Federal Inter-Agency River Basin Committee.<sup>275</sup>

**ARKANSAS-WHITE AND RED RIVER BASINS.**—Here, the most significant recent incident concerning comprehensive development is a 1950 legislative provision for a survey and preparation of plans by the Army Engineers. Bills were introduced early in 1949 in both the House and Senate to establish a temporary United States Study Commission to provide for “an integrated and cooperative investigation, study, and survey” in promotion of the conservation, utilization, and development of the land and water resources of the Arkansas-White and Red River Basins for multiple purposes.<sup>276</sup>

Such a provision was adopted by the Senate as an amendment to the 1950 Flood Control Bill, after having been re-

<sup>270</sup> Department of the Interior Order No. 2558, March 21, 1950, 15 F. R. 1901

<sup>271</sup> See *supra*, pp. 327-330.

<sup>272</sup> See *supra*, pp. 343-344.

<sup>273</sup> Unpublished letter from Chief of Engineers to Director of the National Park Service dated February 23, 1945.

<sup>274</sup> Act of June 23, 1936, 49 Stat. 1894, 16 U. S. C. 17k-17n.

<sup>275</sup> See *supra*, pp. 431-433.

<sup>276</sup> H. R. 4331 and S. 1576, both 81st Cong., 1st sess. (1949).

jected by the House Committee.<sup>277</sup> This amendment would have created a Commission made up of one representative each from the Departments of Agriculture, the Army, and the Interior, one from the Federal Power Commission, and a resident of the Basins not an official or employee of the United States. In addition, the governor of each affected state was to appoint a representative as a member of an advisory committee to participate in the meetings of the Commission.<sup>278</sup> The Commission's report was to be submitted to the President and transmitted to Congress.

The Conference Committee rejected this Senate amendment, substituting in its place a provision authorizing the Army Engineers to conduct a survey. It stated that "such a study can be accomplished and the results coordinated with the appropriate Federal and State agencies under existing procedures of the Corps of Engineers as governed by law and administrative procedure."<sup>279</sup> The conference provision became law, under which the Army Engineers will make an examination for flood control and allied purposes with a view to developing for this region:<sup>280</sup>

comprehensive, integrated plans of improvement for navigation, flood control, domestic and municipal water supplies, reclamation and irrigation, development and utilization of hydroelectric power, conservation of soil, forest and fish and wildlife resources, and other beneficial development and utilization of water resources including such consideration of recreation uses, salinity and sediment control, and pollution abatement as may be provided for under Federal policies and procedures, all to be coordinated with the Department of the Interior, the Department of Agriculture, the Federal

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<sup>277</sup> H. R. 5472, 81st Cong., 1st sess. (1949) : H. Rep. No. 969, 81st Cong., 1st sess., p. 98 (1949) ; Sen. Rep. No. 1143, 81st Cong., 1st sess., p. 74 (1949) ; H. Rep. No. 1968, 81st Cong., 2d sess., p. 27 (1950).

<sup>278</sup> The original bills provided that these state representatives be members of the Commission. See *supra*, n. 276, p. 453.

<sup>279</sup> H. Rep. No. 1968, 81st Cong., 2d sess., p. 27 (1950).

<sup>280</sup> Act of May 17, 1950, § 205, 64 Stat. 163, —.

Power Commission, other appropriate Federal agencies and with the States, as required by existing law \* \* \*.

The provision also contains language designed to prevent alteration, hindrance or delay of projects theretofore authorized, or thereafter authorized, if in compliance with section one of the Flood Control Act of 1944.

In signing the bill, the President expressed dissatisfaction with it.<sup>281</sup> He pointed out that since important phases of the development work would be carried out by the Department of Agriculture, the Department of the Interior and other federal agencies, these agencies should participate in the making of the plans in the first place, as should the states which also have important responsibilities in resource-development work. Referring to the provision for coordination of the Department of the Army's plans with other federal agencies and the states, "as required by existing law," the President said:<sup>282</sup>

All that is required by existing law, however, is that certain Federal agencies and the States concerned be given an opportunity to comment on the plans prepared by the Department of the Army, before they are submitted to the President and the Congress. This is plainly no substitute for participation in the original preparation of the plans.

\* \* \* \* \*

In the absence of such legislation, [as proposed in the Senate version of the bill] I shall attempt to assure concerted action and effective planning, so far as that may be accomplished under existing laws. I am therefore issuing instructions to the appropriate Federal agencies to work together in preparing comprehensive plans for these basins, insofar as their existing authority permits, and to invite participation by the States concerned. This should remedy, to some extent, the inadequacy of

<sup>281</sup> H. Doc. No. 597, 81st Cong., 2d sess., p. 2 (1950).

<sup>282</sup> *Ibid.*



the present act. But more than this is needed. I recommend that the Congress reconsider the matter, and authorize the type of investigation and planning that would be accomplished under the provisions originally adopted by the Senate. (Bracketed material supplied.)

Later, in separate letters to the Departments of Agriculture, the Army, Commerce, and the Interior, to Federal Power Commission, and to Federal Security Agency, the President directed these agencies to organize an interagency committee, to formulate procedure, and to map out a joint plan of investigation, indicating specifically the responsibilities of each and the prospective allocation of agency resources to the joint effort. He stated: <sup>233</sup>

It is essential that the Executive agencies organize their efforts to realize, as far as possible under existing law, the potentialities of the broad-scale, integrated national resources study for the Arkansas-White and Red River Basins authorized in H. R. 5472.

In this connection it is important that the efforts of the various agencies be integrated from the very beginning of the investigation.

\* \* \* The final product of such a joint interagency investigation should be a single comprehensive report embracing the coordinated views of all agencies concerned.

This interagency field committee was established by the Federal Inter-Agency River Basin Committee on June 12, 1950, with the Department of the Army designated as the Chairman Agency. <sup>234</sup>

CENTRAL VALLEY, CALIFORNIA.—Federal participation in water-resource development in the Central Valley is largely the responsibility of the Bureau of Reclamation and the Army Engineers, both having prepared basin-wide plans for develop-

<sup>233</sup> Letters of the President, dated May 19, 1950.

<sup>234</sup> Minutes, FIARBC, June 12, 1950, Exhibit A.

ment.<sup>285</sup> In addition, the State of California has a plan for development.<sup>286</sup>

It will be remembered that the act creating the California Débris Commission directed the preparation of plans for navigation and flood control on the Sacramento and San Joaquin Rivers.<sup>287</sup> In commenting on the resulting report, the Board of Engineers for Rivers and Harbors stated:<sup>288</sup>

While Congress has hitherto included flood relief among the objects to be accomplished by the work of the debris commission, it appears to have considered this only as incidental to the control of mining debris in the interests of navigation. Should Congress now decide to cooperate with the State of California in a comprehensive project of this magnitude for the purpose of flood control, it is believed that the plan proposed, with such division of cost as Congress may determine, should be adopted, since, in the opinion of the board it is well designed to secure the desired result. The board reports, however, that the execution of this project is not necessary in the interests of navigation.

Transmitting this report in 1911, the Acting Chief of Engineers said:<sup>289</sup>

This report presents a project for control of floods, the third duty assigned the commission. Recognizing that the interests of navigation, debris control, and flood control are inseparably connected, the commission has considered these problems as one general subject, thus

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<sup>285</sup> Sen. Doc. No. 113, 81st Cong., 1st sess. (1949); H. Doc. No. 367, 81st Cong., 1st sess. (1949). For a discussion of the controversy over these two plans, see REPORT OF THE COMMISSION ON ORGANIZATION OF THE EXECUTIVE BRANCH OF THE GOVERNMENT, App. L, pp. 149-182 (1949). For an extensive treatment of the legal issues involved in the development of the Central Valley, see 38 CALIF. L. REV. No. 4 (October 1950).

<sup>286</sup> See Sen. Doc. No. 113, pp. 289-431.

<sup>287</sup> See *supra*, pp. 119-120, 353, 389.

<sup>288</sup> H. Doc. No. 81, 62d Cong., 1st sess., p. 3 (1911).

<sup>289</sup> *Id.* p. 2.

utilizing for the common good to the fullest extent practicable the works for any one of the three projects.

Congress did not approve this plan until it enacted the 1917 flood control statute.<sup>290</sup>

In the 1936 and 1938 Flood Control Acts, Congress directed the Army Engineers to make preliminary examinations and surveys of a large number of rivers including the Sacramento, certain of its tributaries, and the San Joaquin.<sup>291</sup> Pursuant to this authority, a number of interim reports were prepared for specific projects, some of which were authorized in the 1941 and 1944 Flood Control Acts.<sup>292</sup>

Meanwhile, the Bureau of Reclamation was also prosecuting a basin-wide development program. The California Legislature in 1929 had authorized a state survey to evolve "a coordinated plan for the conservation, development and utilization of the water resources of California."<sup>293</sup> Such a plan was submitted to the State Legislature in 1931, but was not approved until 1941.<sup>294</sup> In 1933, the initial units of this plan, known as the Central Valley project, were approved by the State Legislature and by a special referendum.<sup>295</sup> This same Legislature memorialized the Federal Government to include the Central Valley project as a part of the emergency unemployment relief program.<sup>296</sup> Initial portions of the Central Valley project were authorized by Congress in 1935 as a river and harbor improvement.<sup>297</sup> That same year, portions of the

<sup>290</sup> Act of March 1, 1917, § 2, 39 Stat. 948, 949.

<sup>291</sup> Act of June 22, 1936, § 6, 49 Stat. 1570, 1592, 1595; Act of June 28, 1938, § 6, 52 Stat. 1215, 1223, 1225.

<sup>292</sup> Act of August 18, 1941, § 3, 55 Stat. 638, 639, 647; Act of December 22, 1944, § 10, 58 Stat. 887, 891, 901.

<sup>293</sup> CALIFORNIA STATUTES OF 1929, ch. 832.

<sup>294</sup> State of California Department of Public Works, Bulletin No. 25, "Report to Legislature of 1931 on State Water Plan" (1930); CALIFORNIA STATUTES OF 1941, ch. 1185, DEERINGS CALIF. CODES, WATER, §§ 10000-10002.

<sup>295</sup> CALIFORNIA STATUTES OF 1933, ch. 1042, DEERINGS CALIF. CODES, WATER, §§ 11100-11855; Special Election, December 19, 1933.

<sup>296</sup> CALIFORNIA STATUTES OF 1933, SEN. J. RES. 29, ch. 109, p. 3166.

<sup>297</sup> Act of August 30, 1935, § 1, 49 Stat. 1028, 1038.

project were authorized under Reclamation Law.<sup>298</sup> The entire project was reauthorized by Congress, for construction by the Secretary of the Interior as a multiple-purpose project, in 1937 and again in 1940.<sup>299</sup> The latter reauthorization declares the project:

to be for the purposes of improving navigation, regulating the flow of the San Joaquin River and the Sacramento River, controlling floods, providing for storage and for the delivery of the stored waters thereof, for construction under the provisions of the Federal reclamation laws of such distribution systems as the Secretary of the Interior deems necessary in connection with lands for which said stored waters are to be delivered, for the reclamation of arid and semiarid lands and lands of Indian reservations, and other beneficial uses, and for the generation and sale of electric energy as a means of financially aiding and assisting such undertakings, and in order to permit the full utilization of the works constructed to accomplish the aforesaid purposes.

In 1949, the Central Valley project was again reauthorized, this time to include the American River development.<sup>300</sup> The Army Engineers are to construct the Folsom Dam and Reservoir. Upon its completion to the extent where water from the reservoir is ready to be turned either into the power plant or the conduits, the project is to be turned over to the Bureau of Reclamation for "operation and maintenance under the supervision of the Secretary of the Interior together with other features of the American River development herein authorized for construction by the Bureau of Reclamation, all in accordance with the Federal reclamation laws."<sup>301</sup>

<sup>298</sup> See UNITED STATES DEPARTMENT OF THE INTERIOR, BUREAU OF RECLAMATION PROJECT FEASIBILITIES AND AUTHORIZATIONS, pp. 117-122 (1949). See also Act of June 22, 1936, 49 Stat. 1597, 1622.

<sup>299</sup> Act of August 26, 1937, § 2, 50 Stat. 844, 850; Act of October 17, 1940, 54 Stat. 1198, 1199-1200.

<sup>300</sup> Act of October 14, 1949, § 1, 63 Stat. 852. For a further reauthorization see Act of September 26, 1950, 64 Stat. 1036.

<sup>301</sup> § 2, 63 Stat. 852. The Army's flood-control jurisdiction is preserved in accordance with § 7 of the Act of December 22, 1944, 58 Stat. 887, 890.

The Secretary of the Interior is directed: <sup>302</sup>

to cause the operation of said works to be coordinated and integrated with the operation of existing and future features of the Central Valley project in such manner as will effectuate the fullest and most economic utilization of the land and water resources of the Central Valley project of California for the widest possible public benefit.

**COLORADO RIVER BASIN.**—Early relevant events concerning the Colorado Basin trace progress toward adoption of the Boulder Canyon Project Act in 1928.

In 1904, Congress directed the Secretary of the Interior to investigate and report on the use of the waters of the lower Colorado River for the irrigation of arid lands in Arizona and California.<sup>303</sup> By the 1920 Kinkaid Act, he was directed to make an examination and report on the possibilities for irrigation of the Imperial Valley in California by diversion of water from the lower Colorado.<sup>304</sup> The resulting report was submitted in 1922, and bills were vainly introduced to carry out its recommendations.<sup>305</sup> Two years later, the Bureau of Reclamation submitted to the Senate Committee on Irrigation and Reclamation a voluminous report on development of the Colorado River.<sup>306</sup>

During the 1925 debate in the Senate on legislation laying the basis for the "308 Reports," several Senators voiced concern lest authorization of an additional survey further delay approval of the Bureau's program for development of the Colorado Basin.<sup>307</sup> Consequently, a proviso was added to the

<sup>302</sup> § 4, 63 Stat. —.

<sup>303</sup> Sen. J. Res. 71, April 23, 1904, 33 Stat. 591.

<sup>304</sup> Act of May 18, 1920, 41 Stat. 600.

<sup>305</sup> Sen. Doc. No. 142, 67th Cong., 2d sess. (1922); see, HISTORY AND FIRST ANNUAL REPORT, THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA, pp. 31-32 (1939).

<sup>306</sup> See Sen. Rep. No. 592, Part 1, 70th Cong., 1st sess., pp. 13-14 (1928); and H. Rep. No. 918, 70th Cong., 1st sess., p. 10 (1928). The Bureau of Reclamation was then known as the Reclamation Service.

<sup>307</sup> 66 Cong. REC. 4804-4809.

1925 River and Harbor Act which had the effect of precluding "308" surveys for the Colorado River.<sup>308</sup>

Meanwhile, in 1922 the seven States in the Colorado River Basin had signed an interstate compact which became effective in 1929 as to all such States except Arizona by which it was finally ratified in 1944.<sup>309</sup> The compact divides the Colorado River Basin into an "Upper Basin" and a "Lower Basin" and apportions the waters between these two Basins.<sup>310</sup> Its major purposes are:<sup>311</sup>

to provide for the equitable division and apportionment of the use of the waters of the Colorado River system; to establish the relative importance of different beneficial uses of water; to promote interstate comity; to remove causes of present and future controversies and to secure the expeditious agricultural and industrial development of the Colorado River Basin, the storage of its waters, and the protection of life and property from floods.

In addition to approving the Colorado River Compact, the 1928 Boulder Canyon Project Act authorized the development recommended six years earlier by the Bureau of Reclamation.<sup>312</sup> The Act directs the Secretary of the Interior "to make investigation and public reports of the feasibility of projects for irrigation, generation of electric power, and other purposes in the States of Arizona, Nevada, Colorado, New Mexico, Utah, and Wyoming for the purpose of \* \* \* formulating a comprehensive scheme of control and the improvement and utilization of the water of the Colorado River and its tributaries."<sup>313</sup> It also gave consent to the States involved to enter into compacts consistent with the Colorado River Compact and con-

<sup>308</sup> Act of March 3, 1925, § 3, 43 Stat. 1186, 1190.

<sup>309</sup> See *supra*, n. 27, pp. 320-321.

<sup>310</sup> Colorado River Compact, Arts. I, III, *HOOVER DAM POWER AND WATER CONTRACTS AND RELATED DATA*, Department of the Interior, Bureau of Reclamation, pp. 5, 6 (1950).

<sup>311</sup> Art. I, *id.*, p. 5.

<sup>312</sup> For approval of the Compact, see *supra*, n. 27, pp. 320-321.

<sup>313</sup> Act of December 21, 1928, § 15, 45 Stat. 1057, 1065, as amended, 43 U. S. C. 617n. For an interim report, see H. Doc. No. 419, 80th Cong., 1st sess. (1947).

sistent with the Act "for a comprehensive plan for the development of the Colorado River and providing for the storage, diversion, and use of the waters of said river."<sup>314</sup>

Subsequently, other multiple-purpose projects were authorized on the lower Colorado River. Parker Dam was authorized in 1935, and Davis Dam in 1941.<sup>315</sup>

In 1940, Congress passed the Boulder Canyon Project Adjustment Act which provided for revision of the rate structure for the Boulder Canyon Project.<sup>316</sup> This Act also created a Colorado River Development Fund into which is to be paid \$500,000 per year for the 50-year amortization period of the project.<sup>317</sup> The initial installments into this Fund were to be used for the formulation of a comprehensive plan for the utilization of water of the Colorado River system. Subsequent installments are to be used for the investigation and construction of projects in the Colorado River Basin.

In 1949, Congress approved the Upper Colorado Basin Compact.<sup>318</sup> Its statement of purposes is much the same as that in the Colorado River Compact.<sup>319</sup> However, it apportions among the signatory States the waters apportioned to the Upper Basin by the Colorado River Compact.<sup>320</sup> In addition, the compact creates the Upper Colorado River Commission, composed of four Commissioners representing respectively the States of Colorado, New Mexico, Utah, and Wyoming, and one representing the United States.<sup>321</sup> In its First Annual Report, the Commission stated that it:<sup>322</sup>

looks toward the day when it may, by agreement with the Federal Government designed to assure protection of the broad national interests to be served thereby,

<sup>314</sup> § 19, 45 Stat. 1065.

<sup>315</sup> Act of August 30, 1935, § 2, 49 Stat. 1028, 1039; H. Doc. No. 186, 77th Cong., 1st sess. (1941).

<sup>316</sup> Act of July 19, 1940, 54 Stat. 774, as amended, 43 U. S. C. 618-618o.

<sup>317</sup> § 2(d), 54 Stat. 774, as amended, 43 U. S. C. 618a(d) (Supp. III).

<sup>318</sup> Act of April 6, 1949, 63 Stat. 31.

<sup>319</sup> Art. I(a), 63 Stat. 31.

<sup>320</sup> Art. III, 63 Stat. 32. These States are Arizona, Colorado, New Mexico, Utah, and Wyoming.

<sup>321</sup> Art. VIII, 63 Stat. 35.

<sup>322</sup> FIRST ANNUAL REPORT, UPPER COLORADO RIVER COMMISSION, p. 1 (1950).

take over the administration, care, operation and maintenance of works that are authorized and constructed.

Recently, the Bureau of Reclamation has prepared plans for a large-scale irrigation development known as the Central Arizona Project.<sup>323</sup> This proposed development was approved by the Senate in 1950 as a project for irrigation, flood control, navigation, water storage, power generation, and other beneficial purposes, but no vote was taken by the House.<sup>324</sup>

**COLUMBIA RIVER BASIN.**—The first two large multiple-purpose projects on the Columbia River—Bonneville and Grand Coulee Dams—were undertaken in 1935.<sup>325</sup> The impending completion of Bonneville Dam two years later led to enactment of legislation to provide for its maintenance and operation and for the disposition of its power.<sup>326</sup> This legislation followed substantially the recommendations of the President's Power Policy Committee.<sup>327</sup> As recommended by that Committee, the form of administration established is to be provisional "pending establishment of a permanent administration for Bonneville and other projects in the Columbia River Basin."<sup>328</sup>

<sup>323</sup> H. Doc. No. 136, 81st Cong., 1st sess. (1949).

<sup>324</sup> S. 75, 81st Cong., 1st sess. (1949); 96 CONG. REC. 2060 (1950).

In commenting on this proposal, the Department of Agriculture pointed to "the need for a truly comprehensive plan in the Colorado Basin, prepared jointly by all agencies able to make worth-while contributions thereto." H. Doc. No. 136, 81st Cong., 1st sess., p. 104 (1949). It said the project "must be supported by projects and activities not contemplated in the report; in particular, by upper basin reservoirs and a program of land treatment," and that the reservoirs contemplated would soon be rendered useless by sediment if nothing were done to reduce erosion. *Ibid.* The Army Engineers pointed out that they were studying a group of related units included in the project though not involving use of Colorado River water or power. *Id.* p. 102.

<sup>325</sup> See *supra*, p. 413.

<sup>326</sup> Act of August 20, 1937, 50 Stat. 731, 16 U. S. C. 832 *et seq.*

<sup>327</sup> Sen. Dec. No. 21, 75th Cong., 1st sess. (1937).

<sup>328</sup> *Id.* p. 2; Act of August 20, 1937, § 2(a), 50 Stat. 731, 732, 16 U. S. C. 832a. The President's Power Policy Committee said that although Bonneville and Grand Coulee "should be considered together, the Committee has been compelled, because of the immediate need for legislative action in connection with Bonneville to report on the latter first. However, in recommending an administrative program for Bonneville the Committee has not lost sight of the fact that there must ultimately be a tie-in of other Federal projects in the Columbia River Basin and that recommendations made at



In addition, the Act provided that the Bonneville Power Administrator shall act in consultation with an advisory board of representatives from the other principal federal agencies concerned with water-resource development.<sup>529</sup>

Repeated efforts to obtain passage of a permanent over-all administration for the Columbia Basin have been unsuccessful.<sup>530</sup> Meanwhile, both the Army Engineers and the Bureau of Reclamation have prepared reports on long-range programs for development of the Columbia Basin.<sup>531</sup> The President instructed both agencies to review their programs to obtain coordination with each other and "with other affected agencies of the Department of the Interior, the Department of Agriculture, and the Federal Power Commission, to the end that the best over-all plans would be available" for presentation to Congress.<sup>532</sup>

Such a coordinated plan was submitted to the President on April 11, 1949. In the letter of transmittal, the two Secretaries said:<sup>533</sup>

this time should be of a nature not incompatible with any national power policy which may ultimately be established.

"For that reason the Committee suggests that a special provisional form of administration be set up for the Bonneville project pending the establishment of a permanent administration for Bonneville, Grand Coulee, and other projects in the Columbia River Basin." Sen. Doc. No. 21, p. 2.

A similar interim policy was adopted in the case of the Fort Peck Project, with the Bureau of Reclamation designated as power-marketing agent. Act of May 18, 1938, § 2(a), 52 Stat. 403, 404, 16 U. S. C. 833a.

<sup>529</sup> Departments of Agriculture, the Army, and the Interior, and the Federal Power Commission. § 2a, 50 Stat. 732, 16 U. S. C. 832a.

<sup>530</sup> See S. 4390, 76th Cong. (1940); H. R. 977, H. R. 1434, H. R. 5129, H. R. 5583, H. R. 6076, H. R. 6889, S. 1852, S. 2430, all 77th Cong. (1941-1942); H. R. 5083, S. 460, S. 1716, all 79th Cong. (1945-1946); S. 1647, 80th Cong. (1947); H. R. 427, H. R. 3636, H. R. 4286, H. R. 4287, S. 1631, S. 1632, S. 1645, all 81st Cong. (1949). Extensive hearings were held by the Public Works Committees of both the House and Senate of the 81st Congress, 1st sess., on H. R. 4286 and S. 1645 which were endorsed by the President, but no other action has been taken.

<sup>531</sup> H. Doc. No. 473, 81st Cong., 2d sess. (1950) (Interior); H. Doc. No. 531, 81st Cong., 2d sess. (1950) (Army). An earlier Army Engineer "308 Report" had been submitted in 1933. H. Doc. No. 103, 73d Cong., 1st sess., vols. I, II (1933).

<sup>532</sup> Letters from the President to Secretary of the Army and Secretary of the Interior, dated September 16, 1948.

<sup>533</sup> H. Doc. No. 473, 81st Cong., 2d sess., p. 23 *Italic* (1950).

the two plans have been fully coordinated, not only with regard to the physical features to be included in the plan of development but also with regard to the policies and scheduling of the work to be done.

The coordinated plan is comprehensive in scope and is designed not only to meet the most pressing current needs but to provide as well a basis for incorporation of further projects into the program as they become necessary. It provides also for the inclusion, when prepared by the appropriate agencies, of plans for forest management, land treatment, protection and propagation of fish and wildlife, recreational development, meeting needs and rights of Indians, and interagency procedures for coordinated operation of river-control projects.

A supplemental Bureau of Reclamation report was submitted to the President on July 20, 1949, together with the views of the affected states and the federal agencies.<sup>334</sup>

The Senate Public Works Committee recommended authorization of parts of the Army portion of the coordinated plan as an amendment to the 1950 Flood Control Bill.<sup>335</sup> That Committee declined to include the Bureau of Reclamation portion of the plan because reclamation was not within its jurisdiction.<sup>336</sup> However, the Interior and Insular Affairs Committee was given time to prepare an amendment covering the reclamation features.<sup>337</sup>

This latter Committee reported out an amendment which would have authorized the initial reclamation units of the coordinated plan, and would have provided for a "Basin account" under which records for all power and irrigation proj-

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<sup>334</sup> H. Doc. No. 473, 81st Cong., 2d sess., pp. 12-13, 55-93 *Italic* (1950). The Secretary of the Interior made it clear that he does not consider these reports as a substitute for a Columbia Valley Administration. *Id.* p. 13 *Italic*. The President also shares this view. H. Doc. No. 597, 81st Cong., 2d sess., p. 4 (1950).

<sup>335</sup> H. R. 5472, 81st Cong., 1st sess. (1949); H. Doc. No. 531, 81st Cong., 2d sess. (1950); Sen. Rep. No. 1143, 81st Cong., 1st sess., pp. 67-69 (1949); H. Rep. No. 1968, 81st Cong., 2d sess., pp. 22-24 (1950).

<sup>336</sup> See 95 Cong. Rec. 14121 (1949).

<sup>337</sup> *Ibid.*

ects would be kept on a region-wide basis.<sup>328</sup> Also, all power costs and all reimbursements to be received from power revenues would be kept on a consolidated basis.<sup>329</sup> The Committee asserted that there are two alternatives to such an account:<sup>340</sup>

One is to have a heterogeneous collection of power rates, one rate for each project, even though the power would be marketed through one transmission system resulting in confusion and competition among Federal projects. The second choice is to establish a uniform rate at the level consistent with the highest-cost power project, an undesirable and unequitable procedure.

But the Senate tabled the Interior and Insular Affairs Committee amendment, as well as subsequent amendments which would have provided for a "Basin account" for reclamation projects only.<sup>341</sup> The debate in the Senate suggests that, in its effect upon comprehensive development of water resources, the distribution of jurisdiction among legislative committees is at times like the distribution of jurisdiction among agencies of the executive branch.<sup>342</sup>

The President signed the Bill but urged the early authorization of the missing pieces of the coordinated plan.<sup>343</sup>

**DELAWARE RIVER BASIN.**—A considerably different pattern of development exists in the Delaware River Basin. Here certain basin activities are being promoted by an interstate commission known as Incodel.

In 1923, New Jersey, New York, and Pennsylvania, each

<sup>328</sup> Sen. Rep. No. 1351, 81st Cong., 2d sess., pp. 7, 26-28 (1950). A summary of the legislative history of the bill and of the coordinated plan appears at pp. 2-3.

<sup>329</sup> *Id.* p. 7.

<sup>330</sup> *Ibid.*

<sup>341</sup> 96 CONG. REC. 5252, 5256, unbound ed., April 14, 1950. Controversy also arose over the "interest component" feature of the account by which interest on power investment may be applied to repayment of irrigation allocation. See also *supra*, p. 296.

<sup>342</sup> 90 CONG. REC. 5086-5088 and 5127-5131, unbound ed., April 11 and 12, 1950.

<sup>343</sup> Act of May 17, 1950, 64 Stat. 163; H. Doc. No. 597, 81st Cong., 2d sess., p. 4 (1950).

authorized the appointment of commissioners to negotiate an interstate compact relative to the conservation, use, and development of the water resources of the Delaware River.<sup>344</sup> They negotiated a compact which was ratified by New York in 1925, but by neither New Jersey nor Pennsylvania.<sup>345</sup> A revised compact suffered a similar fate in 1927.<sup>346</sup>

In 1929, a controversy developed between New Jersey and New York over water diversion from the upper Delaware River basin. After two years of litigation, the United States Supreme Court settled this dispute, on the basis of "equitable apportionment."<sup>347</sup> Thereafter, the four Delaware River Basin States in 1936 formed an interstate commission, popularly called Incodel, for the purpose of "entering upon a program to study the conservation, water supply, pollution, and other potential uses and benefits of, and to develop integrated plans to conserve and safeguard," the water and other resources of the Delaware River Basin in specified particulars.<sup>348</sup>

<sup>344</sup> NEW JERSEY LAWS OF 1923, ch. 94; LAWS OF NEW YORK, 1923, ch. 56; LAWS OF PENNSYLVANIA, 1923, No. 239.

<sup>345</sup> LAWS OF NEW YORK, 1925, ch. 177; see also LAWS OF NEW YORK, 1925, n. 4, p. 244.

<sup>346</sup> LAWS OF NEW YORK, 1927, ch. 682; see also LAWS OF NEW YORK, 1927, n. 1, p. 1712. These compacts each recited that the compact was to be in full force and effect "upon adoption by the legislative act of each and all of said states, the Congress of the United States having consented thereto." Art. XXIV of 1925 Compact and Art. XXV of 1927 Compact. The laws ratifying each were repealed by New York in 1939. LAWS OF NEW YORK, 1939, ch. 108.

<sup>347</sup> See THE BOOK OF THE STATES, The Council of State Governments, p. 214 (1941-1942); *New Jersey v. New York*, 283 U. S. 336, 343 (1931).

<sup>348</sup> For the acts establishing the several Commissions and Committees on Interstate Cooperation, see LAWS OF DELAWARE, 1939, ch. 202; NEW JERSEY LAWS, 1936, ch. 21; LAWS OF PENNSYLVANIA, 1937, No. 35. In New York, this is accomplished by annual Concurrent Resolutions. See THE INTERSTATE COMMISSION ON THE DELAWARE RIVER BASIN, A DECADE OF PLANNED PROGRESS, 1936-1946, App. (1946). Each such act establishes a Commission on Interstate Cooperation which in turn may establish committees and advisory bodies to formulate proposals for intergovernmental cooperation. Each Commission consists of representatives of the legislative and executive branches of the States. The members serve without compensation, may employ a staff and incur expenses, and make contributions to the Council of State Governments. The Interstate Commission on the Delaware River Basin, Incodel, is a "joint advisory board" maintained by these Commis-

Incodel has dealt mostly with the acute problems of pollution abatement and water supply, but has also expressed concern over problems of flood control, navigation, salinity, soil conservation, forestation, water conservation, and recreation.<sup>349</sup> It has drafted uniform acts covering pollution and water supply which formed the basis for legislation by each of the States concerned.

The water-pollution legislation of Delaware, New Jersey, and Pennsylvania is in the form of an interstate agreement.<sup>350</sup> This legislation recites the desirability of interstate action on Delaware River problems and declares that Incodel was formed for that purpose. It then sets out a "reciprocal agreement" which has received "formal ratification" by the health depart-

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sions as "an instrument of governmental machinery" for the purpose quoted in the text. See statutes cited below.

The specified particulars referred to in the text are thus stated in the Delaware legislation; "A. To serve as a fact-coordinating body and to develop the means and procedure by which the general plans and policies proposed for the development of the region may be carried out; B. To sponsor the carrying out of properly developed plans which result from surveys and research concerning population, land and water resources and uses, and other related subjects; C. To coordinate the activities of the Commission and Committees on Interstate Cooperation and their joint agency, the Council of State Governments, with the work of the appropriate state and federal agencies for the prevention and abatement of pollution, for flood control and for the proper general use and control of the waters of the Delaware River; D. To encourage interstate (*sic*) compacts and the enactment of uniform state laws for the abatement of water pollution, for flood control and for the proper general use and control, of the waters of the Delaware River; E. To advance, perpetuate and outline the work recommended by its conferences, and to develop and propose new objectives \* \* \*." Slightly different language is contained in the New Jersey and Pennsylvania Acts, but no such language appears in the New York legislation. LAWS OF DELAWARE, 1941, ch. 93, § 2; NEW JERSEY LAWS OF 1939, ch. 146, Preamble; LAWS OF PENNSYLVANIA, 1945, No. 123, § 2.

Incodel consists of five members from each State's Commission on Interstate Cooperation, and has a small staff and several technical advisory committees. THE INTERSTATE COMMISSION ON THE DELAWARE RIVER BASIN, A DECADE OF PLANNED PROGRESS, 1936-1946, App. (1946); THE BOOK OF THE STATES, The Council of State Governments, p. 213 (1941-1942).

<sup>349</sup> THE INTERSTATE COMMISSION ON THE DELAWARE RIVER BASIN, A DECADE OF PLANNED PROGRESS, 1936-1946, pp. 5-21 (1946).

<sup>350</sup> LAWS OF DELAWARE, 1941, ch. 93; NEW JERSEY LAWS, 1939, ch. 146; LAWS OF PENNSYLVANIA, 1945, No. 123.

ments of the four Delaware River Basin States. The agreement declares that the four States "agree and are bound," that each "pledges to each of the other signatory States faithful cooperation in the control of future pollution and in the correction of existing pollution," and that each "agrees to enact adequate legislation, if necessary." The legislation then says that the "reciprocal agreement" is "hereby ratified and applied to the waters and watershed of said Delaware River Basin within the territorial limits of this State."

The foregoing agreement contains no reference to the Compact Clause of the Constitution, nor has it received specific consent of Congress. However, it might be argued that such an agreement comes within the compass of the provision in the 1911 Weeks Law granting blanket consent of Congress for interstate compacts "for the purpose of conserving the forests and the water supply of the States" entering into such a compact.<sup>351</sup>

These Acts also declared:<sup>352</sup>

That part of the area of the Delaware River Basin lying within this State is hereby established and declared to be a component part of an interstate region for intergovernmental cooperation by said states in the conservation, protection and development of the water resources thereof by means of integrated plans \* \* \*.

The New York legislation enacts the substance of the uniform act, but does not purport to ratify any agreement. However, it empowers its Department of Health to execute an agreement with the appropriate agencies of the other States and to apply to Congress for its consent to such agreement "in accordance with" the Compact Clause of the Constitution.<sup>353</sup> The New York Act recognizes Incodel as the "agency of this state" for the attainment of intergovernmental cooperation correcting pollution, as does the legislation of the other States.<sup>354</sup>

<sup>351</sup> Act of March 1, 1911, § 1, 36 Stat. 961, 16 U. S. C. 552.

<sup>352</sup> LAWS OF DELAWARE, 1941, ch. 93, § 1; NEW JERSEY LAWS, 1939, ch. 146, § 1; LAWS OF PENNSYLVANIA, 1945, No. 123, § 1.

<sup>353</sup> LAWS OF NEW YORK, 1939, ch. 600, §§ 2, 11.

<sup>354</sup> § 1.

It also declares its portion of the Delaware River Basin to be an interstate region but only for intergovernmental cooperation "to correct and eliminate pollution, as herein provided, of the water resources thereof."<sup>255</sup>

Diversions of water from the Delaware River system are regulated by an interstate water-supply act enacted in similar form by New Jersey, New York, and Pennsylvania.<sup>256</sup> These Acts provide that, whenever the State agency gives its final approval to any diversion project, "application shall forthwith be made to the Supreme Court of the United States for approval of such project."<sup>257</sup> In New Jersey and Pennsylvania, the decision and approval of the State agency shall be of no force or effect "unless and until the project has been approved by the Supreme Court of the United States in those cases in which the said Court retains or assumes jurisdiction in the matter." The corresponding New York provision omits the words which follow "United States."

In 1949, these three States adopted reciprocal legislation calling upon Incodel to undertake investigations to determine "the feasibility and advisability of the future construction of an integrated water project" within the Delaware River Basin above Trenton, New Jersey.<sup>258</sup> This project is designed to meet,

<sup>255</sup> *Id.*

<sup>256</sup> NEW JERSEY LAWS, 1944, ch. 121; LAWS OF NEW YORK, 1943, ch. 709; LAWS OF PENNSYLVANIA, 1943, No. 193. These Acts each provide that they will not take effect until the State Secretary of State certifies that the other two States have enacted substantially similar legislation.

<sup>257</sup> NEW JERSEY LAWS, 1944, ch. 121, § 12; LAWS OF NEW YORK, 1943, ch. 709, § 1; LAWS OF PENNSYLVANIA, 1943, No. 193, § 12.

<sup>258</sup> NEW JERSEY LAWS, 1949, ch. 105; LAWS OF NEW YORK, 1949, ch. 610; LAWS OF PENNSYLVANIA, 1949, No. 475.

In this connection, two recent holdings of the Federal Power Commission should be noted. The plans of the City of New York included diversion of water from the Neversink River, a tributary of the Delaware, as one of the sources from which its municipal water supply could be drawn. The City entered into an agreement with the Central Hudson Gas & Electric Corporation for construction of a hydroelectric plant in the municipal aqueduct used for this diversion. The Federal Power Commission found that a license was not required under the Federal Power Act for this plant because the diversion had been permitted by the United States Supreme Court in its decree of May 25, 1931 in the case of *New Jersey v. New York*, 283 U. S. 336, 805. See *Central Hudson Gas & Electric Corp.*, F. P. C. Docket

among other purposes, the combined prospective water-supply requirements of political subdivisions and metropolitan areas in the signatory States both within and outside of such Basin. Each Act also declares that Incodel "is hereby designated as the agency and instrumentality" of the enacting State for this purpose.<sup>300</sup>

**MISSISSIPPI RIVER.**—River-development and control activities of the Federal Government on the Mississippi River are chiefly the responsibility of the Army Engineers. Within its prescribed area, the Mississippi River Commission, created in 1879, performs these functions.<sup>301</sup> The Department of Agriculture also has its usual watershed responsibilities relating to flood control.<sup>302</sup>

The Mississippi River was the subject of special flood-control legislation in 1917, 1923, 1928, and 1936 prior to the assumption of greater federal responsibility for flood control nationally in 1936.<sup>303</sup> In addition, the general navigation and flood-control legislation discussed previously governs federal development in this Basin.<sup>304</sup>

**MISSOURI RIVER BASIN.**—The present stage of efforts toward comprehensive development of the Missouri Basin may be portrayed in large part by tracing the history of the Army Engineer-Bureau of Reclamation plan, commonly called the

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DI-181, February 19, 1948. The Commission made it clear that this determination did not relate to diversions not covered by the Court's decree. A substantially similar determination was reached by the Commission in connection with the hydroelectric plant proposed by the Rockland Light & Power Company for construction on and adjacent to the New York City aqueduct at the East Branch Tunnel which connects two municipal water-supply reservoirs known as the Pepacton Reservoir, on the East Branch of the Delaware and Rondout Reservoir, on Rondout Creek. *Rockland Light & Power Company*, F. P. C. Docket E-6220, November 29, 1945.

<sup>300</sup> § 1 of each Act cited in preceding note above.

<sup>301</sup> See *supra*, p. 98.

<sup>302</sup> See *supra*, pp. 374-377.

<sup>303</sup> Act of March 1, 1917, 39 Stat. 948; Act of March 4, 1923, 42 Stat. 1505; Act of May 15, 1928, 45 Stat. 534; Act of June 15, 1936, 49 Stat. 1508; Act of June 22, 1936, 49 Stat. 1570. See also *supra*, pp. 409-410.

<sup>304</sup> See *supra*, pp. 91-121, 134-148, 415-418.



"Pick-Sloan" plan, together with attempts to create a Missouri Valley Authority.<sup>364</sup>

Pursuant to a 1943 resolution of the House Committee on Flood Control, the Board of Engineers for Rivers and Harbors reviewed certain "308 Reports" to determine if any modification should be made with respect to Missouri River main-stem flood control.<sup>365</sup> The report of this review was submitted in 1944.<sup>366</sup> After its preparation but prior to its submission, it was circulated for comment to the Bureau of Reclamation, the Federal Power Commission, the Department of Agriculture, and the Bureau of the Budget.<sup>367</sup>

About the same time, the Bureau of Reclamation submitted its general plan for development of the Missouri River Basin, saying:<sup>368</sup>

This report deals with a plan for the conservation and control of the water resources of the entire Missouri River Basin, which includes the northern Great Plains, and the use of such resources in watershed development. Every water resource and all feasible beneficial uses of water, such as aids to navigation, flood control, the irrigation of land, the producing of power, the restoration of surface and ground-water levels and of domestic and municipal water supplies, the abatement of stream pollution, silt control, fish and wildlife preservation, and recreation, were taken into account in an effort to formulate a basin-wide plan most likely to yield the greatest good to the greatest number of people. \* \* \* Agriculture is and always will be the primary basis of

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<sup>364</sup> A Missouri River Commission was created in 1884 to carry out "plans for the improvement of the navigation of said river, \* \* \* " to make surveys and devise plans "to maintain a channel and depth of water \* \* \* sufficient for \* \* \* commerce." Act of July 5, 1884, § 1, 23 Stat. 133, 144-145. For a history of the relatively short life of this Commission, see INDEX TO THE REPORTS OF THE CHIEF OF ENGINEERS, U. S. ARMY, 1866-1912, vol. 1, p. 1040.

<sup>365</sup> H. Doc. No. 475, 78th Cong., 2d sess., p. 14 (1944); H. Doc. No. 238, 73d Cong., 2d sess. (1934); H. Doc. No. 821, 76th Cong., 3d sess. (1940).

<sup>366</sup> H. Doc. No. 475, 78th Cong., 2d sess. (1944).

<sup>367</sup> *Id.* pp. 1, VII.

<sup>368</sup> Sen. Doc. No. 191, 78th Cong., 2d sess., p. 17 (1944).

the economy of the Missouri River Basin. \* \* \*  
This fact has been recognized in designing a plan for water-resource development for the basin.

The plan here tendered incorporates the Corps of Engineers' proposed plans for flood control and aids to navigation in the river below Sioux City, with some modifications of Army plans for developments on the upper river \* \* \*.

A general statement with respect to the Missouri River Basin and its economic problems, and a comprehensive plan for developing and utilizing its water resources is contained in this report.

Because of differences between the two reports, a committee composed of two representatives each from the Army Engineers and the Bureau of Reclamation was appointed to review and reconcile the engineering features of the two plans.<sup>369</sup> It prepared a joint engineering report pointing out that by making appropriate modifications it was possible to eliminate the differences, and it enunciated the following basic principles:<sup>370</sup>

(a) The Corps of Engineers should have the responsibility for determining main stem reservoir capacities and capacities of tributary reservoirs for flood control and navigation.

(b) The Bureau of Reclamation should have the responsibility for determining the reservoir capacities on the main stem and tributaries of the Missouri River for irrigation, the probable extent of future irrigation, and the amount of stream depletion due to irrigation development.

(c) Both agencies recognize the importance of the fullest development of the potential hydroelectric power in the basin consistent with the other beneficial uses of water.

As thus modified, the plans of the two agencies were approved and the initial stages authorized in the Flood Control Act of

<sup>369</sup> Sen. Doc. No. 247, 73th Cong., 2d sess., p. 1 (1944).

<sup>370</sup> *Ibid.*

1944.<sup>371</sup> The approved plan became known as the "Pick-Sloan" plan.<sup>372</sup> Additional stages of the Army plan were authorized in 1950.<sup>373</sup>

In addition, the Department of Agriculture has recently prepared and submitted to Congress a long-range program for land rehabilitation and use in the Missouri Basin covering conservation and improvement measures on grassland and cropland, forests and forest ranges, stabilizing measures for small water courses, irrigation, and drainage.<sup>374</sup> This program the Department designed as "an integral part of the coordinated Missouri Basin development."<sup>375</sup>

During congressional consideration of plans for the Missouri Basin, proposals for a Missouri Valley Authority were also discussed. In transmitting the report of reconciliation to Congress, the President said that the revised reports of the Army Engineers and the Bureau of Reclamation should be authorized "as a basic engineering plan to be developed and administered by a Missouri Valley Authority, such as I have already recommended in my message of September 21."<sup>376</sup> The MVA proposals failed to receive committee approval, and an amendment from the floor to create an MVA was withdrawn after assurances were given that hearings would be held early in the next Congress.<sup>377</sup>

<sup>371</sup> Act of December 22, 1944, § 9, 58 Stat. 887, 891. Appropriations for carrying out the Department of the Interior's portion of this development are made to the Bureau of Reclamation under an express provision by which they may be expended "either independently or through or in cooperation with existing Federal and State agencies." See, *e. g.*, Act of July 3, 1935, § 1, 59 Stat. 318, 343.

<sup>372</sup> So named for Maj. Gen. Lewis A. Pick, then Colonel and Division Engineer, Corps of Engineers, and W. G. Sloan, then Assistant Regional Director, Bureau of Reclamation.

<sup>373</sup> Act of May 17, 1950, § 204, 64 Stat. 163, —.

<sup>374</sup> H. Doc. No. 373, 81st Cong., 1st sess., pp. 19-20 (1949).

<sup>375</sup> *Id.* p. 29.

<sup>376</sup> President's Message to President of the Senate, November 27, 1944, 90 Cong. Rec. 8479 (1944).

<sup>377</sup> 90 Cong. Rec. 8626-8628 (1944). In addition, Senator Hill, acting majority leader (see *id.* p. 8629), said, "I understand the declaration of policy which was in the bill, which the author of the Missouri Valley Authority bill thought might be prejudicial to the M. V. A. bill, has now been stricken from the bill, and the provision in the bill creating the Missouri River

Accordingly, an MVA bill was reintroduced the following year, and since it embraced matters within the jurisdiction of several separate Congressional Committees, the Senate ordered its Committees on Irrigation and Reclamation, on Agriculture and Forestry, and on Commerce, each to report on those features of the bill falling within its jurisdiction.<sup>378</sup> The first two of these Committees recommended against adoption of the proposal, contending that approval of the "Pick-Sloan" plan had made it unnecessary, and that existing agencies were doing a satisfactory job.<sup>379</sup> The Committee on Agriculture and Forestry merely recommended postponing further hearings indefinitely.<sup>380</sup> Subsequent MVA proposals have been introduced but no further action has been taken.<sup>381</sup>

Commission has also been stricken out. So that as the bill now stands, as I understand, there is nothing in it which would be prejudicial, or inimical, let me say, to the creation of a Missouri Valley Authority. As I understand, by the passage of the bill we would take the first step which the President recommended. The second step would be the creation of the Missouri Valley Authority. As I stated previously, I favor a Missouri Valley Authority." *Id.* p. 8627.

The stricken language referred to by Senator Hill read, "It is the purpose of this act to establish a definite policy of making use of existing Federal agencies for the construction, operation, and maintenance of all public improvements in connection with navigation, flood control, and allied activities; to insure coordinated operation of all Federal projects therein for the improvement of navigation and alleviation of flood conditions; to provide for realization of other benefits to be derived from such projects; to facilitate preparations and planning for post-war construction by the Federal Government in the interest of employment; and to secure efficient executive management under the direction and supervision of the permanent executive agencies already established by Act of Congress." *Id.* p. 8243.

<sup>378</sup> S. 555 and Sen. Res. 97, both 79th Cong., 1st sess. (1945).

<sup>379</sup> Sen. Rep. No. 246, 79th Cong., 1st sess., p. 1 (1945); Sen. Rep. No. 639, Part 1, 79th Cong., 1st sess., p. 1 (1945). The Commerce Committee also said: "Flood control is not a Missouri regional problem, any more than it is a local problem. Flood control is a Mississippi Basin-wide problem in which the Missouri River is only one of the tributaries. The flood-control problem of the Mississippi Basin can be solved only by Federal control by one agency, with authority over the entire Mississippi Basin. The agency best qualified for this task by experience and training is the United States Army Engineers." Sen. Rep. No. 246, p. 2.

<sup>380</sup> Sen. Rep. No. 889, 79th Cong., 2d sess. (1946).

<sup>381</sup> S. 1156, 80th Cong., 1st sess. (1947); S. 1160 and H. R. 3522, 81st Cong., 1st sess. (1949). See also H. R. 894, 81st Cong., 1st sess. (1949) (Rankin Bill for Conservation Authorities).

**NEW ENGLAND-NEW YORK.**—Here, the current situation is similar to that in the Arkansas-White and Red River Basins. Proposals had been advanced for a New England-New York Resources Survey Commission.<sup>332</sup> In recommending such a Commission, the President said:<sup>333</sup>

New York and the New England States have real and serious problems of soil and forest conservation and management, and of controlling and using water to prevent floods, to provide domestic and industrial water supplies, and to furnish low-cost hydroelectric power. \* \* \*

We have gradually come to understand that, if best results are to be achieved, these problems should be considered together, and met by comprehensive planning and action which recognizes the close inter-relationship of land and water and their manifold uses.

But the Flood Control Act of 1950 authorized the Army Engineers to conduct an examination of the "Merrimack and Connecticut Rivers and their tributaries, and such other streams in the States of Maine, New Hampshire, Vermont, Massachusetts, Connecticut, and Rhode Island, where power development appears feasible and practicable, to determine the hydroelectric potentialities, in combination with other water and resource development."<sup>334</sup>

Referring to requests that the survey be coordinated with the Federal Power Commission, the Senate Committee on Public Works said:<sup>335</sup>

The committee considers that under existing laws and administrative procedures, the Federal Power Commission has full authority to make surveys of this type and to coordinate such surveys with those of the Corps of Engineers and other agencies. It is understood that this

<sup>332</sup> S. 2847 (H. R. 7062) superseding S. 1899; later superseded by S. 3707 (H. R. 8747) all 81st Cong.

<sup>333</sup> President's letter to President of the Senate, dated February 9, 1950, 96 Cong. Rec. 1697-1698 (1950).

<sup>334</sup> Act of May 17, 1950, § 205, 64 Stat. 163, —.

<sup>335</sup> Sen. Rep. No. 1143, 81st Cong., 1st sess., p. 71 (1949).

survey will be fully coordinated between the Corps of Engineers, the Federal Power Commission, and State and local agencies.

In approving the bill, the President noted several objections to this provision.<sup>386</sup> Among other things, he objected to the authorization to a single agency, the Army Engineers; the emphasis on power, rather than a comprehensive resource survey on a multiple-purpose basis; and the geographic limitation to New England, whereas New England and New York need to be considered as a unit, even from the single viewpoint of power development. He reiterated his recommendation that Congress create a New England-New York Survey Commission, saying:<sup>387</sup>

In the meantime, although I consider it an inadequate remedy, I shall issue instructions to the appropriate Federal agencies to work together and with the States in preparing as much of a combined resource development plan for this area as existing law will permit.

The President later directed the six agencies represented on the Federal Inter-Agency River Basin Committee to organize a temporary interagency committee to undertake such a survey and report to him by July 1, 1952.<sup>388</sup> Among the subjects to be covered are electric power generation and transmission, forest management, fish and wildlife conservation, flood control, mineral development, municipal and industrial water supply, navigation, pollution control, recreation, and soil conservation. The committee is directed to "coordinate its plans and activities with those of the interested State and local agencies" and to consult with the Department of State on matters involving international waters. These matters include the St. Lawrence Seaway, Niagara River and Passamaquoddy, already mentioned.<sup>389</sup>

<sup>386</sup> H. Doc. No. 597, 81st Cong., 2d sess., p. 3 (1950).

<sup>387</sup> *Ibid.*

<sup>388</sup> Letters from the President to each of the six agency heads, dated October 9, 1950; *New York Times*, October 12, 1950, p. 27, col. 1. Establishment of Interagency Committee, Minutes, FIARBC, October 27, 1950, Exhibit D.

<sup>389</sup> See *supra*, pp. 309-311.

**OHIO RIVER BASIN.**—Two programs of development for the Ohio River Basin should be noted. These are the flood-control programs of the Army Engineers and the recent pollution-control program of the Ohio River Valley Sanitation Commission.

In 1936, Congress approved the Army Engineer "308 Report" for the Ohio River.<sup>300</sup> Two years later, it approved a "general comprehensive plan for flood control and other purposes in the Ohio River Basin."<sup>301</sup>

In 1936, Congress granted its consent to the States in the Ohio River Basin to enter into an interstate compact for pollution control.<sup>302</sup> Congress approved the negotiated compact in 1940.<sup>303</sup> The compact created an Ohio River Valley Sanitation Commission consisting of three Commissioners representing each signatory State and three representing the United States.<sup>304</sup> The Commission was directed to "make a comprehensive report for the prevention and reduction of stream pollution" in the Sanitation District created by the compact.<sup>305</sup>

It is also empowered to recommend uniform legislation dealing with pollution problems of the District, to consult with and advise the States, and to issue orders upon "any municipality, corporation, person or other entity discharging sewage or industrial waste" into the Ohio or certain other interstate streams.<sup>306</sup> Such an order to be effective must receive the

<sup>300</sup> Act of June 22, 1936, § 5, 49 Stat. 1570, 1586; H. Doc. No. 306, 74th Cong., 1st sess. (1936). In addition to the "308 Report," a flood-control survey had been authorized by the Act of May 15, 1928, § 10, 45 Stat. 534, 538.

<sup>301</sup> Act of June 28, 1938, § 4, 52 Stat. 1215, 1217; Com. Doc. No. 1, House Committee on Flood Control, 75th Cong., 1st sess. (1937). This plan was approved with "such modifications thereof as in the discretion of the Secretary of War and the Chief of Engineers may be advisable." It has since been amended and supplemented. Act of August 11, 1939, § 4, 53 Stat. 1414; Act of August 18, 1941, § 3, 55 Stat. 638, 646; Act of December 22, 1944, § 10, 58 Stat. 887, 898; Act of July 24, 1946, § 10, 60 Stat. 641, 649; Act of June 30, 1948, § 203, 62 Stat. 1171, 1177; Act of May 17, 1950, § 204, 64 Stat. 163, —. In addition to this, a "comprehensive" plan for the Cumberland River was approved in the Act of July 24, 1946, § 1, 60 Stat. 634, 636. See H. Doc. No. 761, 79th Cong., 2d sess. (1946).

<sup>302</sup> H. J. Res. 377 of June 8, 1936, 49 Stat. 1490.

<sup>303</sup> Act of July 11, 1940, 54 Stat. 752.

<sup>304</sup> Arts. III, IV, 54 Stat. 753.

<sup>305</sup> Art. VIII, 54 Stat. 754.

<sup>306</sup> Arts. VIII, IX, 54 Stat. 754, 755.

assent of a majority of the Commissioners from each of a majority of the signatory States, including a majority of the Commissioners of the State where the pollution originates.<sup>397</sup> There is also provision for securing court enforcement of these orders.<sup>398</sup>

The pending question as to the validity of West Virginia's participation in this compact arrangement has been discussed earlier.<sup>399</sup>

**POTOMAC RIVER BASIN.**—Here, an arrangement exists similar in some respects to that in the Delaware River Basin, except that Congress has specifically consented to the interstate agreement.<sup>400</sup>

This compact creates an Interstate Commission on the Potomac River Basin to deal with pollution control and abatement.<sup>401</sup> The Commission consists of three representatives of each signatory State, three of the District of Columbia, and three appointed by the President.<sup>402</sup>

It acts in an advisory capacity, seeking to promote uniform anti-pollution legislation by the signatory bodies.<sup>403</sup> The Commission has established four advisory committees, namely a technical committee, an industrial committee, a local government committee, and a land committee.<sup>404</sup> It does not have power to appropriate funds or to administer plans or projects.

It should also be noted that, in addition to pollution, this Commission has expressed its interest in use of surface and subsurface waters, soil conservation, general economic development, forest practices and reforestation, flood control, and recreation.<sup>405</sup>

<sup>397</sup> Art. IX, 54 Stat. 755.

<sup>398</sup> Art. IX, 54 Stat. 755.

<sup>399</sup> See *supra*, pp. 68-70.

<sup>400</sup> Sen. J. Res. 222 of July 11, 1940, 54 Stat. 748.

<sup>401</sup> Preamble, 54 Stat. 748.

<sup>402</sup> Art. I, 54 Stat. 749.

<sup>403</sup> Art. II, 54 Stat. 749.

<sup>404</sup> BIENNIAL REPORT OF THE INTERSTATE COMMISSION ON THE POTOMAC RIVER BASIN, pp. 8-9 (1946-1948).

<sup>405</sup> INTERSTATE COMMISSION ON THE POTOMAC RIVER BASIN, ITS POLICY AND PROGRAM, pp. 8-9 (1946).



**RIO GRANDE BASIN.**—The situation in the Rio Grande Basin offers an illustration of the use of the treaty power in the development of a river basin.<sup>406</sup>

In 1924, Congress authorized the President to appoint commissioners to cooperate with Mexican representatives in a study regarding the equitable use of the waters of the lower Rio Grande with a view to their proper utilization for irrigation and other beneficial uses.<sup>407</sup> By a 1927 amendment, this authorization was extended to include a study of the lower Colorado River, and to make the purpose of the study the securing of information on which to base a treaty with Mexico relative to the use of the waters of these Rivers.<sup>408</sup>

The study was again broadened in 1935, this time to include the Tijuana River, and the purposes of the proposed treaty were enlarged to include use of the waters of these Rivers and "matters closely related thereto."<sup>409</sup> This 1935 legislation also authorized the American Commissioner of the International Boundary and Water Commission, United States and Mexico, to conduct technical and other investigations in relation to defining the international boundary, to flood control, to water resources, to conservation and utilization of water, and to sanitation and other related matters upon the boundary.<sup>410</sup> Moreover, the President was empowered to construct, operate, and maintain on the Rio Grande all works or projects recommended as a result of such investigations and which he deems necessary and proper, or any project which may be provided for in a treaty with Mexico.<sup>411</sup>

The treaty between Mexico and the United States was negotiated in 1944 and became effective in 1945.<sup>412</sup> It recited that

<sup>406</sup> See *supra*, pp. 56-57.

<sup>407</sup> Act of May 13, 1924, § 1, 43 Stat. 118, as amended, 22 U. S. C. 277.

<sup>408</sup> H. J. Res. 345 of March 3, 1927, 44 Stat. 1403, as amended, 22 U. S. C. 277.

<sup>409</sup> Act of August 19, 1935, 49 Stat. 660, as amended, 22 U. S. C. 277.

<sup>410</sup> 49 Stat. 660, as amended, 22 U. S. C. 277a. The Commission was then known as the International Boundary Commission, United States and Mexico. For its current title, see Treaty Series 994, Art. 2, 59 Stat. 1219, 1222.

<sup>411</sup> 49 Stat. 660, as amended, 22 U. S. C. 277b.

<sup>412</sup> Treaty Series 994, 59 Stat. 1219 (1945).

previous treaties regulated the use of waters for navigation only and that it was desirable to fix the rights of the two Countries in order to obtain "the most complete and satisfactory utilization" of the waters of the Rio Grande and the Colorado and Tijuana Rivers.<sup>413</sup> The treaty also provides for allocation of waters to each country,<sup>414</sup> construction of main channel works,<sup>415</sup> investigations and preparation of plans for flood-control work<sup>416</sup> and hydroelectric power-generation works,<sup>417</sup> reservoir regulation,<sup>418</sup> and operation of the projects.<sup>419</sup>

**TENNESSEE VALLEY.**—In 1933, the Federal Government undertook the basin-wide development of the Tennessee River Valley for multiple uses, under unified legislation designed:<sup>420</sup>

to improve the navigability and provide for the flood control of the Tennessee River; to provide for reforestation and the proper use of marginal lands in the Tennessee Valley; to provide for the agricultural and industrial development of said Valley; to provide for the national defense.

Federal navigation development of the Tennessee River was initiated as early as 1827.<sup>421</sup> The idea of a dual-purpose project appeared in 1899 when Congress authorized nonfederal construction of a canal and power station.<sup>422</sup> In 1906, a private power company proposed a joint investment with the Government in a navigation and power project, but this and other similar plans were rejected by Congress.<sup>423</sup> Federal improve-

<sup>413</sup> Preamble, 59 Stat. 1220.

<sup>414</sup> Art. 4, 59 Stat. 1225; Art. 10, 59 Stat. 1237.

<sup>415</sup> Art. 5, 59 Stat. 1228; Art. 12, 59 Stat. 1239.

<sup>416</sup> Art. 6, 59 Stat. 1230; Art. 13, 59 Stat. 1241; Art. 16, 59 Stat. 1249.

<sup>417</sup> Art. 7, 59 Stat. 1231.

<sup>418</sup> Art. 8, 59 Stat. 1231.

<sup>419</sup> Art. 5, 59 Stat. 1228; Art. 6, 59 Stat. 1230; Art. 7, 59 Stat. 1231.

<sup>420</sup> Act of May 18, 1933, 48 Stat. 58, as amended, 16 U. S. C. 831-831dd.

<sup>421</sup> Act of March 2, 1827, 4 Stat. 228. See also 17 *AMERICAN STATE PAPERS: MILITARY AFFAIRS*, Vol. II, pp. 698-701 (Lowrie and Franklin ed. 1834). The history of federal development of this area and the origin and background of TVA legislation are set out in Sen. Doc. No. 56, 76th Cong., 1st sess., pp. 11-16 (1939).

<sup>422</sup> Act of March 3, 1899, 30 Stat. 1351. However, this project was not undertaken. See Sen. Doc. No. 56, p. 11.

<sup>423</sup> See Sen. Doc. No. 56, p. 12.

ment of the River nevertheless continued. An Army Engineer report in 1916 showed that nearly \$10,000,000 had been spent on the River, with some improvement to navigation but without completion of the work.<sup>426</sup>

With the problems of World War I came action significant here. The National Defense Act of 1916 authorized the President to determine the best means of producing nitrates, and to build dams and power equipment for this purpose.<sup>425</sup> Although not fully equipped, two nitrate plants were built at Muscle Shoals; and Wilson Dam, the most important of three planned by the Army Engineers, was completed in 1925.<sup>426</sup>

After the war, various attempts were made to find a use for the Muscle Shoals plants. A bill to set up a government corporation to sell fertilizer and power failed of passage in the House.<sup>427</sup> Senator Norris then introduced a bill to create a Federal Chemical Corporation, with a three-man board, to manufacture and sell fertilizer.<sup>428</sup> It would have provided for dams on the Tennessee and its tributaries, for navigation, flood control, and power.<sup>429</sup> Power not needed in producing fertilizer or explosives—"surplus power"—was to be sold, with preference to municipalities.<sup>430</sup> This bill foreshadowed the Tennessee Valley Authority Act by more than ten years, stating the principle of surplus power later to be accepted by the Supreme Court in the *Ashwander* case.<sup>431</sup>

Meanwhile, various proposals for private operation of the Muscle Shoals plants were rejected by Congress as a result of a Senate Committee report which declared that consideration

<sup>425</sup> H. Doc. No. 961, 64th Cong., 1st sess. (1916); see also Sen. Doc. No. 56, 76th Cong., 1st sess., p. 12 (1939).

<sup>426</sup> Act of June 3, 1916, § 124, 39 Stat. 166, 215, 31 U. S. C. 745.

<sup>427</sup> See Sen. Doc. No. 56, 76th Cong., 1st sess., p. 13 (1939). Steam-power plants were also constructed at these plants. See Sen. Rep. No. 673, 68th Cong., 1st sess., p. 6 (1924).

<sup>428</sup> S. 3390 and H. R. 10329, 66th Cong., 1st sess. (1919); 60 CONG. REC. 812-13 (1920).

<sup>429</sup> S. 3420, 67th Cong., 2d sess. (1922).

<sup>430</sup> Sen. Rep. No. 831, 67th Cong., 2d sess., pp. 32-34 (1922).

<sup>431</sup> *Id.* p. 30.

<sup>432</sup> *Ashwander v. Tennessee Valley Authority*, 297 U. S. 288 (1936); see *supra*, pp. 50-52, 54-55.

should be given to the river system as a whole in planning its development for navigation, flood control, and power.<sup>422</sup> On the other hand, a bill creating a federal corporation to produce and sell fertilizer and power, and authorizing a dam on Cove Creek, now Norris Dam, was passed by Congress in 1928 but was pocket-vetoed by President Coolidge.<sup>423</sup> A similar bill was vetoed by President Hoover on March 3, 1931.<sup>424</sup>

Meanwhile, an exhaustive study over a five-year period had led to authorization of a project in the 1930 River and Harbor Act looking to a nine-foot channel to be obtained by building either 32 low dams or seven high dams.<sup>425</sup> The report recommended the low dams with a proviso that a high dam under a Federal Power Commission license could be substituted for any two or more low dams.<sup>426</sup> In such case, the United States should contribute to the cost of the nonfederal high dam the amount which the replaced navigation works would have cost. The Act directed the Chief of Engineers to ascertain the prospective cooperation in such construction of the high dams by "responsible interests."<sup>427</sup> He later reported that no definite assurance of early cooperation had been received.<sup>428</sup>

In 1933, President Roosevelt recommended legislation to create a Tennessee Valley Authority as a corporation:<sup>429</sup>

<sup>422</sup> Sen. Rep. No. 678, 68th Cong., 1st sess., pp. 8-9 (1924); Sen. Rep. No. 831, pp. 32-33. See Sen. Doc. No. 56, 76th Cong., 1st sess., pp. 13-14 (1939).

<sup>423</sup> Sen. J. Res. 46, 70th Cong., 1st sess. (1928); H. Rep. No. 1095, 70th Cong., 1st sess., pp. 1-8 (1928); Sen. Doc. No. 56, p. 14.

<sup>424</sup> Sen. J. Res. 49, 71st Cong., 3d sess.; Sen. Doc. No. 321, 71st Cong., 3d sess. (1931).

<sup>425</sup> H. Doc. No. 328, 71st Cong., 2d sess. (1930); Act of July 3, 1930, § 1, 46 Stat. 918, 927-928.

<sup>426</sup> H. Doc. No. 328, pp. 6-7.

<sup>427</sup> § 1, 46 Stat. 928.

<sup>428</sup> H. Doc. No. 131, 72d Cong., 1st sess., p. 2 (1931). For a discussion of the effect of the TVA Act on congressional authorization of this project, see *Tennessee Electric Power Co. v. Tennessee Valley Authority*, 21 F. Supp. 947, 953 (D. C. Tenn. 1938) affirmed, 306 U. S. 118 (1939).

<sup>429</sup> H. Doc. No. 15, 73d Cong., 1st sess. (1933). The President also said, "It is clear that the Muscle Shoals development is but a small part of the potential public usefulness of the entire Tennessee River. Such use, if envisioned in its entirety, transcends mere power development: it enters the wide fields of flood control, soil erosion, afforestation, elimination from agricultural use of marginal lands, and distribution and diversification of in-

charged with the broadest duty of planning for the proper use, conservation, and development of the natural resources of the Tennessee River drainage basin and its adjoining territory for the general social and economic welfare of the Nation.

The Tennessee Valley Authority Act, enacted shortly thereafter, provides for creation of a government corporation for the purpose of "maintaining and operating the properties of the United States at Muscle Shoals, Alabama, in the interests of national defense and for agricultural and industrial development, and to improve navigation in the Tennessee River and to control the destructive flood waters in the Tennessee River and Mississippi River Basins."<sup>440</sup>

Among other things, the Authority is empowered to construct such dams and reservoirs as will maintain a nine-foot channel in the Tennessee River and will best serve to promote navigation and control floods.<sup>441</sup> It is also empowered to construct, acquire, and maintain power facilities, to promote soil conservation, and stimulate fertilizer use.<sup>442</sup> And the

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industry. In short, this power development of war days leads logically to national planning for a complete river watershed involving many States and the future lives and welfare of millions. It touches and gives life to all forms of human concerns.

"I, therefore, suggest to the Congress legislation to create a Tennessee Valley Authority—a corporation clothed with the power of Government but possessed of the flexibility and initiative of a private enterprise. It should be charged with the broadest duty of planning for the proper use, conservation, and development of the natural resources of the Tennessee River drainage basin and its adjoining territory for the general social and economic welfare of the Nation. This Authority should also be clothed with the necessary power to carry these plans into effect. Its duty should be the rehabilitation of the Muscle Shoals development and the coordination of it with the wider plan." *Id.* pp. 1-2.

<sup>440</sup> Act of May 18, 1933, § 1, 48 Stat. 58, as amended, 16 U. S. C. 831. In connection with the constitutional aspects of this legislation, see Swidler and Marquis, *TVA in Court: A Study of TVA's Constitutional Litigation*, 32 *Iowa L. Rev.* 296 (1947).

<sup>441</sup> § 4, 48 Stat. 60, as amended, 16 U. S. C. 831c(j).

<sup>442</sup> § 5, 48 Stat. 61, as amended, 16 U. S. C. 831d; § 9a, as added by Act of August 31, 1935, § 5, 49 Stat. 1075, 1076, 16 U. S. C. 831h-1; § 10, 48 Stat. 64, as amended, 16 U. S. C. 831i.

Authority is given broad power to enable it to carry out the responsibilities with which it is charged.<sup>443</sup>

The operation of dams and reservoirs is to be primarily for the purposes of promoting navigation and controlling floods, with operation for power generation to be consistent with these primary purposes.<sup>444</sup>

Under the terms of the Act, the President is directed to recommend legislation for comprehensive development of the Tennessee drainage basin which would foster the "orderly and proper physical, economic, and social development" of the area.<sup>445</sup> In addition, such recommended legislation must be for the declared special purpose of bringing about:<sup>446</sup>

- (1) the maximum amount of flood control; (2) the maximum development of said Tennessee River for navigation purposes; (3) the maximum generation of electric power consistent with flood control and navigation; (4) the proper use of marginal lands; (5) the proper method of reforestation of all lands in said drainage basin suitable for reforestation; and (6) the economic and social well-being of the people living in the said river basin.

Strongly endorsing this unified river control, the Joint Congressional Committee which investigated TVA in 1939, said:<sup>447</sup>

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<sup>443</sup> See principally §§ 4, 5, 48 Stat. 60, 61, as amended, 16 U. S. C. 831c, 831d.

<sup>444</sup> § 9a, as added by Act of August 31, 1935, § 5, 49 Stat. 1075, 1076, 16 U. S. C. 831h-1.

<sup>445</sup> § 22, 48 Stat. 69, 16 U. S. C. 831u. By Ex. O. No. 6161, June 8, 1933, the President directed TVA to make such general plans as may be "necessary and suitable to aid the proper use, conservation, and development of the natural resources of the Tennessee River drainage basin, and of such adjoining territory as may be related to or materially affected by the development consequent to this act, and to promote the general welfare of the citizens of said area."

<sup>446</sup> § 23, 48 Stat. 69, 16 U. S. C. 831v. By the 1935 amendment, the TVA Board was directed to report to Congress a recommendation for the unified development of the Tennessee River system. Act of August 31, 1935, § 2, 49 Stat. 1075, 16 U. S. C. 831c(j) note following.

<sup>447</sup> Sen. Doc. No. 56, 76th Cong., 1st sess., p. 236 (1939).

The value of the Authority lies in providing the only method by which all the uses of the river can be brought within reach of the public.

TVA's operating divisions are organized into four principal groupings: those having to do with water control in the channel; those dealing with land rehabilitation and water control on the land; those dealing with power transmission and utilization; and those dealing with health, recreation, and community relations.<sup>448</sup>

TVA represents a unique type of governmental organization for resource development. Its former Chairman, David Lilienthal, has stated that the three essential features of the TVA idea are:<sup>449</sup>

A federal autonomous agency, with authority to make its decisions in the region.

Responsibility to deal with resources, as a unified whole, clearly fixed in the regional agency, not divided among several centralized federal agencies.

A policy, fixed by law, that the federal regional agency work cooperatively with and through local and state agencies.

### Judicial Views on Comprehensive Development by the United States

We have previously discussed numerous cases which have affirmed federal authority to regulate or control many aspects of water-resource development.<sup>450</sup> Among them, two recent decisions of the Supreme Court merit particular note here.

<sup>448</sup> UNITED STATES GOVERNMENT ORGANIZATION MANUAL, p. 523 (1950). Under the Office of Chief Engineer are the divisions of Water Control Planning, Design, and Construction. Under the Office of Manager of Power are the divisions of Power Utilization, Power Operations, and Power Engineering and Construction. The Office of Chief Conservation Engineer controls the divisions of Chemical Engineering, Agricultural Relations, and Forestry Relations. The Office of Manager of Reservoir and Community Relations has charge of the divisions of Regional Studies, Health and Safety, and Reservoir Properties.

<sup>449</sup> Lilienthal, *TVA—DEMOCRACY ON THE MARCH*, p. 153 (1944).

<sup>450</sup> See *supra*, pp. 5-72.

In the 1940 *New River* opinion, the Court said that: <sup>451</sup>

navigable waters are subject to national planning and control in the broad regulation of commerce granted the Federal Government.

The following year in the *Denison Dam* case, the Court declared that it is for Congress alone to decide whether a particular project "by itself or as part of a more comprehensive scheme" will have such a beneficial effect on the arteries of interstate commerce as to warrant it.<sup>452</sup> And there is no constitutional reason, the Court held, why Congress cannot treat the: <sup>453</sup>

watersheds as a key to flood control on navigable streams and their tributaries. Nor is there a constitutional necessity for viewing each reservoir project in isolation from a comprehensive plan covering the entire basin of a particular river.

### Summary

Comprehensive development, as applied to water resources and related land uses, may be defined as basin-wide development for optimum beneficial uses of a river system and its watershed.

**GROWTH UNTIL WORLD WAR I.**—The natural unity between a river system and its watershed has been accorded varying and increasing recognition in legislation dating back to the latter part of the 19th century. Statutes of this period recognized various combinations of such purposes as navigation, flood control, irrigation, power development, forest protection, debris control, and water supply.

Legislative attention to conservation and development of water resources increased with the turn of the century. In the years immediately preceding World War I, several legislative and executive commissions were appointed to study the question of river development for multiple purposes and to recommend legislation for such development.

<sup>451</sup> *United States v. Appalachian Electric Power Co.*, 311 U. S. 377, 426-427 (1940), reh. den., 312 U. S. 712 (1941).

<sup>452</sup> *Oklahoma v. Atkinson*, 313 U. S. 508, 527 (1941).

<sup>453</sup> 313 U. S. at 525.



Beginning in 1909, Congress required that reports on examinations and surveys for navigation works contain data concerning terminal and transfer facilities, the development and utilization of water power, and "such other subjects as may be properly connected with such project." It provided, however, that consideration of these questions shall be given only to their bearing upon the improvement of navigation, to the possibility and desirability of their being coordinated in a logical and proper manner with improvements for navigation to lessen the cost of such improvements and to compensate the Government for navigation expenditures, and as added by 1912 statute, to their relation to the development and regulation of commerce.

Since 1917, all flood-control examinations and surveys must include a comprehensive study of the watershed, and ascertain the extent and character of the area to be affected by the proposed improvement, the probable effect upon navigation, the possible development and utilization of water power, and "such other uses as may be properly related to or coordinated with the project."

Also in 1917, legislation was passed creating a Waterways Commission and directing it to prepare "a comprehensive plan or plans for the development of waterways and the water resources of the United States for the purposes of navigation and for every useful purpose." Largely because of American participation in World War I, however, the Commissioners were never appointed, and the legislation was repealed in 1920 by the Federal Power Act.

**FROM WORLD WAR I TO THE "DEPRESSION."**—Under this latter Act, the Federal Power Commission has broad authority to make investigations and collect data concerning the "utilization of the water resources in any region to be developed."

Moreover, a condition of a license for nonfederal power development requires that the project adopted be such as will be best adapted to a "comprehensive plan for improving or developing" the waterway for navigation, power development, and other beneficial uses.

In 1927, the Army Engineers were authorized to formulate general plans for the most effective improvement of a large number of specified streams for the purpose of navigation and the prosecution of such improvement in combination with the most efficient development of potential water power, the control of floods and the needs of irrigation.

**FROM THE "DEPRESSION" TO DATE.**—The "depression" focused attention on a new aspect of river-basin development. Projects were undertaken as a means of putting men to work, as well as to conserve and develop water resources. Increased emphasis was placed upon the public utilization of the completed projects for the direct benefit of the greatest number of people.

Responsibility for carrying out particular aspects of river-basin development had been assigned to separate agencies without a requirement for integration of efforts under a comprehensive plan. But as the development of larger river-improvement projects was made possible by advances in engineering methods, as populations in river basins increased, as industry expanded, and as our economy grew more complex—increasing legislative recognition was given to the multiple-purpose utilization of projects.

Steps were also taken to allocate primary responsibility for each of the functions served by any project to the agency traditionally responsible for that function, irrespective of which was the constructing agency.

Congress also declared its policy to "facilitate the consideration of projects on a basis of comprehensive and coordinated development." Generally, however, the partial implementations of this policy have been in the directions indicated above rather than complete integration of efforts for comprehensive development.

**AUTHORITY FOR INTERAGENCY COORDINATION.**—Within statutory limitations, further steps toward comprehensive development have been effected through executive and administrative action directed toward coordination of efforts. Principal among such steps was the formation of the Federal Inter-

Agency River Basin Committee by an agreement among the principal agencies involved in river development.

This Committee reviews and seeks to coordinate agency activities respecting basin programs, but cannot resolve any conflict inherent in statutory requirements. Nor can it require the agencies to conform to its decisions.

The President, through review by the Bureau of the Budget and through executive directives, has also sought to coordinate the project proposals and programs of the different agencies. In addition, department heads have effectuated considerable coordination of planning and operations within statutory limits. The Reorganization Act of 1949 permits certain transfers and consolidations of functions and agencies, but does not furnish the further authority necessary for a full reconciliation of statutory conflicts encountered in basin development.

**FEDERAL-STATE COORDINATION.**—Comprehensive development necessarily affects both federal and state activities. Congress has repeatedly declared its policy to recognize the rights and interests of the states in the development of water resources.

**PROGRESS IN COORDINATION WITHIN PARTICULAR REGIONS.**—Water-resource policies vary not only in accordance with the principal purpose for which a project is authorized, but they also differ from basin to basin. At times and for various reasons, development of more than one basin may be encompassed in a single plan. Thus, provision has been made for coordinated, multiple-agency surveys for the Arkansas-White and Red River Basins, and for the New England-New York Region for the purpose of developing comprehensive, integrated plans of improvement for many related purposes.

In the Alabama-Coosa Basin several agencies are pursuing their separate developmental programs independently. In the Central Valley of California, plans for basin-wide development have been prepared by both the Bureau of Reclamation and the Army Engineers. The Bureau of Reclamation has principal responsibility for preparing a "comprehensive scheme" for water-resource development in the Colorado Basin.

In the Columbia Basin, only the initial units of the Army Engineer portion of a coordinated Army Engineer-Bureau of Reclamation basin-wide plan has been approved. And various inconsistent statutes govern the marketing of federal power produced in this area.

Certain planning in the Delaware and Potomac Basins is being promoted by interstate commissions created by the states. On the Mississippi and Ohio Rivers, the principal improvements are those prosecuted by the Army Engineers. Important also are the efforts of an interstate commission to control pollution in the Ohio River. A composite of Army Engineer and Bureau of Reclamation plans has been approved for the Missouri Basin. Certain responsibilities concerning land utilization are vested in the Bureau of Reclamation and the Department of Agriculture. The basis for development of the Rio Grande rests largely upon a treaty between the United States and Mexico.

For the Tennessee Valley, a regional agency has been vested with all functions directly related to river development, as well as some functions indirectly related. In the discharge of its responsibilities, it is guided by one set of laws covering all aspects of its task.

**JUDICIAL VIEWS ON COMPREHENSIVE DEVELOPMENT BY THE UNITED STATES.**—The Supreme Court of the United States has said that “navigable waters are subject to national planning and control in the broad regulation of commerce granted the Federal Government.” It is for Congress alone, the Court pointed out, to decide whether a particular project “by itself or as a part of a more comprehensive scheme” will have such a beneficial effect on the arteries of interstate commerce as to warrant it.

## Comparative Summary

In previous chapters, we traced the growth of federal law affecting the development, utilization, and conservation of water resources, including related uses of land. That law developed in response to expressed needs arising from time to time, as to one and then another of the purposes for which water may be used or controlled: navigation, flood control, irrigation, power, and other public purposes. Nor did this development overlook water's relationship to uses of land. For the most part, each of these needs has received separate legislative treatment as it has arisen, and separate administrative machinery for the several needs has confirmed and extended this approach.

We have also seen, however, that the potentialities of uses of structures for more than one purpose and the inevitable physical interrelationships among structures on the same river system have led to multiple-purpose projects and toward comprehensive development. This evolution we outlined in the preceding chapter.

But the process has continued without substantially altering the underlying bodies of separate law which are still largely articulated with the principal water-resource purposes. And since these underlying bodies of law have not been substantially altered, a composite of the separate, differing, and often conflicting statutory provisions constitutes the law applicable to federal responsibilities for and participation in water-resource activities. This "law" is thus a unit in name only.

To understand the practical impact of that law, it is not sufficient to have described the historical origins and growth with respect to each separate purpose. Rather, it is necessary to consider together the provisions applicable to each func-

tional step in the conception and execution of a program of multiple-purpose project development. In other words, our purpose here is to summarize comparatively the principal portions of the law applicable to preparing for projects, to the review and authorization of plans and projects, to their design and construction, their financing, and their operation and maintenance. In addition, we shall summarily refer to certain significant aspects of other programs related to the development of projects.

Moreover, we shall see that on one matter, one body of law may be silent while another is explicit. For the development of the law applicable to the various purposes and agencies is by no means coextensive. Reference to administrative practice in such cases will be informative.

### Preparing for Projects

Three segregable aspects of preparation will be considered here: the collection of data, program development, and project evaluation.

**COLLECTION OF DATA.**—Common sense dictates the need for collection in usable form of physical and other data as a prerequisite to activities seeking to develop, utilize, or conserve water resources. Such physical data include topographic and geologic maps; soil and mineral surveys; hydrologic data on precipitation, snow pack, snow melt, stream flow, and ground-water conditions; and meteorological data on temperatures and evaporation. Need for other data may extend to such matters as population trends, industrial and agricultural activities and opportunities, transportation, and power requirements and markets.

Provision has been made in numerous statutes for the collection of such data by several federal agencies. The more significant of these were grouped and reviewed in the chapter on Other Public Purposes.<sup>1</sup> While there is thus no need to repeat all of those provisions, we should mention here certain of their features.

<sup>1</sup> See *supra*, pp. 342-348.

In the first place, it should be noted that the Army Engineers are given individual grants of authority and the Bureau of Reclamation has general authority to make examinations and surveys in connection with their water-resource responsibilities.<sup>2</sup> Similarly, the Federal Power Commission has wide investigatory authority in connection with its regulatory responsibilities and in securing information as a basis for recommending legislation.<sup>3</sup> Other federal agencies having no direct responsibility for participation in federal water-resource development have long been authorized to collect data useful to that end, such as the Weather Bureau, the Geological Survey, and the Coast and Geodetic Survey.<sup>4</sup> Moreover, the Departments of Agriculture and Commerce collect a variety of data useful generally to persons engaged in agriculture or commerce.<sup>5</sup> Such data, of course, have a corresponding usefulness in connection with federal water-resource activities. Even a casual examination of the relevant statutes reflects overlaps and duplications in authority. Several examples will suffice to illustrate.

But in considering these examples it should not be assumed that each statutory overlap carries with it a duplication of effort, since provision has been made both by statute and voluntary administrative arrangement to avoid such duplication. For example, Congress has generally authorized the heads of agencies to place orders with other agencies for "work or services, of any kind that such requisitioned Federal agency may be in a position to supply or equipped to render."<sup>6</sup> In the case of flood-control examinations and surveys by the Army Engineers, Congress has directed that, upon request of the Secretary of the Army, the several departments shall detail personnel to assist "to the end that duplication of work may be avoided and the various services of the Government economically coordinated therein."<sup>7</sup> A similar provision exists

<sup>2</sup> See *supra*, pp. 91-95, 134-135, 187-193.

<sup>3</sup> See *supra*, pp. 247-275.

<sup>4</sup> See *supra*, pp. 343-345.

<sup>5</sup> See *supra*, pp. 342-343, 345-347.

<sup>6</sup> Act of July 20, 1942, 56 Stat. 661, as amended, 31 U. S. C. 686.

<sup>7</sup> Act of March 1, 1947, § 3, 39 Stat. 948, 950, 33 U. S. C. 701.

in the case of investigations by the Federal Power Commission.<sup>8</sup>

Another preliminary point should be noted. In some cases, statutes direct an agency to perform a certain function relating to development of water resources, and while certain data are plainly prerequisite to proper discharge of that responsibility, the statute does not expressly empower the agency to obtain the data. Nevertheless, the "grant of an express power carries with it the authority to exercise all other activities reasonably necessary to carry it into effect."<sup>9</sup> Whether or not collection of certain data would thus by implication be "reasonably necessary" in a particular case would depend upon an examination of the nature of the express grant of authority in the context of the entire statute. For "every question of construction is unique, and an argument that would prevail in one case may be inadequate in another."<sup>10</sup>

*Stream-Flow and Related Data.*—In the matter of collecting information respecting stream-flow and related matters, numerous authorizations exist. Since 1890, the Weather Bureau has been responsible for "the gauging and reporting of rivers."<sup>11</sup> It measures the water equivalent of snow on the ground and

<sup>8</sup> Act of June 10, 1920, § 4(b), 41 Stat. 1063, 1065, as amended, 16 U. S. C. 797(c). See also provisions relating to the Council of Economic Advisers, *supra*, p. 426.

<sup>9</sup> 3 Sutherland, *STATUTORY CONSTRUCTION*, § 6604, p. 287 (3d ed. 1943).

"Where a statute confers powers or duties in general terms, all powers and duties incidental and necessary to make such legislation effective are included by implication. \* \* \* The reason behind the rule is to be found in the fact that legislation is enacted to establish broad or general standards. Matters of minor detail are frequently omitted from legislative enactments, and 'if these could not be supplied by implication the drafting of legislation would be an interminable process and the true intent of the legislature likely to be defeated.'" *Id.* § 5402, pp. 19-20.

"Legislatures create administrative agencies with the desire and expectation that they will perform efficiently the tasks committed to them. That, at least, is one of the contemplated social advantages to be weighed in resolving doubtful construction." Stone, *The Common Law in the United States*, 50 HARV. L. REV., p. 18 (1936).

<sup>10</sup> *United States v. Jin Fuey Moy*, 241 U. S. 394, 402 (1916).

<sup>11</sup> Act of October 1, 1890, § 3, 26 Stat. 653, as amended, 15 U. S. C. 313. See also *supra*, pp. 344-345.



forecasts water supply and stream flow.<sup>12</sup> The similar activities of the Geological Survey include the maintenance of 6,200 gauging stations and the conduct of nation-wide investigations concerning the occurrence, quantity, and quality of water in the United States.<sup>13</sup> Moreover, the Secretary of Agriculture is authorized to make snow surveys and conduct research concerning long-range weather forecastings and the relationships between weather and soil erosion.<sup>14</sup> Not to be overlooked is the 1938 provision for establishment, operation, and maintenance by the Weather Bureau of a current information service on precipitation, flood forecasts, and warnings, in connection with authorized flood-control activities by the Army Engineers.<sup>15</sup>

The need for stream-flow and related data appears to be inherent in investigations concerning the effect on wildlife of pollution and of water impoundment or diversion. Investigations by the Secretary of the Interior are authorized to include the "determination of standards of water quality for the maintenance of wildlife," together with a study of methods of abat-

<sup>12</sup> UNITED STATES GOVERNMENT ORGANIZATION MANUAL, 1950-51, pp. 264-285 (1950).

<sup>13</sup> ANNUAL REPORT OF THE SECRETARY OF THE INTERIOR, p. 193 (1949). As we have noted, the act creating the Geological Survey did not mention stream gauging. In this connection, the Chairman of the Committee of the Whole House in 1906 sustained a point of order against an appropriation for "gauging streams, and determining the water supply." He ruled that this term "does not fall within any of the provisions of the statute creating the office of the Geological Survey." IV HINDS, PRECEDENTS OF THE HOUSE OF REPRESENTATIVES, § 3714. See also § 3715. This ruling was reaffirmed the following year. *Id.* § 3795.

Nevertheless, in appropriation acts and in acts providing for reports, Congress has long made provision for stream gauging as a function of the Geological Survey. And in 1942, it authorized the Secretary of the Interior to acquire lands for use by the Geological Survey in gauging streams. See *supra*, pp. 343-344.

The Geological Survey performs many investigations for other federal agencies. For example, \$2,400,000 was transferred in the fiscal year 1949 from other agencies to the Geological Survey for these investigations. ANNUAL REPORT OF THE SECRETARY OF THE INTERIOR, p. 191 (1949).

<sup>14</sup> Reorganization Plan No. IV, § 8, effective June 30, 1940, 54 Stat. 1234, 1236, 5 U. S. C. 133t note following.

<sup>15</sup> Act of June 28, 1938, § 8, 52 Stat. 1215, 1226, 33 U. S. C. 706. See also *supra*, p. 146.

ing and preventing pollution.<sup>16</sup> Investigations by the Secretary of the Interior are also authorized "for the purpose of determining the possible damage to wildlife resources and of the means of preventing loss of and damage to wildlife resources" resulting from the impoundment or diversion of water under federal permit or by the Federal Government.<sup>17</sup>

Correspondingly, the acquisition and use of stream-flow data would appear to be an essential step in discharge by the Surgeon General of his responsibility, "after careful investigation," to prepare comprehensive programs for eliminating pollution of interstate waters.<sup>18</sup> He is also directed among other things to collect and disseminate information relating to water pollution and its prevention and abatement, to support and aid technical research, and to make available the results of specified work conducted by him and cooperating agencies.<sup>19</sup>

Furthermore, a number of enactments expressly authorize data collection by federal agencies as an incident of the discharge of their primary functions. Thus, several agencies within the Department of Agriculture have such authority.<sup>20</sup> Under the Soil Conservation and Domestic Allotment Act, there is authority for surveys, investigations, and research relating to the character of soil erosion; and a declared purpose of the statute is the protection of rivers and harbors against the results of soil erosion in aid of maintaining navigability and in aid of flood control.<sup>21</sup> Moreover, different agencies within the

<sup>16</sup> Act of August 14, 1946, § 5, 60 Stat. 1080, 1081, 16 U. S. C. 665. See also *supra*, p. 329.

<sup>17</sup> Act of August 14, 1946, § 2, 60 Stat. 1080, 16 U. S. C. 662. Funds made available to a construction agency for "surveying, engineering, or construction" may be transferred to the Fish and Wildlife Service to enable it to conduct these investigations. *Id.*

<sup>18</sup> Act of June 30, 1948, § 2(a), 62 Stat. 1155, 33 U. S. C. 466a(a) (Supp. III). See also *supra*, pp. 338-342.

<sup>19</sup> § 2(b), 62 Stat. 1156, 33 U. S. C. 466a(b) (Supp. III).

<sup>20</sup> See *supra*, pp. 345-347.

<sup>21</sup> Act of April 27, 1935, § 1, 49 Stat. 163, 16 U. S. C. 590a(1); Act of February 29, 1936, § 1, 49 Stat. 1148, 1150, as amended, 16 U. S. C. 590g(a), 590i. See also *supra*, pp. 366-372. Authority is vested in the Secretary of the Interior with respect to any lands under his jurisdiction. Reorganization Plan No. IV, effective June 30, 1940, § 6, 54 Stat. 1234, 1235, 5 U. S. C. 133t note following.

Department of Agriculture share its flood-control jurisdiction over federal investigations of watersheds, and measures for run-off and water-flow retardation and soil-erosion prevention on watersheds.<sup>22</sup>

In addition, both the Army Engineers and the Bureau of Reclamation have duties requiring collection and use of data relating to stream flow. Thus, authorized surveys of navigable streams by the Army Engineers must include "such stream-flow measurements and other investigations of the watersheds as may be necessary for preparation of plans of improvement and a proper consideration of all uses of the stream affecting navigation."<sup>23</sup> Since 1871, the Secretary of the Army has been directed to have "water gauges established, and daily observations made of the rise and fall" of the Mississippi River and its tributaries.<sup>24</sup> And of course a wide variety of stream-flow data was necessary in the conduct of examinations and surveys upon which "308 Reports" are based.<sup>25</sup> Furthermore, additional studies and investigations were authorized by Congress for the express purpose of taking into account important changes in "additional stream-flow records."<sup>26</sup> All flood-control examinations and surveys by the Army Engineers must include "a comprehensive study" of the watershed relating to, among other things, the probable effect upon any navigable water, the possible economical development and utilization of power, and other properly related uses.<sup>27</sup> Relevant also is the 1938 provision for establishment, operation, and maintenance by the Weather Bureau of a current information service on precipitation, flood forecasts and warnings, in connection with authorized flood-control activities by the Army Engineers.<sup>28</sup>

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<sup>22</sup> Act of June 22, 1936, § 2, 49 Stat. 1570, as amended, 33 U. S. C. 701b. See also *supra*, pp. 316-317, 374-377.

<sup>23</sup> Act of June 25, 1910, § 3, 36 Stat. 630, 669, 33 U. S. C. 546.

<sup>24</sup> R. S. § 5252, from Res. of February 21, 1871, No. 40, 16 Stat. 598, as amended, 33 U. S. C. 4.

<sup>25</sup> See *supra*, pp. 92-93.

<sup>26</sup> Act of August 30, 1935, § 6, 49 Stat. 1028, 1048.

<sup>27</sup> Act of March 1, 1917, § 3, 39 Stat. 948, 950, 33 U. S. C. 701.

<sup>28</sup> Act of June 28, 1938, § 8, 52 Stat. 1215, 1226, 33 U. S. C. 706. See also *supra*, p. 146.

In the case of the Bureau of Reclamation, a variety of stream-flow and related data is again prerequisite to discharge of the express statutory direction that examinations and surveys be made for irrigation works for the storage, diversion, and development of waters.<sup>29</sup> Another statute requires the securing of information "concerning the water supply" of projects.<sup>30</sup> Even more detailed and varied are the data respecting stream-flow in the case of examinations and surveys contemplated by the reports and findings specified in the 1939 Reclamation Project Act.<sup>31</sup>

*Water-Borne Transportation Data.*—Another example of overlapping statutory provision for collection of data concerns river and inland waterway traffic. Within the Department of Commerce, the Bureau of Foreign and Domestic Commerce is charged with gathering and collating data relating to interstate and foreign commerce and to the actual cost of transporting freight and passengers on "canals, rivers, and other navigable waters of the United States."<sup>32</sup> Also within the Department of Commerce, the Inland Waterways Corporation has the duty of compiling and distributing data "concerning transportation on inland waterways."<sup>33</sup>

On the other hand, the collection of statistics on water-borne domestic commerce and their publication in Annual Reports of the Chief of Engineers is governed by various laws enacted since 1866.<sup>34</sup> Furthermore, authorized examinations and surveys by the Army Engineers must include full information regarding the "present and prospective commercial importance" of the project and the probable "benefit to commerce," as well as data concerning "terminal and transfer facilities."<sup>35</sup> Simi-

<sup>29</sup> Act of June 17, 1902, § 2, 32 Stat. 388, as amended, 43 U. S. C. 411.

<sup>30</sup> Act of December 5, 1924, § 4, subsection B, 43 Stat. 672, 702, 43 U. S. C. 412. See also *supra*, p. 187.

<sup>31</sup> Act of August 4, 1939, §§ 9(a), 9(b), 53 Stat. 1187, 1193, 1194, 43 U. S. C. 485h(a), 485h(b).

<sup>32</sup> Act of March 3, 1875, § 1, 18 Stat. 343, 352, as amended, 15 U. S. C. 178.

<sup>33</sup> Act of February 28, 1920, § 500, 41 Stat. 456, 499, as amended, 49 U. S. C. 142. See also *supra*, pp. 83-86.

<sup>34</sup> See *supra*, pp. 86-87.

<sup>35</sup> Act of March 4, 1913, § 3, 37 Stat. 801, 825, 33 U. S. C. 545.

larly, in its consideration of works and projects, the Board of Engineers for Rivers and Harbors is required to have in view the "amount and character of commerce," existing or reasonably prospective which will be benefited by the improvement, and the relation of the ultimate cost to the "public commercial interests" involved.<sup>86</sup>

*Power-Resource and Power-Requirement Data.*—Operating on a nation-wide basis, the Federal Power Commission has express authority to make investigations and collect data concerning the utilization of water resources, the water-power industry and its relation to other industries and to interstate or foreign commerce, the location, capacity, development costs, and relation to markets of power sites, whether the power from government dams can be advantageously used by the United States for its public purposes, and the fair value of power from government dams.<sup>87</sup> Exercising this authority, the FPC makes continuing surveys and technical studies of marketing areas within economic distance of proposed hydroelectric plants to determine their usable capacity, possible rate of development, and type of load to which they are suitable.<sup>88</sup> In addition, it has broad investigative power to secure information in connection with its regulatory duties and as a basis for recommending legislation.<sup>89</sup> No other federal agency has corresponding express and specific authority.

But a number of statutes impose duties upon other agencies which require use of power-resource and power-requirement data. For example, reports by the Army Engineers on preliminary examinations for navigation projects must include, among other things, data regarding the "development and utilization of water power for industrial and commercial

<sup>86</sup> Act of June 13, 1902, § 3, 32 Stat. 331, 372, as amended, 33 U. S. C. 541.

In connection with the overlapping statutory provisions mentioned in the text, we have previously noted steps taken under the 1942 Federal Reports Act to eliminate duplication of effort here. See *supra*, n. 74, p. 87.

<sup>87</sup> Act of June 10, 1920, § 4(a), 41 Stat. 1063, 1065, as amended, 16 U. S. C. 797(a). See also *supra*, pp. 274-275, 292-293.

<sup>88</sup> See *supra*, n. 208, p. 293.

<sup>89</sup> Act of August 26, 1935, § 311, 49 Stat. 838, 859, 16 U. S. C. 825j. See also *supra*, pp. 274-275.

purposes.”<sup>40</sup> Similarly, their reports on flood-control examinations and surveys must include such data as it may be practicable to secure in regard to “the possible economical development and utilization of water power.”<sup>41</sup> In 1927, Congress authorized the Army Engineers to conduct surveys “in accordance with House Document Numbered 308, Sixty-ninth Congress, first session.”<sup>42</sup> This document recommends studies sufficient to determine, among other things, the “present and prospective power markets available.”<sup>43</sup>

In the case of proposed irrigation projects, the Reclamation Project Act of 1939 requires submission of a report and findings by the Secretary of the Interior on, among other things, “the part of the estimated cost which can properly be allocated to power and probably be returned to the United States in net power revenues.”<sup>44</sup> Similarly, the use of power-market data is seemingly contemplated by that Act’s authorization for the Secretary to sell power or lease power privileges at rates fixed in accordance with the standard prescribed in the Act.<sup>45</sup>

The Secretary of the Interior is also charged with responsibility for marketing surplus power generated at reservoir projects under Army control in such a manner as “to encourage the most widespread use thereof at the lowest possible rates to consumers consistent with sound business principles.”<sup>46</sup> He has a similar responsibility under the Bonneville Project and Fort Peck Project Acts.<sup>47</sup> While these authorizations include no express provision for studies of power needs and resources, they have been administratively construed to embrace such studies.<sup>48</sup>

Also, the Rural Electrification Administrator is authorized to make “studies, investigations, and reports concerning the

<sup>40</sup> Act of March 4, 1913, § 3(b), 37 Stat. 801, 826, as amended, 33 U. S. C. 545 (b). See also n. 41, pp. 396-397.

<sup>41</sup> Act of March 1, 1917, § 3, 39 Stat. 948, 950, 33 U. S. C. 701.

<sup>42</sup> Act of January 21, 1927, § 1, 44 Stat. 1010, 1015.

<sup>43</sup> H. Doc. No. 308, 69th Cong., 1st sess., p. 2 (1926).

<sup>44</sup> Act of August 4, 1939, § 9(a), 53 Stat. 1187, 1193, 43 U. S. C. 485h(a).

<sup>45</sup> § 9(c), 53 Stat. 1194, 43 U. S. C. 485h(c). See, e. g., Power Market Survey—Eastern Colorado, Bureau of Reclamation, Region 7 (January 1949).

<sup>46</sup> Act of December 22, 1944, § 5, 58 Stat. 887, 890, 16 U. S. C. 825s.

<sup>47</sup> See *supra*, pp. 302-306.

<sup>48</sup> See *supra*, n. 210, p. 294.

condition and progress of the electrification of" rural areas.<sup>49</sup> Likewise, the broad survey, planning, and power-marketing provisions of the TVA Act contemplate the use of power-market data.<sup>50</sup> In addition, the National Security Resources Board, through its Office of Energy and Utilities, has conducted power surveys as part of its mobilization planning.<sup>51</sup>

The foregoing circumstances have produced duplication of effort. The Federal Power Commission makes continuing surveys and power-market studies. Other agencies, having responsibilities for marketing federal power, also make studies of power needs and resources in the areas where they operate.

Note should also be made of certain steps taken to eliminate duplication in this field. In 1925, Congress directed the Secretary of the Army, through the Army Engineers, and the Federal Power Commission jointly to prepare and submit an estimate of the cost of making examinations and surveys of those navigable streams and their tributaries "where power development appears feasible and practicable," for specified purposes.<sup>52</sup> But when it authorized prosecution of the surveys in 1927—the basis of the "308 Reports"—Congress assigned the responsibility to the Army Engineers alone.<sup>53</sup> Some administrative steps have been taken to reduce duplication here. In the "308 Report" on the Columbia Basin, for example, the Army Engineers employed a power-market analysis representing the combined research of the Bonneville Power Administration and the Bureau of Reclamation, published as an appendix.<sup>54</sup> In addition, that analysis included information obtained from the Forest Service and the Bureau of Agricultural Economics, both of the Department of Agriculture.<sup>55</sup>

<sup>49</sup> Act of May 20, 1936, § 2, 49 Stat. 1363, as amended, 7 U. S. C. 902 (Supp. III).

<sup>50</sup> See *supra*, n. 210, p. 294.

<sup>51</sup> See, *e. g.*, THIRD NATIONAL ELECTRIC POWER SURVEY, National Security Resources Board (April 1950). In this case, NSRB relied almost exclusively on data assembled by the Federal Power Commission. *Id.* p. 5; see also *supra*, p. 423.

<sup>52</sup> See *supra*, pp. 92–93.

<sup>53</sup> Act of January 21, 1927, § 1, 44 Stat. 1010, 1015.

<sup>54</sup> H. Doc. No. 531, 81st Cong., 2d sess., App. N (1950).

<sup>55</sup> *Ibid.*

In this case, the Federal Power Commission did not participate in the study, preparing its own market analysis which was published as a separate appendix to the report of the Army Engineers.<sup>56</sup>

*Duplication.*—Notwithstanding the statement of the preceding examples of duplication, it should be emphasized that no study has been attempted to ascertain the extent of actual duplication of effort under the overlapping statutory provisions which have been set forth. And we have already noted the express general authority for use of the services of one agency by another and two instances in which interagency assistance is required by statute.<sup>57</sup> In addition, means for still further interagency coordination on a voluntary basis exist, as we have previously outlined.<sup>58</sup>

Beyond these, there is always the limitation on duplication inherent in the annual congressional review of agency activities in connection with appropriations. The very presentation of detailed agency budgets to appropriation committees furnishes a basis for legislative decision on the scope of proposed data collection. Whether or not there ensues limiting language in a resulting appropriation statute, the process of presentation and examination in itself serves as a limiting factor upon duplication in the collection of data.

It is generally accepted that there is a great and continuing need for data if river systems and their watersheds are to be developed for optimum beneficial uses.<sup>59</sup> Irrespective of whether existing law provides adequately the necessary authority, that authority cannot be employed without the funds needed for its exercise.

Nor should it be inferred from the foregoing review that data collected for one purpose are necessarily adequate for another. This suggests the desirability, in certain circum-

<sup>56</sup> *Id.* App. S.

<sup>57</sup> See *supra*, pp. 495-496.

<sup>58</sup> See *supra*, pp. 430-439.

<sup>59</sup> See, *e. g.*, H. Doc. No. 706, 81st Cong., 2d sess. (1950); REPORT OF THE COMMISSION ON ORGANIZATION OF THE EXECUTIVE BRANCH OF THE GOVERNMENT, App. L, p. 27 (January 1949).



stances, of providing for exercise of administrative discretion, under appropriate legislative standards, in the process of collection of data.

The review suggests, moreover, the need for a complete reexamination of authorizations, together with a clear statement of the broad purposes to be served by the data to be collected.

**PROGRAM DEVELOPMENT.**—Beyond the collection of basic data which may be useful in any and all water-resource development, the first step, and one by which subsequent water-resource activity is formed and guided, is the development of plans and programs. As used here, the term “program development” refers to the development of broad plans for water-resource projects—as distinct, on the one hand, from the general collection of basic data and, on the other, from the design of specific projects. This functional distinction is made because the various statutes relevant here frequently speak in terms of “investigations and surveys,” which may include the collection of basic data, a subject previously discussed; the development of plans and programs, discussed in this section; and some of the elements of specific project design, a subject to be discussed later.

*Distribution of the Responsibility.*—Although water is the common denominator of all water-resource activity, the responsibility for program development is not consolidated about water, but is usually defined in terms of its particular uses or aspects: navigation, flood control, irrigation, power, and the like. At the same time, in recognition of the interrelationships among different uses, agencies assigned primary responsibility for particular uses have also been authorized to plan for other related uses. The result is a multiplicity of planning by several agencies, each with planning responsibility for different primary purposes.

(Army Engineers)—The Army Engineers have primary responsibility for the development of authorized navigation and flood-control programs.<sup>60</sup> In the case of flood control, this has

<sup>60</sup> See *supra*, pp. 90-91.

been limited to flood-control investigations and improvements of rivers and other waterways. Responsibility for formulating watershed measures in aid of flood control has been assigned to the Secretary of Agriculture.<sup>61</sup> An earlier requirement that all flood-control examinations and surveys by the Army Engineers include "a comprehensive study" of the watershed remains in effect, however.<sup>62</sup> The dams and reservoirs programmed by the Army Engineers may also serve other purposes, notably power, irrigation, water supply, and recreation, and provision is made for inclusion of such features in plans.<sup>63</sup>

(Department of the Interior)—The Bureau of Reclamation has primary responsibility for the development of irrigation programs.<sup>64</sup> In connection with such development, it is also authorized to provide for power, navigation, and flood control and to furnish water for municipal water supply or miscellaneous purposes.<sup>65</sup> With the Department of Agriculture, it also has responsibility for developing programs under the Water Conservation and Utilization Act.<sup>66</sup> We shall hereafter refer to this Act from time to time for illustrative purposes, even though, as previously noted, no new projects have been recently initiated thereunder.<sup>67</sup>

The Bureau of Indian Affairs has primary responsibility for the administration of Indian lands, including the programming of authorized water-resource projects for irrigation, water supply, and power.<sup>68</sup>

The Fish and Wildlife Service has primary federal responsibility for the protection of fish and wildlife.<sup>69</sup> And in addition to such minor water-resource facilities as it programs solely for wildlife purposes, it recommends measures which should

<sup>61</sup> See *supra*, pp. 374-375.

<sup>62</sup> Act of March 1, 1917, § 3, 39 Stat. 948, 950. See also *supra*, p. 402.

<sup>63</sup> See *supra*, pp. 109-112, 147.

<sup>64</sup> See *supra*, p. 182.

<sup>65</sup> See *supra*, pp. 194-197, 239-240.

<sup>66</sup> See *supra*, pp. 243-245, 379.

<sup>67</sup> See *supra*, p. 245.

<sup>68</sup> See *supra*, pp. 246-254.

<sup>69</sup> Reorganization Plan No. III, § 3, effective June 30, 1949, 54 Stat. 1231, 1232, 5 U. S. C. 133t note following. And see 16 U. S. C., ch. 9.

be taken for the protection of fish and wildlife in the planning of any dam or reservoir, either federal or nonfederal under federal permit.<sup>70</sup>

The Bonneville, Southeastern, and Southwestern Power Administrations have primary responsibility for programming the transmission and sale of power from the federal dams for which each is the power-marketing agency.<sup>71</sup>

(Department of Agriculture)—The Department of Agriculture has a primary responsibility for programming watershed measures in aid of flood control.<sup>72</sup> It also has a primary responsibility for the small water facilities supplying domestic, stock, and irrigation water pursuant to the Water Facilities Act.<sup>73</sup>

(Federal Power Commission)—The Federal Power Commission facilitates private development of water-power resources under terms and conditions designed to safeguard the public interest and protect other water uses. In so doing, it must assure that the project adopted will be best adapted to a comprehensive plan for development of the waterway for the use or benefit of commerce, the improvement and utilization of water-power development, and other beneficial public uses, including recreation.<sup>74</sup> Although the scope of the Commission's investigative authority is broad, its surveys have been primarily concerned with power.<sup>75</sup>

License conditions to safeguard the public interest are wide in scope, but the act places special emphasis on protection of navigation.<sup>76</sup>

(Land-Management Agencies)—In addition to the development of plans for water-resource activities, agencies such

<sup>70</sup> See *supra*, pp. 329-330.

<sup>71</sup> Act of August 20, 1937, 50 Stat. 731, as amended, 16 U. S. C. 832-832-1; Department of the Interior Order No. 2115, October 16, 1945, 10 F. R. 14211, as amended; Department of the Interior Order No. 2135, November 21, 1945, 10 F. R. 14527; Department of the Interior Order No. 2558, March 21, 1950, 15 F. R. 1901.

<sup>72</sup> See *supra*, pp. 374-377.

<sup>73</sup> See *supra*, pp. 377-379.

<sup>74</sup> See *supra*, pp. 275-278.

<sup>75</sup> See *supra*, pp. 407-408.

<sup>76</sup> See *supra*, pp. 276-277.

as the Soil Conservation Service, Forest Service, the Bureau of Land Management, and the National Park Service are responsible for programs for the improvement and conservation of certain federal lands.<sup>77</sup> These programs are clearly related to and may have a significant impact upon the need, timing, and sequence of programs for water-resource projects; they may overlap or conflict with the latter; they should therefore be considered with the latter programs. We shall discuss them more fully later.<sup>78</sup>

(Tennessee Valley Authority)—Unlike the other agencies mentioned, the TVA was not assigned a primary responsibility for one or two water-resource purposes, with authority to include in its program development a consideration of the other purposes which water might serve. Instead, it has responsibility for developing a general basin-wide program for water-resource purposes, including navigation, flood control, power, and watershed measures.<sup>79</sup> It is also furnished a statutory guide as to which water uses should be given precedence in the event of conflict.<sup>80</sup>

(Duplication and Conflict)—The result of generally assigning program responsibility to different agencies for different water-resource purposes, followed by extending the scope of each agency's program responsibility in response to the need for comprehensive development, has thus been to give responsibility for plans for development of the same river basins to several agencies. At times, the potentiality for duplicate effort has been followed by the actuality.<sup>81</sup> The Army Engineers and the Bureau of Reclamation each prepared "comprehensive plans" for the development of the Missouri Basin.<sup>82</sup> The plans not only overlapped, but in the area of overlap were

<sup>77</sup> See *supra*, pp. 351-382.

<sup>78</sup> See *infra*, pp. 621-626.

<sup>79</sup> Act of August 31, 1935, § 2, 49 Stat. 1075, 16 U. S. C. 831c(j). See also *supra*, pp. 484-486.

<sup>80</sup> Act of May 18, 1933, § 9a, as added by Act of August 31, 1935, § 5, 49 Stat. 1075, 1076, 16 U. S. C. 831h-1. See also *supra*, p. 485.

<sup>81</sup> See *supra*, n. 177, p. 427.

<sup>82</sup> See *supra*, pp. 471-474.

also divergent.<sup>85</sup> Similarly, the basin-wide plans of the Army Engineers and the Bureau of Reclamation for the Columbia River Basin overlapped, and in the area of overlap, they presented conflicts.<sup>84</sup>

Such duplication and conflict, under the present statutes, are not subject to solution solely through interagency coordination. For the planning agencies have different primary statutory responsibilities to which they must accord precedence. Thus, program development by the Bureau of Reclamation must give precedence to irrigation, while program development by the Army Engineers must similarly give precedence to navigation and flood control.<sup>85</sup> This is particularly illustrated by the different plans of the Army and the Bureau for the Folsom Dam in the American River in California. The Army's original plan contemplated a reservoir of a capacity of 355,000 acre-feet of storage, while the Bureau's plan contemplated a reservoir of a capacity of 1,000,000 acre-feet of storage to serve its irrigation development.<sup>86</sup>

This difference in primary statutory responsibility is reinforced by subsidiary differences in the basic statutory framework governing the activities of each agency. A notable example of this is the Kings River Project in California. Both the Bureau of Reclamation and the Army Engineers prepared plans for the development as a multiple-purpose project for both flood control and irrigation.<sup>87</sup> The Bureau would condition construction upon the conclusion of repayment contracts

<sup>84</sup> See *supra*, pp. 472-473. See also 90 Cong. Rec., 4119 (1944); Sen. Doc. No. 191, 78th Cong., 2d sess., p. 2 (1944).

<sup>85</sup> Army Engineers: H. Doc. No. 531, 81st Cong., 2d sess. (1950). Bureau of Reclamation: H. Doc. No. 473, 81st Cong., 2d sess., pp. 83-86 italic (1950).

<sup>86</sup> See *supra*, pp. 418-420, 402, 408-409.

<sup>87</sup> Army Engineers: H. Doc. No. 649, 78th Cong., 2d sess., p. 5 (1944). Bureau of Reclamation: Sen. Doc. No. 113, 81st Cong., 1st sess., p. 127 (1949).

After conferences with the Bureau and the State of California, these differences were subsequently reconciled, and the Army Engineers now recommend 1,000,000 acre-feet of storage capacity. H. Doc. No. 367, 81st Cong., 1st sess., p. 40 (1949).

<sup>88</sup> Bureau of Reclamation: H. Doc. No. 631, 76th Cong., 3d sess. (1940). Army Engineers: H. Doc. No. 630, 76th Cong., 3d sess. (1940).

in accordance with Reclamation Law.<sup>80</sup> On the other hand, the Army Engineers would proceed with immediate construction in order to obtain earliest flood-control benefits, leaving the construction and reimbursement of associated irrigation facilities to later settlement.<sup>81</sup> In commenting upon the reasons for differences between the reports of the two agencies for this and related projects, a memorandum from the Chief of Engineers stated: <sup>82</sup>

The fundamental differences between the reports of the Corps of Engineers and the Bureau of Reclamation stem from the laws and administrative procedures under which the agencies function. These differences, while not set forth completely in the reports, have had a basic influence during their preparation.

Conflicts in program development may represent the desirable expression of different views as to possible alternatives—in the absence of a statutory structure requiring programming to achieve basin-wide development for optimum beneficial uses of a river system and its watershed. But under existing law, efforts to promote differing programs clearly may lead to premature selection of projects—projects which might be substantially altered or even omitted if programming were required to proceed under a single standard applying uniformly to the basin.<sup>81</sup>

*Measures to Coordinate.*—In providing for program development on a basis broader than that available within single agencies, the Water Conservation and Utilization Act is of interest.<sup>82</sup> It provides that the Secretary of the Interior may, by cooperative agreement with the Secretary of Agriculture, or with such other federal or state agencies as deemed desirable by

<sup>80</sup> See H. Doc. No. 367, 81st Cong., 1st sess., p. 66 (1949).

<sup>81</sup> *Id.* pp. 5-6.

<sup>82</sup> *Id.* p. XI.

<sup>83</sup> In this connection, see REPORT OF THE COMMISSION ON ORGANIZATION OF THE EXECUTIVE BRANCH OF THE GOVERNMENT, App. L, pp. 129-130 (January 1949).

<sup>84</sup> Act of August 11, 1939, 53 Stat. 1418, as amended, 16 U. S. C. 590y-590z-11.

the President, arrange for cooperation in the investigation, survey, construction, operation, and maintenance of water-conservation and utilization projects.<sup>93</sup> It also requires consultation by the Secretary of the Interior with the Secretary of Agriculture, and a report to the President on the participation of the Department of Agriculture.<sup>94</sup>

Similar in effect is the provision of the 1944 Flood Control Act which, as to program development within the area in which both Army Engineers and the Bureau of Reclamation operate, requires that each give the other, "during the course of the investigations, information developed by the investigations and also opportunity for consultation regarding plans and proposals," and to the extent deemed practicable by the investigating department, "opportunity to cooperate in the investigations."<sup>95</sup> In such cases, the reports submitted to Congress must set out the relationship between plans reported on and the views of both the Secretary of the Army and the Secretary of the Interior.<sup>96</sup>

As to irrigation development at dams and reservoirs under Army control, the 1944 Act also takes the further coordinating step of assigning to the Secretary of the Interior the responsibility for recommendations in that regard, as well as the construction of the additional irrigation works.<sup>97</sup> As to navigation and flood-control features at Reclamation projects, the 1939 Reclamation Project Act provides for consultation between the Secretaries of the Army and the Interior on cost allocations, but leaves the programming of such features otherwise in the hands of the Secretary of the Interior.<sup>98</sup>

Congress has also required that federal agencies and licensees consult with the Fish and Wildlife Service before im-

<sup>93</sup> § 6, as added by Act of October 14, 1940, 54 Stat. 1119, 1123, 16 U. S. C. 590z-4.

<sup>94</sup> § 3(a), as added by Act of October 14, 1940, 54 Stat. 1119, 1120, 16 U. S. C. 590z-1(a).

<sup>95</sup> Act of December 22, 1944, §§ 1(a), 1(c), 58 Stat. 887, 888, 889.

<sup>96</sup> *Id.*

<sup>97</sup> § 8, 58 Stat. 891, 43 U. S. C. 390. With respect to this section's exception for pre-1944 dams, see *infra*, pp. 533, 594.

<sup>98</sup> Act of August 4, 1939, § 9(b), 53 Stat. 1187, 1194, 43 U. S. C. 485h(b).

pounding or diverting any stream or other body of water, and that the reports and recommendations of the Secretary of the Interior on the possible damage to wildlife be included in any report submitted to Congress by the federal construction agency.<sup>99</sup> In providing for pollution abatement by the Surgeon General under the 1948 Water Pollution Control Act, Congress established a review board which includes representatives of the Departments of Agriculture, the Army, and the Interior and the General Services Administrator to review policies and programs of the Public Health Service under the Act and to make recommendations thereon to the Surgeon General.<sup>100</sup>

In addition to these statutory measures, some action to coordinate program development has been taken within the Executive Branch through interagency committees and the like. These have already been detailed.<sup>101</sup> And the process of project review and authorization affords some possibility for reconciling any conflicts in programs not theretofore resolved.<sup>102</sup>

*Limitations on Program Development.*—Three types of limitations on program development may be noted. Some are inherent in requirement as to authorization. Secondly, operations of some agencies are geographically restricted by law. And finally there are the limitations imposed by appropriations.

(Authorizations)—The Bureau of Reclamation has blanket organic authority to make examinations and surveys of potential irrigation projects in the West.<sup>103</sup> Examinations and surveys for navigation and flood-control projects by the Army Engineers may be undertaken, however, only after authorization by an act of Congress.<sup>104</sup> And after the “regular or formal reports made as required by law on any examination, survey,

<sup>99</sup> Act of August 14, 1946, § 2, 60 Stat. 1080, 16 U. S. C. 662.

<sup>100</sup> Act of June 30, 1948, § 6, 62 Stat. 1155, 1158, as amended, 33 U. S. C. 466e (Supp. III).

<sup>101</sup> See *supra*, pp. 430-439.

<sup>102</sup> See *infra*, pp. 520-538.

<sup>103</sup> Act of June 17, 1902, § 2, 32 Stat. 388, as amended, 43 U. S. C. 411. See also Act of August 4, 1939, § 9(a), 53 Stat. 1187, 1193, 43 U. S. C. 485h(a).

<sup>104</sup> Act of March 4, 1913, § 3, 37 Stat. 801, 825, 33 U. S. C. 545; Act of August 11, 1939, § 6, 53 Stat. 1414, 1415, 33 U. S. C. 701b-4.



project, or work under way or proposed are submitted no supplemental or additional report or estimate shall be made unless authorized by law."<sup>105</sup> The 1941 and subsequent Flood Control Acts have provided that "the Secretary of War may cause a review of any examination or survey to be made and a report thereon submitted to the Congress if required by the national defense or by changed physical or economic conditions."<sup>106</sup>

But the difference between procedures for Army and Reclamation projects is somewhat narrowed by the authorization for supplementing the "308 Reports," covering virtually all the major streams, by such additional study or investigation as the Chief of Engineers "finds necessary to take into account important changes in economic factors as they occur, and additional stream-flow records, or other factual data."<sup>107</sup>

Authorization under Flood Control Acts for surveys and investigations of watersheds by the Department of Agriculture follows much the same pattern as that for flood-control examinations and surveys of the waterways by the Army Engineers.<sup>108</sup>

Other water-resource agencies are granted authority to conduct certain investigations, examinations, and surveys without individualized legislative approval. Such is the authority to conduct investigations and surveys granted by the 1935 soil-conservation legislation.<sup>109</sup> So also as to investigations and surveys under the Federal Power Act.<sup>110</sup>

(Area)—An agency's program function may also be limited to certain areas. Examinations and surveys for irrigation projects under Reclamation Law are authorized as to the 17 Western States.<sup>111</sup> Similarly, investigations for projects under the Water Conservation and Utilization Act may be made in

<sup>105</sup> Act of September 22, 1922, § 12, 42 Stat. 1038, 1043; Act of August 11, 1939, § 6, 53 Stat. 1414, 1415, 33 U. S. C. 701b-4.

<sup>106</sup> See, *e. g.*, Act of August 18, 1941, § 4, 55 Stat. 638, 648.

<sup>107</sup> Act of August 30, 1935, § 6, 49 Stat. 1028, 1048. See also *supra*, pp. 92-93.

<sup>108</sup> See *supra*, pp. 374-376.

<sup>109</sup> Act of April 27, 1935, § 1, 49 Stat. 163, 16 U. S. C. 590a.

<sup>110</sup> Act of June 10, 1920, § 4(a), 41 Stat. 1063, 1065, as amended, 16 U. S. C. 797(a).

<sup>111</sup> Act of June 17, 1902, § 2, 32 Stat. 388, as amended, 43 U. S. C. 411.

the Great Plains and arid and semiarid areas of the United States.<sup>112</sup> The authority of the Secretary of Agriculture to formulate and keep current a program of facilities for water storage or utilization is limited to the arid and semiarid areas of the United States.<sup>113</sup> Surveys and plans by the Tennessee Valley Authority are authorized with respect to the natural resources of the "Tennessee River drainage basin and of such adjoining territory as may be related to or materially affected by the development consequent" to the TVA Act.<sup>114</sup> Likewise, the International Boundary and Water Commission is charged with certain planning for the lower Rio Grande and lower Colorado and Tijuana rivers.<sup>115</sup>

While limited as to area, each of these authorizations leaves to the agency a certain right to initiate investigations and surveys, and to that extent the development of programs.

(Appropriations)—By the express terms of the Tennessee Valley Authority Act, surveys and plans may be made "within the limits of appropriations made therefor by Congress."<sup>116</sup> The provision is clearly worded, but its practical effect is doubtful. As an organic limitation on the authority to expend money it cannot be self-executing, but necessarily depends on language of appropriation acts containing a limited amount for such activities. A review of appropriation acts of 1943-1948 reveals no such limitations.

River and harbor appropriations acts are usually worded so that all funds appropriated thereby are available for examinations and surveys; the same result is accomplished by general legislation for flood-control appropriations.<sup>117</sup> Annual appropriations for the Bureau of Reclamation, however, have contained specific amounts for general investigations.<sup>118</sup>

<sup>112</sup> Act of October 14, 1940, § 1, 54 Stat. 1119, 16 U. S. C. 590y.

<sup>113</sup> Act of August 28, 1937, §§ 1, 2, 50 Stat. 869, 16 U. S. C. 590r, 590s.

<sup>114</sup> Act of May 18, 1933, § 22, 48 Stat. 58, 69, 16 U. S. C. 831u. While the power to initiate surveys and planning was placed in the President by statute, it was transferred to TVA. Ex. O. No. 6161, June 8, 1933.

<sup>115</sup> See Act of May 13, 1924, § 1, 43 Stat. 118, as amended, 22 U. S. C. 277.

<sup>116</sup> Act of May 18, 1933, § 22, 48 Stat. 58, 69, 16 U. S. C. 831u.

<sup>117</sup> See, *e. g.*, Act of June 30, 1948, 62 Stat. 1148; Act of August 11, 1939, § 2, 53 Stat. 1414, 33 U. S. C. 701b-3.

<sup>118</sup> See, *e. g.*, Act of September 6, 1950, ch. VII, title I, 64 Stat. 595.

**PROJECT EVALUATION.**—Directly or indirectly, Congress itself determines the actual undertaking of federal water-resource projects, as we shall shortly see in the discussion of project authorization. On the other hand, it has prescribed a number of standards, most of them in general terms, bearing upon the administrative evaluation or selection of projects. There is no uniform criterion. The major purpose to be served by the project usually determines the standards to be applied.

*Nonfederal Power Projects.*—In the licensing of nonfederal power projects, the project adopted must be such as in the judgment of the Federal Power Commission: <sup>119</sup>

will be best adapted to a comprehensive plan for improving or developing a waterway or waterways for the use or benefit of interstate or foreign commerce, for the improvement and utilization of water-power development, and for other beneficial public uses, including recreational purposes \* \* \*

*Navigation Projects.*—Congress has directed that if a preliminary examination shows a proposed improvement not advisable, no further action may be taken unless directed by Congress; if favorable, the Secretary of the Army has discretion to cause a survey to be made and the cost and advisability reported to Congress.<sup>120</sup>

Among other things, reports on examinations and surveys must contain full information regarding the present and prospective commercial importance of the project and the probable benefit to commerce, together with data respecting public terminal and transfer facilities, the development and utilization of water power for industrial and commercial purposes, and other related subjects, provided that "consideration shall be given only to their bearing upon the improvement of navigation," to the possibility and desirability of their coordination with navigation improvements to lessen the cost of such improvements, and to their relation to the "development and

<sup>119</sup> Act of June 10, 1920, § 10 (a), 41 Stat. 1063, 1068, as amended, 16 U. S. C. 803 (a).

<sup>120</sup> Act of March 4, 1913, § 3, 37 Stat. 801, 825, 33 U. S. C. 545.

regulation of commerce.”<sup>121</sup> In addition, reports must contain a statement of “special or local benefit which will accrue to localities affected by such improvement and a statement of general or national benefits, with recommendations as to what local cooperation should be required, if any, on account of such special or local benefit.”<sup>122</sup>

Moreover, in reviewing such reports, the Board of Engineers for Rivers and Harbors is required to have in view the amount and character of commerce existing or reasonably prospective which will be benefited by the improvement; the “relation of the ultimate cost of such work, both as to cost of construction and maintenance, to the public commercial interests involved;” and the public necessity for the work, and the propriety of its construction, continuance, or maintenance at the expense of the United States.<sup>123</sup>

Superimposed on the foregoing requirements is the policy adopted by Congress in 1944 in connection with the exercise of its jurisdiction over the rivers of the Nation through the construction of navigation and flood-control improvements.<sup>124</sup> That policy recognizes the interests and rights of the states in determining the development of watersheds within their borders and in water utilization and control, as therein authorized, to preserve and protect to the fullest possible extent established and potential uses, for all purposes, of the waters of the Nation’s rivers.<sup>125</sup> Moreover, that policy is to facilitate the consideration of projects “on a basis of comprehensive and coordinated development,” and to limit:<sup>126</sup>

<sup>121</sup> *Id.* See also *supra*, n. 41, pp. 396–397.

<sup>122</sup> Act of June 5, 1920, § 2, 41 Stat. 1009, 1010, 33 U. S. C. 547.

<sup>123</sup> Act of June 13, 1902, § 3, 32 Stat. 331, 372, as amended, 33 U. S. C. 541. “Commerce” is defined to include the use of waterways by “seasonal passenger craft, yachts, house boats, fishing boats, motor boats, and other similar water craft, whether or not operated for hire.” Act of February 10, 1932, 47 Stat. 42, see 33 U. S. C. 541.

<sup>124</sup> Act of December 22, 1944, § 1, 58 Stat. 887, 888. This is the 1944 Flood Control Act. The same statement was repeated in the 1945 River and Harbor Act. Act of March 2, 1945, § 1, 59 Stat. 10. It has since been made applicable in each River and Harbor and Flood Control Act. For the full text of the provision, see *supra*, p. 96.

<sup>125</sup> *Id.*

<sup>126</sup> *Id.*

the authorization and construction of navigation works to those in which a substantial benefit to navigation will be realized therefrom and which can be operated consistently with appropriate and economic use of the waters of such rivers by other users.

*Flood-Control Projects.*—In its 1936 declaration of flood-control policy, Congress specified that:<sup>127</sup>

the Federal Government should improve or participate in the improvement of navigable waters or their tributaries, including the watersheds thereof, for flood-control purposes if the benefits to whomsoever they may accrue are in excess of the estimated costs, and if the lives and social security of people are otherwise adversely affected.

This policy, of course, applies not only to Army Engineer flood-control projects, but also to flood-control activities of the Department of Agriculture.<sup>128</sup> In 1917, Congress required that the provisions of existing law relating to examinations and surveys for navigation shall “apply, so far as applicable,” in the case of flood-control improvements.<sup>129</sup> In addition, it then specified that all flood-control examinations and surveys must include a comprehensive study of the watershed, each report to include data regarding the extent and character of the area to be affected, the probable effect upon any navigable water, the possible economical development and utilization of water power, and other properly related uses.<sup>130</sup>

Reports by the Board of Engineers for Rivers and Harbors must state its opinion as to what federal interest, if any, is involved; what share of the expense, if any, should be borne by the United States; and the advisability of adopting the project.<sup>131</sup>

*Irrigation Projects.*—A standard totally different from the

<sup>127</sup> Act of June 22, 1936, § 1, 49 Stat. 1570, 33 U. S. C. 701a. For the full text of the provision, see *supra*, p. 131.

<sup>128</sup> For the provisions relevant to flood-control activities of the Department of Agriculture, see *supra*, pp. 374-377.

<sup>129</sup> Act of March 1, 1917, § 3, 39 Stat. 948, 950, 33 U. S. C. 701.

<sup>130</sup> *Id.*

<sup>131</sup> *Id.*

foregoing criteria is specified for irrigation projects under the 1939 Reclamation Project Act—a repayment standard. That Act requires findings as to the engineering feasibility; estimated costs; and the parts thereof properly allocable to irrigation, power, and municipal water supply and other miscellaneous purposes.<sup>122</sup> Allocations are separate for the part of the estimated cost which can properly be allocated to irrigation and “probably be repaid by the water users”; and of the parts allocable to power and to municipal water supply and other miscellaneous purposes, which can “probably be returned to the United States.”<sup>123</sup>

Provision is made by the 1939 Act for nonreimbursable allocations to flood control and navigation, and by a 1946 statute for a like allocation to the preservation and propagation of fish and wildlife.<sup>124</sup>

If the project be found by the Secretary to have engineering feasibility, and if the “repayable and returnable allocations,” together with any nonreimbursable allocations, equal the total estimated project costs, the project is deemed authorized and may be undertaken after submission of the report and findings to the President and the Congress.<sup>125</sup> Otherwise, or if adverse comments have been received from an affected state or the Secretary of the Army, the project may be undertaken only if authorized by act of Congress.<sup>126</sup>

*Benefits and Costs.*—With considerable variations, the foregoing standards contemplate some examination of relative benefits and costs of the projects and activities proposed. More-

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<sup>122</sup> Act of August 4, 1939, § 9(a), 53 Stat. 1187, 1193, 43 U. S. C. 485h(a). For the full text of this provision and a discussion of earlier statutes, see *supra*, pp. 193–195.

With this standard, compare the provision for authorization of water-conservation and utilization projects, prescribing a modified repayment standard allowing for the use of relief and other funds for the costs which cannot be repaid. Act of October 14, 1940, § 3, 54 Stat. 1119, 1120, as amended, 16 U. S. C. 590z-1.

<sup>123</sup> § 9(a), 53 Stat. 1193, 43 U. S. C. 485h(a).

<sup>124</sup> § 9(b), 53 Stat. 1187, 1194, 43 U. S. C. 485h(b); Act of August 14, 1946, § 2, 60 Stat. 1080, as amended, 16 U. S. C. 662.

<sup>125</sup> § 9(a), 53 Stat. 1187, 1193, 43 U. S. C. 485h(a).

<sup>126</sup> *Id.*; Act of December 22, 1944, § 1(c), 58 Stat. 887, 889.

over, all of the federal agencies concerned do evaluate such relative benefits and costs in considering projects.<sup>137</sup> But what benefits and what costs are to be included and how they are to be measured are decisions which can and do vary substantially from agency to agency.<sup>138</sup>

For example, as to the interest rate employed for the conversion of nonuniform benefits to an equivalent average annual benefit, the Army Engineers employ the average rate of interest payable on money borrowed for long-term private investment in the locality concerned, generally 4 to 5%.<sup>139</sup> But the Department of Agriculture generally employs a 2% rate.<sup>140</sup> And the Bureau of Reclamation a rate of 2½%.<sup>141</sup>

Similarly, as to the price level used in calculating benefits, the Army Engineers and the Department of Agriculture use the price level prevailing at the time of analysis.<sup>142</sup> On the other hand, the Bureau of Reclamation employs its estimate of what average prices will be during the proposed project's life—as of May 1950, prices corresponding with the 1939–1944 period.<sup>143</sup>

Differences such as the foregoing are susceptible of resolution by statutory prescription of a uniform standard or through administrative agreement. But the latter means cannot be employed to reconcile existing statutory differences in standards for project selection. Outstanding in this respect is the fact that only in the case of Reclamation projects does there exist a statutory pay-out standard.<sup>144</sup> No corresponding requirement obtains in the case of projects proposed for authori-

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<sup>137</sup> PROPOSED PRACTICES FOR ECONOMIC ANALYSIS OF RIVER BASIN PROJECTS, prepared by the Subcommittee on Benefits and Costs, Federal Inter-Agency River Basin Committee, pp. 74–85 (May 1950).

<sup>138</sup> *Ibid.*

<sup>139</sup> *Id.* p. 75.

<sup>140</sup> *Ibid.*

<sup>141</sup> *Ibid.*

<sup>142</sup> *Id.* p. 74.

<sup>143</sup> *Ibid.*

<sup>144</sup> However, apart from this standard, Congress has in individual cases authorized irrigation projects by special statutes. See, e. g., BUREAU OF RECLAMATION PROJECT FEASIBILITIES AND AUTHORIZATIONS, Department of the Interior, pp. 123–124, 141–142, 225, 290, 414, 537 (1949).

zation by the Army Engineers or the Department of Agriculture.

The practical impact of this standard in the case of Reclamation projects merits further comment. It appears inevitable that, with the completion of the development of lands susceptible of cheaper reclamation improvement, the pay-out requirement will tend to limit future irrigation projects to those which have associated reimbursable features, especially power. But irrigation projects with power features may not be the most desirable in terms of relative benefits and costs. On the other hand, the Bureau of Reclamation in practice considers projects not alone on their pay-out ability, but also in terms of their relative benefits and costs.<sup>146</sup>

### Review and Authorization of Plans and Projects

Both under statute and under voluntary administrative arrangement, project proposals and plans are subject to differing requirements of review and authorization. In the case of certain projects, provision is made for pre-authorization review by states and federal agencies other than the construction agency. After examining these, we shall review the wide variations which occur in connection with project authorization.

**REVIEW BY STATES AND FEDERAL AGENCIES OTHER THAN THE CONSTRUCTION AGENCY.**—Attention will be first directed to certain provisions of the 1944 Flood Control Act and the 1946 statute concerning wildlife resources.<sup>146</sup> Thereafter, we shall note the unusual review provisions prescribed for water-conservation and utilization projects. In addition to these statutory requirements, other procedures for pre-authorization review within the executive branch will be outlined.

*The 1944 Flood Control Act.*—This statute requires that plans, proposals, or reports of the Chief of Engineers for any

<sup>146</sup> PROPOSED PRACTICES FOR ECONOMIC ANALYSIS OF RIVER BASIN PROJECTS, prepared by the Subcommittee on Benefits and Costs, Federal Inter-Agency River Basin Committee, p. 74 (May 1950).

<sup>147</sup> Act of December 22, 1944, 58 Stat. 887; Act of August 14, 1946, 60 Stat. 1080, see 16 U. S. C. 661-666c.



works of improvement for navigation or flood control, not theretofore or therein authorized, be transmitted to each "affected" state, and to the Secretary of the Interior in certain cases.<sup>147</sup> Any state in which the works or any part thereof are proposed to be located is an "affected" state; in states lying wholly or in part west of the ninety-eighth meridian, any state within the drainage basin involved is also an "affected" state; while any state east of the ninety-eighth meridian, in addition to that in which the project is located, is an "affected" state only if in the judgment of the Chief of Engineers it will be substantially affected by the proposed project.<sup>148</sup> Not all Army Engineer reports must be submitted to the Secretary of the Interior, only those where the plans or proposals are concerned with the use or control of waters which rise in whole or in part west of the ninety-seventh meridian.<sup>149</sup>

A 90-day period is provided within which the Secretary of the Interior and each "affected" state may submit written views and recommendations to the Chief of Engineers.<sup>150</sup> These must be transmitted to Congress by the Secretary of the Army, with such comments and recommendations as he deems appropriate, along with the proposed report.<sup>151</sup>

In the case of plans, proposals, or reports for irrigation projects, the Secretary of the Interior is subject to the same provisions as are prescribed for the Chief of Engineers and the

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<sup>147</sup> Act of December 22, 1944, § 1(a), 58 Stat. 837, 888. The provisions of § 1 were repeated in the 1945 River and Harbor Act. Act of March 2, 1945, 59 Stat. 10. While these provisions may be of continuing effect, they have nevertheless since been made specifically applicable in each River and Harbor and Flood Control Act. See also 90 Cong. Rec. 8487, and see *supra*, n. 136, p. 417.

<sup>148</sup> § 1(a), 58 Stat. 887, 888.

<sup>149</sup> *Id.* The ninety-seventh meridian passes through Minnesota immediately east of Grand Forks, North Dakota, thence through North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, and Texas between Dallas and Fort Worth. States wholly or partly west of the ninety-eighth meridian include the foregoing States excepting Minnesota, and all states west of them. These are the 17 Western States under Reclamation Law. See *supra*, p. 183.

<sup>150</sup> *Id.*

<sup>151</sup> *Id.*

Secretary of the Army.<sup>153</sup> Thus, review of irrigation projects by states is subject to the same definition as to which are "affected," and the requirement of interdepartmental review is limited to cases where the plans or proposals are concerned with the use or control of waters which rise in whole or in part west of the ninety-seventh meridian. In this connection, it should be noted that another provision of the Act conditionally authorizes the construction of irrigation works at Army dam and reservoir projects.<sup>153</sup> The scope of this provision is subject to some disagreement between the Army Engineers and the Bureau of Reclamation.<sup>154</sup>

*Fish and Wildlife.*—When any federal agency or nonfederal agency under federal permit impounds, diverts, or otherwise controls waters, it must consult with the Fish and Wildlife Service of the Department of the Interior and with the head of the state agency concerned with wildlife resources, with a view to preventing loss of and damage to wildlife resources.<sup>155</sup> In such cases, the reports and recommendations of the Secretary of the Interior and the state agency must be made an integral part of any report submitted by any federal agency responsible for engineering surveys and construction of such projects.<sup>156</sup>

*Water Conservation and Utilization Act.*—In the development and operation of projects authorized by this statute, certain responsibilities concerning settlement are vested in the Secretary of Agriculture, pursuant to cooperative agreement with the Secretary of the Interior.<sup>157</sup> Moreover, in connection with project consideration, the Secretary of the Interior must submit to the President his report and findings on prescribed matters, and in connection with such reports and findings he must consult with the Secretary of Agriculture regarding participa-

<sup>153</sup> § 1(c), 58 Stat. 889.

<sup>154</sup> § 8, 58 Stat. 891, 43 U. S. C. 390.

<sup>155</sup> See *infra*, p. 562.

<sup>156</sup> Act of August 14, 1946, § 2, 60 Stat. 1080, 16 U. S. C. 662. See also *supra*, pp. 327-330.

<sup>157</sup> *Id.*

<sup>158</sup> Act of October 14, 1940, § 5(a), 54 Stat. 1119, 1122, as amended, see 16 U. S. C. 590z-3.

tion in the proposed project by the Department of Agriculture, a report of the Secretary of Agriculture on any such participation to be submitted by the Secretary of the Interior to the President.<sup>158</sup>

*Intradepartmental Review.*—In addition to the foregoing requirements, other provisions exist for review of proposed projects within the department responsible. Thus, in the case of both navigation and flood-control projects, it is required by statute that all reports on examinations and surveys and all projects or changes in projects be referred to the Board of Engineers for Rivers and Harbors for its recommendation.<sup>159</sup> This Board submits to the Chief of Engineers its recommendations on commencing or continuing of improvements on which reports are required.<sup>160</sup> In the case of flood-control works under the jurisdiction of the Department of Agriculture, coordinating and reviewing arrangements exist through field committees and within the Department.<sup>161</sup> The situation is the same with respect to the Department of the Interior in the case of Reclamation projects.<sup>162</sup>

*Review by the Bureau of the Budget.*—Before a proposed plan is submitted to Congress, it must first be submitted to the Bureau of the Budget within the Executive Office of the President, for its review and advice as to the relationship of the plan to the program of the President.<sup>163</sup> Such review is required whether or not individualized congressional authorization of the project is prerequisite to the expenditure of funds.<sup>164</sup> In certain cases, such review by the Bureau of the Budget does not in fact precede consideration of a proposed plan by Congress. For a committee of Congress may request that plans,

<sup>158</sup> § 3, 54 Stat. 1120, as amended, see 16 U. S. C. 590z-1.

<sup>159</sup> Act of June 13, 1902, § 3, 32 Stat. 331, 372, as amended, 33 U. S. C. 541; Act of March 1, 1917, § 3, 39 Stat. 948, 950, 33 U. S. C. 701. See also *supra*, pp. 99-100.

<sup>160</sup> *Id.*

<sup>161</sup> See *supra*, pp. 436-438.

<sup>162</sup> See *supra*, pp. 438-439.

<sup>163</sup> Ex. O. No. 9384, October 4, 1943, 8 F. R. 13782, 31 U. S. C. 21 note following. See also *supra*, pp. 423-424.

<sup>164</sup> *Id.*

at any stage of development, be transmitted for its consideration.<sup>165</sup>

**AUTHORIZATION OF PROJECTS.**—In two different ways and in varying degrees, Congress asserts its control directly or indirectly over selection and authorization of water-resource projects.

A first prerequisite is that Congress authorize the proposed activity by substantive legislation, including authorization for the appropriation of funds, as distinguished from the appropriation itself.<sup>166</sup> Such an authorization may be of a blanket character, rendering individualized legislative approval unnecessary, as in the case of Reclamation projects.<sup>167</sup> Or statutes may provide individualized project authorization, as generally in the case of navigation and flood-control projects of the Army Engineers.<sup>168</sup> Modifications of these two extremes appear under other statutes, as we shall see. In this aspect of legislative control, consideration of project proposals or reports rests with different legislative committees depending upon which is the prosecuting agency, even where the plans of the several agencies relate to development within the same river basin.<sup>169</sup>

<sup>165</sup> For example, the proposed plans and report of the Army Engineers and Bureau of Reclamation for the Columbia Basin were requested by the Senate Committee on Public Works, and hearings were held thereon in May 1949. Such plans and reports were not reviewed and cleared by the Bureau of the Budget until February 1950, in connection with H. R. 5472, 81st Cong., 1st sess. (1949). See Sen. Doc. No. 473, 81st Cong., 2d sess., pp. 4-6 italic (1950).

<sup>166</sup> Rule XXI, RULES OF THE HOUSE OF REPRESENTATIVES, H. Doc. No. 766, 80th Cong., 2d sess., pp. 415-428 (1949); Rule XVI, SENATE MANUAL, Sen. Doc. No. 11, 81st Cong., 1st sess., p. 20 (1949).

<sup>167</sup> See *supra*, pp 193-194. Cf. Act of August 28, 1937, 50 Stat. 869, 16 U. S. C. 590r-590x.

<sup>168</sup> See *supra*, pp. 100-105, 136-142.

<sup>169</sup> For example, in the Senate, matters pertaining to agriculture, forestry, rural electrification, and soil conservation are referred to the Committee on Agriculture and Forestry; matters pertaining to navigation, the Coast and Geodetic Survey, the Weather Bureau, inland waterways, and fisheries and wildlife are referred to the Committee on Interstate and Foreign Commerce; matters pertaining to interstate compacts generally go to the Judiciary Committee; public health matters go to the Committee on Labor and Public Welfare; matters relating to public lands, forest reserves created from the public domain, irrigation and reclamation, interstate compacts relating to apportionment of water for irrigation purposes, minerals, Geological Survey,

A second type of legislative control over project selection is that incident to the provision of funds. Here, agency activities are reviewed by the appropriation committees of Congress. Generally, all water-resource agencies require annual appropriations. Even where special funds are available for water-resource development, an affirmative appropriation act is usually prerequisite to their use, as we shall later see.<sup>170</sup> On the other hand, we shall also discuss a few instances where special funds are available without appropriation action, and other arrangements similarly permitting expenditures without specific appropriation action.<sup>171</sup> But even in these cases, detailed reports on proposed programs must be submitted to Congress.<sup>172</sup> A like requirement exists in the case of government corporations.<sup>173</sup>

Through these means, therefore, Congress is provided with information upon which it may pass legislation affirmatively preventing any project activity.

Before turning to an examination of the statutes providing for varying legislative review of proposed water-resource projects, we should first note certain limitations which Congress has imposed upon its own action.

*Limitations on Legislative Consideration.*—Prescribing certain restrictions for itself, Congress in 1922 prohibited committee consideration of any navigation project with a view to its adoption, except with a view to a survey, if five years have

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and Indians go to the Committee on Interior and Insular Affairs, formerly called Committee on Public Lands; matters relating to navigation and flood control, water power, and pollution of navigable waters go to the Committee on Public Works. The situation is substantially the same in the House. See Act of August 2, 1946, §§ 102, 121, 60 Stat. 812, 814, 822. See also Rule XI, RULES OF THE HOUSE OF REPRESENTATIVES, H. DOC. NO. 766, 80th Cong., 2d sess., pp. 326-352 (1949); Rule XXV, SENATE MANUAL, SEN. DOC. NO. 11, 81st Cong., 1st sess., pp. 28-40 (1949).

<sup>170</sup> See *infra*, p. 578.

<sup>171</sup> See *infra*, p. 574.

<sup>172</sup> Act of June 10, 1921, 42 Stat. 20, as amended, 31 U. S. C. 1 *et seq.*; Ex. O. No. 9384, October 4, 1943, 8 F. R. 13782, 31 U. S. C. 21 note following. See also Act of September 12, 1950, §§ 101, 102, 64 Stat. 832, —.

<sup>173</sup> Act of December 6, 1945, § 102, 59 Stat. 597, 598, as amended, 31 U. S. C. 847.

elapsed since submission of a survey report on the project.<sup>174</sup> With respect to navigation and flood-control projects, Congress in 1946 declared its policy that no project or "any modification not authorized" shall be authorized by Congress unless a report has been previously submitted in conformity with law.<sup>175</sup> The use of the phrase, "any modification not authorized," apparently reflects an intention not "to interfere with discretionary authority to modify projects as conferred on" the Secretary of the Army and the Chief of Engineers.<sup>176</sup> No provisions corresponding with the foregoing have been enacted in the case of projects of other types, but individualized project authorization is not contemplated by statutes governing certain other cases, such as Reclamation projects.

*Navigation and Flood-Control Projects.*—As we have previously outlined in detail, it is generally required by statute that examinations and surveys for navigation and flood-control projects, as well as the projects themselves, may not be undertaken unless specifically authorized by Congress.<sup>177</sup> General congressional practice has long been to authorize such activity in omnibus acts containing a substantial number of projects.<sup>178</sup> In addition to the limitations imposed by the sheer number of projects thus simultaneously considered, the general rule requiring individualized authorization has been modified by a number of statutes in the nature of continuing authorizations, several permitting varying degrees of discretion in the use of funds for specified types of work.<sup>179</sup>

<sup>174</sup> Act of September 22, 1922, § 9, 42 Stat. 1038, 1043, 33 U. S. C. 568.

<sup>175</sup> Act of July 24, 1946, § 2, 60 Stat. 641, 33 U. S. C. 701e.

<sup>176</sup> Sen. Rep. No. 1624, 79th Cong., 2d sess., p. 1 (1946).

<sup>177</sup> See *supra*, pp. 91-92, 100, 134, 136.

<sup>178</sup> See, e. g., Act of May 20, 1826, 4 Stat. 175; Act of December 22, 1944, 58 Stat. 887; Act of March 2, 1945, 59 Stat. 10; Act of May 17, 1950, 64 Stat. 163. See also *supra*, pp. 101-104, 136-141.

<sup>179</sup> The general rule requiring individualized authorization does not apply in the case of operation and maintenance. As to flood-control projects, express provision of statute authorizes "all appropriations" necessary for their operation and maintenance. Act of August 18, 1941, § 10, 55 Stat. 638, 651, 33 U. S. C. 701f-1 note following.

While there is no corresponding statutory provision applying to navigation projects, annual lump-sum appropriations are made "For the preservation

As we group for joint consideration the following provisions applicable to flood-control and navigation work of the Army Engineers, it will be readily apparent that there is a lack of uniformity even here.

(Project Modification)—In the case of navigation projects, whenever “entire reconstruction” of the work is essential to its efficient and economical operation and maintenance, certain “modifications in plan and location” may be made where necessary to provide adequate facilities for existing navigation.<sup>180</sup>

Different provisions apply to flood-control projects. For example, where the total authorization for a project is not sufficient for its completion, the Chief of Engineers may make expenditures on preparations for the project, and so modify the plans that the project will be smaller than originally planned “with a view to completing a useful improvement within an authorization.”<sup>181</sup> Likewise, authority exists for modification of project plans in certain circumstances to provide additional storage capacity for domestic water supply or other conservation storage, if the cost of such increased capacity is contributed by local agencies and they agree to utilize the same in a manner consistent with federal uses and purposes.<sup>182</sup> A unique alternative arrangement is available in the case of flood-control projects, the Chief of Engineers being authorized to modify project plans so as to evacuate areas rather than protect them by levees or flood walls if the cost does not “substantially exceed” the resulting saving in project construction cost.<sup>183</sup>

It should be noted here that flood-control projects of the Army Engineers are generally authorized “substantially in accordance with” the recommendations submitted to Congress as

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and maintenance of existing river and harbor works, and for the prosecution of such projects heretofore authorized as may be most desirable in the interests of commerce and navigation.” See, *e. g.*, Act of October 13, 1949, 63 Stat. 845, —. As to repair work, see Act of July 5, 1884, § 4, 23 Stat. 133, 147, as amended, 33 U. S. C. 5.

<sup>180</sup> Act of July 5, 1884, § 4, 23 Stat. 133, 147, as amended, 33 U. S. C. 5.

<sup>181</sup> Act of August 18, 1941, § 2, 55 Stat. 638, 33 U. S. C. 701m.

<sup>182</sup> Act of June 22, 1936, § 5, 49 Stat. 1570, 1572, as added by Act of July 19, 1937, § 1, 50 Stat. 515, 518, 33 U. S. C. 701h.

<sup>183</sup> Act of June 28, 1938, § 3, 52 Stat. 1215, 1216, 33 U. S. C. 701i.

a basis for the authorization.<sup>184</sup> Navigation projects, on the other hand, are generally authorized "in accordance with" plans previously submitted.<sup>185</sup> Authority for variations is sometimes included, however.<sup>186</sup>

(Utility Repair, Alteration, and Relocation)—Applying both to flood-control and navigation projects, a 1946 statute authorizes the "repair, relocation, restoration, and protection" of a highway, railway, or utility when it has been or is being damaged or destroyed by reason of the operation of any dam or reservoir project under Army control.<sup>187</sup>

A 1940 statute makes provision for the altering or relocating of railroad bridges unreasonably obstructing navigation.<sup>188</sup> Marking a shift in earlier policy, this legislation provides for an apportionment between the United States and the owners of the costs of such alteration or relocation.<sup>189</sup> Applying only to flood-protection projects, a 1946 statute permits the Chief of Engineers to include at federal expense the necessary alterations of railroad bridges and approaches in connection therewith, if the authorized project includes such alterations.<sup>190</sup>

(Bridges on Dams)—Applying generally to federal dam projects, authority exists to construct bridges on flood-control and navigation dams upon conditions of structural feasibility and clearance with specified agencies.<sup>191</sup>

(Fishways)—The Secretary of the Army has authority to provide "practical and sufficient fish-ways" whenever any river and harbor improvement is found to obstruct fish pas-

<sup>184</sup> See, *e. g.*, Act of December 22, 1944, § 10, 58 Stat. 887, 891; Act of July 24, 1946, § 10, 60 Stat. 641, 643.

<sup>185</sup> See, *e. g.*, Act of March 2, 1945, § 2, 59 Stat. 10, 11. But see Alabama-Coosa Project, 59 Stat. 17.

<sup>186</sup> See, *e. g.*, Act of May 17, 1950, § 106, 64 Stat. 163. — Certain improvement of the Intracoastal Waterway in Florida may be constructed along any of several named routes or along "any other route as may be deemed feasible by the Chief of Engineers and approved by the Secretary of the Army."

<sup>187</sup> Act of July 24, 1946, § 9, 60 Stat. 641, 643, 33 U. S. C. 701q.

<sup>188</sup> Act of June 21, 1940, 54 Stat. 497, 33 U. S. C. 511-523.

<sup>189</sup> § 6, 54 Stat. 499, 33 U. S. C. 516. See also *supra*, pp. 114-115.

<sup>190</sup> Act of July 24, 1946, § 3, 60 Stat. 641, 642, 33 U. S. C. 701p. See also *supra*, n. 75, p. 140.

<sup>191</sup> Act of July 29, 1946, § 1, 60 Stat. 709, 23 U. S. C. 64.



sage.<sup>192</sup> A 1946 statute of general application also requires certain measures for the protection of fish and wildlife.<sup>193</sup>

(Power)—Several separate statutes provide for power facilities at navigation and flood-control projects. For example, a 1912 statute authorizes the Secretary of the Army, upon recommendation of the Chief of Engineers, to provide in the permanent parts of an authorized dam “such foundations, sluices, or other works, as may be considered desirable for the future development of its water power.”<sup>194</sup> Moreover, with respect to navigation dams authorized since 1945, with one possible exception, Congress has directed the installation of penstocks and other facilities adaptable to future use for development of power, when approved by the Secretary of the Army upon recommendation of the Chief of Engineers and the Federal Power Commission.<sup>195</sup> A like provision has been made applicable with respect to flood-control projects authorized since 1938.<sup>196</sup>

(School Facilities)—The earlier provisions for school facilities at specified water-resource development projects appear to have been superseded, in effect, by two acts of general application passed in 1950.<sup>197</sup> These statutes authorized federal assistance for school construction and assistance to school districts in federally affected areas. Although neither repeals the previous authorizations, each transfers to the Commissioner of Education appropriations made to other agencies for the same purposes covered by it, and prohibits further appropriations for such purposes under other acts for a limited number of years.<sup>198</sup>

(Other Exceptions)—The statutes involved here are like

<sup>192</sup> Act of August 11, 1888, § 11, 25 Stat. 400, 425, 33 U. S. C. 608.

<sup>193</sup> Act of August 14, 1946, 60 Stat. 1080, see 16 U. S. C. 661–666c. See also *supra*, pp. 329–330.

<sup>194</sup> Act of July 25, 1912, § 12, 37 Stat. 201, 233, 33 U. S. C. 609. A 1917 statute required that provisions of existing law relating to navigation improvements “apply, so far as applicable,” to flood-control improvements. Act of March 1, 1917, § 3, 39 Stat. 948, 950, 33 U. S. C. 701.

<sup>195</sup> See *supra*, n. 199, p. 291.

<sup>196</sup> See *supra*, p. 141.

<sup>197</sup> Act of September 23, 1950, 64 Stat. 967; Act of September 30, 1950, 64 Stat. 1100. For the earlier provisions, see *supra*, pp. 109, 140.

<sup>198</sup> § 209, 64 Stat. —; § 8, 64 Stat. —.

those preceding in that they are exceptions to the general rule under which navigation and flood-control projects and activities are individually authorized. Unlike the foregoing, however, the following statutes are so framed as to remove the necessity for obtaining funds for each individual operation. In some instances, provision is made for expenditure from available funds. In other cases, "emergency" funds are authorized to be appropriated.

An outstanding example involves "small flood-control projects." The Secretary of the Army is authorized to allot up to \$3,000,000 in any one fiscal year from appropriated funds for the construction of undefined "small flood-control projects" not specifically authorized by Congress and not within the areas intended to be protected by authorized projects.<sup>200</sup> Such projects must also come within the 1936 congressional declaration of policy, and must be complete in themselves and not commit the United States to additional improvement to insure their successful operation.<sup>200</sup> Not more than \$150,000 from appropriations for any one fiscal year may be allotted at a single locality and the local cooperation provisions of the amended 1936 Act shall apply.<sup>201</sup>

Another example involving wide discretion in use of funds concerns undefined "rescue work" or the repair or maintenance of flood-control work threatened or destroyed by flood.<sup>202</sup> This authorization includes the strengthening, raising, extending, or other modification for adequate functioning of the work for flood control.<sup>203</sup> In 1950, Congress made provision for an emergency fund of \$15,000,000 for such activities, authorizing

<sup>200</sup> Act of June 30, 1948, § 205, 62 Stat. 1171, 1182, 33 U. S. C. 701s (Supp. III). The 1948 statute's specification of a \$2,000,000 amount was increased to \$3,000,000 by the Act of May 17, 1950, § 212, 64 Stat. 163, —.

<sup>201</sup> *Id.* For the text of the 1936 policy declaration, see *supra*, p. 131.

<sup>202</sup> *Id.* The 1948 statute's limitation of \$100,000 was increased to \$150,000 by the 1950 Act. See *supra*, pp. 136-137.

<sup>203</sup> Act of July 24, 1946, § 12, 60 Stat. 641, 652, as amended, 33 U. S. C. 701n (Supp. III).

<sup>204</sup> Act of June 30, 1948, § 206, 62 Stat. 1171, 1182, see 33 U. S. C. 701n (Supp. III).

an appropriation for initial establishment of the fund and its replenishment on an annual basis.<sup>204</sup>

Somewhat similar authority exists for the construction of emergency bank-protection works to prevent flood damage to highways, bridge approaches, and public works. When the Chief of Engineers deems such work advisable, the Secretary of the Army is authorized to allot up to \$1,000,000 per year from flood-control appropriations, but not more than \$50,000 at any single locality.<sup>205</sup>

In the interests of either navigation or flood control, snag and débris removal and channel straightening may be prosecuted, under specified conditions and within specified limits, without individualized authorization or appropriation.<sup>206</sup>

Moreover, each appropriation act for river and harbor works since 1936 has made provision for expenditure of sums necessary "for the maintenance of harbor channels provided by a State, municipality, or other public agency, outside of harbor lines and serving essential needs of general commerce and navigation."<sup>207</sup> Similarly, the Secretary of the Army is authorized to make direct allotments from available appropriations for drift removal in certain harbors and their tributaries.<sup>208</sup>

Passing note should be made of another exception to the general rule requiring individualized authorization for the undertaking of navigation work by the Army Engineers on a project-by-project basis. This is the surveying and charting of the "Northern and Northwestern lakes," an operation continuing since 1841 under legislation appropriating funds for that purpose.<sup>209</sup>

*Flood-Control Work by the Department of Agriculture.—By*

<sup>204</sup> Act of May 17, 1950, § 210, 64 Stat. 163. See *supra*, n. 62, pp. 137-138.

<sup>205</sup> Act of July 24, 1946, § 14, 60 Stat. 641, 653, 33 U. S. C. 701r.

<sup>206</sup> Act of March 2, 1945, § 3, 59 Stat. 10, 23, 33 U. S. C. 603a; Act of August 28, 1937, § 2, 50 Stat. 876, 877, as amended, 33 U. S. C. 701g. See also *supra*, n. 155, p. 102.

<sup>207</sup> See, e. g., Act of May 15, 1936, 49 Stat. 1278, 1306.

<sup>208</sup> Act of July 3, 1930, § 6, 46 Stat. 918, 947, 33 U. S. C. 607a; Act of June 30, 1948, § 102, 62 Stat. 1171, 1173, 33 U. S. C. 572 (Supp. III); Act of May 17, 1950, § 102, 64 Stat. 163, —.

<sup>209</sup> See *supra*, p. 104.

a 1937 statute, the Secretary of Agriculture is generally authorized to make preliminary examinations and surveys "for run-off and water-flow retardation and soil-erosion prevention on the watersheds" of all waterways previously authorized to be surveyed by the Army Engineers.<sup>210</sup> Works of improvement for such measures are "authorized to be prosecuted by the Department of Agriculture under the direction of the Secretary of Agriculture and in accordance with plans approved by him."<sup>211</sup> In practice, the Department of Agriculture nevertheless prepares and submits to Congress programs for works of improvement.<sup>212</sup> And Congress has specifically authorized such works in the same manner as it individually authorizes the flood-control projects of the Army Engineers.<sup>213</sup>

In addition, and without individualized congressional authorization, the Secretary of Agriculture is empowered to undertake "emergency measures for run-off retardation and soil-erosion prevention" to safeguard lives and property from floods and the products of erosion "on any watershed" which has been suddenly impaired by fire or other natural force.<sup>214</sup> Not to exceed \$300,000 may be expended during any one fiscal year for such emergency measures.<sup>215</sup>

*Irrigation Projects.*—Reclamation projects meeting the repayment standard do not require individualized legislative authorization. And there are correspondingly fewer statutory exceptions to this general rule than in the case of Army Engineer projects which generally require such specific authorization, as we have seen.

Under the Reclamation Project Act of 1939, any new project, new division of a project, or new supplemental works on a

<sup>210</sup> Act of August 28, 1937, § 3, 50 Stat. 876, 877. See also *supra*, pp. 374-375.

<sup>211</sup> Act of June 28, 1938, § 7, 52 Stat. 1215, 1225, 33 U. S. C. 701b-1. See also *supra*, n. 136, p. 375.

<sup>212</sup> See, e. g., H. Rep. No. 1309, 78th Cong., 2d sess., pp. 51-52 (1944); Sen. Rep. No. 1030, 78th Cong., 2d sess., pp. 26-29 (1944).

<sup>213</sup> See, e. g., Act of December 22, 1944, § 13, 58 Stat. 887, 905.

<sup>214</sup> Act of December 22, 1944, § 15, 58 Stat. 907, amending § 7 of the Act of June 28, 1938, 52 Stat. 1215, 1225.

<sup>215</sup> Act of May 17, 1950, § 216, 64 Stat. 163, —.

project shall be deemed authorized and may be undertaken after the Secretary of the Interior has submitted his report and feasibility findings "to the President and to the Congress."<sup>216</sup> As earlier noted, such findings concern engineering feasibility, estimated construction costs, and the parts of those costs properly allocable to irrigation, power, and municipal water supply or other miscellaneous purposes, together with any nonreimbursable allocations to navigation, flood control, and preservation and propagation of fish and wildlife.<sup>217</sup> But if the Act's pay-out requirement is not met, individualized legislative approval is required.<sup>218</sup> So also if an "affected" state or the Secretary of the Army objects to the plans or proposals.<sup>219</sup>

However a proposal for the construction of irrigation works in connection with Army dam and reservoir projects may be undertaken only after a report and finding, as described above, and after "subsequent specific authorization" by Congress.<sup>220</sup> Here, it is provided that, "within the limits of the water users' repayment ability" the report may be predicated upon "the allocation to irrigation of an appropriate portion of the cost of the structures and facilities used for irrigation and other purposes."<sup>221</sup> This authorization procedure is made expressly inapplicable to any dam or reservoir constructed by the Army Engineers prior to December 22, 1944, which provides conservation storage of water for irrigation purposes.<sup>222</sup>

The Secretary of the Interior is generally authorized in connection with the construction or operation and maintenance of any project to acquire lands or interests therein for the "relocation of highways, roadways, railroads, telegraph, telephone, or electric transmission lines, or any other properties whatsoever," the relocation of which is necessitated by project con-

<sup>216</sup> Act of August 4, 1939, § 9(a), 53 Stat. 1187, 1193, 43 U. S. C. 485h(a). See also *supra*, n. 257, p. 194.

<sup>217</sup> See *supra*, pp. 194-196.

<sup>218</sup> See *supra*, p. 195.

<sup>219</sup> Act of December 22, 1944, § 1(c), 58 Stat. 887, 889.

<sup>220</sup> Act of December 22, 1944, § 8, 58 Stat. 887, 891, 43 U. S. C. 390.

<sup>221</sup> *Id.* Cf. Act of June 5, 1944, § 3, 58 Stat. 270, 43 U. S. C. 593b (Hungry Horse Project).

<sup>222</sup> *Id.*

struction, operation, and maintenance.<sup>223</sup> To this end, he may enter into contracts with the owners of such properties whereby they undertake to acquire the property needed for relocation, or to perform the work involved in such relocation.<sup>224</sup> He is also empowered to make contracts for the "exchange or replacement of water, water rights, or electric energy or for the adjustment of water rights."<sup>225</sup>

Furthermore, authorizations provided in certain previously described general statutes apply in the case of Reclamation projects. These include provisions for bridges on dams, measures for the protection of fish and wildlife, and for construction of school facilities at federally affected areas.<sup>226</sup>

*Water-Conservation and Utilization Projects.*—Another and different method of authorization is prescribed in the case of water-conservation and utilization projects authorized for development by the Secretary of the Interior in cooperation with the Department of Agriculture.<sup>227</sup> Such a project is deemed authorized after submission of prescribed findings by the Secretary of the Interior to the President, and after the President approves such findings and himself makes further prescribed findings.<sup>228</sup>

*Projects Under the Water Facilities Act.*—In carrying out the policy of Congress to assist in providing facilities for water storage and utilization in arid and semiarid areas, the Secretary of Agriculture is generally authorized to formulate and keep current a program of projects for the construction and maintenance of "ponds, reservoirs, wells, check-dams, pumping installations, and other facilities for water storage or utilization," and to construct, and sell, or lease such facilities.<sup>229</sup> Individualized legislative authorization is not prerequisite.

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<sup>223</sup> Act of August 4, 1939, § 14, 53 Stat. 1187, 1197, 43 U. S. C. 389.

<sup>224</sup> *Id.*

<sup>225</sup> *Id.*

<sup>226</sup> See *supra*, pp. 94-95, 329-330, 529.

<sup>227</sup> Act of August 11, 1939, 53 Stat. 1418, as amended and restated by Act of October 14, 1940, 54 Stat. 1119, as amended, 16 U. S. C. 590y-590z-11. See also *supra*, pp. 243-245.

<sup>228</sup> § 3, 54 Stat. 1120, as amended, 16 U. S. C. 590z-1.

<sup>229</sup> Act of August 28, 1937, §§ 1, 2, 50 Stat. 869, 16 U. S. C. 590r, 590s.

*Tennessee Valley Authority.*—Among the general powers granted to TVA in the case of the Tennessee River and its tributaries, it is pertinent to note here its authority to construct such dams and reservoirs as will provide a described nine-foot channel and will best serve to promote navigation and control destructive floods.<sup>220</sup> It has similar power to acquire or construct navigation projects and incidental works, including certain power facilities.<sup>221</sup> Again, individualized legislative authorization is not required. The foregoing provision was accompanied by a direction for TVA to report to Congress by April 1, 1936, its recommendations for unified development of the Tennessee River System.<sup>222</sup>

Another variation here should be noted. In case any bridge or other highway or railroad structure is endangered by any TVA dam, reservoir, or other improvement, its owner must be compensated for "the reasonable actual cost of such protection, alteration, reconstruction, relocation, or replacement" as may be necessary or proper to preserve its safety or utility or to meet the requirements of navigation or flood control.<sup>223</sup>

*International Boundary and Water Commission, United States and Mexico.*—With respect to the Rio Grande below Fort Quitman, Texas, the President has general authority to construct any and all works or projects recommended to him as a result of specified investigations authorized in the case of the boundary between the United States and Mexico and which he deems "necessary and proper."<sup>224</sup> Individualized legislative authorization is not required.

It should also be noted that several such projects are contemplated by a 1944 treaty providing for their construction by the International Boundary and Water Commission.<sup>225</sup> The

<sup>220</sup> Act of May 18, 1933, § 4(j), 48 Stat. 58, 61, as amended by Act of August 31, 1935, § 2, 49 Stat. 1075, 16 U. S. C. 831c(j).

<sup>221</sup> *Id.* See also *supra*, pp. 306-309.

<sup>222</sup> Act of August 31, 1935, § 2, 49 Stat. 1075.

<sup>223</sup> Act of November 21, 1941, 55 Stat. 773, 16 U. S. C. 831c-1. *Cf. supra*, pp. 114-115.

<sup>224</sup> Act of August 19, 1935, § 2, 49 Stat. 660, see 22 U. S. C. 277a.

<sup>225</sup> Treaty of February 3, 1944, Art. 5, 59 Stat. 1219, 1928, Treaty Series 994. See also *supra*, pp. 122-123, 148-149, 480-481.

President had previously been authorized to construct "any project or works which may be provided for in a treaty entered into with Mexico."<sup>236</sup> In consenting to ratification of the 1944 treaty, the Senate prescribed that no officer or employee of the United States may commit the United States to the construction of any works other than those specifically provided for in the treaty without the prior approval of Congress.<sup>237</sup>

*Pattern of Authorization.*—The foregoing provisions range from individualized legislative authorization of projects to a blanket grant of authority to an agency head. The variations seem generally related to the scope of possible project selection under the program involved.

Thus, as a result of nation-wide jurisdiction over navigation and flood-control projects, the scope of possible activity is broadest in the case of the Army Engineers. For they plan and construct such projects on a nation-wide basis. In turn, statutes make individualized legislative approval prerequisite as a general rule.

On the other hand, projects of the Bureau of Reclamation are by nature limited to arid and semiarid areas and under Reclamation Law to the West. Under a prescribed statutory standard, projects may be authorized after submission of administrative findings to the President and to Congress. But selection is limited by the fact that, if an "affected" state or the Secretary of the Army objects, the project may be authorized only by act of Congress.

Another difference may be noted. No pay-out formula is prescribed for Army Engineer projects. But Congress has in certain types of cases required "local contributions" toward flood-control projects. Like contributions have been required as to some individual navigation projects.<sup>238</sup> In the case of Reclamation projects, on the other hand, the statutory pay-out standard tends to limit further the range of project selection.

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<sup>236</sup> Act of August 19, 1935, § 2, 49 Stat. 660, see 22 U. S. C. 277a.

<sup>237</sup> Sen. Res. of April 18, 1945, 59 Stat. 1263.

<sup>238</sup> See *supra*, n. 175, p. 106.



Three factors seem to narrow the impact of the foregoing differences. First, as a sequel of the general rule for requiring individualized legislative approval of navigation and flood-control projects, Congress has enacted a number of statutes in the nature of continuing authorizations for specified types of work in the interests of navigation and flood control. Secondly, Congress in 1944 established a procedure for authorization of the undertaking of irrigation works at Army dam and reservoir projects. Finally, in a number of individual cases, Congress has relaxed the pay-out standard for Reclamation projects by lengthening the repayment period,<sup>239</sup> and in several cases it has individually authorized Reclamation projects.<sup>240</sup>

Certain features of the bases for project selection under the other statutes should be noted. In each, legislative control is less direct, none requiring individualized project approval by Congress. As to project selection in the cases of the TVA and International Boundary and Water Commission, significance may attach to two facts. In both instances, the geographic area involved is relatively small, and available information in both cases made it possible to foresee the probable effect of blanket authorizations.<sup>241</sup> Similarly limited is the range of project selection under the Water Conservation and Utilization Act and under the Water Facilities Act. Both are restricted to arid and semiarid regions, and both impose ceilings on project expenditures.

ANNUAL REVIEW BY APPROPRIATION COMMITTEES.—In addition to whatever legislative review of individual project proposals may be provided under the procedures already outlined, each federal agency must submit to Congress its annual budget program and summary of project activities for review by the appropriation committees of Congress.<sup>242</sup>

<sup>239</sup> See *supra*, n. 333, p. 208

<sup>240</sup> See, *e. g.*, *supra*, n. 144, p. 519.

<sup>241</sup> See, *e. g.*, H. Doc. No. 328, 71st Cong., 2d., sess. (1930) ; H. Doc. No. 359, 71st Cong., 2d sess. (1930). See also H. Rep. No. 422, 74th Cong., 1st sess., pp. 2-3 (1935).

In the case of the Rio Grande, surveys had been continuing for some time. Act of May 13, 1924, 43 Stat. 118, as amended, 22 U. S. C. 277.

<sup>242</sup> See *supra*, p. 525.

This includes government corporations.<sup>283</sup> Their budget programs must be submitted through the Bureau of the Budget to the President, and thence to Congress.<sup>284</sup> Moreover, it is expressly stipulated that, "if necessary, legislation shall be enacted making available such funds or other financial resources as the Congress may determine."<sup>285</sup> It is not clear whether this language contemplates merely appropriation of additional funds, or whether it affirmatively authorizes restrictive provisions in an appropriation act with respect to corporate funds, a restriction which would otherwise be subject to a point of order as substantive legislation.<sup>286</sup> It should be noted, however, that although the same section expressly prohibits its being construed as affecting in any way the section of the Tennessee Valley Authority Act allowing TVA to retain and use its revenues,<sup>287</sup> a 1947 appropriation statute did contain a restriction applicable to TVA.<sup>288</sup>

The point is that annual submission of a budget program by federal agencies permits full legislative review by Congress, affording opportunity for control over project selection and activities in federal water-resource programs.

### Restrictions on Use of Water

Under existing law, a number of restrictions on the use of water must be considered in the design, construction, and operation of water-resource projects and activities.

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<sup>283</sup> "It is hereby declared to be the policy of the Congress to bring Government corporations and their transactions and operations under annual scrutiny by the Congress and to provide current financial control thereof." Act of December 6, 1945, § 2, 59 Stat. 597, 31 U. S. C. 841. This is the Government Corporation Control Act.

<sup>284</sup> §§ 102, 103, 59 Stat. 598, 31 U. S. C. 847, 848.

<sup>285</sup> § 104, 59 Stat. 598, 31 U. S. C. 849.

<sup>286</sup> Rule XXI, RULES OF THE HOUSE OF REPRESENTATIVES, H. Doc. No. 766, 80th Cong., 2d sess., pp. 416-417 (1949); Rule XVI, SENATE MANUAL, Sen. Doc. No. 11, 81st Cong., 1st sess., p. 20 (1949). There is, of course, no question as to the validity of such restrictions if enacted.

<sup>287</sup> § 104, 59 Stat. 598, 31 U. S. C. 849; Act of May 18, 1933, § 23, 48 Stat. 58, 71, as amended, 16 U. S. C. 831y.

<sup>288</sup> Act of July 30, 1947, Titles I, II, 61 Stat. 574, 576, 16 U. S. C. 831h-2 (Supp. III).

BACKGROUND.—As we earlier noted, the riparian doctrine prevailing in the East permits only an owner of lands riparian to a stream to make use of its waters, and only on his riparian lands.<sup>249</sup> We also pointed out that, under the arid conditions generally prevailing in parts of the West, a custom evolved whereby acquisition of water by prior appropriation for beneficial use was entitled to protection. The first in time is prior in right. Nor are appropriative water rights confined to riparian owners. Evolving from custom and usage, the doctrine of appropriation was early recognized in legislation and judicial decision. Today, while some of the 17 Western States still variously recognize the riparian doctrine, it has been specifically repudiated by eight of them. On the other hand, the appropriation doctrine is variously recognized in all 17 States.

Similarly, we have previously observed that contests arose between appropriators under this possessory system and patentees under the 1862 Homestead Act and the 1864 Pacific Railway Act, the latter claiming to be successors of the United States with the right to oust prior appropriators of waters on the lands patented.<sup>250</sup> Soon thereafter, Congress passed the Act of 1866, a statute making good appropriations in being as against later patents to riparian parcels of the public domain.<sup>251</sup> An 1870 supplement subjected patents, preemptions, and homesteads to accrued water rights, or rights to ditches and reservoirs used in connection with such water rights, as may have been acquired under or recognized by the 1866 Act.<sup>252</sup>

Significant also is the proviso in the Desert Land Act of 1877, which makes the right to the use of water dependent upon "bona fide prior appropriation" not to exceed the amount of water "actually appropriated, and necessarily used for the purpose of irrigation and reclamation."<sup>253</sup> With respect to that part of the public domain subject to the 1877 Act, the Supreme

<sup>249</sup> See *supra*, pp. 34-35, 155-158.

<sup>250</sup> See *supra*, pp. 35-36.

<sup>251</sup> See *supra*, pp. 35-37. For the text of the relevant portion of the Act of 1866, see *supra*, p. 36.

<sup>252</sup> For the text of the relevant portion of the Act of 1870, see *supra*, p. 36.

<sup>253</sup> For the full text of the relevant portion of the Act of 1877, see *supra*, pp. 37-38.

Court has said that Congress intended to establish a rule that for the future the land should be patented separately, and that "all non-navigable waters thereon should be reserved for the use of the public under the laws of the states and territories named."<sup>254</sup> This statute:<sup>255</sup>

simply recognizes and gives sanction, in so far as the United States and its future grantees are concerned, to the state and local doctrine of appropriation, and seeks to remove what otherwise might be an impediment to its full and successful operation.

The effect of the recognition accorded by these statutes to the doctrine of appropriation so far as they concern public lands is subject to certain qualifications, as is apparent from several decisions of the Supreme Court.<sup>256</sup> Thus, unless authorized by Congress:<sup>257</sup>

a State cannot by its legislation destroy the right of the United States, as the owner of lands bordering on a stream, to the continued flow of its waters; so far at least as may be necessary for the beneficial uses of the government property.

Nor did Congress by the Acts of 1866, 1870, and 1877 intend "to release its control over the navigable streams of the country" or to grant the right "to appropriate the waters on the sources of navigable streams to such an extent as to destroy their navigability."<sup>258</sup> When it later held the Colorado River to be a navigable stream of the United States, the Supreme Court in 1936 said:<sup>259</sup>

The privilege of the states through which it flows and their inhabitants to appropriate and use the water is subject to the paramount power of the United States to control it for the purpose of improving navigation.

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<sup>254</sup> *California Oregon Power Co. v. Beaver Portland Cement Co.*, 295 U. S. 142, 162 (1935).

<sup>255</sup> 295 U. S. at 164.

<sup>256</sup> See *supra*, pp. 38-42.

<sup>257</sup> *United States v. Rio Grande Irrigation Co.*, 174 U. S. 690, 703 (1899).

<sup>258</sup> 174 U. S. at 703.

<sup>259</sup> *Arizona v. California*, 298 U. S. 558, 569 (1936).

Moreover, exercising its treaty-making powers, the United States has undeniable authority to reserve the waters of a non-navigable stream and exempt them from appropriation under state laws.<sup>260</sup>

Furthermore, after enactment of the statutes discussed above, Congress passed still other laws involving use of public lands which either purport to exercise control over the acquisition of rights to use of water, or proceed on an assumption of the existence of the power to do so.<sup>261</sup> For example, in 1897, it enacted this provision regulating the use of waters within national forests:<sup>262</sup>

All waters on such reservations may be used for domestic, mining, milling, or irrigation purposes, under the laws of the State wherein such forest reservations are situated, or under the laws of the United States and the rules and regulations established thereunder.

Such is the division between federal and state power under the Constitution, and such is the situation created by statutes, summarized briefly above, that conflicting claims over rights to use of waters frequently arise in the West. We have already referred to one, for example, that involving the unresolved claim recently advanced by the United States that the Acts of 1866, 1870, and 1877 did not divest it of title to or control over unappropriated waters in nonnavigable streams in the West.<sup>263</sup>

**FEDERAL WATER-RESOURCE PROJECTS AND ACTIVITIES.**—The importance of rights to use of water in the economy of the West is a matter of common knowledge. And Congress has prescribed a number of measures recognizing that importance in statutes providing for federal participation in the development, utilization, and conservation of water resources. Such provisions of course affect the design, construction, and operation of water-resource projects and activities. But these measures do not cover the full range of possible difficulties, as we shall see.

<sup>260</sup> *Winters v. United States*, 207 U. S. 564, 577 (1908).

<sup>261</sup> See *supra*, n. 171, p. 42.

<sup>262</sup> Act of June 4, 1897, § 1, 30 Stat. 11, 36, 16 U. S. C. 481.

<sup>263</sup> See *supra*, pp. 41-42.

*Navigation and Flood-Control Projects.*—In the 1944 Flood Control Act, Congress included this pronouncement of policy:<sup>264</sup>

In connection with the exercise of jurisdiction over the rivers of the Nation through the construction of works of improvement, for navigation or flood control, as herein authorized, it is hereby declared to be the policy of the Congress to recognize the interests and rights of the States in determining the development of the watersheds within their borders and likewise their interests and rights in water utilization and control, as herein authorized to preserve and protect to the fullest possible extent established and potential uses, for all purposes, of the waters of the Nation's rivers; to facilitate the consideration of projects on a basis of comprehensive and coordinated development; and to limit the authorization and construction of navigation works to those in which a substantial benefit to navigation will be realized therefrom and which can be operated consistently with appropriate and economic use of the waters of such rivers by other users.

In conformity with that policy, Congress prescribed measures for cooperation with "affected" states, the details of which we have already set forth.<sup>265</sup> The policy quoted above and the procedures prescribed for cooperation relate to improvements for navigation and for flood control.

In addition, Congress at the same time enacted the following restriction on navigation use:<sup>266</sup>

The use for navigation, in connection with the operation and maintenance of such works herein authorized for construction, of waters arising in States lying wholly or partly west of the ninety-eighth meridian shall be only such use as does not conflict with any beneficial consumptive use, present or future, in States lying wholly or partly west of the ninety-eighth meridian, of

<sup>264</sup> Act of December 22, 1944, § 1, 58 Stat. 887.

<sup>265</sup> See *supra*, pp. 96-97, 520-522.

<sup>266</sup> § 1(b), 58 Stat. 889.

such waters for domestic, municipal, stock water, irrigation, mining, or industrial purposes.

This restriction is thus made applicable only to the works authorized in the 1944 statute. But the same restriction was repeated with respect to projects authorized by the 1945 River and Harbor Act, and has since been made applicable as to those authorized in all subsequent Flood Control and River and Harbor Acts.<sup>267</sup> As to the Arkansas River and its tributaries, Congress has specified that the word "navigation" in the above-quoted provision shall include the use of water for power purposes.<sup>268</sup>

No provision is made, however, with respect to waters other than those "arising in States lying wholly or partly west of the ninety-eighth meridian." Nor is there a legislative directive establishing a relationship between the operation and maintenance of pre-1944 projects and uses of water under state law.

It should also be noted that no corresponding general restriction has been enacted with respect to control of water for purposes of flood control. However, with respect to the Denison Dam, Congress in 1938 stated that:<sup>269</sup>

The Government of the United States acknowledges the right of the States of Oklahoma and Texas to continue to exercise all existing proprietary or other rights of supervision of and jurisdiction over the waters of all tributaries of Red River within their borders above Denison Dam site and above said dam, if and when constructed, in the same manner and to the same extent as is now or may hereafter be provided by the laws of said States, respectively, and all of said laws as they now exist or as same may be hereafter amended or enacted and all rights thereunder, including the rights to impound or authorize the retardation or impounding thereof for flood control above the said Denison Dam and to divert the same for municipal purposes, domestic

<sup>267</sup> See, e. g., Act of March 2, 1945, § 1 (b), 59 Stat. 10, 11.

<sup>268</sup> Act of July 24, 1946, § 1, 60 Stat. 634.

<sup>269</sup> Act of June 28, 1938, § 4(b), 52 Stat. 1215, 1219.

uses, and for irrigation, power generation, and other beneficial uses, shall be and remain unaffected by or as a result hereof. All such rights are hereby saved and reserved for and to the said States and the people and the municipalities thereof, and the impounding of any such waters for any and all beneficial uses by said States or under their authority may be as freely done after the passage hereof as the same may now be done.

The 1944 Act also contains an authorization for the Secretary of the Army to make contracts for domestic and industrial uses for surplus water available at any reservoir under Army control.<sup>270</sup> And Congress directed that no such contracts "shall adversely affect then existing lawful uses" of such water.<sup>271</sup>

*Irrigation Projects.*—Unlike navigation and flood-control projects governed by the foregoing provisions, projects under Reclamation Law involve principally a "consumptive" use of water—the putting of water on land to enable its productive use. The 1902 Reclamation Act contains a provision characterized by the United States Supreme Court as "a direction by Congress to the Secretary of the Interior" to proceed in conformity with state laws in the appropriation of water for irrigation purposes.<sup>272</sup> This requirement, Section 8, provides:<sup>273</sup>

That nothing in this Act shall be construed as affecting or intended to affect or to in any way interfere with the laws of any State or Territory relating to the control,

<sup>270</sup> Act of December 22, 1944, § 6, 58 Stat. 887, 890, 33 U. S. C. 708.

<sup>271</sup> *Id.*

<sup>272</sup> *Nebraska v. Wyoming*, 325 U. S. 589, 614 (1945).

<sup>273</sup> Act of June 17, 1902, § 8, 32 Stat. 388, 390, 43 U. S. C. 333, 372. See also *supra*, pp. 46-48.

With Section 8 compare this provision appearing in a recent statute authorizing the Folsom Dam, "Nothing contained in this Act shall be construed by implication or otherwise as an allocation of water and in the studies for the purposes of developing plans for disposal of water as herein authorized the Secretary of the Interior shall make recommendations for the use of water in accord with State water laws, including but not limited to such laws giving priority to the counties and areas of origin for present and future needs." Act of October 14, 1949, § 2, 63 Stat. 852.



appropriation, use, or distribution of water used in irrigation, or any vested right acquired thereunder and the Secretary of the Interior, in carrying out the provisions of this Act, shall proceed in conformity with such laws, and nothing herein shall in any way affect any right of any State or of the Federal Government or of any landowner, appropriator, or user of water in, to, or from any interstate stream or the waters thereof: *Provided*, That the right to the use of water acquired under the provisions of this Act shall be appurtenant to the land irrigated, and beneficial use shall be the basis, the measure, and the limit of the right.

*Water-Conservation and Utilization Projects.*—Among the findings made prerequisite to construction of projects under the Water Conservation and Utilization Act, Congress directed that the Secretary of the Interior shall have found: <sup>274</sup>

- (i) that water rights adequate for the purposes of the project have been acquired with titles and at prices satisfactory to him, or that such water rights have been initiated and in his judgment can be perfected in conformity with State law and any applicable interstate agreements and in a manner satisfactory to him; and
- (ii) that such water rights can be utilized for the purposes of the project in conformity with State law and any applicable interstate agreements and in a manner satisfactory to him.

**NONFEDERAL POWER PROJECTS.**—In addition to the foregoing provisions relating to the use of water in connection with federal projects, Congress included in the Federal Power Act a provision pertinent here. It directed that nothing contained in that Act: <sup>275</sup>

shall be construed as affecting or intending to affect or in any way to interfere with the laws of the respective

<sup>274</sup> Act of October 14, 1940, § 3(b), 54 Stat. 1119, 1121, as amended, 16 U. S. C. 590z-1(b).

<sup>275</sup> Act of June 10, 1920, § 27, 41 Stat. 1063, 1077, as amended, 16 U. S. C. 821. See also *supra*, n. 87, p. 276.

States relating to the control, appropriation, use, or distribution of water used in irrigation or for municipal or other uses, or any vested right acquired therein.

**NATIONAL PARKS.**—Another restriction on use of water for water-resource projects arises from legislation concerning the national parks. The express purpose of such parks is: <sup>276</sup>

to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.

In 1921, Congress reinforced this purpose by prohibiting the issuance of licenses for nonfederal development under the Federal Power Act in the case of "existing national parks and national monuments."<sup>277</sup> Similarly, Congress has in certain cases prohibited interstate compacts from affecting such areas.<sup>278</sup> On the other hand, legislative permission has been granted in some cases for power and for reclamation.<sup>279</sup>

**INTERSTATE COMPACTS.**—We have previously referred to the increasing use of interstate compacts as a means for accomplishing an apportionment of the waters of interstate streams.<sup>280</sup> Interstate water compacts involve matters of mutual concern and interest to the United States and the affected states. It is accordingly important that the provisions of such compacts

<sup>276</sup> Act of August 25, 1916, § 1, 39 Stat. 535, as amended, 16 U. S. C. 1.

<sup>277</sup> Act of March 3, 1921, 41 Stat. 1353. For a partial listing of later acts applying specifically to subsequently created parks or lands acquired therefor, see FEDERAL POWER ACT, Federal Power Commission, App., p. 54, n. 3 (1940).

<sup>278</sup> See, e. g., Act of June 3, 1948, 62 Stat. 294; Act of June 2, 1949, 63 Stat. 152.

<sup>279</sup> For example, the Secretary of the Interior is authorized to permit use of rights-of-way through specified national parks for designated power, irrigation, and other facilities. Act of February 15, 1901, 31 Stat. 790, as amended, 43 U. S. C. 959.

In the case of the Rocky Mountain National Park, express authority is provided for utilizing "for flowage or other purposes any area within said park which may be necessary for the development and maintenance of a Government reclamation project." Act of January 26, 1915, § 1, 38 Stat. 798, 16 U. S. C. 191.

<sup>280</sup> See *supra*, pp. 65-66.

“reflect as clearly as possible a recognition of the respective responsibilities and prerogatives of the United States and the affected states.”<sup>281</sup>

The possibilities in the use of interstate compacts in relation to federal water-resource development may be illustrated by reference to the Boulder Canyon Project Act.<sup>282</sup> Under it, the United States, its permittees, licensees, and contractees, and all users and appropriators of water from the project are made subject to and controlled by the Colorado River Compact in constructing, managing, and operating the reservoir, canals, and other works authorized by the Act.<sup>283</sup>

Two other provisions of this statute merit note here. Nothing in the Act may be construed as interfering with such rights as the states had on the date of passage of the Act:<sup>284</sup>

either to the waters within their borders or to adopt such policies and enact such laws as they may deem necessary with respect to the appropriation, control, and use of waters within their borders, except as modified by the Colorado River compact or other interstate agreement.

At the same time, Congress directed that the dam and reservoir shall be used:<sup>285</sup>

First, for river regulation, improvement of navigation, and flood control; second, for irrigation and domestic uses and satisfaction of present perfected rights in pursuance of Article VIII of said Colorado River compact; and third, for power.

TREATIES.—Controlling limitations may be imposed by treaty upon the use of water. Thus, by treaties with western tribes of Indians, the United States has reserved for certain Indians rights to use of water. Upon establishment of certain

<sup>281</sup> See *supra*, n. 293, p. 67.

<sup>282</sup> Act of December 21, 1928, 45 Stat. 1057, as amended, 43 U. S. C. 617-617t. For a summary of certain facts relating to the Colorado River Compact, see *supra*, n. 27, pp. 320-321.

<sup>283</sup> § 8(a), 45 Stat. 1062, 43 U. S. C. 617g(a). See also Act of July 19, 1940, § 14, 54 Stat. 774, 779, 43 U. S. C. 618m.

<sup>284</sup> § 18, 45 Stat. 1065, 43 U. S. C. 617q. See also Act of July 19, 1940, § 14, 54 Stat. 774, 779, 43 U. S. C. 618m.

<sup>285</sup> § 6, 45 Stat. 1061, 43 U. S. C. 617e.

Indian reservations from territorial lands, the Supreme Court has held that rights to use of water for the irrigation of reservation lands have been impliedly reserved.<sup>286</sup> Moreover, provisions of treaties with respect to boundary waters have established fixed standards for the operation of projects constructed or regulated by international bodies established pursuant to treaty. With respect to boundary waters between the United States and Canada, the International Joint Commission has authority to approve the use, obstruction, or diversion of boundary waters.<sup>287</sup> By treaty, it is required to observe the following order of precedence in the exercise of its authority:<sup>288</sup>

- (1) Uses for domestic and sanitary purposes;
- (2) Uses for navigation, including the service of canals for the purposes of navigation;
- (3) Uses for power and for irrigation purposes.

In the case of the boundary portions of the Rio Grande and Colorado River, the International Boundary and Water Commission, United States and Mexico, is required by treaty to be guided by the following order of precedence in making provision for joint use of international waters, subject to any sanitary works or measures agreed upon by the two Governments:<sup>289</sup>

1. Domestic and municipal uses.
2. Agriculture and stock raising.
3. Electric power.
4. Other industrial uses.
5. Navigation.
6. Fishing and hunting.

<sup>286</sup> *Winters v. United States*, 207 U. S. 564, 576-577 (1908). See also *supra*, pp. 57, 249.

<sup>287</sup> Treaty of January 11, 1909, Art. III, 36 Stat. 2448, 2449.

<sup>288</sup> Art. VIII, 36 Stat. 2451.

<sup>289</sup> Treaty of February 3, 1944, Art. 3, 59 Stat. 1219, 1225.

In this connection, it should be noted that in advising and consenting to ratification of the treaty, the Senate stipulated that "nothing contained in the treaty or protocol shall be construed as authorizing the Secretary of State of the United States, the Commissioner of the United States Section of the International Boundary and Water Commission, or the United States Section of said Commission, directly or indirectly to alter, or control the distribution of water to users within the territorial limits of any of the individual States." Sen. Res. of April 18, 1945, 59 Stat. 1263, 1265.

7. Any other beneficial uses which may be determined by the Commission.

### Design and Prosecution of Projects

It has long been required that, except as otherwise provided by law, sums appropriated for the various branches of expenditure in the public service "shall be applied solely to the objects for which they are respectively made, and for no others."<sup>290</sup> The importance of the "objects" for which funds are appropriated in the case of water-resource projects and activities is therefore obvious. Such "objects" may be specified in the appropriation act itself, or may be ascertained from the authorization for that appropriation. In either event, the "objects" become limitations on the consequent design, construction, and operation of the project. And limitations may of course be prescribed in other legislation, such as the statutes authorizing construction of the project.

Significance therefore attaches to the authorized purposes of a project. While its design, construction, and operation may not be limited to the precise plans existing at the time of authorization, they would seem clearly to be limited, as a general rule, to the purposes inherent in those plans. Exceptions would occur in cases where blanket authority exists for inclusion of an additional purpose, as in the case of recreational facilities at Army reservoir projects.<sup>291</sup> A similar situation exists generally with respect to inclusion of provisions for the preservation of fish and wildlife.<sup>292</sup>

**DIVISION OF PROJECT RESPONSIBILITY: EFFECT ON DESIGN.**—Generally, the design of projects is a function of the construction agency. The design of projects, however, may be influenced by a division of responsibilities affecting the project.

For example, responsibility for marketing of federal power

<sup>290</sup> R. S. § 3678, from Act of March 3, 1809, § 1, 2 Stat. 535, as amended, 31 U. S. C. 628.

<sup>291</sup> Act of December 22, 1944, § 4, 58 Stat. 887, 889, as amended, 16 U. S. C. 460d.

<sup>292</sup> See *supra*, p. 329.

is frequently vested in an agency other than the agency constructing the project. This may or may not be accompanied by a responsibility concerning design of electrical facilities. For example, the Secretary of the Interior markets surplus power from Army dam and reservoir projects.<sup>293</sup> But here he has no statutory responsibility for design.

In some cases, surplus power from dams constructed by the Bureau of Reclamation is marketed by other agencies.<sup>294</sup> As in the preceding situation, no statutory provision is made for the participation by the marketing agency in the design function.

Another division of responsibility exists in the case of the Bonneville Project and Fort Peck Project Acts. But unlike the preceding situation, both statutes here make express identical provision for the overlapping of interest where responsibility is divided.<sup>295</sup> Thus, the Secretary of the Army is directed to:<sup>296</sup>

provide, construct, operate, maintain, and improve at Bonneville project such machinery, equipment, and facilities for the generation of electric energy as the administrator may deem necessary to develop such electric energy as rapidly as markets may be found therefor.

**CONDITIONS PRECEDENT TO DESIGN AND CONSTRUCTION.**—Variations occur among different statutes which require that certain preliminary steps be taken in some cases before projects may be designed, and in others prior to construction.

*Local Contribution.*—In the case of navigation projects, each survey report must include a statement of special or local benefit which will accrue to affected localities and of general or national benefits, together with recommendations as to what local co-

<sup>293</sup> See *supra*, pp. 294–295.

<sup>294</sup> See *supra*, n. 243, p. 300, and n. 267, p. 304.

<sup>295</sup> Act of August 20, 1937, § 1, 50 Stat. 731, 16 U. S. C. 832; Act of May 18, 1938, § 1, 52 Stat. 403, 16 U. S. C. 833. In the latter act, the words "Fort Peck" and "Bureau" appear in place of "Bonneville" and "administrator."

<sup>296</sup> § 1, 50 Stat. 731, 16 U. S. C. 832.

operation should be required.<sup>297</sup> And while there is no general requirement of local contribution as a condition precedent, Congress has stipulated such requirements from time to time on a project-by-project basis. This is usually accomplished by authorization for the prosecution of a project "in accordance with the plans and subject to the conditions recommended by the Chief of Engineers in the respective reports" designated.<sup>298</sup>

Unlike navigation projects, however, a general requirement for local contribution to the cost of flood protection has been established by Congress, but it is inapplicable in the case of dam and reservoir projects.<sup>299</sup> On other Army Engineer flood-control improvements, such as levees, no money appropriated therefor may be expended until states or other local interests give assurances satisfactory to the Secretary of the Army that the necessary lands will be provided, and that other cooperative requirements will be fulfilled.<sup>300</sup> Moreover, authorization of such a project expires within five years from the date of notification to the local interests of the requirements of local cooperation, unless such local interests furnish within that time satisfactory assurances that such cooperation will be furnished.<sup>301</sup>

In the case of Reclamation projects authorized under the 1939 Reclamation Project Act, nonreimbursable allocations to navigation and flood control are permissible.<sup>302</sup> But there is no requirement for local contribution in connection with such

<sup>297</sup> Act of June 5, 1920, § 2, 41 Stat. 1009, 1010, 33 U. S. C. 547.

<sup>298</sup> See, *e. g.*, Act of May 17, 1950, § 101, 64 Stat. 163, —; see also *supra*, n. 175, p. 106.

<sup>299</sup> See *supra*, pp. 144-145. In a statute enacted prior to the assumption of federal responsibility for flood control on a nation-wide basis, Congress declared "that the principle of local contribution toward the cost of flood-control work, which has been incorporated in all previous national legislation on the subject, is sound, as recognizing the special interest of the local population in its own protection, and as a means of preventing inordinate requests for unjustified items of work having no material national interest." Act of May 15, 1928, § 2, 45 Stat. 534, 535, 33 U. S. C. 702b.

<sup>300</sup> Act of June 22, 1936, § 3, 49 Stat. 1570, 1571, as amended, 33 U. S. C. 701c. See *supra*, pp. 144-146.

<sup>301</sup> See *supra*, pp. 145-146.

<sup>302</sup> Act of August 4, 1939, § 9(b), 53 Stat. 1187, 1194, 43 U. S. C. 485h(b).

allocations. On the other hand, provision is made for repayable and returnable allocations to irrigation, power, and municipal water supply or other miscellaneous purposes.<sup>303</sup>

*Interest in Lands.*—By statute of general application, it is required that no money may be expended on land purchased for the purpose of erecting public buildings “until the written opinion of the Attorney General shall be had in favor of the validity of the title.”<sup>304</sup> A more recent general requirement, however, permits earlier expenditure of appropriated funds, the taking of possession, and construction of public works upon fulfillment of prescribed conditions.<sup>305</sup> Upon fulfillment of different conditions, the Secretary of the Army is authorized to take immediate possession of lands needed for authorized navigation improvements or flood-control projects, and proceed with the authorized work.<sup>306</sup> Also, it has been held that, in condemnation proceedings under the Reclamation Act, it is not necessary that damages be assessed and paid before taking of possession.<sup>307</sup> In connection with land acquisition, the obtaining of exclusive jurisdiction in the United States has not been required since 1940.<sup>308</sup>

In the case of Army Engineer flood-control projects, provision is made for consent of the state to acquisition of lands if the benefits are in other states.<sup>309</sup> But this provision does not apply in the case of dam and reservoir projects.<sup>310</sup> As a

<sup>303</sup> See *supra*, pp. 194–195.

<sup>304</sup> R. S. § 355, from J. Res. No. 6, September 11, 1841, 5 Stat. 468, as amended, 40 U. S. C. 255.

<sup>305</sup> Act of February 26, 1931, § 5, 46 Stat. 1421, 1422, 40 U. S. C. 258e.

<sup>306</sup> Act of July 18, 1918, § 5, 40 Stat. 904, 911, 33 U. S. C. 594; Act of August 18, 1941, § 6, 55 Stat. 633, 650, 33 U. S. C. 701c-2.

<sup>307</sup> *United States v. O'Neill*, 198 Fed. 677, 683 (D. C. Colo. 1912). See also 5 COMP. GEN. 907 (1926).

Findings by the Secretary of the Interior respecting acquisition of lands and water rights are stipulated in the form of a condition precedent to construction of projects under the Water Conservation and Utilization Act. Act of October 14, 1940, § 3(b), 54 Stat. 1119, 1121, as amended, 16 U. S. C. 590z-1(b).

<sup>308</sup> Act of October 9, 1940, 54 Stat. 1080, 1083, see 40 U. S. C. 255.

<sup>309</sup> Act of June 22, 1936, § 3, 49 Stat. 1570, 1571, as amended, 33 U. S. C. 701c.

<sup>310</sup> Act of June 28, 1938, § 2, 52 Stat. 1215, as amended, 33 U. S. C. 701c-1.



practical matter, the requirement thus becomes insignificant since the remaining projects to which it does apply would be primarily local in scope. When Congress in 1944 authorized prosecution by the Secretary of Agriculture of flood-control work in 11 watersheds, it provided that nothing in the authorizing act shall be construed as authorizing "the acquisition of any land by the Federal Government until the legislature of the State in which the land lies shall have consented to the acquisition of lands by the United States for the purposes within the scope of this section."<sup>311</sup>

*Other Conditions.*—Still other provisions in the nature of conditions precedent have been prescribed for other types of projects. Thus, in the case of water-conservation and utilization projects, there must be a finding by the President that labor, materials, and property should be made available to the Department of the Interior by other federal agencies, to the extent needed to make up the difference between the estimated construction cost and the part to be met with appropriated funds, together with nonfederal contributions.<sup>312</sup> Another example appears in the Boulder Canyon Project Act which requires the execution of power contracts to insure repayment of the cost of the dam and power plant.<sup>313</sup>

**SPECIAL PROBLEMS IN CONSTRUCTION.**—Several special problems incident to the construction of water-resource projects have received statutory recognition. These include matters concerning land acquisition, whether construction shall be by contract or force account, and relocation of inundated facilities.

*Land Acquisition.*—It has long been required by law that "no land shall be purchased on account of the United States, except under a law authorizing such purchase."<sup>314</sup> Various special provisions have followed in connection with water-resource development.

Thus, the Secretary of the Army is generally empowered to acquire by purchase or condemnation land needed for au-

<sup>311</sup> Act of December 22, 1944, § 13, 58 Stat. 887, 905.

<sup>312</sup> Act of October 14, 1940, § 3 (a), 54 Stat. 1119, 1120, 16 U. S. C. 590z-1 (a).

<sup>313</sup> Act of December 21, 1923, § 4 (b), 45 Stat. 1057, 1059, 43 U. S. C. 617c (b).

<sup>314</sup> R. S. § 3736, from Act of May 1, 1820, § 7, 3 Stat. 567, 568, 41 U. S. C. 14.

thorized navigation and flood-control improvements.<sup>315</sup> In addition, whenever a state or designated local agency shall undertake to secure lands needed in connection with such projects for the purpose of conveying the same to the United States free of cost and shall be unable to do so, the Secretary of the Army may acquire such lands.<sup>316</sup>

In the case of Reclamation projects, the Secretary of the Interior is authorized to purchase or condemn property or rights therein.<sup>317</sup> Importantly facilitating later federal reclamation activities, an 1890 statute required that in all patents for lands thereafter taken up under the land laws or on entries or claims validated by that statute, west of the one-hundredth meridian: <sup>318</sup>

it shall be expressed that there is reserved from the lands in said patent described, a right of way thereon for ditches or canals constructed by the authority of the United States.

Specific authority to acquire property by purchase or condemnation is also contained in the Bonneville Project Act and the Fort Peck Project Act.<sup>319</sup> Similarly, express authority for the acquisition of property or rights is also contained in the Water Conservation and Utilization Act.<sup>320</sup>

As already noted, in authorizing flood-control works by the Secretary of Agriculture, Congress specified a requirement of state consent in connection with acquisition of land.<sup>321</sup> A like restriction is stipulated under the 1911 Weeks Law, making provision for acquisition of forested, cut-over, or denuded lands

<sup>315</sup> Act of April 24, 1888, 25 Stat. 94, 33 U. S. C. 591; Act of March 1, 1917, § 3, 39 Stat. 948, 950, 33 U. S. C. 701.

<sup>316</sup> Act of August 8, 1917, § 9, 40 Stat. 250, 267, 33 U. S. C. 593; Act of August 18, 1941, § 6, 55 Stat. 638, 650, 33 U. S. C. 701c-2.

<sup>317</sup> Act of June 17, 1902, § 7, 32 Stat. 388, 389, 43 U. S. C. 421.

<sup>318</sup> Act of August 30, 1890, § 1, 26 Stat. 371, 391, 43 U. S. C. 945.

<sup>319</sup> Act of August 20, 1937, § 2(c), 50 Stat. 731, 732, 16 U. S. C. 832a(c); Act of May 18, 1938, §§ 2(c), 2(d), 52 Stat. 403, 404, 16 U. S. C. 833a(c), 833a(d).

<sup>320</sup> Act of October 14, 1940, § 10(b), 54 Stat. 1119, 1125, 16 U. S. C. 590a-8(b).

<sup>321</sup> Act of December 22, 1944, § 13, 58 Stat. 887, 905.

within watersheds of navigable streams.<sup>322</sup> Also, the Secretary of Agriculture has power to acquire, by purchase, gift, condemnation, or otherwise, lands, or rights or interests therein, necessary under the soil-conservation program.<sup>323</sup> And, in connection with the program for retirement of submarginal land, he has similar authority.<sup>324</sup>

The Tennessee Valley Authority is authorized to acquire, by purchase or condemnation, lands and property "necessary or convenient in the transaction of its business."<sup>325</sup> Detailed provisions are prescribed for condemnation proceedings fitted to the land-acquisition program incident to TVA's development of water resources.<sup>326</sup>

*Contract or Force Account.*—In general, water-resource activities are prosecuted by contract rather than by force account.<sup>327</sup>

With respect to the prosecution of navigation and flood-control projects, other than surveys, estimates, and gaugings, the Secretary of the Army is directed to apply appropriated funds in carrying on the work, "by contract or otherwise, as may be most economical and advantageous to the Government."<sup>328</sup> He is prohibited from using funds appropriated for navigation improvements to pay for any work done by private contract "if the contract price is more than 25 per centum in excess of the estimated cost of doing the work by Government plant."<sup>329</sup>

But no corresponding requirement is specified in the case of flood-control projects. Nor do the statutes applicable to the prosecution of flood-control works by the Secretary of Agri-

<sup>322</sup> Act of March 1, 1911, § 7, 36 Stat. 961, 962, as amended, 16 U. S. C. 517.

<sup>323</sup> Act of April 27, 1935, § 1, 49 Stat. 163, 16 U. S. C. 590a.

<sup>324</sup> Act of July 22, 1937, § 32, 50 Stat. 522, 525, as amended, 7 U. S. C. 1011.

<sup>325</sup> Act of May 18, 1933, §§ 4 (f), 4 (h), 48 Stat. 58, 60, as amended, 16 U. S. C. 831c (f), 831c (h).

<sup>326</sup> § 25, 48 Stat. 70, 16 U. S. C. 831x.

<sup>327</sup> See, e. g., Hearings before a Subcommittee of the Senate Committee on Appropriations, on Interior Department Appropriation Bill for 1949, 80th Cong., 2d sess., pp. 628-632, 1300-1307 (1948).

<sup>328</sup> See, e. g., Act of August 11, 1888, § 3, 25 Stat. 400, 423, as amended, 33 U. S. C. 622; Act of March 1, 1917, § 3, 39 Stat. 948, 950, 33 U. S. C. 701.

<sup>329</sup> Act of March 2, 1919, § 8, 40 Stat. 1275, 1290, 33 U. S. C. 624.

culture specify the manner in which that work shall be accomplished.

As to Reclamation projects, express provision is made for the letting of "contracts for the construction."<sup>330</sup> Appropriation statutes sometimes place a limit on the amount expendable for construction work "by force account or on a hired-labor basis."<sup>331</sup>

Contrary to the general rule, the majority of projects in the Tennessee Valley have been completed by force-account construction.<sup>332</sup>

*Relocation of Inundated Facilities.*—Whenever the Chief of Engineers finds that "any highway, railway, or utility" has been or is being damaged or destroyed by reason of the operation of any dam or reservoir project under Army control, he may use project funds for the repair, relocation, restoration, or protection of such highway or utility.<sup>333</sup> In the case of Reclamation projects, the Secretary of the Interior has authority to acquire lands for relocation of "highways, roadways, railroads, telegraph, telephone, or electric transmission lines, or any other properties whatsoever," and he also has express authority to contract with the property owners whereby they undertake to acquire property needed for relocation, or to perform the work involved.<sup>334</sup> Powers somewhat similar to but broader than the foregoing are vested in the Tennessee Valley Authority.<sup>335</sup> Included among these powers is an authorization "to advise and cooperate in the readjustment of the population displaced" by the construction of dams.<sup>336</sup>

*Rate of Construction.*—Three requirements of general applicability should first be noted. No contract may be made for

<sup>330</sup> Act of June 17, 1902, § 4, 32 Stat. 388, 389, 43 U. S. C. 419.

<sup>331</sup> See, e. g., Act of September 6, 1950, ch. VII, title I, 64 Stat. 595, —.

<sup>332</sup> See Hearings before the Subcommittee of the House Committee on Appropriations on Independent Offices Appropriation Bill for 1950, H. R. 4177, 81st Cong., 1st sess., Part 2, pp. 852–861, 894–895, 898–900 (1949).

<sup>333</sup> Act of July 24, 1946, § 9, 60 Stat. 641, 643, 33 U. S. C. 701q.

<sup>334</sup> Act of August 4, 1939, § 14, 53 Stat. 1187, 1197, 43 U. S. C. 389.

<sup>335</sup> Act of July 18, 1941, 55 Stat. 599, see 16 U. S. C. 831c (k).

<sup>336</sup> Act of May 18, 1933, § 4, 48 Stat. 58, 60, as added by Act of August 31, 1935, § 13, 49 Stat. 1060, 16 U. S. C. 831c (l).

a public improvement "which shall bind the government to pay a larger sum of money than the amount in the treasury appropriated for the specific purpose."<sup>337</sup> Nor may a federal agency expend in any one fiscal year "any sum in excess of appropriations made by Congress for that fiscal year, or involve the government in any contract or other obligation for future payment of money in excess of such appropriations unless such contract or obligation is authorized by law."<sup>338</sup> In the third place, with an exception not pertinent here, no contract may be made "unless the same is authorized by law or is under an appropriation adequate to its fulfillment."<sup>339</sup>

Therefore, either appropriations or express authority to contract beyond appropriated amounts must be provided to enable an agency to initiate construction, or to continue construction of a project otherwise authorized. In large measure, the rate of construction is thus determined by the authorizing legislation or the amount of appropriation.

Authorized navigation and flood-control projects "may be prosecuted by direct appropriations, by continuing contracts," or both.<sup>340</sup> Moreover, appropriations for navigation and flood-control improvements usually specify that the funds shall be "immediately available" and "remain available until expended."<sup>341</sup> It should also be noted that an authorization of a navigation or flood-control work "in accordance with the plans" in a designated report, "at an estimated" specified cost, imposes no limitation on appropriations.<sup>342</sup> On the other hand, a limitation does arise from a project authorization "at a cost not to exceed" a specified amount.<sup>343</sup> In cases where a comprehensive plan is authorized, the act may place varying

<sup>337</sup> R. S. § 3733, from Act of July 25, 1868, § 3, 15 Stat. 171, 177, 41 U. S. C. 12.

<sup>338</sup> R. S. § 3679, from Act of July 12, 1870, § 7, 16 Stat. 230, 251, as amended, 31 U. S. C. 665.

<sup>339</sup> R. S. § 3732, from Act of March 2, 1861, § 10, 12 Stat. 214, 220, as amended, 41 U. S. C. 11.

<sup>340</sup> Act of September 22, 1922, § 10, 42 Stat. 1038, 1043, 33 U. S. C. 621.

<sup>341</sup> See, *e. g.*, Act of June 25, 1948, 62 Stat. 1019, 1020.

<sup>342</sup> See, *e. g.*, Act of December 22, 1944, § 10, 58 Stat. 887, 891.

<sup>343</sup> See, *e. g.*, Act of June 28, 1938, 52 Stat. 1215, 1220, project for Colfax, Grant Parish, La.

limitations on the funds which can be expended for particular projects or features of a project.<sup>344</sup> Such an arrangement, of course, reserves to Congress control over the rate of development of individual works even though authorized in an omnibus act.

In the case of Reclamation projects, the Secretary of the Interior is authorized to enter into contracts for such period of time as he finds necessary, but the liability of the United States shall be contingent upon appropriations being made therefor.<sup>345</sup> As in the case of navigation and flood-control projects, funds appropriated for Reclamation projects "remain available until expended."<sup>346</sup>

As already suggested, a limitation imposed in an annual appropriation or the authorization of only a limited appropriation can fix the construction rate. The latter control is waived where statutes authorizing a project or program also authorize all appropriations necessary. Such is the situation as to the Bureau of Reclamation, the Bonneville Power Administration, the Fort Peck Project, and the Tennessee Valley Authority.<sup>347</sup> Like provisions are also contained in the 1935 soil-conservation legislation, the Water Facilities Act, and the Water Conservation and Utilization Act.<sup>348</sup>

*Modification of Plans.*—Important in connection with the design and construction of projects is the authorized degree of discretion to modify plans after they have been submitted to and approved by Congress. Presumably, details not specifically mentioned in the plans are left to the discretion of the constructing agency. But the degree of discretion may vary under appropriation and other legislation.

<sup>344</sup> See, *e. g.*, Act of June 28, 1938, 52 Stat. 1215, 1218, 1222.

<sup>345</sup> Act of August 4, 1939, § 12, 53 Stat. 1187, 1197, 43 U. S. C. 388.

<sup>346</sup> See, *e. g.*, Act of September 6, 1950, ch. VII, title I, 64 Stat. 595, —.

<sup>347</sup> As to the Bureau of Reclamation, see *supra*, p. 199 and n. 257, p. 194; as to the Bonneville Power Administration, see Act of August 20, 1937, § 11, 50 Stat. 731, 736, 16 U. S. C. 832j; as to the Fort Peck Project, see Act of May 18, 1938, § 10, 52 Stat. 403, 406, 16 U. S. C. 833i; as to the Tennessee Valley Authority, see Act of May 18, 1933, § 27, 48 Stat. 58, 71, 16 U. S. C. 831z.

<sup>348</sup> Act of April 27, 1935, § 6, 49 Stat. 163, 164, 16 U. S. C. 590f; Act of August 23, 1937, § 7, 50 Stat. 869, 870, 16 U. S. C. 590x; Act of October 14, 1940, § 12, 54 Stat. 1119, 1125, 16 U. S. C. 590z-10.

A related matter involves administrative discretion to suspend construction. Here, the 1901 remarks of the Attorney General are pertinent:<sup>349</sup>

An appropriation for a public improvement carries with it as a necessary implication a direction that the work shall be done, and the executive department has no power, in the absence of statutory provisions giving it discretionary authority, to decline to execute such work. Except where otherwise provided, the time for the commencement of such work and that required for its completion are necessarily committed to the sound discretion of the executive department of the Government, and in the exercise of such discretion, work once commenced may be suspended if in the judgment of the executive department such suspension will best insure the ultimate completion of the work. The suspension of the work for a legitimate object connected with its ultimate completion must not be confounded with such suspension whose purpose is a refusal to carry on the work further. A mere doubt as to the wisdom of carrying out a public work authorized by Congress would not justify its suspension and a refusal to complete it.

Correspondingly, it is generally true that additions to authorized projects may not be made. In the case of navigation and flood-control projects, many statutes point in this direction.<sup>350</sup> And in imposing a restriction on legislative consideration, Congress declared that no project or "any modification not authorized" of navigation and flood-control projects shall be authorized by Congress unless a report has previously been submitted by the Chief of Engineers in conformity with law.<sup>351</sup> Authorization procedure for Reclamation projects also prohibits expenditures for the construction of any new projects, new division of a project, or "new supplemental

<sup>349</sup> 23 Ops. Att'y GEN. 504, 506 (1901).

<sup>350</sup> See *supra*, pp. 91-92, 100-105, 134, 136-142.

<sup>351</sup> Act of July 24, 1946, § 2, 60 Stat. 641, 33 U. S. C. 701o. This provision was repeated in Act of June 30, 1948, § 202, 62 Stat. 1171, 1175 and in the Act of May 17, 1950, § 202, 64 Stat. 163, —

works on a project" until after submission of prescribed findings and report.<sup>352</sup>

On the other hand, general authority is provided for certain discretionary modifications in the case of Army projects. For example, the Chief of Engineers is authorized to modify the plan for any authorized dam or other works to make it smaller than originally planned with a view to completing a useful improvement within an authorization, provided it will be feasible in the future to enlarge the work to permit full utilization of the site for all purposes of conservation such as "flood control, navigation, reclamation, the development of hydroelectric power, and the abatement of pollution."<sup>353</sup> Like authority exists for the modification of flood-control project plans so as to evacuate areas rather than protect them by levees or flood walls.<sup>354</sup> Further authority for modification of flood-control project plans is permitted by a 1937 statute authorizing the provision of additional storage capacity for domestic water supply or other conservation storage if the cost of such increased capacity is contributed by local agencies and they agree to utilize the same in a manner consistent with federal uses and purposes.<sup>355</sup>

## Operation and Maintenance of Projects

A number of different and varied statutes deal with the operation and maintenance of water-resource projects. Here, the law leaves some important matters uncovered where responsibility is divided. Other statutes provide for project operation by beneficiaries or other nonfederal entities. Variations exist in the matter of fiscal flexibility to meet operational requirements and emergencies. Some statutes provide for

<sup>352</sup> Act of August 4, 1939, § 9(a), 53 Stat. 1187, 1193, 43 U. S. C. 485h(a).

<sup>353</sup> Act of August 18, 1941, § 2, 55 Stat. 638, 33 U. S. C. 701m.

<sup>354</sup> Act of June 28, 1938, § 3, 52 Stat. 1215, 1216, 33 U. S. C. 701i.

<sup>355</sup> Act of June 22, 1936, § 5, 49 Stat. 1570, 1572, as added by Act of July 19, 1937, § 1, 50 Stat. 515, 518, 33 U. S. C. 701h.

See also Act of December 22, 1944, § 10, 58 Stat. 889, 901, authorizing the Folsom Reservoir "with such modifications thereof as in the discretion" of the Secretary of the Army and the Chief of Engineers may be "advisable."



project operation for purposes in addition to those for which the project was authorized and constructed. Finally, there is the difficulty of conflicts among alternative uses of water. These matters we shall review in the foregoing order.

**AGENCY RESPONSIBILITY.**—Under existing statutes, the constructing agency generally operates and maintains the project. A number of exceptions have been provided, however.

Outstanding in this respect is the 1944 legislative direction that surplus power generated at reservoir projects under Army control be delivered to the Secretary of the Interior for transmission and disposal.<sup>356</sup> But operation of the generating facilities continues under the control of the Secretary of the Army. And the statute does not define the beginning of the transmission system, operation of which is controlled by the Secretary of the Interior.

We have already noted that the Secretary of the Interior has the principal responsibility for marketing of federal power, power marketed by the Tennessee Valley Authority being the main exception.<sup>357</sup> As earlier outlined, the Secretary's marketing responsibilities are discharged through several agencies. In some instances, such an agency under his control markets power from a Reclamation project also under his control.<sup>358</sup>

The foregoing 1944 statute provides for still another division of responsibility in project operation. When the Secretary of the Army determines, on recommendation of the Secretary of the Interior, that any dam and reservoir project under the former's direction may be utilized for irrigation purposes, the Secretary of the Interior is authorized to construct, operate, and maintain under the provisions of Reclamation Law such additional works in connection therewith as he may deem necessary for irrigation purposes.<sup>359</sup> Such works may be undertaken, however, only upon specific authorization by act

<sup>356</sup> Act of December 22, 1944, § 5, 58 Stat. 887, 890, 16 U. S. C. 825s.

<sup>357</sup> See *supra*, p. 300.

<sup>358</sup> See *supra*, n. 243, p. 300.

<sup>359</sup> Act of December 22, 1944, § 8, 58 Stat. 887, 891, 43 U. S. C. 390.

of Congress.<sup>300</sup> Specifically exempted are dam and reservoir projects previously constructed by the Army Engineers which provide conservation storage of water for irrigation purposes.<sup>301</sup>

One feature of Section 8 is in dispute. As indicated, it provides for a determination by the Secretary of the Army as to "any" dam or reservoir project operated under his direction, and that any irrigation works authorized thereunder are to be constructed, operated, and maintained by the Secretary of the Interior, "under the provisions of the Federal reclamation laws."<sup>302</sup> The Secretary of the Interior takes the view that the application of the section is not limited geographically, and that it was designed to prevent agency duplication in the field of irrigation.<sup>303</sup> The Chief of Engineers, on the other hand, takes the view that the section is tied in with Reclamation Law which applies only in the 17 Western States, and that consequently the section was intended to apply only in those States.<sup>304</sup>

Section 7 of the 1944 Act vests in the Secretary of the Army the duty of prescribing regulations for use of storage allocated to navigation or flood control at all reservoir projects constructed wholly or in part with federal funds provided on the basis of such purposes.<sup>305</sup>

Other statutes make varying provisions for division of agency responsibility with respect to power projects. For example, the Tennessee Valley Authority Act contemplated that the President might designate the Secretary of the Army or the Secretary of the Interior to construct Norris Dam.<sup>306</sup> But it directed that control of the completed dam be entrusted to TVA.<sup>307</sup>

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<sup>300</sup> *Id.*

<sup>301</sup> *Id.*

<sup>302</sup> *Id.*

<sup>303</sup> H. Doc. No. 255, 81st Cong., 1st sess., pp. XIV-XV (1949).

<sup>304</sup> *Id.*, pp. XIX, XX.

<sup>305</sup> Act of December 22, 1944, § 7, 58 Stat. 887, 890, 33 U. S. C. 709. With a specified qualification concerning flood control, this provision does not apply to TVA. See *supra*, n. 199, p. 109.

<sup>306</sup> Act of May 18, 1933, § 18, 48 Stat. 58, 67, 16 U. S. C. 831d.

<sup>307</sup> *Id.*

Similarly, the President is authorized by legislation to designate any federal or other specified agency to operate and maintain certain projects on certain Mexican boundary waters.<sup>368</sup> The treaty of February 3, 1944 provided that various projects on the Rio Grande and the Colorado and Tijuana Rivers be constructed, operated, and maintained by the International Boundary and Water Commission, United States and Mexico.<sup>369</sup>

In 1944, the Army Engineers were authorized to construct, for flood control and other purposes, the Folsom Reservoir in the American River in California.<sup>370</sup> In recently directing that the Folsom Dam and Reservoir be constructed with enlarged storage capacity, however, Congress provided that the dam and reservoir be constructed by the Army Engineers and the power-plant features by the Secretary of the Interior.<sup>371</sup> It also stipulated that the dam be transferred to the Bureau of Reclamation for operation and maintenance in accordance with Reclamation Law.<sup>372</sup>

In addition to the foregoing provisions, other statutory arrangements divide operating responsibilities, including provision for nonfederal participation, as we shall now see.

**OPERATION BY NONFEDERAL AGENCIES.**—Navigation projects are federally operated by the Army Engineers.<sup>373</sup> The same is true of flood-control dam and reservoir projects.<sup>374</sup> But it is required by law that maintenance and operation of other flood-control projects be undertaken by local interests furnishing the required assurances prerequisite to construction.<sup>375</sup> Title is held by the United States.<sup>376</sup>

Under the 1902 Reclamation Act, management and opera-

<sup>368</sup> Act of August 19, 1935, § 3(a), 49 Stat. 660, as amended, see 22 U. S. C. 277b.

<sup>369</sup> Treaty of February 3, 1944, Arts. 7, 12, 24, 59 Stat. 1219, 1231, 1240, 1255, Treaty Series 994.

<sup>370</sup> Act of December 22, 1944, § 10, 58 Stat. 887, 901.

<sup>371</sup> Act of October 14, 1949, § 2, 63 Stat. 852, 853.

<sup>372</sup> *Id.*

<sup>373</sup> See *supra*, pp. 105, 109-112.

<sup>374</sup> See *supra*, pp. 143, 147-148.

<sup>375</sup> Act of June 22, 1936, § 3, 49 Stat. 1570, 1571, as amended, 33 U. S. C. 701c.

<sup>376</sup> Act of June 28, 1938, § 2, 52 Stat. 1215, as amended, 33 U. S. C. 701c-1.

tion of irrigation works are required to pass to the owners of the lands irrigated thereby, to be maintained at their expense, when payments required by the Act have been made for the major portion of the lands irrigated.<sup>377</sup> But title to, and management and operation of, the reservoirs and works necessary for their protection and operation remain in the Government.<sup>378</sup> Under a later statute, the Secretary of the Interior has discretionary power to transfer the care, operation, and maintenance of projects to a legally organized water-users' association or irrigation district.<sup>379</sup>

In still another way, the Secretary of the Interior is authorized to permit nonfederal participation in Reclamation project operation. For in addition to authority to sell electric power, he is empowered to lease "power privileges" under specified conditions.<sup>380</sup> Under the Boulder Canyon Project Act, the Secretary may lease a unit or units of the government-built generating facilities, or lease the use of water for generation of electric energy.<sup>381</sup>

**RELEVANT FISCAL PROVISIONS.**—As already noted, the constructing agencies are subject to general fiscal control under the appropriation process. Their expenditures for operation and maintenance are also subject to yearly legislative review. But statutes generally provide greater flexibility in the case of funds for operation and maintenance than for construction.

For example, Congress has authorized all appropriations necessary for operation and maintenance of flood-control

<sup>377</sup> Act of June 17, 1902, § 6, 32 Stat. 388, 389, 43, U. S. C. 498.

<sup>378</sup> *Id.*

<sup>379</sup> Act of August 13, 1914, § 5, 38 Stat. 686, 687, 43 U. S. C. 499.

In 1924, it was required that, whenever two-thirds of the irrigable area of any project shall be covered by water-right contracts a water-users' association or irrigation district shall be required to take over the project's care, operation, and maintenance as a condition precedent to receiving certain benefits under the section. Act of December 5, 1924, § 4, subsection G, 43 Stat. 672, 702, 43 U. S. C. 500. But provision was made two years later for dispensing with this requirement as to certain projects. Act of May 25, 1926, § 45, 44 Stat. 636, 648, 43 U. S. C. 423d.

<sup>380</sup> Act of August 4, 1939, § 9(c), 53 Stat. 1187, 1194, 43 U. S. C. 485h(c); Act of April 16, 1906, § 5, 34 Stat. 116, 117, as amended, 43 U. S. C. 522.

<sup>381</sup> Act of December 21, 1928, § 6, 45 Stat. 1057, 1061, 43 U. S. C. 617e.

works authorized to be operated and maintained by the United States.<sup>382</sup> No corresponding general authorization exists with respect to navigation projects, however.

As to Reclamation projects, an express purpose of the Reclamation Fund is the "maintenance of irrigation works."<sup>383</sup> And the Secretary of the Interior is directed to use the Fund for the "operation and maintenance" of works constructed under the statute.<sup>384</sup> In the General Appropriation Act, 1951, Congress appropriated a lump sum for "operation and maintenance of reclamation projects" and other facilities.<sup>385</sup> Prior to this, funds were appropriated for individual projects with a provision that 10% of the amounts so appropriated shall be available interchangeably for expenditures on such projects but not more than 10% may be added to the amount appropriated for any one project.<sup>386</sup>

A further legislative recognition of the need for flexibility here appears in provisions for funds of an emergency character in the case of some, but not all types of projects. For Army Engineer flood-control projects, Congress has authorized appropriations for initial establishment of a \$15,000,000 emergency fund and for its replenishment on an annual basis.<sup>387</sup> Expenditures from the fund may be made in the discretion of the Chief of Engineers where necessary for the adequate functioning of the work for flood control:<sup>388</sup>

in rescue work or in the repair, restoration or maintenance of flood control work threatened or destroyed by flood, including the strengthening, raising, extending or other modification thereof \* \* \*.

A somewhat similar authorization is available to the Secretary of Agriculture to expend not to exceed \$300,000 for speci-

<sup>382</sup> Act of August 18, 1941, § 10, 55 Stat. 638, 651, 33 U. S. C. 701f-1 note following.

<sup>383</sup> Act of June 17, 1902, § 1, 32 Stat. 388, as amended, 43 U. S. C. 391.

<sup>384</sup> § 6, 32 Stat. 389, 43 U. S. C. 491.

<sup>385</sup> Act of September 6, 1950, ch. VII, title I, 64 Stat. 595, —.

<sup>386</sup> See, e. g., Act of October 12, 1949, 63 Stat. 765, —.

<sup>387</sup> Act of May 17, 1950, § 210, 64 Stat. 163, —. See also *supra*, n. 62, pp. 137-138.

<sup>388</sup> *Id.*

fied "emergency measures" on any watershed suddenly impaired by fire or other natural force.<sup>889</sup> No corresponding provision is made with respect to navigation projects. However, since 1884 annual appropriations have been authorized for preserving and continuing without interruption the use and navigation of canals and other works.<sup>890</sup>

In order to insure continuous operation of irrigation or power systems operated by the Bureau of Reclamation, Congress in 1948 authorized appropriations from the Reclamation Fund of an "emergency fund" to defray expenses incurred because of unusual or emergency conditions.<sup>891</sup> Such conditions are defined to mean:<sup>892</sup>

canal bank failures, generator failures, damage to transmission lines; or other physical failures or damage, or acts of God, or of the public enemy, fires, floods, drought, epidemics, strikes, or freight embargoes, or conditions, causing or threatening to cause interruption in water or power service.

Still other statutes of more limited geographic application provide for emergency funds. For example, a continuing fund of \$1,000,000 is available to the Tennessee Valley Authority "to defray emergency expenses and to insure continuous operation."<sup>893</sup> Another continuing fund has been established in connection with the Southwestern Power Administration.<sup>894</sup>

<sup>889</sup> Act of December 22, 1944, § 15, 58 Stat. 887, 907, as amended by Act of May 17, 1950, § 216, 64 Stat. 163, —.

<sup>890</sup> Act of July 5, 1884, § 4, 23 Stat. 133, 147, as amended, 33 U. S. C. 5.

<sup>891</sup> Act of June 26, 1948, § 1, 62 Stat. 1052, 43 U. S. C. 502 (Supp. III).

<sup>892</sup> § 2, 62 Stat. 1052, 43 U. S. C. 503 (Supp. III). The Act specifies no amount for this fund. Until 1950, appropriation acts contained a provision making available by transfer from the appropriation for any project included in the Act an amount "sufficient to make necessary emergency repairs" should existing works or the water supply for lands under cultivation be endangered by floods or other unusual conditions. Approval of the Secretary was necessary. See, *e. g.*, Act of October 12, 1949, 63 Stat. 765, —.

<sup>893</sup> Act of May 18, 1933, § 26, 48 Stat. 58, 71, as added by Act of August 31, 1935, § 10, 49 Stat. 1075, 1079, 16 U. S. C. 831y.

<sup>894</sup> Act of December 23, 1943, 57 Stat. 611, 621, as amended by Act of October 12, 1949, 63 Stat. 765, —.

Somewhat similar is the \$500,000 continuing fund provided for by the Bonneville Project Act "to defray emergency expenses and to insure continuous operation."<sup>305</sup> A like fund under the Fort Peck Project Act provides additionally for expenditures to "defray the operating expense of generation and transmission of power."<sup>306</sup>

Although the Boulder Canyon Project Act established the special Colorado River Dam Fund, no expenditures may be made from that Fund for operation and maintenance "except from appropriations therefor."<sup>307</sup>

Of indirect interest here is the Emergency Fund available to the President for assistance to "State and local governments or other agencies" in major disasters. It was provided by appropriation acts beginning in 1948.<sup>308</sup> Under the direction of the Bureau of Community Facilities, this Fund has been used generally to extend aid to state and local governments.<sup>309</sup> In 1950, Congress enacted continuing legislation authorizing such federal assistance and authorizing the appropriation to the President of "a sum or sums not exceeding \$5,000,000 in the aggregate."<sup>310</sup>

**OPERATION FOR ADDITIONAL PURPOSES.**—As already noted, the purposes contemplated by the original project authorization and the project plans usually determine the uses for which a project may be operated. As a practical matter, however, recreation and the sale of surplus water are purposes which

<sup>305</sup> Act of August 20, 1937, § 11, 50 Stat. 731, 736, 16 U. S. C. 832j.

<sup>306</sup> Act of May 18, 1938, § 10, 52 Stat. 403, 406, 16 U. S. C. 833i.

<sup>307</sup> Act of December 21, 1928, § 2(c), 45 Stat. 1057, 1058, 43 U. S. C. 617a (c).

<sup>308</sup> The Act of June 25, 1948, 62 Stat. 1027, 1031, appropriated \$500,000 for such disaster relief. Later, \$1,000,000 was added to this appropriation. H. J. Res. 112 of January 28, 1949, 63 Stat. 5; H. J. Res. 136 of February 7, 1949, 63 Stat. 5.

In 1949, this fund was combined with the President's Emergency Fund, and \$1,000,000 was appropriated for the combined purposes. Act of August 24, 1949, title I, 63 Stat. 630, —. This was repeated in 1950. Act of September 6, 1950, ch. VIII, title I, 64 Stat. 595, —.

<sup>309</sup> See, e. g., Orders of the General Services Administration, dated May 24, 1950 and June 1, 1950, 15 F. R. 3491, 3800.

<sup>310</sup> Act of September 30, 1950, § 8, 64 Stat. 1109, —.

may nevertheless be added. This fact is variously recognized by statute.

*Recreation.*—In the case of recreation, we have previously collected and reviewed the significant provisions of law.<sup>401</sup> It will bear repeating, however, that general provision has been made for recreational use of reservoir projects under Army control.<sup>402</sup> But there is no corresponding general authorization with respect to projects of the Bureau of Reclamation.<sup>403</sup> And a different provision is available in the case of the Tennessee Valley Authority.<sup>404</sup>

*Surplus Water.*—The varying provisions of statutes concerning supply of water for domestic municipal, stock-watering, and industrial purposes have been previously grouped and reviewed.<sup>405</sup> Some differences warrant comment here.

In specified circumstances, the Secretary of the Army may receive contributions from local interests to be expended in connection with funds appropriated for authorized flood-control work and may modify any reservoir project plans to provide additional storage capacity for "domestic water supply or other conservation storage."<sup>406</sup> While no corresponding provision exists in the case of navigation or irrigation projects, a 1906 statute makes a limited provision for furnishing water to towns in or near irrigation projects.<sup>407</sup>

In the case of either navigation or flood-control projects, the Secretary of the Army may make contracts for "domestic and industrial uses for surplus water."<sup>408</sup> Such a contract may not adversely affect "then existing lawful uses of such water."

<sup>401</sup> See *supra*, pp. 331-334.

<sup>402</sup> Act of December 22, 1944, § 4, 58 Stat. 887, 889, as amended, 16 U. S. C. 460d.

<sup>403</sup> For instances of recreational use of reservoir areas at Reclamation projects under agreement with the National Park Service, see *supra*, p. 333.

<sup>404</sup> Act of May 18, 1933, § 4(k)(a), 48 Stat. 58, 60, as added by Act of July 18 1941, 55 Stat. 599, 16 U. S. C. 831c(k)(a).

<sup>405</sup> See *supra*, pp. 319-327.

<sup>406</sup> Act of June 22, 1936, § 5, 49 Stat. 1570, 1572 as added by Act of July 19, 1937, § 1, 50 Stat. 515, 518, 33 U. S. C. 701h.

<sup>407</sup> Act of April 16, 1906, § 4, 34 Stat. 116, 43 U. S. C. 567.

<sup>408</sup> Act of December 22, 1944, § 6, 58 Stat. 887, 890, 33 U. S. C. 708.



The Reclamation Project Act of 1939 contains the most recent of several authorizations relevant here. Under its terms, the Secretary of the Interior may enter into contracts to furnish water for "municipal water supply or miscellaneous purposes."<sup>400</sup> Such a contract may not impair the efficiency of the project "for irrigation purposes."

**CONFLICTS IN PROJECT USE.**—Of pervading significance to effective operation of an integrated system of water-resource projects is the problem presented where the diverse purposes for which they may be operated cannot all be fulfilled. Importance therefore attaches to the statutory prescription of standards governing or guiding administrative efforts to resolve such conflicts.

For example, there are times when the maximum demands for navigation, flood control, electric power, and irrigation cannot be satisfied by the same structure.<sup>410</sup> A practical operating problem then exists as to whether reservoir operation shall be directed primarily to serving one or another of these needs.<sup>411</sup> For such an operating problem and its possible multiple variations, the law lacks a total answer.

One provision of general application should first be noted. In 1944, Congress assigned to the Secretary of the Army the duty of prescribing regulations for the use of storage "allocated for flood control or navigation" at all reservoir projects constructed wholly or in part with federal "funds provided on the basis of such purposes," and required that operation of any such project must accord with those regulations.<sup>412</sup> But regardless of the possible project use for these purposes, this provision does not of course govern the use of storage at Reclamation or other projects not constructed with "funds provided

<sup>400</sup> Act of August 4, 1939, § 9(c), 53 Stat. 1187, 1194, 43 U. S. C. 485h(c).

<sup>410</sup> See, e. g., REPORT ON FLOOD CONTROL OPERATIONS, COLUMBIA BASIN, 1950 FLOOD, Corps of Engineers and Bureau of Reclamation, pp. 1-2, 4, 5 (August 1950) for a discussion of the conflicting interests in the operation of the Columbia basin dams during the 1950 flood season, and the limitation placed upon flood-control operations by the need to assure water for irrigation and for logging operations.

<sup>411</sup> *Ibid.*

<sup>412</sup> See *supra*, n. 199, p. 109.

on the basis of such purposes." Nor is the requirement effective with respect to storage space not "allocated for flood control or navigation," even though there be additional storage which might be used for these purposes.

We have earlier noted a restriction of limited application on use of waters for navigation in the operation and maintenance of certain projects. With respect to navigation and flood-control projects authorized since 1944, Congress has prescribed a formula restricting navigation use.<sup>413</sup> But it does not apply to pre-1944 projects. And the provision does not operate with respect to waters other than those arising in states lying wholly or partly west of the ninety-eighth meridian. Nor does it specify the relationship between navigation and nonconsumptive uses, such as power.

No comparable provision has been enacted with respect to control of waters for purposes of flood control.

In the case of Reclamation projects, Congress has directed the Secretary of the Interior to proceed in conformity with state laws in the appropriation of water for irrigation purposes.<sup>414</sup> Moreover, Reclamation Law generally requires that contracts for disposal of power may not be made if they would impair the efficiency of the project for irrigation purposes.<sup>415</sup> And the situation is the same in the case of contracts for the supply of water for purposes other than irrigation.<sup>416</sup>

Pertinent also are certain provisions of statute concerning fish and wildlife. Since 1946, it has been required that when any federal agency impounds, diverts, or controls waters, "adequate provision consistent with the primary purposes" shall be made for the conservation, maintenance, and management of wildlife.<sup>417</sup> Furthermore, in the management of existing facilities in the upper Mississippi River, the Department of

<sup>413</sup> See *supra*, pp. 111-112.

<sup>414</sup> See *supra*, pp. 46-49.

<sup>415</sup> See, *e. g.*, Act of April 16, 1906, § 5, 34 Stat. 116, 117, as amended, 43 U. S. C. 522; Act of August 4, 1939, § 9(c), 53 Stat. 1187, 1194, 43 U. S. C. 485h(c).

<sup>416</sup> Act of February 25, 1920, 41 Stat. 451, 43 U. S. C. 521; Act of August 4, 1939, § 9(c), 53 Stat. 1187, 1194, 43 U. S. C. 485h(c).

<sup>417</sup> Act of August 14, 1946, § 3, 60 Stat. 1080, 1081 16 U. S. C. 663.

the Army is directed to give full consideration and recognition to the needs of fish and other wildlife resources and their habitat dependent on such waters, and it is required generally to operate and maintain pool levels as though navigation were carried on throughout the year.<sup>418</sup> Operation of works as though navigation were carried on is thus required whether needed or not.

From the foregoing provisions, it may readily be seen that there are areas of uncertainty in the case of potential conflicts among alternative uses to which a project or series of projects on the same river may be devoted unless there be adopted a standard uniform for the river basin.

Some operational decisions are necessarily left to administrative discretion, a discretion which may be shared by several agencies within the same river basin.<sup>419</sup> Furthermore, these agencies have general statutory responsibilities to foster and promote different water uses.<sup>420</sup> This fact alone may impede interagency agreement on an operational program. In addition, there are definite limitations upon the authority of an agency to transfer its responsibility to an interagency group seeking resolution of conflicting water uses.<sup>421</sup> An alternative

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<sup>418</sup> Act of June 19, 1948, 62 Stat. 497, 16 U. S. C. 665a (Supp. III).

<sup>419</sup> In addition to operation of navigation and flood-control projects by the Army Engineers, and irrigation projects by the Bureau of Reclamation, federal power-marketing functions are largely consolidated in the Secretary of the Interior. See *supra*, pp. 293-300. Also, projects under the supervision of the Bureau of Indian Affairs may be involved. See *supra*, pp. 250-254.

<sup>420</sup> See *supra*, pp. 508-510.

<sup>421</sup> In connection with such transfers, it should be noted that Congress has authorized each department head to prescribe regulations "not inconsistent with law" for the government of his department, the conduct of its officers and clerks, for the distribution and performance of its business, and the custody and use of property appertaining to it. R. S. § 161, from Act of July 27, 1789, 1 Stat. 28, as amended, 5 U. S. C. 22. It would seem that any transfer of a function vested by statute in a department head would be "inconsistent with law." 27 OPA. ATT'Y GEN. 542, 546 (1909); 29 OPA. ATT'Y GEN. 247, 249 (1911); 30 OPA. ATT'Y GEN. 119, 122-123 (1913); 36 OPA. ATT'Y GEN. 75 (1929). See also *supra*, p. 435.

Furthermore, Congress has often indicated affirmatively whether and how a function may be transferred. Such authorizations are usually restricted to personnel within the department or agency concerned. For

to transfer of statutory functions where prohibited by law would be voluntary interagency action, but to be effective that would require unanimous consent of the participating agencies as in the case of the procedure under the Federal Inter-Agency River Basin Committee.<sup>422</sup>

Consolidation of all water-resource project functions for a river system in one agency would aid in resolution of conflicts among purposes. To the extent permitted by physical facts and applicable statutory standards, a single administrative decision could then seek maximum achievement of all project purposes. In the case of the Tennessee Valley Authority, consolidation of federal water-resource functions largely in a single agency was effected under a single set of standards previously discussed.<sup>423</sup> A measure of consolidation has been accomplished with respect to the lower Colorado River where federal water-resource operations are largely vested in the Bureau of Reclamation.<sup>424</sup> Relevant to the latter case is the fact that

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example, Congress recently conditionally empowered the Secretary of Defense to perform certain functions vested in him through or with the aid of such "officials or organizational entities of the Department of Defense" as he may designate. Act of August 10, 1949, § 5, 63 Stat. 578. Similarly, the Administrator of General Services is authorized "to regroup, transfer, and distribute" certain functions "within the General Services Administration." Act of June 30, 1949, § 106, 63 Stat. 377, —.

Likewise, the transfer of certain reclamation functions is permissible within the Department of the Interior, but not outside. Reorganization Plan No. 3, 1950, § 1, effective May 24, 1950, 15 F. R. 3174. See also *supra*, pp. 435-436.

<sup>422</sup> See *supra*, p. 432. In connection with this latter possibility, see *e. g.*, REPORT ON FLOOD CONTROL OPERATIONS, COLUMBIA BASIN, 1950 FLOOD, Corps of Engineers and Bureau of Reclamation (August 1950), containing Memorandum of Understanding Regarding Control of Storage in Grand Coulee Reservoir for Reduction of Crest of the 1950 Spring Flood on Columbia River.

<sup>423</sup> See *supra*, pp. 484-486.

<sup>424</sup> On the lower Colorado River, the Hoover, Davis, Parker, and Imperial Dams are all operated by the Bureau. It also maintains a front-work and levee system in connection with the Yuma Project on the Colorado River. Act of October 12, 1949, 63 Stat. 765, —. In connection with the performance of protection work between the Yuma Project and the Boulder Dam by the Bureau of Reclamation, see Act of March 3, 1925, 43 Stat. 1186, 1198; Act of January 21, 1927, § 4, 44 Stat. 1010, 1021; Act of July 1, 1940, 54 Stat. 708; Act of June 23, 1946, 60 Stat. 338.

the Boulder Canyon Project Act prescribes a fixed priority of uses for the dam and reservoir, as previously pointed out.<sup>425</sup> But differing statements of purpose appear in connection with other authorized dams along the lower Colorado.<sup>426</sup>

In any evaluation of the need for and type of statutory basis which will permit effective resolution of conflicts among uses, it must be remembered that the reward for coordination is great. For the operation of a system of water-resource projects is a dramatic illustration of the manner in which the whole may exceed the aggregate of its component parts. By hydraulic and

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<sup>425</sup> See *supra*, p. 547.

<sup>426</sup> *Imperial*: Act of December 21, 1928, § 1, 45 Stat. 1057, 43 U. S. C. 617, authorized the construction, operation, and maintenance of a "suitable diversion dam" for use in connection with a main canal entirely within the United States. The All-American Canal Contract of December 1, 1932, between the United States and the Imperial Irrigation District, made pursuant to the Act, provided for the construction by the United States of a "suitable diversion dam" and main canal, therein styled Imperial Dam and All-American Canal. *HOOVER DAM POWER AND WATER CONTRACTS AND RELATED DATA*, Department of the Interior, p. 65 (1950).

*Parker*: Act of August 30, 1935, § 2, 49 Stat. 1028, 1039, authorized the construction "for the purpose of controlling floods, improving navigation, regulating the flow of the streams of the United States, providing for storage and for the delivery of the stored waters thereof, for the reclamation of public lands and Indian reservations, and other beneficial uses, and for the generation of electric energy as a means of financially aiding and assisting" such undertakings. See also *supra*, n. 33, p. 323.

*Davis* (originally Bullshead Dam): "Through regulation of the flow of the main stream of the Colorado River below Boulder Dam it will contribute to flood reduction, navigation improvement, irrigation and domestic water supplies, power development, silt-pollution reduction, recreation, and wild waterfowl protection, as well as other related conservation purposes. \* \* \* When an international agreement regarding the division of the waters of the Colorado River between the United States and Mexico is completed, the accurate control which will be provided by Bullshead Dam will be essential to meter out the water to be passed downstream." Project report of the Commissioner of Reclamation accompanying feasibility finding, April 26, 1941, from the Secretary of the Interior to the Speaker of the House of Representatives, *BUREAU OF RECLAMATION PROJECT FEASIBILITIES AND AUTHORIZATIONS*, Department of the Interior, pp. 157-158 (1949). See also the Mexican Water Treaty, effective November 8, 1945, Treaty Series 994, 59 Stat. 1219; Sen. Res. of April 18, 1945, 59 Stat. 1263.

electric integration, greater benefits can be derived than when the same projects are operated independently.<sup>427</sup>

## Project Financing

In discussing legislative review in connection with project selection, we noted the general necessity for annual appropriations in the financing of water-resource projects. Annual appropriations from the general fund of the Treasury are in fact the means by which most such projects have been financed.

**SPECIAL FUNDS.**—A substantial portion of water-resource project financing, however, is accomplished through the medium of special funds. But the establishment of such funds does not remove the financing process from legislative scrutiny since each agency must submit to Congress its annual budget program and summary of project activities for review by the appropriation committees of Congress.<sup>428</sup> In most cases, as we shall see, the use of such a fund requires affirmative appropriation action. In general, the effect of such a fund is to segregate from the general fund of the Treasury an amount to be expended for specified purposes.

*Reclamation Fund.*—The outstanding example is the Reclamation Fund created for financing irrigation works and activities by reserving, setting aside, and appropriating moneys received from the disposal of public lands in the 16 Western States and Territories named in the Act.<sup>429</sup> After the Act creating the Fund was judicially determined in 1909 to be an appro-

<sup>427</sup> For example, it is estimated that the operation of Hungry Horse Dam in Montana in coordination with downstream dams of the Columbia River system will produce 400,000 more kilowatts of firm power than would the isolated operation of this dam. **ADVANCE PROGRAM OF TRANSMISSION SYSTEM DEVELOPMENT, 1950-1956**, Bonneville Power Administration, p. 26 (1950).

<sup>428</sup> Act of June 10, 1921, 42 Stat. 20, as amended, 31 U. S. C. 1 *et seq.*; **Ex. O. No. 9384**, October 4, 1943, 8 F. R. 13782, 31 U. S. C. 21 note following. See the definition of "appropriations" in the Act of September 12, 1950, Title I, Part 1, § 101, 64 Stat. 832, —.

<sup>429</sup> Act of June 17, 1902, § 1, 32 Stat. 388, as amended, 43 U. S. C. 391. For a more detailed discussion of the Fund, and reference to the addition of Texas as the 17th state, see *supra*, pp. 198-202.

riation of the proceeds, Congress in 1914 prohibited expenditures "except out of appropriations made annually by Congress."<sup>430</sup>

By a number of statutes, Congress authorized the disposal of certain other lands connected with Reclamation projects and provided for covering the receipts into the Fund.<sup>431</sup> In addition, a number of statutes provided for further augmenting the Fund by other revenues.<sup>432</sup> These included a wide variety of sources such as receipts from bonuses, royalties, and rentals from mining on the public domain of coal, phosphates, oil, oil shale, gas, and sodium; a portion of charges for use of public lands and national forests by Federal Power Commission licensees; certain moneys accrued from naval petroleum reserves; and various sums derived from operations in connection with Reclamation projects, including incidental power features.<sup>433</sup>

*Navigation and Headwater Improvements.*—Another special fund derived from income from natural resources is established by the Federal Power Act. With specified exceptions, 50% of the charges collected from certain licensees is "reserved and appropriated as a special fund" to be expended under the direction of the Secretary of the Army in the maintenance and operation of federal navigation structures or in the construction, maintenance, or operation of "headwater or other improvements of navigable waters of the United States."<sup>434</sup>

*Tennessee Valley Authority.*—In directing that the proceeds from the sale of power and other products manufactured by TVA be paid into the Treasury, Congress provided for a special fund by excepting from that requirement such part "as in the opinion of the Board shall be necessary for the Corporation in the operation of dams and reservoirs, in conducting its business

<sup>430</sup> *United States v. Hanson*, 167 Fed. 881, 884-885 (C. A. 9, 1909); Act of August 13, 1914, § 16, 38 Stat. 686, 690, 43 U. S. C. 414.

<sup>431</sup> See *supra*, n. 276, p. 199.

<sup>432</sup> See *supra*, n. 281, pp. 199-200.

<sup>433</sup> See *supra*, pp. 199-202.

<sup>434</sup> Act of June 10, 1920, § 17, 41 Stat. 1063, 1072, as amended, 16 U. S. C. 810.

in generating, transmitting, and distributing electric energy" and in its fertilizer business.<sup>435</sup> This provision is an amendment of the original act which required that the net proceeds derived from the sale of power and manufactured products be paid into the Treasury at the end of each calendar year, after deducting the cost of operation, maintenance, depreciation, amortization, and an amount deemed by the Board to be necessary to withhold as operating capital, or devoted by the Board to new construction.<sup>436</sup>

One noteworthy aspect of the amendment is the changed language setting aside so much of the proceeds as the Board deems necessary in the "operation" of dams and reservoirs, whereas the original language permitted the withholding of amounts for new construction. Furthermore, Congress in 1947 directed that none of TVA's power revenues be used for construction of "new power producing projects (except for replacement purposes) unless and until approved by Congress."<sup>437</sup> This provision, of course, applies to steam-electric plants as well as hydroelectric plants.

*Colorado River Funds.*—The Boulder Canyon Project Act established a special fund called the "Colorado River Dam Fund."<sup>438</sup> It is limited to the financing of a single project, and the statute authorizes the necessary appropriations for advances to the Fund.<sup>439</sup> Project revenues are to be paid into the Fund, and expenditures therefrom are available "for construction and the payment of interest, during construction."<sup>440</sup> But no expenditures from the Fund may be made for operation and maintenance except from appropriations therefor.<sup>441</sup>

Subsequently, the Boulder Canyon Project Adjustment Act

<sup>435</sup> Act of August 31, 1935, § 10, 49 Stat. 1075, 1079, see 16 U. S. C. 831y.

<sup>436</sup> Act of May 18, 1933, § 26, 48 Stat. 58, 71.

<sup>437</sup> Act of July 30, 1947, § 201, 61 Stat. 551, 572, 16 U. S. C. 831h-2 (Supp. III).

<sup>438</sup> Act of December 21, 1928, § 2(a), 45 Stat. 1057, 43 U. S. C. 617a(a).

<sup>439</sup> *Id.*; § 3, 45 Stat. 1058, 43 U. S. C. 617b.

<sup>440</sup> §§ 2(b), 2(c), 45 Stat. 1057, 43 U. S. C. 617a(b), 617a(c).

<sup>441</sup> § 2(c), 45 Stat. 1057, 43 U. S. C. 617a(c); Act of July 19, 1940, § 2(a), 54 Stat. 774, 43 U. S. C. 618a(a).



provided for the transfer of \$500,000 a year to a special fund designated the "Colorado River Development Fund."<sup>442</sup> Receipts of this Fund are authorized to be appropriated for studies and investigations and for construction of projects in the Colorado River Basin.<sup>443</sup>

*Other Funds.*—In addition to the foregoing funds designed for use in connection with water-resource projects, Congress has from time to time created still other funds from receipts in connection with natural resources.<sup>444</sup>

*New Construction.*—Even with the variety of sources of revenue made available to the Reclamation Fund, the amounts have proved insufficient for the program of project construction envisioned, making appropriations from the general fund necessary.<sup>445</sup> Though previously authorized in the form of advances to the Reclamation Fund,<sup>446</sup> such appropriations are now made directly available for expenditures.<sup>447</sup> So far as project construction goes, the other special funds have a limited impact. Moreover, to the extent that nonreimbursable expenditures from such funds are authorized, each becomes self-de-

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<sup>442</sup> Act of June 19, 1940, § 2(d), 54 Stat. 774, 43 U. S. C. 618a(d) (Supp. III).

<sup>443</sup> *Id.* See also *supra*, p. 302.

<sup>444</sup> For example:

Twenty-five percent of certain receipts collected under an authorization for the lease of grazing lands outside grazing districts, when appropriated by Congress, is available until expended "solely for the construction, purchase, or maintenance of range improvements." Act of August 6, 1947, § 2, 61 Stat. 790, 43 U. S. C. 315i (Supp. III). Moreover, moneys received by the Secretary of the Interior in the administration of certain nonfederal grazing lands are made available, when appropriated by Congress, for leasing such nonfederal lands. Act of June 23, 1938, § 4, 52 Stat. 1033, 43 U. S. C. 315m-4.

Similarly, 10% of all moneys received from national forests during each fiscal year is made available at the end thereof, to be expended for the construction or maintenance of roads and trails within national forests in the states from which such proceeds are derived. Act of March 4, 1913, 37 Stat. 843, as amended, 16 U. S. C. 501.

<sup>445</sup> See *supra*, pp. 199-200.

<sup>446</sup> See, *e. g.*, Act of June 25, 1910, § 1, 36 Stat. 835, 43 U. S. C. 397; Act of March 3, 1931, 46 Stat. 1507, 43 U. S. C. 391a, 391b. See also Act of May 9, 1938, § 1, 52 Stat. 322, 43 U. S. C. 391a-1.

<sup>447</sup> See, *e. g.*, Act of June 29, 1948, 62 Stat. 1112, 1128, 1129.

pleting.<sup>448</sup> In the aggregate, therefore, these special funds do not answer the fiscal problem respecting new projects and programs.

*Necessity for Appropriations.*—For a time, expenditures from the Reclamation Fund were permissible without appropriation action.<sup>449</sup> But Congress in 1914 prohibited expenditures “except out of appropriations.”<sup>450</sup> The construction of Boulder Canyon Project was dependent upon appropriations to the Colorado River Dam Fund.<sup>451</sup> And for specified purposes, receipts of the Colorado River Development Fund are “authorized to be appropriated.”<sup>452</sup> On the other hand, without appropriation action, the Tennessee Valley Authority is authorized to reserve a portion of the proceeds from its operations for use for specified purposes, previously set forth.<sup>453</sup>

Finally, the need for appropriation action varies with respect to the other resource funds we have mentioned.<sup>454</sup>

**FISCAL-YEAR FINANCING.**—A number of rules of general applicability should first be noted. Except where modified, they govern important aspects of the financing of water-resource projects and reflect the effect of the appropriation process.

For example, no federal agency may “involve the Government in any contract or other obligation for the future payment of money in excess of” appropriations unless authorized by law.<sup>455</sup> Nor may a contract or purchase on behalf of the

<sup>448</sup> For example, certain administrative and investigative expenses are chargeable to the Reclamation Fund but may not “be charged as a part of the reimbursable construction or operation and maintenance costs.” Act of December 5, 1924, § 4, subsection O, 43 Stat. 672, 704, as amended, 43 U. S. C. 377.

<sup>449</sup> See *supra*, pp. 198–199.

<sup>450</sup> Act of August 13, 1914, § 16, 38 Stat. 686, 690, 43 U. S. C. 414.

<sup>451</sup> Act of December 21, 1928, § 2(b), 45 Stat. 1057, 43 U. S. C. 617a(b).

<sup>452</sup> Act of July 19, 1940, § 2(d), 54 Stat. 774, 775, 43 U. S. C. 618a(d).

<sup>453</sup> See *supra*, pp. 575–576.

<sup>454</sup> Thus, appropriation action is required in the case of the Taylor Grazing Act fund, but not as to the fund for maintenance of roads and trails within national forests. See *supra*, n. 444, p. 577.

<sup>455</sup> R. S. § 3679, from Act of July 12, 1870, § 7, 16 Stat. 230, 251, as amended, 31 U. S. C. 665.

United States be made "unless the same is authorized by law or is under an appropriation adequate to its fulfillment."<sup>456</sup> Likewise, no contract for a public improvement may be made "which shall bind the Government to pay a larger sum of money than the amount in the Treasury appropriated for the specific purpose."<sup>457</sup>

Furthermore, except as otherwise provided by law, "all balances of appropriations contained in the annual appropriation bills and made specifically for the service of any fiscal year, and remaining unexpended at the expiration of such fiscal year, shall only be applied to the payment of expenses properly incurred during that year, or to the fulfillment of contracts properly made within that year."<sup>458</sup> Sums appropriated for "expenditure in the public service shall be applied solely to the objects for which they are respectively made, and for no others," except as otherwise provided by law.<sup>459</sup>

With the same exception, "no advance of public money shall be made in any case unless authorized by the appropriation concerned or other law."<sup>460</sup> In all cases of contracts for the performance of any service, or the delivery of articles of any description, "payment shall not exceed the value of the service rendered, or of the articles delivered previously to such payment."<sup>461</sup> Nor may any federal department or officer "accept voluntary service for the Government or employ personal service in excess of that authorized by law," except in specified emergencies.<sup>462</sup>

<sup>456</sup> R. S. § 3732, from Act of March 2, 1861, § 10, 12 Stat. 214, 220, as amended, 41 U. S. C. 11, with an exception not pertinent here.

<sup>457</sup> R. S. § 3733, from Act of July 25, 1868, § 3, 15 Stat. 171, 177, 41 U. S. C. 12.

<sup>458</sup> R. S. § 3690, from Act of July 12, 1870, § 5, 16 Stat. 230, 251, 31 U. S. C. 712. Balances not needed for the specified purposes are carried over to the surplus fund, and "permanent or indefinite appropriations" are exempted.

<sup>459</sup> R. S. § 3678, from Act of March 3, 1809, § 1, 2 Stat. 535; Act of February 12, 1808, § 2, 15 Stat. 35, 36, 31 U. S. C. 628.

<sup>460</sup> R. S. § 3648, from Act of January 31, 1823, § 1, 3 Stat. 723, as amended, 31 U. S. C. 529.

<sup>461</sup> *Id.*

<sup>462</sup> R. S. § 3679, from Act of July 12, 1870, § 7, 16 Stat. 230, 251, as amended, 31 U. S. C. 665.

Based on a review of several of the foregoing and other similar provisions, the Court of Claims in 1880 observed that:<sup>463</sup>

A reading of these provisions will show conclusively, we think, that Congress have restricted in every possible way the expenditures and expenses and liabilities of the government, so far as executive officers are concerned, to the specific appropriations for each fiscal year.

But the fiscal year bears only an artificial relation to the construction process. Construction of dams may extend over a period of several years, and short-term contracts for less than a year may cover parts of two fiscal years, since the latter end on June 30. Moreover, the appropriation process is often lengthy, and errors may be made in decisions as to the amount of money required by a proposed project. Congress has enacted modifications of the foregoing rules variously reconciling fiscal requirements to the needs of construction. But such modifications differ from agency to agency.

*Construction.*—One method employed to relax the restrictive effects of the general rules is to broaden the scope of the appropriation statute.

Thus, instead of an individualized appropriation for each project, the practice of making a lump-sum appropriation for a group of projects or activities affords flexibility within the amount of the total appropriation. Since 1920, this has been the legislative practice with respect to water-resource projects prosecuted by the Army Engineers.<sup>464</sup> In 1950, Congress employed this practice in making appropriations for construction and rehabilitation by the Bureau of Reclamation.<sup>465</sup>

Another possible modification facilitating contract sched-

<sup>463</sup> *Wilder v. United States*, 16 Ct. Cl. 528, 543 (1880). Among the provisions previously cited herein, those referred to by the Court included R. S. §§ 3678, 3679, 3690. So far as pertinent here, none of these provisions appears to have been significantly altered since 1880.

<sup>464</sup> See *supra*, n. 174, p. 105.

<sup>465</sup> Act of September 6, 1950, ch. VII, § 101, 64 Stat. 595, —. Previously, appropriations were made on an individualized project basis, with an express prohibition against exceeding construction amounts appropriated from the Reclamation Fund for any project and a limitation on expenditures from the Fund to its total amount. Act of October 12, 1949, § 1, 63 Stat. 765, —.

uling is to make appropriations available until expended. In the case of navigation and flood-control projects, this has been accomplished by general legislation.<sup>466</sup> Or such modification may be made effective with respect to individual annual appropriation items. Thus, the General Appropriation Act, 1951, so provides in the case of appropriations for construction of water-resource projects by the Army Engineers, the Bureau of Reclamation, the Bonneville Power Administration, the Tennessee Valley Authority, and the International Boundary and Water Commission.<sup>467</sup> And the same is true in the case of appropriations for the prosecution of flood-control activities by the Department of Agriculture.<sup>468</sup>

Another means for relaxing the effect of the general rules is by an authorization for the execution of contracts extending beyond the fiscal year. For example, it is expressly provided that any public work on canals, rivers, and harbors adopted by Congress may be prosecuted by "direct appropriations, by continuing contracts," or by both.<sup>469</sup> Similar but limited authority may be included in appropriation legislation. Such is the case with respect to appropriations for the Bureau of Reclamation and the Bonneville Power Administration in the General Appropriation Act, 1951.<sup>470</sup> It should be noted, however, that the mere existence of contract authority may not resolve the problem of construction scheduling. For the contract authority may be less than the time requirements of the construction program.

Under the Tennessee Valley Authority Act, Congress in 1933 removed project construction from the need for appropriations. It authorized TVA, in the "construction of any future dam, steam plant, or other facility, to be used in whole or in part

<sup>466</sup> Act of August 24, 1912, § 7, 37 Stat. 417, 487, as amended, 31 U. S. C. 718; Act of March 1, 1917, § 3, 39 Stat. 948, 950.

<sup>467</sup> Act of September 6, 1950, ch. III, title I; ch. VII, title I; ch. VIII, title I; ch. IX, 64 Stat. 595, —, —, —. Such a provision has been regularly included since 1937 in legislation appropriating funds for navigation projects. See, e. g., Act of July 19, 1937, § 1, 50 Stat. 515, 516.

<sup>468</sup> Ch. VII, title I, 64 Stat. —.

<sup>469</sup> Act of September 22, 1922, § 10, 42 Stat. 1038, 1043, 33 U. S. C. 621.

<sup>470</sup> Act of September 6, 1950, ch. VII, title I, 64 Stat. 595, —, —.

for the generation or transmission of electric power" to issue bonds not exceeding \$50,000,000 in amount.<sup>471</sup> Similar authority was later granted for TVA to issue bonds in a like amount to enable the extension of credit to specified nonfederal agencies to assist them in acquiring, improving, and operating existing power facilities.<sup>472</sup> But the foregoing authorizations were replaced in 1939, at which time TVA was authorized to issue bonds not to exceed \$61,500,000 to finance acquisition, rehabilitation, and connection of property owned by private utilities.<sup>473</sup>

It should be noted that these bonding provisions unnecessarily separate the funding arrangements with respect to prosecution of water-resource projects from other funding arrangements of the Treasury Department. For equally effective borrowing authority could be made available by authorizing advances to a federal constructing agency and making such advances a "public-debt" transaction, empowering the Secretary of the Treasury to issue securities to obtain the required funds.<sup>474</sup> This approach is not without precedent.<sup>475</sup>

With respect to the need for financial flexibility resulting from varying expenses of operating power-market facilities and the need to maintain uninterrupted service, the TVA Act furnishes another unique example. Under its authority to reserve revenues, TVA may except such part thereof as it deems necessary "in conducting its business in generating, transmitting, and distributing electric energy."<sup>476</sup> Such funds are in addition to the continuing fund of \$1,000,000 available to TVA to defray emergency expenses and to insure continu-

<sup>471</sup> Act of May 18, 1933, § 15, 48 Stat. 58, 66, 16 U. S. C. 831n.

<sup>472</sup> § 15a, as added by Act of August 31, 1935, § 9, 49 Stat. 1075, 1079, 16 U. S. C. 831n-1.

<sup>473</sup> §§ 15b, 15c, as added by Act of July 26, 1939, 53 Stat. 1083, 16 U. S. C. 831n-2, 831n-3.

<sup>474</sup> Under the Second Liberty Bond Act, as amended, the Secretary of the Treasury may borrow on the credit of the United States and issue bonds for sums necessary to meet authorized expenditures for public purposes. Act of September 24, 1917, § 1, 40 Stat. 288, as amended, 31 U. S. C. 752.

<sup>475</sup> This was done, for example, in the case of the Defense Production Act of 1950. Act of September 8, 1950, § 304(b), 64 Stat. 798, —.

<sup>476</sup> Act of May 18, 1933, § 26, 48 Stat. 58, 71, as amended, 16 U. S. C. 831y.

ous operation.<sup>477</sup> No comparable situation exists under other statutes whereby nearly all other federal power-marketing responsibilities are vested in the Secretary of the Interior.<sup>478</sup>

*Operation and Maintenance.*—It has previously been pointed out that Congress has generally authorized appropriations for operation and maintenance in the case of flood-control and irrigation projects, but not in the case of navigation projects.<sup>479</sup> In both cases, appropriations must be made.

Significant variations exist in the manner in which funds are appropriated by Congress for operation and maintenance of water-resource projects and activities. The General Appropriation Act, 1951, will serve to illustrate. In the case of navigation projects, provision is made jointly for the "preservation and maintenance" along with the "prosecution" of authorized projects.<sup>480</sup> A similar item for flood control lumps "construction and maintenance."<sup>481</sup> And in the case of TVA, a lump sum is made available for "carrying out the provisions of the Tennessee Valley Authority Act."<sup>482</sup> The items for construction are separate from items for operation and maintenance in the case of the Bureau of Reclamation, the Bonneville Power Administration, and the Southwestern Power Administration.<sup>483</sup> The lesser flexibility afforded under the latter type appropriation is apparent from the general requirement of law that sums must be applied "solely to the objects for which they are respectively made, and for no others."<sup>484</sup>

Reference should be made here to the "special fund," derived from charges collected from Federal Power Commission licensees, which is available to the Secretary of the Army in the "maintenance and operation" of federal navigation structures or in the construction, "maintenance, or operation" of head-

<sup>477</sup> *Id.*

<sup>478</sup> See *supra*, pp. 293-300.

<sup>479</sup> See *supra*, pp. 564-565.

<sup>480</sup> Act of September 6, 1950, ch. IX, 64 Stat. 595, —.

<sup>481</sup> Ch. IV, 64 Stat. —.

<sup>482</sup> Ch. VIII, title I, 64 Stat. —.

<sup>483</sup> Ch. VII, title I, 64 Stat. —, —, —.

<sup>484</sup> R. S. § 3678, from Act of March 3, 1809, § 1, 2 Stat. 535, as amended, 31 U. S. C. 628.

water or other improvements of navigable waters of the United States.<sup>485</sup>

Perhaps the most flexible arrangement in the case of operation and maintenance funds is that prescribed for the Tennessee Valley Authority. As already pointed out, it may reserve so much of its revenues as it deems necessary "in the operation of dams and reservoirs, in conducting its business in generating, transmitting, and distributing electric energy" and in its fertilizer business.<sup>486</sup> Here, replenishment from revenues depends upon the administrative discretion of the operating agency.

We have also outlined the varying legislative provisions for funds of an emergency character available in the case of flood-control work of the Army Engineers and the Department of Agriculture, as to Reclamation projects, and under statutes relating to the Tennessee Valley Authority, the Bonneville Project, and the Fort Peck Project.<sup>487</sup> At the same time, it was noted that no such fund is provided with respect to navigation projects or the Boulder Canyon Project.<sup>488</sup>

As to these emergency funds, however, variations exist in the degree to which they are exempted from the appropriation process. For example, replenishment of the Army Engineer emergency flood-control fund is dependent upon appropriations.<sup>489</sup> The same is true of the authorization for emergency flood-control expenditures by the Secretary of Agriculture.<sup>490</sup> In the case of the Bureau of Reclamation's emergency fund, replenishment is accomplished by appropriations from the

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<sup>485</sup> Act of June 10, 1920, § 17, 41 Stat. 1063, 1072, as amended, 16 U. S. C. 810.

<sup>486</sup> Act of May 18, 1833, § 26, 48 Stat. 58, 71, as amended, 16 U. S. C. 831y. Somewhat similar is the provision of a fund under the Fort Peck Act, "to defray the operating expenses of generation and transmission of power," as well as for emergency expenses. Act of May 18, 1938, § 10, 52 Stat. 403, 406, 16 U. S. C. 833i.

<sup>487</sup> See *supra*, pp. 565-567.

<sup>488</sup> See *supra*, p. 567.

<sup>489</sup> Act of May 17, 1950, § 210, 64 Stat. 163, —.

<sup>490</sup> Act of December 22, 1944, § 15, 58 Stat. 887, 907, as amended by Act of May 17, 1950, § 216, 64 Stat. 163, —.



Reclamation Fund.<sup>491</sup> Automatic replenishment from revenues is provided for in the case of the continuing emergency funds available under the Bonneville Project, Fort Peck Project, and Tennessee Valley Authority Acts.<sup>492</sup> So also as to the Southwestern Power Administration fund.<sup>493</sup>

CONTRIBUTIONS.—Local contributions constitute another possible source of funds or other aids to development of water-resource projects. Authorizing statutes vary as to what may be accepted, specification of the contributor, and the underlying purpose.

In the case of navigation projects, we earlier noted that every report on an authorized survey must contain a statement of "special or local benefit," and recommendations as to what "local cooperation" should be required, if any.<sup>494</sup> On the basis of such reports, Congress may then on a project-by-project basis require local contribution in authorizing individual projects.<sup>495</sup> The Secretary of the Army has discretion to receive from "private parties" contributed "funds" to be expended with appropriated funds for any authorized improvement whenever such work and expenditure may be considered by the Chief of Engineers as advantageous to the "interests of navigation."<sup>496</sup> In aid of "immediate prosecution" of an authorized "work of river and harbor improvement," advance "funds" may

<sup>491</sup> Act of June 26, 1948, § 1, 62 Stat. 1052, 43 U. S. C. 502 (Supp. III).

<sup>492</sup> Act of August 20, 1937, § 11, 50 Stat. 731, 736, 16 U. S. C. 832j; Act of May 18, 1938, § 10, 52 Stat. 403, 406, 16 U. S. C. 833i; Act of May 18, 1933, § 26, 48 Stat. 58, 71, as amended, 16 U. S. C. 831y.

<sup>493</sup> Act of December 23, 1943, 57 Stat. 611, 621, as amended by Act of October 12, 1949, 63 Stat. 765, —.

<sup>494</sup> Act of June 5, 1920, § 2, 41 Stat. 1009, 1010, 33 U. S. C. 547.

<sup>495</sup> See, *e. g.*, Act of March 2, 1945, § 2, 59 Stat. 10, 13, where local interests were required to contribute 50% of the first cost of improvement of Jones Inlet, N. Y., and to furnish necessary lands, easements, and rights-of-way. See ANNUAL REPORT OF THE CHIEF OF ENGINEERS, U. S. ARMY, pp. 232-233 (1949).

<sup>496</sup> Act of March 4, 1915, § 4, 38 Stat. 1049, 1053, 33 U. S. C. 560. When such contributions are in excess of the actual cost of the work properly chargeable to such contributions, such excess may be returned unless its retention is required by law.

be accepted from "local interests" and expended by the Secretary of the Army.<sup>497</sup>

In the case of flood-control projects, the Secretary of the Army has discretion to receive and expend advance "funds" from any "State or political subdivision thereof" in the "immediate prosecution" of such work.<sup>498</sup> Like the preceding statute, this latter provision directs him to repay such contributions without interest from appropriations which "may be provided by Congress," unless such contribution was made to meet a condition imposed by statute.<sup>499</sup> Also, with respect to flood-control projects other than dam and reservoir projects, the law requires, as a condition precedent to the use of federal funds, assurances from "States, political subdivisions thereof, or other responsible local agencies" that they will provide necessary lands, easements, and rights-of-way; hold and save the United States free from damages due to construction; and maintain and operate the works after completion.<sup>500</sup>

Furthermore, another provision specially applicable to flood-control projects permits their modification to provide additional storage capacity for domestic water supply or other water-conservation storage if the increase in cost is contributed by "local agencies" and they agree to utilize such capacity consistently with federal uses.<sup>501</sup> As in the case of navigation projects, the Secretary of the Army is also authorized to receive contributed "funds" from "States and political subdivisions thereof" to be expended with appropriated funds for authorized flood-control work.<sup>502</sup> This may be done, on recommendation of the Chief of Engineers, "as advantageous in the public interest," whereas the statute applying to navigation projects is operative on his recommendation that the work and expenditure are "advantageous to the interests of navigation."

<sup>497</sup> Act of March 3, 1925, § 11, 43 Stat. 1186, 1197, 33 U. S. C. 561.

<sup>498</sup> Act of October 15, 1940, 54 Stat. 1176, 33 U. S. C. 701b-1.

<sup>499</sup> *Id.* With respect to the general statutory requirements concerning local contributions, see *supra*, pp. 144-146.

<sup>500</sup> See *supra*, pp. 144-145, and especially notes 103-104.

<sup>501</sup> Act of June 22, 1936, § 5, 49 Stat. 1570, 1572, as added by Act of July 19, 1937, § 1, 50 Stat. 515, 518, 33 U. S. C. 701h.

<sup>502</sup> *Id.*

Still different is the law applicable to flood-control work of the Department of Agriculture. The Secretary has discretionary authority to require, as a condition to extending benefits in prosecuting authorized works, "contributions in money, services, materials, or otherwise."<sup>503</sup>

The General Appropriation Act, 1951, provides that the expenditure of any sums from the appropriation to the Bureau of Reclamation for "General Investigations" for investigations of any nature requested by states, municipalities, or other interests shall be upon the basis of the state, municipality, or other interest advancing at least 50 per centum of the estimated cost of such investigations.<sup>504</sup>

Elsewhere we have discussed provisions applicable to federal activity concerning beach and shore erosion.<sup>505</sup> It will suffice here to note that the Secretary of the Army may require contributions from the state for investigations and studies.<sup>506</sup> Federal assistance to construction of protection works for shores by states or political subdivisions is limited to one-third of the total cost.<sup>507</sup>

A reclamation statute stipulates that moneys received from any "State, municipality, corporation, association, firm, district, or individual for investigations, surveys, construction work, or any other development work incident thereto" which involve operations similar to those provided for by Reclama-

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<sup>503</sup> Act of June 22, 1936, § 3, 49 Stat. 1570, 1571, as amended, 33 U. S. C. 701c. The Secretary may also require: "The enactment and reasonable safeguards for the enforcement of State and local laws imposing suitable permanent restrictions on the use of such lands and otherwise providing for run-off and water-flow retardation and soil-rosion prevention," and "agreements or covenants as to the permanent use of such lands." *Id.*, as added by Act of August 28, 1937, § 4, 50 Stat. 867, 877.

Somewhat similar authority is available to the Secretary of Agriculture under the 1935 soil-conservation legislation. Act of April 27, 1935, § 3, 49 Stat. 163, 16 U. S. C. 590c. So also as to the extension of benefits under the Water Facilities Act. Act of August 28, 1937, § 4, 50 Stat. 869, 870, 16 U. S. C. 590u.

<sup>504</sup> Act of September 6, 1950, ch. VII, title I, 64 Stat. 595, —.

<sup>505</sup> See *supra*, pp. 334-346.

<sup>506</sup> Act of July 3, 1930, § 2, 46 Stat. 918, 945, 33 U. S. C. 426.

<sup>507</sup> Act of August 16, 1946, § 1, 60 Stat. 1056, 33 U. S. C. 426e.

tion Law, shall be covered into the Reclamation Fund and shall be available for expenditures for the purposes for which contributed.<sup>508</sup>

**RELIEF AND OTHER FUNDS.**—From time to time, we have mentioned instances where water-resource projects were developed with relief funds.<sup>509</sup> In this connection, reference should be made to the provisions of the Water Conservation and Utilization Act which permitted the use of relief and other funds available to federal agencies, along with contributions from states, to defray a portion of the costs of projects covered by that Act.<sup>510</sup>

Excepting lands withdrawn from the public domain, the Secretary of the Army is authorized to use lands or other property under his control and jurisdiction for the prosecution of any authorized civil work or function administered by the Department of the Army without charge, except usual handling charges, against appropriations for such civil works or functions.<sup>511</sup>

**RETURN OF PROJECT COSTS.**—In the absence of statutory provisions to the contrary, reimbursement is not required from beneficiaries of federal expenditures. Varying provisions to the contrary, however, are included in laws providing for federal development of water-resource projects. These are not uniform for all benefits; nor are provisions uniform under different statutes with respect to the same type of benefits.

Before turning to an examination of these statutes as they relate to specific benefits, a few general observations will be helpful.

As just indicated, return of project costs by beneficiaries is necessary only when required by statute. If a project purpose has been recognized by statute, expenditure therefor may be authorized, as in the case of fishways where river and harbor improvements are found to obstruct fish passage.<sup>512</sup> But

<sup>508</sup> Act of March 4, 1921, § 1, 41 Stat. 1367, 1404, 43 U. S. C. 395.

<sup>509</sup> See *supra*, pp. 243-245, 410-413.

<sup>510</sup> Act of October 14, 1940, § 2, 54 Stat. 1119, 1120, as amended, 16 U. S. C. 590z.

<sup>511</sup> Act of July 24, 1946, § 8, 60 Stat. 641, 643, 5 U. S. C. 229.

<sup>512</sup> Act of August 11, 1888, § 11, 25 Stat. 400, 425, 33 U. S. C. 608.

unless a statute so provides, such costs are not required to be returned.

On the other hand, various statutes authorize the sale of vendible project products and thus provide to some extent for the return of project costs. By implication, such provisions may be said to require return of project costs. Similarly, varying requirements for "local contribution" are stipulated which provide for, and in some cases require, payment of portions of project costs. Such requirements establish the pattern for the return of costs of navigation and flood-control projects of the Army Engineers. Somewhat similar is the situation respecting flood-control work by the Department of Agriculture. Here, return of costs is provided for to the extent that the Secretary, in his discretion, invokes the statutory provision for "local contribution."

In order to assess the law's requirements as to return of project costs, we shall here review the various relevant provisions, notwithstanding the fact that many of them are to be separately reviewed later as "pricing" provisions. Such separate treatment of the provisions relating to return of project costs appears desirable since in one area, the area of Reclamation Law, there is express statutory recognition of the concept, as such, in the prerequisite to project authorization.

Reclamation Law currently requires findings by the Secretary of the Interior that repayable and returnable allocations to reimbursable project purposes, together with authorized allocations to designated nonreimbursable project purposes, equal the total estimated cost of construction.<sup>513</sup> In effect,

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<sup>513</sup> Act of August 4, 1939, § 9(a), 53 Stat. 1187, 1193, 43 U. S. C. 485h(a). The situation is different in the case of projects under the Water Conservation and Utilization Act. Act of October 14, 1940, 54 Stat. 1119, as amended, 16 U. S. C. 590y-590z-11. The term "reimbursable construction costs" is expressly confined to costs allocated to irrigation plus such amounts as the President may determine to be reimbursable. § 4(b), 54 Stat. 1121, as amended, 16 U. S. C. 590z-2(b). Costs allocated to purposes other than irrigation are not expressly classed as reimbursable or nonreimbursable. But provision is made for contracts for surplus power or municipal or miscellaneous water-supply purposes. § 9, 54 Stat. 1124, 16 U. S. C. 590z-7. To this extent, the Act contemplates at least partial return of costs allocated to these purposes.

this reverses the procedure applicable to other projects, since costs are here termed nonreimbursable only as specifically so authorized. Such is the case with respect to allocations to navigation, flood control, and to the preservation and propagation of fish and wildlife.<sup>514</sup> The provisions of Reclamation Law expressly contemplating the return of project costs are separate, it may be noted, from those governing repayment by irrigation water users, or the fixing of rates in contracts for power or for the furnishing of water for municipal water supply or miscellaneous purposes.<sup>515</sup>

While these two approaches to return of project costs need not differ, there are differences in fact, as we shall shortly see.<sup>516</sup> One such difference may be noted at the outset. The allocation provisions of Reclamation Law do not refer to interest. And it has been administratively determined that repayment with interest is not required and that, when interest is collected in the form of power rates, the statute permits any interest component of such revenues to be applied to the repayment of the construction investment.<sup>517</sup> In the case of power from reservoir projects under Army control, on the other hand, the cost of interest is one of the costs included in the setting of power rates, despite the lack of express statutory requirement

<sup>514</sup> § 9(b), 53 Stat. 1194, 43 U. S. C. 485h(b); Act of August 14, 1946, § 2, 60 Stat. 1080, 16 U. S. C. 662.

<sup>515</sup> See, e. g., § 9(c), 53 Stat. 1194, 43 U. S. C. 485h(c).

<sup>516</sup> So far as the term, "return of project costs," suggests return of moneys for the general use of the Government, there are other differences not developed here. If, as in the case of the Reclamation Fund, parts of such costs are returned to a special fund for specific purposes, such moneys are not returned for general use by the Government. In this connection, see the discussion of special funds, *supra*, pp. 574-578.

<sup>517</sup> With respect to the interpretation of the Act as permitting the application of interest, collected as a component of power rates, to the return to the United States of irrigation costs to be borne by power, see *supra*, pp. 295-296.

It should be noted, however, that one of the two pricing standards applicable to contracts to furnish water for municipal water supply or miscellaneous purposes requires the return of interest "if the Secretary determines an interest charge to be proper." § 9(c), 53 Stat. 1194, 43 U. S. C. 485h(c).

therefor, interest on the power investment thus being one of the costs returned to the United States.<sup>518</sup>

In addition to the foregoing general provisions, statutes such as the Boulder Canyon Project Act have expressly provided for return of costs in the case of particular projects.<sup>519</sup> On the other hand, the special act authorizing the Hungry Horse Dam is silent with respect to return of nonirrigation costs of the Dam and power facilities.<sup>520</sup>

Preliminarily it may also be noted that there is a variation among the statutes with respect to the necessity for the procedure of allocating costs to various project purposes. As to navigation and flood-control projects, there is no general express requirement. But when irrigation works are constructed in connection with Army dam and reservoir projects under the authority of the 1944 Flood Control Act, certain costs allocations are made expressly necessary.<sup>521</sup> Detailed requirements necessitating allocation of costs are specified for irrigation projects under the 1939 Reclamation Project Act.<sup>522</sup> The same is true when the "preservation and propagation of fish and wildlife" is made a purpose of an irrigation project authorized under the foregoing 1939 Act.<sup>523</sup>

Specific recognition of the cost-allocation procedure appears also in the Bonneville Project Act, the Fort Peck Project Act, and the Tennessee Valley Authority Act.<sup>524</sup> For projects gov-

<sup>518</sup> See, e. g., *Re Bonneville Project, Columbia River, Oregon-Washington*, Allocation of Costs, Project No. IT 5955, 4 F. P. C. 950, 955 (1945).

<sup>519</sup> Act of December 21, 1928, § 5, 45 Stat. 1057, 1060, as amended, 43 U. S. C. 617d.

<sup>520</sup> Act of June 5, 1944, 58 Stat. 270, 43 U. S. C. 593a-593b. Reclamation Law is made expressly applicable to "such additional works" as the Secretary of the Interior deems necessary for irrigation purposes. § 3, 58 Stat. 371, 43 U. S. C. 593b. See also *supra*, p. 305.

<sup>521</sup> Act of December 22, 1944, § 8, 58 Stat. 887, 891, 43 U. S. C. 390.

<sup>522</sup> Act of August 4, 1939, § 9, 53 Stat. 1187, 1193, 43 U. S. C. 485h.

<sup>523</sup> Act of August 14, 1946, § 2, 60 Stat. 1080, 16 U. S. C. 662.

<sup>524</sup> Act of August 20, 1937, § 7, 50 Stat. 731, 735, 16 U. S. C. 832f; Act of May 18, 1938, § 6, 52 Stat. 403, 405, 16 U. S. C. 833e; Act of May 18, 1933, § 14, 48 Stat. 58, 66, as amended, 16 U. S. C. 831m.

erned by the first two Acts, the Federal Power Commission is required to make an allocation of costs upon which power-rate schedules must be based, while the latter Act requires certain cost allocations by the TVA Board.<sup>525</sup> Moreover, while cost-allocation procedures are not expressly required under a number of other statutes, they are employed in administrative practice in connection with benefit-cost determinations and in rate making.<sup>526</sup>

The subject of return of project costs, to which we now turn, we shall treat separately from the matter of pricing of project products.<sup>527</sup> The two matters nevertheless bear a close relationship, for the pricing provisions alone often determine the degree to which project costs are returned to the United States.

*Navigation and Flood Control.*—Statutes applicable to Army Engineer projects contain no provision requiring return of costs allocable to navigation and flood control, except so far as local contribution is required pursuant to statute.<sup>528</sup> Nor are any costs required to be returned in the case of flood-control work by the Department of Agriculture, unless the Secretary in his discretion requires local contribution.<sup>529</sup> Costs allocated to navigation and flood control are expressly made nonreimbursable in connection with projects authorized under the 1939 Reclamation Project Act.<sup>530</sup>

*Irrigation.*—Under that 1939 Act, provision is made for an allocation of that part of the estimated project cost which can “properly be allocated to irrigation and probably be repaid by the water users.”<sup>531</sup> Payment of interest is not expressly required. Costs allocable to irrigation but beyond the water-

<sup>525</sup> *Id.*

<sup>526</sup> See, e. g., H. Doc. No. 531, 71st Cong., 2d sess., ch. III, Main Control Plan and Related Programs: Justification pp. — (1950). Federal Power Commission Order, Re *Department of the Interior*, relative to the Alatoona Project, Docket No. E-6157, January 25, 1949.

<sup>527</sup> As to the pricing of project products, see *infra*, pp. 600–615.

<sup>528</sup> See *supra*, pp. 105–106, 144–146; see *infra*, pp. 601–603.

<sup>529</sup> Act of August 28, 1937, § 4, 50 Stat. 876, 877, see 33 U. S. C. 701c.

<sup>530</sup> Act of August 4, 1939, § 9(a), 9(b), 53 Stat. 1187, 1193, 43 U. S. C. 485h(a), 485h(b).

<sup>531</sup> § 9(a), 53 Stat. 1193, 43 U. S. C. 485h(a).



users' repayment ability are in practice assigned for return by revenues from other reimbursable purposes.<sup>532</sup>

Somewhat different is the situation with respect to irrigation works at Army dam and reservoir projects, authorized pursuant to Section 8 of the Flood Control Act of 1944.<sup>533</sup> While this Section provides for the construction, operation, and maintenance of such works under Reclamation Law, it adds a provision affecting return of project costs. Here, the project feasibility report of the Secretary of the Interior may, "within the limits of the water users' repayment ability," be predicated on the allocation to irrigation of an appropriate portion of the cost of structures and facilities used for irrigation and other purposes. The feasibility report may therefore not be predicated upon an allocation to irrigation beyond the "limits of the water users' repayment ability."<sup>534</sup> No corresponding limitation exists with respect to projects authorized under Reclamation Law; rather costs beyond the water-users' repayment

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<sup>532</sup> See *supra*, n. 307, p. 204.

A more flexible situation exists with respect to those reclamation projects under the Water Conservation and Utilization Act. It includes a provision for cost allocations patterned after section 9(a) of the 1939 Reclamation Project Act. Act of October 14, 1940, § 3, 54 Stat. 1119, 1120, as amended, 16 U. S. C. 590z-1. In addition, it authorizes use of relief funds and contributions from federal and nonfederal agencies, reducing the need for direct appropriations. § 2, 54 Stat. 1120, 16 U. S. C. 590z. Cost allocations to irrigation are made reimbursable so far as met by expenditures from appropriated funds plus such amounts of other funds as the President may determine to be reimbursable. § 4(b), 54 Stat. 1121, as amended, 16 U. S. C. 590z-2(b). The contributions by federal agencies are to be reimbursed in such amounts as the President may fix "within the limits of the water users' ability to repay." § 2, 54 Stat. 1120, 16 U. S. C. 590z. Furthermore, a 1943 amendment permitted use of direct appropriations in lieu of relief labor and contributions from federal agencies and provided that expenditures may be excluded from returnable project costs to the extent necessary "for the successful prosecution of the project." Act of July 16, 1943, § 5, 57 Stat. 566, 567, 16 U. S. C. 590z-2(d).

<sup>533</sup> Act of December 22, 1944, § 8, 58 Stat. 887, 891, 43 U. S. C. 390.

<sup>534</sup> In connection with the authorization for the Secretary of the Interior to construct additional irrigation works at the Hungry Horse Dam, the same limitation, "within the limits of the water users' repayment ability," is included in substantially the same manner as in the 1944 Flood Control Act. Act of June 5, 1944, § 3, 58 Stat. 270, 43 U. S. C. 593b.

ability are here assigned for return to another purpose, such as power.<sup>525</sup>

Moreover, it should be noted that the foregoing provision of the 1944 Flood Control Act is made expressly inapplicable to any existing Army dam or reservoir, "which provides conservation storage of water for irrigation purposes."<sup>526</sup> In this connection, it may be reiterated that 1937 legislation permits the modification of project plans for any reservoir to provide for "conservation storage," if the "cost" of such increased capacity is contributed by local agencies and they agree to utilize such capacity in a manner consistent with federal uses and purposes.<sup>527</sup>

*Power.*—As previously noted, statutes covering Army Engineer projects do not expressly require return of project costs.<sup>528</sup> But legislation respecting the disposal of power from Army reservoir projects does contemplate return of power costs within "a reasonable period of years."<sup>529</sup> Moreover, this provision is construed to include repayment with interest.<sup>530</sup> A like situation obtains in the case of power costs under the Bonneville Project and Fort Peck Project Acts.<sup>531</sup>

On the other hand, if the project is a Reclamation project, there is provision for allocation of that part of the estimated cost "which can be properly allocated to power and probably be returned to the United States in net power revenues."<sup>532</sup> Again no specification is made here respecting interest. And the separate minimum power-rate standard has been adminis-

<sup>525</sup> H. Doc. No. 172, 79th Cong., 1st sess., p. 6 (1945). See Act of August 4, 1939, § 9(c), 53 Stat. 1187, 1194, 43 U. S. C. 485h(c).

<sup>526</sup> Act of December 22, 1944, § 8, 58 Stat. 887, 891, 43 U. S. C. 390.

<sup>527</sup> Act of June 22, 1936, § 5, 49 Stat. 1570, 1572, as added by Act of July 19, 1937, § 1, 50 Stat. 515, 518, 33 U. S. C. 701h.

<sup>528</sup> See *supra*, pp. 588-589, 592.

<sup>529</sup> Act of December 22, 1944, § 5, 58 Stat. 887, 890, 16 U. S. C. 825a. For the text of the applicable standard, see *infra*, p. 606.

<sup>530</sup> See *supra*, n. 518, p. 591.

<sup>531</sup> Act of August 20, 1937, § 7, 50 Stat. 731, 735, 16 U. S. C. 832f; Act of May 18, 1938, § 6, 52 Stat. 403, 405, 16 U. S. C. 833e. For discussion of the interest requirement see statement of Senator McNary, floor leader of the Bonneville Project Bill, during debate on that Bill. 81 CONG. REC. 8524 (1937).

<sup>532</sup> Act of August 4, 1939, § 9(a), 53 Stat. 1187, 1193, 43 U. S. C. 485h(a).

tratively construed as permitting the application of interest, collected as a component of power rates, to the return to the United States of irrigation costs to be borne by power.<sup>522</sup>

The Tennessee Valley Authority contains an authorization for the sale of power subject to the policies of the Act, which includes this statement:<sup>523</sup>

It is declared to be the policy of this Act that, in order, as soon as practicable, to make the power projects self-supporting and self-liquidating, the surplus power shall be sold at rates which, in the opinion of the Board, when applied to the normal capacity of the Authority's power facilities, will produce gross revenues in excess of the cost of production of said power \* \* \*.

Similarly, in the Boulder Canyon Project Act, the statute refers to the generation of electric energy as a means for making the project "a self-supporting and financially solvent undertaking."<sup>524</sup> Moreover, the appropriation and expenditure of moneys were here made dependent upon execution of power contracts to meet expenses of operation and maintenance, and the repayment, within 50 years from the date of completion of the dam and power plant, of all advances made for construction including an allocation to flood control, with a provision for interest at 4%. Modification of this arrangement was provided for by the Boulder Canyon Project Adjustment Act, but it nevertheless proceeds on a theory of return of costs, excluding the allocation for flood control.<sup>525</sup>

*Drainage.*—Just as in the case of Army Engineer flood-control projects, provision is made for return of costs of major drainage operations by the Army Engineers only to the extent that local contribution may be required.<sup>527</sup>

<sup>522</sup> See *supra*, n. 220, p. 296.

<sup>523</sup> Act of May 18, 1933, § 10, 48 Stat. 58, 64, as amended, 16 U. S. C. 831i; Act of August 31, 1935, § 8, 49 Stat. 1075, 1077, see 16 U. S. C. 831m.

<sup>524</sup> Act of December 21, 1928, § 1, 45 Stat. 1057, 43 U. S. C. 617.

<sup>525</sup> Act of July 19, 1940, § 1, 54 Stat. 774, 16 U. S. C. 618. See also *supra*, pp. 301-302.

<sup>527</sup> Act of December 22, 1944, § 2, 58 Stat. 887, 889, 33 U. S. C. 701a-1. See *supra*, p. 592.

Similarly, the statutory provisions covering the farmland drainage operations of the Department of Agriculture contemplate such return only to the extent that the Secretary, in his discretion, requires local contribution.<sup>548</sup>

Reclamation Law makes no separate provision for drainage, and the Bureau of Reclamation performs drainage work as a part of irrigation project development. Hence, return of costs incident to drainage operations is part of the return of irrigation costs, already discussed.<sup>549</sup>

*Water Supply Other than for Irrigation.*—Legislation in 1944 authorizes the Secretary of the Army to make contracts for domestic and industrial uses for surplus water that may be available at Army reservoirs.<sup>550</sup> But it includes no provision expressly requiring return of costs allocable to that purpose. Such return is contemplated, however, by the contract provision itself, but to an unascertainable degree, since the Secretary of the Army is authorized to make such contracts "at such prices and on such terms as he may deem reasonable."<sup>551</sup> On the other hand, 1937 legislation authorized modification of any reservoir project plans to provide additional storage capacity for "domestic water supply or other conservation storage."<sup>552</sup> Here, return of cost is required since such modification may be made only upon contribution by local agencies of the cost of such increased capacity.<sup>553</sup>

The Reclamation Project Act of 1939 includes provision for allocation of the part of the estimated project cost which can "properly be allocated to municipal water supply or other miscellaneous purposes and probably returned to the United States."<sup>554</sup>

<sup>548</sup> Act of August 28, 1937, § 4, 50 Stat. 876, 877, see 33 U. S. C. 701c; Act of April 27, 1935, § 3, 49 Stat. 163, 16 U. S. C. 590c.

<sup>549</sup> See *supra*, pp. 592-594.

<sup>550</sup> Act of December 22, 1944, § 6, 58 Stat. 887, 890, 33 U. S. C. 708.

<sup>551</sup> *Id.*

<sup>552</sup> Act of June 22, 1936, § 5, 49 Stat. 1570, 1572, as added by Act of July 19, 1937, § 1, 50 Stat. 515, 518, 33 U. S. C. 701h.

<sup>553</sup> *Id.*

<sup>554</sup> Act of August 4, 1939, § 9(a), 53 Stat. 1187, 1193, 43 U. S. C. 485(a). While this allocation provision makes no mention of interest, one of the two companion pricing standards in Section 9(c) includes discretionary authority for imposition of an interest charge. See *infra*, p. 614.

*Fish and Wildlife.*—The various pertinent statutory provisions have been previously grouped and reviewed.<sup>555</sup> Especially relevant here is the Act of August 14, 1946, which expressly provides for including, as “an integral part of the costs” of federal projects, the cost of planning for, and construction and maintenance of facilities for the prevention of loss of and damage to wildlife resources.<sup>556</sup>

In the case of navigation and flood-control projects, no provision of the foregoing statute or of other relevant legislation requires or contemplates return of the cost of such facilities. And in the case of Reclamation projects, the 1946 Act expressly provides for allocations to both the “preservation and propagation” of fish and wildlife, and further that such costs shall “not be reimbursable.”<sup>557</sup>

*Recreation.*—The diversity in applicable law is apparent from an earlier review of relevant statutes.<sup>558</sup> In the case of an Army reservoir project, express authorization exists for providing recreational facilities.<sup>559</sup> Return of the costs of recreational facilities is not required. As we shall later see, however, the differing provisions for leases contemplate return of an indeterminate portion of such costs.<sup>560</sup>

There is no corresponding general authorization under Reclamation Law. If recreational facilities be included as parts of individual projects, the costs apparently must be included as part of one of the purposes for which the law affirmatively provides an allocation.<sup>561</sup>

<sup>555</sup> See *supra*, pp. 327-330.

<sup>556</sup> Act of August 14, 1946, § 2, 60 Stat. 1080, 16 U. S. C. 662.

<sup>557</sup> *Id.* But *cf.* the President's message vetoing the Vermejo Project, H. R. 3788, 81st Cong., 1st sess. (1949), printed in H. Doc. No. 316, 81st Cong., 1st sess., pp. 1-3 (1949), and in 95 Cong. Rec. 12093 (1949). The President said that allocations for fish and wildlife “are usually restricted in scope to the prevention of loss of and damage to wildlife.” Here, the proposal was to allocate for the benefits resulting from the creation of a wildlife management and development area not required for the protection of existing wildlife resources.

<sup>558</sup> See *supra*, pp. 331-334.

<sup>559</sup> Act of December 22, 1944, § 4, 58 Stat. 887, 889, as amended, 16 U. S. C. 460d.

<sup>560</sup> See *infra*, p. 615.

<sup>561</sup> See *supra*, pp. 194-196.

In the case of projects of the Tennessee Valley Authority, authority exists for conveyance of real property by deed, lease, or otherwise for recreational purposes.<sup>562</sup> But this provision includes no requirement as to return of costs or as to pricing.

*Other Project Purposes.*—With respect to certain additional purposes which may be served by a project, such as salinity control, general recognition as a project purpose has not been accorded by statute. To the extent that projects serve such purposes, therefore, this is apparently accomplished as an incident of recognized statutory purposes, costs being treated accordingly.

*Components of Costs.*—The preceding discussion has referred to costs without detailing the components thereof. With some exceptions, this is true of the more important statutory provisions referring to costs. In such cases, therefore, the term must apparently be given its ordinary meaning. But the way is open for variations such as exist in the costs considered in benefit-cost studies.<sup>563</sup>

Noteworthy here is the fact that all federal agencies engaged in the generation and sale of electric energy for ultimate distribution to the public, as to facilities used and energy sold, are required to comply with the accounting provisions of the Federal Power Act and the regulations issued thereunder, including the uniform system.<sup>564</sup> But the road is open to variations, for this obligation applies only "so far as may be practicable."<sup>565</sup> In connection with this authorization for variations in administrative practices among the various federal agencies, it should be noted that they are also subject to the accounting requirements of the Budget and Accounting Act of 1921, although it has been indicated that commercial-type

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<sup>562</sup> Act of May 18, 1933, § 4(k) (a), 48 Stat. 58, 60, as amended, 16 U. S. C. 831c(k) (a).

<sup>563</sup> PROPOSED PRACTICES FOR ECONOMIC ANALYSIS OF RIVER BASIN PROJECTS, Report of the Subcommittee on Benefits and Costs, Federal Inter-Agency River Basin Committee, pp. 79-81 (May 1950).

<sup>564</sup> § 303, as added by Act of August 26, 1935, § 213, 49 Stat. 838, 855, 16 U. S. C. 825(b).

<sup>565</sup> *Id.*

procedures might be preferable for business-type activities.<sup>566</sup> To fulfill both statutory objectives may result in duplicate accounts.

In addition to compliance with the foregoing requirement of the Federal Power Act, the power accounts of the Bonneville Power Administration are subject to the express provisions of the Bonneville Project Act for an "independent commercial-type audit."<sup>567</sup> This provision does not, however, include an exemption from government-type accounting requirements. In the case of the Fort Peck Project Act, the Bureau of Reclamation is required merely to keep "complete and accurate accounts."<sup>568</sup> In the case of the Tennessee Valley Authority, an audit is made by the Comptroller General, and TVA is permitted to determine its own system of administrative accounts.<sup>569</sup>

Another variation respecting the components of project costs occurs in connection with the costs of investigations and surveys. In the case of navigation and flood-control projects, examinations and surveys are authorized and financed independently of the projects.<sup>570</sup> Such costs are not treated as components of project costs in administrative practice.<sup>571</sup> But the costs of preparing definite planning reports, called Definite Project Reports, incurred after project authorization are included as a part of project costs.<sup>572</sup> A different requirement obtains in the case of irrigation projects. In the first place, costs associated with particular purposes are accounted for in accordance with the allocation procedure already described.<sup>573</sup> Correspondingly, it is required that the cost and expense of

<sup>566</sup> Act of June 10, 1921, 42 Stat. 20, 31 U. S. C. 1 *et seq.*; H. Doc. No. 203, 81st Cong., 1st sess., pp. 5-6 (1949).

<sup>567</sup> Act of August 20, 1937, § 9(a), 50 Stat. 731, 736, as added by Act of October 23, 1945, § 4, 59 Stat. 546, 547, see 16 U. S. C. 832h(a).

<sup>568</sup> Act of May 18, 1938, § 8(a), 52 Stat. 403, 406, 16 U. S. C. 833g(a).

<sup>569</sup> Act of May 18, 1933, § 9, 48 Stat. 58, 63, as amended, 16 U. S. C. 831h. See also H. Doc. No. 172, 80th Cong., 1st sess. (1947).

<sup>570</sup> See *supra*, pp. 91-92, 100-101, 134, 136.

<sup>571</sup> PROPOSED PRACTICES FOR ECONOMIC ANALYSIS OF RIVER BASIN PROJECTS, Report of the Subcommittee on Benefits and Costs, Federal Inter-Agency River Basin Committee, pp. 79-81 (May 1950).

<sup>572</sup> *Id.* p. 79 and see *supra*, pp. 293-294.

<sup>573</sup> See *supra*, pp. 194-196.

general investigations, "except for such cost and expense as are incurred on behalf of specific projects," shall be charged to the Reclamation Fund and not as a part of the reimbursable construction or operation and maintenance costs.<sup>574</sup>

**PRICE OF PROJECT PRODUCTS.**—After costs allocable to a particular purpose have been determined, and the requirements as to their reimbursement ascertained, there remains the important problem of actually effecting that reimbursement.

With few exceptions, assessment of charges is the device employed by statutes. Moreover, the return of project costs, already discussed, is frequently measured solely by the revenues produced pursuant to rate and pricing requirements of statute.

In this connection, note should be made of a difference between provisions contemplating return of project costs and the corresponding provisions designed to effect repayment or return of those costs. Specifically, the cost-allocation procedures specified in the 1939 Reclamation Project Act purport to identify a particular group of project beneficiaries with costs producing particular benefits.<sup>575</sup> But shifts of the cost burden may occur in the administrative application of the pricing provisions of that Act, under which a portion of irrigation costs are "assigned" to be borne by other project beneficiaries.<sup>576</sup> In short, the provisions as to return of project costs bear only a qualified relationship to the pricing provisions.

As we shall shortly see, a variety of considerations in addition to the return of costs are reflected, however, in provisions governing the price or charge for project products or benefits. Ability to repay is one. Still another is the value of the benefit, particularly where requirements of "local contribution" are specified. And in the case of power, statutes often seek low rates employing qualifications of the "utility-rate" concept.

<sup>574</sup> Act of December 5, 1924, § 4, subsection O, 43 Stat. 672, 704, as amended, 43 U. S. C. 377.

<sup>575</sup> Act of August 4, 1939, § 9(a), 53 Stat. 1187, 1193, 43 U. S. C. 485h(a).

<sup>576</sup> §§ 9(a), 9(c), 53 Stat. 1187, 1193, 1194, 43 U. S. C. 485h(a), 485h(c). See *AVERAGE RATE AND REPAYMENT STUDIES FOR POWER SYSTEMS ON BUREAU OF RECLAMATION PROJECTS*, Department of the Interior, Bureau of Reclamation, pp. 1-5 (January 1950); H. Doc. No. 172, 79th Cong., 1st sess., p. 6 (1945).



Infrequently expressed, but nevertheless implicit in pricing provisions is another consideration. A determination under a specific pricing provision must of necessity be in harmony with the statute construed as a whole. In other words, the fixing of a price must be in keeping with the objectives of the statute consistently with the pricing provision itself.

All of the foregoing considerations have been accorded varying weight in respect of various project benefits under different statutes. Pricing standards thus differ for different types of benefits. In addition, these different standards have been developed in the evolution of different bodies of law serving different primary project purposes, and there results a further variation even for identical benefits depending on the type of project involved.

*Navigation.*—Since 1884, there has been a general statutory prohibition against the levying of tolls upon watercraft passing through any federal lock, canal, canalized river, or other work for the use and benefit of navigation.<sup>577</sup> Similarly, when Congress later authorized nonfederal river and harbor improvements, it specifically declared that “no tolls shall be imposed on account thereof.”<sup>578</sup>

On the other hand, the law does provide for certain partial payments. Thus, survey reports must show benefits which will accrue to localities affected by a proposed improvement and a statement of special or local benefits, with recommendations as to any “local cooperation” which should be required on account of such special or local benefits.<sup>579</sup> On the basis of such reports, Congress may require individualized local contribution for specific projects.<sup>580</sup> Although navigation is an expressly recog-

<sup>577</sup> Act of July 5, 1884, § 4, 23 Stat. 133, 147, as amended, 33 U. S. C. 5. See also n. 11, p. 76.

<sup>578</sup> Act of June 13, 1902, § 1, 32 Stat. 331, 371.

<sup>579</sup> Act of June 5, 1920, § 2, 41 Stat. 1009, 1010, 33 U. S. C. 547.

<sup>580</sup> See *supra*, n. 175, p. 106. Pertinent also is the authority of the Secretary of the Army to receive from “private interests” contributions to be expended with appropriated funds for any authorized improvement, whenever such work and expenditure may be considered by the Chief of Engineers as advantageous in the interests of navigation; when such contributions are in excess of the actual cost of the work chargeable to such contributions, such excess may be returned unless its retention is required by law. Act of March 4, 1915, § 4, 38 Stat. 1049, 1053, 33 U. S. C. 560.

nized purpose of irrigation projects under the 1939 legislation, as we have seen, Reclamation Law includes none of the foregoing provisions for local contribution. Indeed, such is the framework of the 1939 Act that allocations to navigation are nonreimbursable.<sup>581</sup>

*Flood Control.*—The situation here is much the same as in the case of navigation. Except to the extent that the law makes provision for “local contribution,” flood-control benefits are nonreimbursable.

Express provision is made for local contribution in the case of Army Engineer flood-control projects other than dam and reservoir projects.<sup>582</sup> Here, as a condition precedent to the use of federal funds, the law requires assurances from “States, political subdivisions thereof, or other responsible local agencies” that they will: (a) provide without cost to the United States all necessary lands, easements, and rights-of-way; (b) hold and save the United States free from damages due to the construction work; and (c) maintain and operate all the works after completion.<sup>583</sup> To this extent, local contribution is thus required for such flood-control work as levees, channel improvements, and channel rectification.

In the case of flood-control work performed by the Department of Agriculture, its Secretary has discretionary authority to require, as a condition of extending benefits in prosecuting authorized works, “contributions in money, services, materials, or otherwise.”<sup>584</sup>

In the case of Reclamation projects, nonreimbursable allo-

<sup>581</sup> See *supra*, p. 195.

<sup>582</sup> See *supra*, pp. 144-146, and especially notes 103-104.

<sup>583</sup> *Id.* Pertinent also is the authority of the Secretary of the Army to receive contributed funds from “States and political subdivisions thereof” to be expended with appropriated funds for authorized flood-control work, whenever such work and expenditure are recommended by the Chief of Engineers as advantageous in the public interest. When such contributions are in excess of the actual cost properly chargeable to such contributions, such excess may be returned to the proper representatives of the contributing interests. Act of June 22, 1936, § 5, 49 Stat. 1570, 1572, as added by Act of July 19, 1937, § 1, 50 Stat. 515, 518, 33 U. S. C. 701h.

<sup>584</sup> Act of June 22, 1936, § 3, 49 Stat. 1570, 1571, as added by Act of August 28, 1937, § 4, 50 Stat. 876, 877, 33 U. S. C. 701c.

cations to flood control are authorized under the 1939 legislation, just as in the case of navigation. But Reclamation Law includes no provisions for local contributions like those set out above.

*Irrigation.*—The evolution of the law respecting repayment for benefits received by irrigation water users is marked by consideration of ability to repay.

The 1902 Act required that they repay the “estimated cost of construction,” without distinction as to the project purposes served.<sup>585</sup> Correspondingly, revenues derived from project operations were covered into the Reclamation Fund.<sup>586</sup> Noteworthy, too, is the fact that the original 10-year repayment period was extended from time to time until today, the law now providing for a period not to exceed 40 years, exclusive of a maximum 10-year development period.<sup>587</sup>

Another shift in the law respecting the irrigation repayment obligation should be noted. Originally, that obligation rested with the individual water user.<sup>588</sup> This was replaced in 1926 by a mandatory requirement for repayment contracts with irrigation districts.<sup>589</sup> Under the 1939 Reclamation Project Act, repayment contracts must be made with an organization “satisfactory in form and powers to the Secretary.”<sup>590</sup>

The 1939 Act includes a number of provisions important with respect to the irrigation water-users’ repayment obligation. In the first place, its allocation provisions and pricing provisions are so constructed that allocations to irrigation but beyond the water-users’ ability to repay are assigned for return from revenues from power, or from the furnishing of water for municipal water supply or miscellaneous purposes.<sup>591</sup> Under these provisions, the irrigation water-users’ obligation is then

<sup>585</sup> Act of June 17, 1902, § 4, 32 Stat. 388, 389, 43 U. S. C. 419, 461.

<sup>586</sup> See *supra*, p. 203.

<sup>587</sup> Act of June 17, 1902, § 4, 32 Stat. 388, 389; Act of August 4, 1939, § 9(d), 53 Stat. 1187, 1195, 43 U. S. C. 485h(d). See also *supra*, pp. 207–208.

<sup>588</sup> Act of June 17, 1902, § 5, 32 Stat. 388, 389, 43 U. S. C. 381, 392, 431.

<sup>589</sup> Act of May 25, 1926, § 46, 44 Stat. 636, 649, 43 U. S. C. 423e.

<sup>590</sup> Act of August 4, 1939, § 9(d), 53 Stat. 1187, 1195, 43 U. S. C. 485h(d).

<sup>591</sup> § 9, 53 Stat. 1194, 43 U. S. C. 485h. See H. Doc. No. 172, 79th Cong., 1st sess., p. 6 (1945).

limited to that part of the construction costs allocated to irrigation and assigned for repayment by them.

Except as to distribution-system cost, the 1939 Act also provides an alternative method for return to the United States of the construction cost connected with water supply and allocated to irrigation.<sup>592</sup> Under this alternative, a short-term or long-term contract may be made to furnish water for irrigation purposes for periods not to exceed 40 years. Such a water-service contract must provide such rates as will produce revenues at least sufficient to cover:

an appropriate share of the annual operation and maintenance cost and an appropriate share of such fixed charges as the Secretary deems proper, due consideration being given to that part of the cost of construction of works connected with water supply and allocated to irrigation \* \* \*.

Payment must be made yearly in advance of delivery of water.

With respect to existing projects on which construction charges are payable to the United States, the 1939 Act also provides an optional basis for calculating the annual installments on the repayment obligation. It is the "normal and percentages plan," which permits variable payments based on the percentage of normal crop returns by which annual returns exceed or are less than normal returns.<sup>593</sup>

Significant here is the fact that the 1939 Act directs the Secretary of the Interior to investigate the repayment problems of existing projects where he deems a contract under the Act would not provide an economically sound adjustment.<sup>594</sup> In such cases, he may negotiate a contract providing "fair and equitable treatment of the repayment problems" in keeping with the purposes of the Act. Such contracts become effective only after approval by Congress.<sup>595</sup>

<sup>592</sup> § 9(e), 53 Stat. 1196, 43 U. S. C. 485h(e).

<sup>593</sup> § 4, 53 Stat. 1189, as amended, 43 U. S. C. 485c. For further details concerning this plan, see *supra*, pp. 205-206.

<sup>594</sup> § 7(a), 53 Stat. 1192, 43 U. S. C. 485f(a).

<sup>595</sup> §§ 7(a), 7(c), 53 Stat. 1192, as amended, 43 U. S. C. 485f(a), 485f(c).

In the case of projects under the Water Conservation and Utilization Act, the irrigation water-users' cost obligation is even more directly tied to ability to pay.<sup>596</sup> Moreover, a 1943 amendment of that statute provided that expenditures might be excluded from returnable project costs to the extent necessary "for the successful prosecution of the project."<sup>597</sup>

Water-users' repayment ability finds further express recognition where irrigation works are constructed at Army dam and reservoir projects pursuant to Section 8 of the 1944 Flood Control Act.<sup>598</sup> For in such a case, the project feasibility report may, "within the limits of the water users' repayment ability," be predicated on the allocation to irrigation of an appropriate portion of the cost of structures and facilities used for irrigation and other purposes.<sup>599</sup> Pertinent here is the fact that 1937 flood-control legislation permits the modification of project plans for any reservoir to provide for "conservation storage," if the cost of the increased capacity is contributed by local agencies and they agree to utilize such capacity in a manner consistent with federal uses and purposes.<sup>600</sup>

Water-users' repayment obligation is left entirely to administrative discretion in the case of debris storage reservoirs of the California Débris Commission.<sup>601</sup> The Secretary of the Army has authority here to make contracts to supply storage for water and use of outlet facilities from such reservoirs for "irrigation purposes," among others, "upon such conditions of delivery, use, and payment as he may approve."<sup>602</sup>

<sup>596</sup> See *supra*, n. 532, p. 593.

<sup>597</sup> *Id.*

<sup>598</sup> Act of December 22, 1944, § 8, 58 Stat. 887, 891, 43 U. S. C. 390.

<sup>599</sup> See *supra*, p. 593. As previously noted, substantially this same language appears in the authorization for addition of irrigation works at the Hungry Horse Dam. See *supra*, n. 534, p. 593.

<sup>600</sup> Act of June 22, 1936, § 5, 49 Stat. 1570, 1572, as added by Act of July 19, 1937, § 1, 50 Stat. 515, 518, 33 U. S. C. 701h. Section 8 of the 1944 Flood Control Act, discussed above, is made expressly inapplicable to any existing Army dam or reservoir which provides "conservation storage" of water for irrigation purposes. § 8, 58 Stat. 891, 43 U. S. C. 390.

<sup>601</sup> Act of June 25, 1938, 52 Stat. 1040, see 33 U. S. C. 683.

<sup>602</sup> *Id.*

*Power.*—Remarkable variation exists among the statutory prescriptions of rate standards under which federal power is marketed. One standard is fixed for reservoirs under control of the Army; another for Reclamation projects; several other differing ones for groups of projects and individual projects; and none in another case.

(Army Projects)—By the 1944 Flood Control Act, it is required that surplus power and energy from dam and reservoir projects under Army control be delivered to the Secretary of the Interior, and that he transmit and dispose power and energy: <sup>603</sup>

in such manner as to encourage the most widespread use thereof at the lowest possible rates to consumers consistent with sound business principles \* \* \*.

While this requirement must be considered in fixing rates, the statute does not define "sound business principles," or any of the other terms.

It is further required that: <sup>604</sup>

Rate schedules shall be drawn having regard to the recovery (upon the basis of the application of such rate schedules to the capacity of the electric facilities of the projects) of the cost of producing and transmitting such electric energy, including the amortization of the capital investment allocated to power over a reasonable period of years.

The amortization requirement has been construed in practice to require that interest be one of the costs which must be returned to the United States.<sup>605</sup> The interest component on power revenues is, therefore, not available to aid in the return of other costs, as is possible by administrative interpretation of minimum-rate standard of the 1939 Reclamation Project

<sup>603</sup> Act of December 22, 1944, § 5, 58 Stat. 887, 890, 16 U. S. C. 825a.

<sup>604</sup> *Id.*

<sup>605</sup> See, e. g., *Re Bonneville Project, Columbia River, Oregon-Washington, Allocation of Costs*, Docket No. IT-5955, 4 F. P. C. 950, 955 (1945).

Act.<sup>606</sup> In the absence of a statutory specification of an interest rate, 2½% has been adopted in practice, a rate sufficient to cover the actual cost of money to the United States.<sup>607</sup> Fifty years has been selected as the "reasonable period" specified in the above statute.<sup>608</sup>

Only a few months after enactment of the foregoing general provision, Congress directed that surplus energy generated at the new hydroelectric plant, St. Mary's River, Michigan, shall be sold by the Secretary of the Army upon such "terms and conditions as he shall determine."<sup>609</sup>

(Reclamation Projects)—The 1939 Reclamation Project Act authorizes the Secretary of the Interior to enter into contracts for the "sale of electric power or lease of power privileges," for such periods, "not to exceed 40 years," and at such rates as in his judgment will produce:<sup>610</sup>

power revenues at least sufficient to cover an appropriate share of the annual operation and maintenance cost, interest on an appropriate share of the construction investment at not less than 3 per centum per annum, and such other fixed charges as the Secretary deems proper \* \* \*.

In the first place, it should be noted that the provision respecting interest has been administratively construed to provide a perpetual 3% rate of the "appropriate share of the construction investment," regardless of the portion of that investment previously returned.<sup>611</sup> The interest element in the rate standard for reservoir projects under control of the Army, on

<sup>606</sup> See *supra*, pp. 295-296.

<sup>607</sup> See, e. g., *Re Bonneville Project, Columbia River, Oregon-Washington*, Allocation of costs, Docket No. IT-5955, 4 F. P. C. 950, 955 (1945).

<sup>608</sup> *Ibid.*

<sup>609</sup> Act of March 2, 1945, § 2, 59 Stat. 10, 20.

<sup>610</sup> Act of August 4, 1939, § 9(c), 53 Stat. 1187, 1193, 43 U. S. C. 485h(c).

<sup>611</sup> Unpublished opinion of the Solicitor of the Department of the Interior concerning power-rate schedules and minimum-rate requirements for Grand Coulee, Opinion M-33473, January 29, 1944, and its Supplement, September 10, 1945. In this connection, see also Act of May 9, 1938, § 1, 52 Stat. 291, 322, 43 U. S. C. 392a.

the other hand, produces 2½% of only the unamortized portion of the construction investment.<sup>622</sup>

We have previously pointed out that the 1939 Act's provision for allocation of repayable and returnable costs makes no mention of interest.<sup>623</sup> And the Act has been administratively construed to permit the application of interest, collected as a component of power rates, to the return to the United States of irrigation costs to be borne by power.<sup>624</sup> While such interest component may thus be applied toward repayment of the irrigation investment, the fact remains that interest is collected in power rates.

Another aspect of Reclamation rate practice should be noted. Rates are fixed so as to return annual operation, maintenance, and replacement costs, plus amortization of the power investment in not to exceed 50 years, with interest at the rate of 3% per annum on the unamortized balance of the power investment—if this formula results in a rate equal to or higher than the minimum required by the statutory formula.<sup>625</sup>

(Tennessee Valley Authority Projects)—It is a declared policy of the TVA Act that:<sup>626</sup>

in order, as soon as practicable, to make the power projects self-supporting and self-liquidating, the surplus power shall be sold at rates which, in the opinion of the Board, when applied to the normal capacity of the Authority's power facilities, will produce gross revenues in excess of the cost of production of said power \* \* \*.

(Boulder Canyon Project)—The Boulder Canyon Project Act directed the Secretary of the Interior to make provision for revenues by contract adequate to insure payment of "all

<sup>622</sup> See, e. g., *Re Bonneville Project, Columbia River, Oregon-Washington*, Allocation of Costs, Docket No. IT-5955, 4 F. P. C. 950, 977 (1945).

<sup>623</sup> See *supra*, p. 590.

<sup>624</sup> See *supra*, n. 220, p. 296. See also AVERAGE RATE AND REPAYMENT STUDIES FOR POWER SYSTEMS ON BUREAU OF RECLAMATION PROJECTS, Department of Interior, Bureau of Reclamation, pp. 1-5 (January 1950).

<sup>625</sup> See, e. g., AVERAGE RATE AND REPAYMENT STUDIES FOR POWER SYSTEMS ON BUREAU OF RECLAMATION PROJECTS, Department of Interior, Bureau of Reclamation, pp. 1-5 (January 1950).

<sup>626</sup> Act of August 31, 1935, § 8, 49 Stat. 1075, 1077, see 16 U. S. C. 831a.



expenses of operation and maintenance" and "repayment within 50 years from the date of completion of said work" of all advances made for construction, including an allocation to flood control, with a qualified provision for interest at 4% per annum on amounts advanced but unpaid.<sup>617</sup>

Significantly, the Act required that power contracts be made with a view to obtaining "reasonable returns," and contain provisions whereby, at the end of 15 years from the date of execution and every ten years thereafter, there shall be readjustment, upon the demand of either party: <sup>618</sup>

either upward or downward as to price, as the Secretary of the Interior may find to be justified by competitive conditions at distributing points or competitive centers \* \* \*

The Boulder Canyon Project Adjustment Act effected several changes pertinent here. In lieu of periodic rate adjustments upon a basis of competitive conditions, rates are stabilized for a period from June 1, 1937 to May 1, 1987; the interest rate is reduced from 4% to 3% and applied to all of the Government's investment except the allocation to flood control; and contract payments are required to be sufficient to cover costs of operation and maintenance and replacements, an amount equal to 100% of the principal of the Government's investment plus 3% interest on all but the allocation to flood control, plus an amount in lieu of taxes to the states wherein the project is located, as well as sums for annual transfer to the Colorado River Development Fund.<sup>619</sup>

<sup>617</sup> Act of December 21, 1928, § 4 (b), 45 Stat. 1057, 1059, 43 U. S. C. 617c (b).

<sup>618</sup> § 5 (a), 45 Stat. 1060, 43 U. S. C. 617d (a).

<sup>619</sup> Act of July 19, 1940, 54 Stat. 774, 43 U. S. C. 618-618o. See also Sen. Rep. No. 1784, 76th Cong., 3d sess., p. 9, (1940). This report also points out that: "In authorizing all later projects Congress has preferred a definite standard of rates, related to the amount required to retire the Government's investment. It seems fair to extend that principle to Boulder Dam; every interest involved, including the Interior Department, the States and the power contractors, prefer such a definite standard, each being willing to forego the speculative advantage to it of certain possibilities under the old law in consideration of the removal of its equally speculative hazards." *Ibid.*

(Bonneville Project and Fort Peck Project)—As to each of these projects it is required that power-rate schedules be determined with due regard to and predicated upon the fact that power is developed from water power created as an incident to the construction of the project for the specified statutory purposes. In addition, both Acts further stipulate substantially the same requirement respecting the manner of drawing rate schedules as that previously set forth for power from reservoir projects under Army control.<sup>620</sup>

(Indian Projects)—In the case of the Flathead Indian Irrigation Project, power is sold at the lowest rates which, in the judgment of the Secretary of the Interior, will repay power costs and certain irrigation costs.<sup>621</sup> In the case of the Coolidge Dam, power revenues are used to repay power and irrigation costs and to make improvements on the irrigation project.<sup>622</sup> Such power revenues may also be used to liquidate the cost of transmission lines.<sup>623</sup>

(California Débris Commission Projects)—The special statute applicable to debris reservoirs of the California Débris Commission merely authorizes the Secretary of the Army to enter into contracts for, among other purposes, "power development upon such conditions of delivery, use, and payment as he may approve."<sup>624</sup>

(Hungry Horse Dam)—Although the statute authorizing this dam makes express provision for power generation, it includes no standard for fixing rates.<sup>625</sup>

(Review of Rates)—Rate schedules for surplus power at reservoir projects under Army control become effective upon "confirmation and approval" by the Federal Power Commission.<sup>626</sup> Similar approval is required in the case of power generated at projects covered by the Bonneville Project and Fort Peck

<sup>620</sup> Act of August 20, 1937, § 7, 50 Stat. 731, 735, 16 U. S. C. 832f; Act of May 18, 1938, § 6, 52 Stat. 403, 405, 16 U. S. C. 833e.

<sup>621</sup> Act of May 25, 1948, §§ 2(g), 2(h), 62 Stat. 269, 270-271.

<sup>622</sup> Act of March 7, 1928, § 1, 45 Stat. 200, 211, see 25 U. S. C. 387 note.

<sup>623</sup> Act of June 22, 1936, 49 Stat. 1822.

<sup>624</sup> Act of June 25, 1938, 52 Stat. 1040, see 33 U. S. C. 683.

<sup>625</sup> Act of June 5, 1944, § 1, 58 Stat. 270, 43 U. S. C. 593a.

<sup>626</sup> Act of December 22, 1944, § 5, 58 Stat. 887, 890, 16 U. S. C. 825s.

Project Acts.<sup>627</sup> Under these two Acts, but not in the case of rate schedules for power generated at Army reservoir projects other than Bonneville, the allocation of costs upon which rate schedules are based must also be made by the Federal Power Commission.<sup>628</sup> In none of these cases is the Commission given continuing rate supervision or authority to require changes.

On the other hand, rates for power sold under Reclamation Law or under the Tennessee Valley Authority Act are not subject to Commission review.

(Pooling of Power Costs and Revenues for Rate Purposes)—  
In the main, the foregoing provisions contemplate individual rates for each project, variously geared to repayment of costs.<sup>629</sup> Variations among power rates within a given area thus result except where the individualized process happens to produce the same rate.

On the other hand, there are provisions of statute tending to mitigate such differences and to move in the direction of rate uniformity within prescribed areas. A suggestion appears in the requirement that surplus power from reservoir projects under Army control be transmitted and disposed of in such a manner "as to encourage the most widespread use thereof."<sup>630</sup>

Similarly, Congress has declared that projects of the Tennessee Valley Authority shall be considered:<sup>631</sup>

primarily as for the benefit of the people of the section as a whole and particularly the domestic and rural consumers to whom the power can economically be made available, and accordingly that sale to and use by industry shall be a secondary purpose, to be utilized principally to secure a sufficiently high load factor and revenue returns which will permit domestic and rural use at the lowest possible rates and in such manner as to encourage increased domestic and rural use of electricity.

<sup>627</sup> Act of August 20, 1937, § 6, 50 Stat. 731, 735, 16 U. S. C. 832e; Act of May 18, 1938, § 5, 52 Stat. 403, 405, 16 U. S. C. 833d.

<sup>628</sup> § 7, 50 Stat. 735, 16 U. S. C. 832f; § 6, 52 Stat. 405, 16 U. S. C. 833e.

<sup>629</sup> In this connection see Sen. Rep. No. 1351, 81st Cong., 2d sess., p. 7 (1950).

<sup>630</sup> Act of December 22, 1944, § 5, 58 Stat. 887, 890, 16 U. S. C. 825s.

<sup>631</sup> Act of May 18, 1933, § 11, 48 Stat. 58, 64, 16 U. S. C. 831j.

Power must be sold at rates which, in the opinion of the Board, "when applied to the normal capacity of the Authority's power facilities, will produce gross revenues in excess of the cost of production of said power."<sup>632</sup>

Both the Bonneville and Fort Peck Project Acts expressly stipulate that rate schedules may provide for:<sup>633</sup>

uniform rates or rates uniform throughout prescribed transmission areas in order to extend the benefits of an integrated transmission system and to encourage the equitable distribution of the electric energy developed \* \* \*.

It should be pointed out here that the Bonneville Power Administration has marketing responsibility for a number of projects in addition to the Bonneville Project, power from which is marketed over an integrated transmission system.<sup>634</sup> The power-rate and marketing requirements are varied among these projects. As to one, Reclamation Law applies; two others are governed by the law applicable to power produced at reservoir projects under Army control; three more come under the provisions of the Bonneville Project Act; and in one case there is a lack of statutory certainty.<sup>635</sup>

Such variations are important where, as here, they involve different dams in the same river system, for the source of power cannot be identified after it enters an integrated transmission network and is commingled with power from other sources. Fulfillment of the varying statutory requirements then becomes physically impossible or difficult, depending on the nature and degree of the differences.

*Drainage.*—As already indicated, the return of costs for federal drainage activities varies as to the agency performing the work.<sup>636</sup> For such activities conducted by the Army Engineers,

<sup>632</sup> Act of August 31, 1935, § 8, 49 Stat. 1075, 1077, 16 U. S. C. 831m.

<sup>633</sup> Act of August 20, 1937, § 6, 50 Stat. 731, 735, as amended, 16 U. S. C. 832e; Act of May 18, 1938, § 5, 52 Stat. 403, 405, 16 U. S. C. 833d.

<sup>634</sup> See *supra*, pp. 305-306.

<sup>635</sup> See *supra*, pp. 305-306.

<sup>636</sup> See *supra*, pp. 595-596.

the pricing standard is the same as in the case of flood control. In other words, the extent of required local contribution is the measure. The situation is substantially the same in the case of drainage activities of the Department of Agriculture, where the price depends upon whether the Secretary exercises his discretionary authority to require local contribution. But where such activities are performed by the Bureau of Reclamation, the pricing standard is that applicable to irrigation.

*Water Supply Other Than for Irrigation.*—Here again, price standards vary with the agency performing the function. Where the Secretary of the Army makes contracts for "domestic and industrial uses for surplus water" at any reservoir under Army control, he is authorized to do so "at such prices and on such terms as he may deem reasonable."<sup>637</sup> If plans for a reservoir project are modified to provide additional storage capacity for "domestic water supply or other conservation storage," the price standard prescribed is that the "cost of such increased storage capacity" be contributed by local agencies.<sup>638</sup>

In connection with the latter provision, a recent restrictive provision merits notice here. The statute authorizing construction of the Coyote Valley Reservoir of the Russian River Project by the Army Engineers requires that, prior to construction, local interests shall contribute \$5,598,000 in full payment of cost allocable to water-conservation benefits.<sup>639</sup> The plan thus adopted provides that the project be turned over to and operated by local interests.<sup>640</sup> A unique feature is the requirement that Section 8 of the 1944 Flood Control Act be made applicable.<sup>641</sup>

As to projects under the 1939 Reclamation Project Act, alternative price standards are provided with respect to contracts to furnish water for "municipal water supply or miscellaneous

<sup>637</sup> Act of December 22, 1944, § 6, 58 Stat. 887, 890, 33 U. S. C. 708.

<sup>638</sup> Act of June 22, 1936, § 5, 49 Stat. 1570, 1572, as added by Act of July 19, 1937, § 1, 50 Stat. 515, 518, as amended, 33 U. S. C. 701h.

<sup>639</sup> Act of May 17, 1950, 64 Stat. 163, —.

<sup>640</sup> Sen. Rep. No. 1143, 81st Cong., 1st sess., p. 65 (1949).

<sup>641</sup> For discussion of Section 8, see *supra*, p. 533.

purposes.”<sup>642</sup> Such a contract may be for a period not exceeding 40 years:<sup>643</sup>

at such rates as in the Secretary’s judgment will produce revenues at least sufficient to cover an appropriate share of the annual operation and maintenance cost and an appropriate share of such fixed charges as the Secretary deems proper, and shall require the payment of said rates each year in advance of delivery of water for said year.

Or such a contract shall require repayment to the United States over a period not to exceed 40 years:<sup>644</sup>

with interest not exceeding the rate of 3½ per centum per annum if the Secretary determines an interest charge to be proper, of an appropriate share as determined by the Secretary of that part of the construction costs allocated by him to municipal water supply or other miscellaneous purposes.

The foregoing standards point up an unusual feature. The procedure for allocation of costs, discussed earlier, includes provision for an allocation to “municipal water supply or other miscellaneous purposes.”<sup>645</sup> But the above pricing standards are restricted to contracts to “furnish water” for municipal water supply or miscellaneous purposes. If the allocation provision be thus broader in scope than authorization for contracts, one apparent result would be the lack of a correlative pricing standard. In this connection, it should also be noted that the allocation provision specifies municipal water supply or “other” miscellaneous purposes, but that word does not appear in the corresponding contract authorization to which the above pricing standards are related.

*Fish and Wildlife.*—As already noted, project costs for these purposes are nonreimbursable.<sup>646</sup>

<sup>642</sup> Act of August 4, 1939, § 9(c), 53 Stat. 1187, 1194, 43 U. S. C. 485h(c).

<sup>643</sup> *Id.*

<sup>644</sup> *Id.*

<sup>645</sup> § 9(a), 53 Stat. 1193, 43 U. S. C. 485h(a).

<sup>646</sup> See *supra*, p. 597.

*Recreation.*—As previously indicated, recreational facilities at certain Reclamation projects are operated by the National Park Service pursuant to interagency agreements.<sup>622</sup> These agreements contain no provision regarding price. The authorization for recreational use of reservoir projects under Army control permits the Secretary of the Army to grant leases “upon such terms as he may deem reasonable.”<sup>623</sup> Leases to nonprofit organizations may be granted at “reduced or nominal rentals.”<sup>624</sup> Licenses to federal, state, or local governmental agencies may be granted “without monetary consideration,” when determined to be in the public interest and for “such periods of time and upon such conditions” as the Secretary of the Army finds advisable.<sup>625</sup> And when he determines it not to be contrary to the public interest, the water areas of such reservoirs shall be open to public use generally “without charge” for recreational purposes.<sup>626</sup>

No price standard is fixed to cover conveyances for recreational purposes by the Tennessee Valley Authority.<sup>627</sup>

Substantially the same situation exists with respect to authorizations for recreational uses of national parks.<sup>628</sup> So also as to certain relevant authorizations permitting recreational uses of national forests, of the so-called “O and C lands,” and of retired submarginal lands.<sup>629</sup>

<sup>622</sup> See *supra*, p. 333.

<sup>623</sup> Act of December 22, 1944, § 4, 58 Stat. 887, 889, as amended, 16 U. S. C. 460d.

<sup>624</sup> *Id.*

<sup>625</sup> *Id.*

<sup>626</sup> *Id.*

<sup>627</sup> Act of May 18, 1933, § 4(k)(a), 48 Stat. 58, 60, as added by Act of July 18, 1941, 55 Stat. 599, 16 U. S. C. 831c(k)(a).

<sup>628</sup> Act of August 25, 1916, § 1, 3, 39 Stat. 535, as amended, 16 U. S. C. 1, 3.

<sup>629</sup> Act of February 28, 1899, § 1, 30 Stat. 908, as amended, 16 U. S. C. 495; Act of March 4, 1915, 38 Stat. 1086, 1101, 16 U. S. C. 497; Act of August 23, 1937, § 1, 50 Stat. 874; Act of July 22, 1937, §§ 31, 32, 50 Stat. 522, 525, as amended, 7 U. S. C. 1010, 1011; 7 C. F. R. 600.2.

## Other Considerations Related to Project Operation and Development

In connection with the development and operation of projects, there are still other statutory provisions of sufficient importance to warrant comparative review. These include provisions relating to preference, transmission facilities, acreage limitations, and payments in lieu of taxes.

**PREFERENCE PROVISIONS.**—For many years, various federal statutes relating to the development of water resources have provided a preference for public bodies and cooperatives. Many of these we have previously grouped for review, and they need not be repeated here.<sup>655</sup> But several significant variations with respect to disposal of power should be noted.

In the marketing of power from reservoir projects under Army control, preference is given to “public bodies and cooperatives.”<sup>656</sup> But in the marketing of power from projects under the Reclamation Project Act of 1939, preference must be given to:<sup>657</sup>

municipalities and other public corporations or agencies; and also to cooperatives and other nonprofit organizations financed in whole or in part by loans made pursuant to the Rural Electrification Act of 1936 and any amendments thereof.

As to power sold from projects of the Tennessee Valley Authority, preference must be given to:<sup>658</sup>

States, counties, municipalities, and cooperative organizations of citizens or farmers, not organized or doing business for profit, but primarily for the purpose of supplying electricity to its own citizens or members \* \* \*.

Still different is the situation under the Bonneville Project and Fort Peck Project Acts. Each provides for both a “prefer-

<sup>655</sup> See *supra*, n. 236, p. 299.

<sup>656</sup> Act of December 22, 1944, § 5, 58 Stat. 887, 890, 16 U. S. C. 825s.

<sup>657</sup> Act of August 4, 1939, § 9(c), 53 Stat. 1187, 1194, 43 U. S. C. 485h(c).

<sup>658</sup> Act of May 18, 1933, § 10, 48 Stat. 58, 64, as amended, 16 U. S. C. 831l.



ence and priority to public bodies and cooperatives."<sup>659</sup> And unlike the foregoing statutes, both of these Acts contain definitions of "public body" and "cooperative."<sup>660</sup> But the Bonneville Project Act contains detailed provisions for implementing the preference requirements, while the Fort Peck Act does not.<sup>661</sup>

**TRANSMISSION FACILITIES.**—In the marketing of power from reservoir projects under Army control, the Secretary of the Interior has authority to construct or acquire by purchase or other agreement:<sup>662</sup>

only such transmission lines and related facilities as may be necessary in order to make the power and energy generated at said projects available in wholesale quantities for sale on fair and reasonable terms and conditions to facilities owned by the Federal Government, public bodies, cooperatives, and privately owned companies.

But Reclamation Law includes no comparable blanket provision. As already noted, however, Congress has recognized in appropriation legislation that transmission facilities constitute parts of authorized Reclamation projects.<sup>663</sup>

The Tennessee Valley Authority has express power "to construct, lease, purchase, or authorize the construction of transmission lines within transmission distance from the place where generated, and to interconnect with other systems."<sup>664</sup> And it also has authority "to construct transmission lines to farms and small villages that are not otherwise supplied with electricity at reasonable rates" in order "to promote and encourage the

<sup>659</sup> Act of August 27, 1937, § 4(a), 50 Stat. 731, 733, 16 U. S. C. 832c(a); Act of May 18, 1938, § 4, 52 Stat. 403, 405, 16 U. S. C. 833c.

<sup>660</sup> The former "means States, public power districts, counties, and municipalities, including agencies or subdivisions of any thereof." The latter "means any form of nonprofit-making organization or organizations of citizens supplying, or which may be created to supply, members with any kind of goods, commodities, or services, as nearly as possible at cost." § 3, 50 Stat. 733, 16 U. S. C. 832b; § 3, 52 Stat. 405, 16 U. S. C. 833b.

<sup>661</sup> §§ 4, 5(a), 50 Stat. 733, 734, as amended, 16 U. S. C. 832c, 832d(a).

<sup>662</sup> Act of December 22, 1944, § 5, 58 Stat. 887, 890, 16 U. S. C. 825s.

<sup>663</sup> See *supra*, n. 530, p. 240.

<sup>664</sup> Act of May 18, 1933, § 12, 48 Stat. 58, 65, as amended, 16 U. S. C. 831k.

fullest possible use of electric light and power on farms" within reasonable distance of its transmission lines.<sup>665</sup>

As to projects covered by the Bonneville Project and the Fort Peck Project Acts, it is directed that such transmission facilities be provided and maintained as are necessary or appropriate to transmit electric energy to "existing and potential markets" as well as to make interconnections "for the purpose of interchange of electric energy."<sup>666</sup>

**ACREAGE LIMITATIONS.**—In connection with the review of Reclamation Law, this subject has been discussed in detail.<sup>667</sup> Several aspects of the relevant legislation merit comment here.

Under the 1902 Reclamation Act, irrigable land holdings on projects, whether entered public lands or private lands, were limited to 160 acres for any one entryman or landowner.<sup>668</sup> But the law has been construed as permitting 320 irrigable acres to be held jointly by man and wife.<sup>669</sup> And it was early held that an owner of more than 160 acres of privately owned land could transfer the excess to his wife or minor children, enabling each of them to receive project water.<sup>670</sup> Moreover, the Act's provisions do not preclude combined farming endeavor by any number of owners, members of a family or otherwise, so long as each owns no more than the acreage limit for any one owner.

In 1938 and 1940 Congress, by special legislation, exempted three projects from the excess-land limitations.<sup>671</sup> By other 1940 legislation repayment contracts were required for water conservation and utilization projects, small reclamation projects, whereby the Secretary of the Interior shall establish farm units of a size sufficient "for the support of a family on the lands to be irrigated."<sup>672</sup> Such a contract must also require

<sup>665</sup> § 10, 48 Stat. 64, as amended, 16 U. S. C. 831i.

<sup>666</sup> Act of August 20, 1937, § 2(b), 50 Stat. 731, 732, as amended, 16 U. S. C. 832a(b); Act of May 18, 1938, § 2(b), 52 Stat. 403, 404, 16 U. S. C. 833a(b).

<sup>667</sup> See *supra*, pp. 217-237.

<sup>668</sup> Act of June 17, 1902, §§ 3, 5, 32 Stat. 388, 389, as amended, 43 U. S. C. 434, 431.

<sup>669</sup> See *supra*, pp. 222-223.

<sup>670</sup> Instructions of the Secretary of the Interior, 32 L. D. 647 (1904).

<sup>671</sup> See *supra*, n. 499, pp. 235-236.

<sup>672</sup> Act of October 14, 1940, § 4(c)(5), 54 Stat. 1119, 1122, 16 U. S. C. 590c-2(c)(5).

that water may not be delivered to or for more than one farm unit owned by a single landowner.<sup>673</sup>

The 1943 Columbia Basin Project Act authorizes the Secretary to establish "farm units of sufficient acreage for the support of an average-sized family at a suitable living level, having in mind the character of the soil, topography, location with respect to the irrigation system," and other relevant factors.<sup>674</sup> With specified exceptions, units are not to be less than 10 nor more than 160 acres.<sup>675</sup> A landowner may receive water for only one unit.<sup>676</sup> The term "landowner" denotes any "person, corporation, joint-stock association or family," the latter including a husband and wife together with their children under 18 years of age.<sup>677</sup>

No provisions such as the foregoing are provided by law where water is delivered by the Army Engineers for irrigation purposes.<sup>678</sup> But as to irrigation works at any dam and reservoir project under Army control, authorized pursuant to Section 8 of the 1944 Flood Control Act, such works must be constructed, operated, and maintained under Reclamation Law.<sup>679</sup>

**PAYMENTS TO STATE AND LOCAL GOVERNMENTS.**—In the development of water resources, the Federal Government necessarily acquires land. In many river basins, it is also an owner of substantial land areas. As to these lands, state and local governments do not collect taxes. Statutes relevant here variously recognize this situation by providing for different payments to state and local governments.<sup>680</sup>

As to flood-control projects of the Army Engineers, 75% of all moneys received from the leasing of lands acquired for flood-

<sup>673</sup> *Id.*

<sup>674</sup> Act of March 10, 1943, § 2(b) (i), 57 Stat. 14, 15, 16 U. S. C. 835a (b) (i).

<sup>675</sup> *Id.*

<sup>676</sup> § 2(b) (iii), 57 Stat. 15, 16 U. S. C. 835a (b) (iii).

<sup>677</sup> § 2(b) (v), 57 Stat. 16, 16 U. S. C. 835a (b) (v).

<sup>678</sup> See *supra*, pp. 561-562.

<sup>679</sup> Act of December 22, 1944, § 8, 58 Stat. 887, 891, 43 U. S. C. 390. See also H. Doc. No. 255, 81st Cong., 1st sess., pp. XIII-XX (1949).

<sup>680</sup> In connection with this problem, which, of course, is not limited to development of water resources, see **FEDERAL CONTRIBUTION TO STATE AND LOCAL GOVERNMENT UNITS WITH RESPECT TO FEDERALLY OWNED REAL ESTATE**, H. Doc. No. 218, 78th Cong., 1st sess. (1943).

control purposes are required to be paid to the state involved for the benefit of public schools and public roads of the county or counties in which such property is situated.<sup>651</sup> In authorizing certain flood-control work by the Department of Agriculture in 1944, Congress provided for annual payment to the county in which any lands are acquired of a sum equal to 1% of the purchase price, or if not acquired by purchase, 1% of value at time of acquisition.<sup>652</sup>

No provisions comparable to the foregoing have been prescribed for navigation or irrigation projects.

On the other hand, the Tennessee Valley Authority Act does provide for financial assistance to states and local governments in which power operations are carried on and in which properties are acquired that were previously subject to state or local tax.<sup>653</sup> A detailed formula is prescribed for computation of such payments which are specifically referred to as "in lieu of taxation."

In still other programs related to development of water resources, statutes make provisions for similar payments. For example, 25% of moneys received from national forests are paid to the state in which such forest is located, for the benefit of the public schools and public roads of the county or counties involved.<sup>654</sup> Similarly, 50% of the revenues from the so-called "O and C lands" are paid to the counties involved.<sup>655</sup>

With specified exceptions, 12½% of certain fees collected under the Taylor Grazing Act are paid to the state for the benefit of the county or counties involved, and 50% of moneys from certain isolated grazing tracts are similarly paid to the state for the benefit of the county or counties involved.<sup>656</sup> In the case of retired submarginal lands, the Secretary of Agriculture is directed to pay 25% of the net revenues to the county involved to be used for school or road purposes, or both.<sup>657</sup>

<sup>651</sup> Act of August 18, 1941, § 7, 55 Stat. 638, 650, as amended, 33 U. S. C. 701c-1.

<sup>652</sup> Act of December 22, 1944, § 13, 58 Stat. 887, 905.

<sup>653</sup> Act of May 18, 1933, § 13, 48 Stat. 58, 66, as amended, 16 U. S. C. 8311.

<sup>654</sup> Act of May 23, 1908, 35 Stat. 251, 260, as amended, 16 U. S. C. 500.

<sup>655</sup> Act of August 23, 1937, title II, 50 Stat. 874, 875.

<sup>656</sup> Act of August 6, 1947, § 2, 61 Stat. 790, 43 U. S. C. 315i (Supp. III).

<sup>657</sup> Act of July 22, 1937, § 33, 50 Stat. 522, 526, 7 U. S. C. 1012.

## Water-Resource Activities Other Than Project Development

The preceding part of the summary has dealt primarily with development, construction, and operation of water-resource projects. But other governmental functions, significantly related to water resources are performed in the management of federal public lands, in activities aiding state and private development, and in the regulation of nonfederal development.

**FEDERAL PUBLIC LANDS.**—Comprising more than 400,000,000 acres in the continental United States, federal lands are administered by a number of agencies—the Forest Service and the Soil Conservation Service in the Department of Agriculture; the Bureau of Land Management, the National Park Service, and the Fish and Wildlife Service in the Department of the Interior; and also in the latter Department, the Bureau of Indian Affairs with respect to large areas included in Indian reservations.<sup>688</sup> We shall summarize here the principal statutes recognizing the relationship between land-use practices and water resources, including particularly the role of land use in controlling the quantity and quality of the water in downstream areas.

*Soil Conservation and Domestic Allotment Act.*—All federal lands may be developed under this statute authorizing measures to prevent soil erosion, including but not limited to, engineering operations, methods of cultivation, growing of vegetation, and changes in the use of land—to further the purposes of preserving natural resources, controlling floods, preventing the impairment of reservoirs, maintaining the navigability of rivers and harbors, protecting public health, public lands, and relieving unemployment.<sup>689</sup>

These measures are carried out by the Secretary of the Interior with respect to soil and moisture-conservation opera-

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<sup>688</sup> See *supra*, pp. 351-382. See also REPORT OF THE COMMISSION ON ORGANIZATION OF THE EXECUTIVE BRANCH OF THE GOVERNMENT, App. L, p. 184 (January 1949).

<sup>689</sup> Act of April 27, 1935, §§ 1, 2, 49 Stat. 163, 16 U. S. C. 590a, 590b. See also *supra*, pp. 366-372.

tions conducted on any lands under the jurisdiction of that Department.<sup>690</sup> Otherwise by the Secretary of Agriculture "with the cooperation of the agency having jurisdiction" of such lands.<sup>691</sup>

*Taylor Grazing Act.*—This legislation authorizes the establishment of grazing districts from unappropriated and unreserved public lands chiefly valuable for grazing and raising forage crops.<sup>692</sup> The Secretary of the Interior is directed to make provision for the protection, administration, regulation, and improvement of these grazing districts, and to do any and all things necessary to preserve and provide for the orderly development and improvement of the range.<sup>693</sup> He is further authorized "to continue the study of erosion and flood control" and to perform such works as may be necessary to protect and rehabilitate the areas involved.<sup>694</sup>

*Bankhead-Jones Farm Tenant Act.*—Under Title III of this statute, the Secretary of Agriculture is directed to develop a program of land utilization and conservation, including retirement of submarginal lands.<sup>695</sup> He is authorized to protect, improve, develop, and administer such property and to construct such structures thereon as may be necessary to adapt it to its most beneficial use.<sup>696</sup> The express purpose of the program is to assist in controlling soil erosion, reforestation, preserving natural resources, mitigating floods, preventing impairment of dams and reservoirs, conserving surface and subsurface moisture, protecting the watersheds of navigable streams, and protecting the public lands, health, safety, and welfare.<sup>697</sup>

<sup>690</sup> Reorganization Plan No. IV, § 6, effective June 30, 1940, 54 Stat. 1234, 1235, 5 U. S. C. 133t note following.

<sup>691</sup> Act of April 27, 1935, § 2, 49 Stat. 163, 16 U. S. C. 590b.

<sup>692</sup> Act of June 28, 1934, 48 Stat. 1269, as amended, 43 U. S. C. 315 *et seq.* See also *supra*, pp. 364-366.

<sup>693</sup> § 2, 48 Stat. 1270, 43 U. S. C. 315a.

<sup>694</sup> *Id.*

<sup>695</sup> Act of July 22, 1937, § 31, 50 Stat. 522, 525, 7 U. S. C. 1010. See also *supra*, pp. 372-374.

<sup>696</sup> § 32, 50 Stat. 525, as amended, 7 U. S. C. 1011.

<sup>697</sup> § 31, 50 Stat. 525, 7 U. S. C. 1010.

*National Forests.*—"Securing favorable conditions of water flows" is one of the limited purposes for which national forests may be established, and Congress has directed that national forest areas be administered for that purpose.<sup>705</sup> Administration is vested in the Secretary of Agriculture.<sup>706</sup>

Further recognition has been accorded the use of land for stream regulation through authority for the acquisition of land for management as a part of national forests. The Secretary of Agriculture is authorized to acquire such "forested, cut-over, or denuded lands within the watersheds of navigable streams as in his judgment may be necessary to the regulation of the flow of navigable streams," after an examination by the Secretary of Agriculture, in cooperation with the Director of the Geological Survey, has shown that the control of such lands will promote or protect the navigability of streams.<sup>707</sup>

*Other Forests and Woodlands.*—Some forests and woodlands are also administered by the Bureau of Land Management in the Department of the Interior.<sup>708</sup> These include the revested Oregon and California Railroad and reconveyed Coos Bay wagon road grant lands, which Congress has provided shall be managed for permanent forest production, on the principle of sustained yield, for the purposes, among others, of protecting watersheds, regulating stream flows, and providing recreational facilities.<sup>709</sup>

*National Parks and Wildlife Refuges.*—The foregoing statutes are express measures for the conservation of land in aid of water-resource development. The same object may be aided though not expressly recognized by the purposes for which the national parks and the wildlife refuges are established and administered. National parks are established to conserve the scenery and the natural and historic objects and

<sup>705</sup> Act of June 4, 1897, § 1, 30 Stat. 11, 35, 16 U. S. C. 475. See also *supra*, pp. 354-358.

<sup>706</sup> Act of February 1, 1905, § 1, 33 Stat. 628, 16 U. S. C. 472.

<sup>707</sup> Act of March 1, 1911, 36 Stat. 961, as amended, 16 U. S. C. 515, 516. Acquisition for production of timber is also permissible. See *supra*, p. 356.

<sup>708</sup> See *supra*, pp. 358-359.

<sup>709</sup> Act of August 28, 1937, 50 Stat. 874; see *supra*, n. 42, p. 359.

the wildlife therein so as to leave them unimpaired for the enjoyment of future generations.<sup>703</sup> Wildlife refuges are acquired to return such areas to their natural conditions under the Migratory Bird Conservation Act, which authorizes the acquisition of land and water areas to implement the Migratory Bird Treaty Act.<sup>704</sup> Other refuges have been established by separate acts.<sup>705</sup>

*Construction of Water Facilities.*—To a large extent, the character of the land which leads to its reservation or acquisition for national forests, national parks, grazing districts, and similar uses, may limit its water-resource use.

The national forests are established from “public lands wholly or in part covered with timber or undergrowth,” or acquired out of “forested, cut-over, or denuded lands.”<sup>706</sup> The Taylor Grazing Act concerns lands “chiefly valuable for grazing and raising forage crops”—but not a part of the national forests, national parks and monuments, Indian reservations, and certain other lands.<sup>707</sup> The purpose of establishing national parks and wildlife refuges is primarily to maintain or return natural objects to their natural condition.<sup>708</sup>

Thus, the primary purposes for which all these lands are to be used do not necessitate extensive works for the direct development of water resources.

*Multiple-Purpose Land Use.*—While lands may be acquired, administered, and used for specified primary purposes, all or parts of these areas and their water resources may also be adaptable to multiple uses for other purposes, such as grazing, recreation, and the protection of wildlife.

<sup>703</sup> Act of August 25, 1916, § 1, 39 Stat. 535, 16 U. S. C. 1. See also *supra*, pp. 360-362.

<sup>704</sup> Act of February 18, 1929, 45 Stat. 1222, as amended, 16 U. S. C. 715-715r; Act of July 3, 1918, 40 Stat. 755, as amended, 16 U. S. C. 703-711.

<sup>705</sup> Act of June 7, 1924, 43 Stat. 650, as amended, 16 U. S. C. 721-731; Act of April 23, 1928, 45 Stat. 448, 16 U. S. C. 690; Act of June 12, 1930, 46 Stat. 579, 16 U. S. C. 691; Act of May 18, 1948, 62 Stat. 238, 16 U. S. C. 695-695c (Supp. III).

<sup>706</sup> Act of March 3, 1891, § 24, 26 Stat. 1095, 1103, as amended, 16 U. S. C. 471; Act of March 1, 1911, § 6, 36 Stat. 961, 962, as amended, 16 U. S. C. 515.

<sup>707</sup> Act of June 28, 1934, § 1, 48 Stat. 1269, as amended, 43 U. S. C. 315.

<sup>708</sup> See *supra*, p. 361.



For lands acquired under Title III of the Bankhead-Jones Farm Tenant Act, the Secretary of Agriculture has the authority to permit the use of such lands for "any public purpose."<sup>719</sup> Specific authority exists to protect, improve, develop, and administer any property so acquired and to construct such structures thereon as may be necessary to adapt it to its most beneficial use.<sup>720</sup>

Lands included in the national forests are "to be administered by the Secretary of Agriculture under such rules and regulations and in accordance with such general plans as may be jointly approved by the Secretary of Agriculture and the Secretary formerly administering the area, for the use and occupation of such lands and for sale of such products therefrom."<sup>721</sup> Further indication of the permissible uses to which such lands may be put is inherent in the provision for the disposition of moneys received on account of permits for hunting, fishing, or camping on certain forest lands.<sup>722</sup>

The Secretary of Agriculture may permit the use of national forest areas adjacent to mineral, medicinal, or other springs, for the purpose of erecting upon such leased grounds sanatoriums or hotels to be opened for the reception of the public.<sup>723</sup> He is further authorized to permit the use of national forest lands for the construction of summer homes, hotels, stores, or other structures needed for recreation or public convenience, not exceeding five acres to any one person or association.<sup>724</sup>

The Taylor Grazing Act applies to land chiefly valuable for grazing and the raising of forage crops.<sup>725</sup> However, the Secretary of the Interior is directed to provide for suitable rules and regulations, for cooperation with local associations of stockmen, state land officials, and official state agencies engaged in conservation or propagation of wildlife, or interested in the use of

<sup>719</sup> Act of July 22, 1937, § 32(d), 32(f), 50 Stat. 522, 526, 7 U. S. C. 1011(d), 1011(f).

<sup>720</sup> § 32(b), 50 Stat. 526, 7 U. S. C. 1011(b).

<sup>721</sup> Act of June 7, 1924, § 9, 43 Stat. 653, 655, 16 U. S. C. 471(b).

<sup>722</sup> Act of March 4, 1917, 39 Stat. 1134, 1149, as amended, 16 U. S. C. 499.

<sup>723</sup> Act of February 23, 1899, § 1, 30 Stat. 908, as amended, 16 U. S. C. 495.

<sup>724</sup> Act of March 4, 1915, 38 Stat. 1066, 1101, 16 U. S. C. 497.

<sup>725</sup> Act of June 28, 1934, § 1, 48 Stat. 1269, as amended, 43 U. S. C. 315.

See also *supra*, pp. 364-366.

grazing districts.<sup>716</sup> Hunting and fishing may also be permitted within the grazing district, in accordance with federal or state laws.<sup>717</sup>

The authority of the Secretary of the Interior with respect to the so-called "O and C" lands is somewhat broader. He is authorized to perform any and all acts and to make such rules and regulations as may be necessary and proper for the purpose of carrying the provisions of the Act into full force and effect.<sup>718</sup> The express purposes for which such lands shall be managed include contributing to the economic stability of local communities and industries, and providing recreational facilities.<sup>719</sup>

The multiple-purpose development of national park lands is, of course, limited by the requirement for keeping such areas in their natural state.<sup>720</sup>

**FEDERAL AID TO STATE AND PRIVATE DEVELOPMENT.**—As we have seen, authorized water-resource activities by the Federal Government relate to both projects in streams and the management of federally owned lands. Statutes also provide for nonfederal development in areas under federal jurisdiction. Within this area, statutory provisions exist for assistance to the states and private persons in their water-developmental activities. Such assistance may take the form of grants of land and rights-of-way, financial assistance, and technical study and information.

*Rights-of-Way: Power.*—Nonfederal development of the navigable streams has been confined largely to the production of electric power. The Federal Government has authorized the use of public lands and the water resources thereon for power under a variety of statutes.

Public lands valuable for water power sites, irrigation, and other public purposes may be withdrawn from disposition.<sup>721</sup> Under statute, the Director of the Geological Survey has cer-

<sup>716</sup> § 9, 48 Stat. 1273, as amended, 43 U. S. C. 315h.

<sup>717</sup> § 1, 48 Stat. 1269, as amended, 43 U. S. C. 315.

<sup>718</sup> Act of August 28, 1937, § 5, 50 Stat. 874, 875.

<sup>719</sup> § 1, 50 Stat. 874.

<sup>720</sup> See *supra*, pp. 360-362.

<sup>721</sup> Act of June 25, 1910, § 1, 36 Stat. 847, 43 U. S. C. 141.

tain authority with respect to the public lands.<sup>722</sup> This authorization is implemented by the order of the Secretary of the Interior authorizing the Director of the Geological Survey, without prior approval, to classify as power sites, lands valuable for power purposes and to modify or revoke such classifications.<sup>723</sup> This classification operates as a withdrawal of such sites from all forms of entry under the public-land laws and reserves them for disposition by the Federal Power Commission.

As we earlier noted, Congress in 1866 legislation concerning public lands provided for the recognition of water rights vesting and accruing before or after that time under local customs, laws, and decisions of the courts for mining, agricultural, manufacturing, or other purposes, and acknowledged a right-of-way for the construction of ditches and canals for the purposes specified.<sup>724</sup> This provision has been construed to permit the use of water transported off the public domain for power-production purposes.<sup>725</sup>

In 1896, the Secretary of the Interior was authorized to permit, under general regulations to be fixed by him, the use of a right-of-way to the extent of 25 feet, together with the use of necessary ground not exceeding 40 acres, upon the public lands and national forests of the United States for the purposes of generating, manufacturing, or distributing electric power.<sup>726</sup> This Act superseded the Act of 1866 so far as it was applicable to such rights-of-way, inasmuch as the prior enactment was primitive and poorly adapted to electric power purposes, limited as it was to ditches, canals, and reservoirs, not covering power houses, transmission lines, or necessary subsidiary structures, and since the latter Act dealt specifically with the subject, covered it fully, and evidently was designed to be complete in itself.<sup>727</sup>

<sup>722</sup> Act of March 3, 1879, § 1, 20 Stat. 377, 394, 43 U. S. C. 31.

<sup>723</sup> Order of the Secretary of the Interior No. 2333, 43 C. F. R. 4.623 (1947 Supp.).

<sup>724</sup> R. S. § 2339, from Act of July 26, 1866, § 9, 14 Stat. 251, 253, 43 U. S. C. 661. For the text of this provision, see *supra*, p. 36.

<sup>725</sup> *Pacific Gas & Electric Co. v. United States*, 45 F. 2d 708 (C. A. 9, 1930).

<sup>726</sup> Act of May 14, 1896, 29 Stat. 120, as amended, 43 U. S. C. 957.

<sup>727</sup> *Utah Power & Light Co. v. United States*, 243 U. S. 389, 405, 406 (1917).

Then in 1901 the Secretary of the Interior was authorized to issue, also under general regulations to be fixed by him, a revocable permit for the use of rights-of-way through the public lands, forest, and other reservations of the United States for electric plants, poles, and lines for the generation and distribution of electric power, to the extent of the ground occupied by such facilities and not to exceed 50 feet on each side of the marginal limits thereof or each side of the center line of power line.<sup>728</sup> Although this Act did not expressly repeal the 1896 provision for rights-of-way, the Supreme Court has stated that the Act of February 15, 1901 "obviously superseded and took the place of the law of May 14, 1896."<sup>729</sup> And in 1908, applications for permission to use rights-of-way for this purpose were required to be submitted under the terms of the latter Act, inasmuch as it was for the same purpose and both contemplated mere permission.<sup>730</sup>

In 1905, the responsibility for executing the laws affecting the national forests was transferred to the Secretary of Agriculture, but excepted therefrom were such laws as affect the surveying, prospecting, locating, appropriating, entering, relinquishing, reconveying, certifying, or patenting of any such lands.<sup>731</sup> This transferred to the Secretary of Agriculture the authority granted by the 1901 statute and presumably the authority granted by the 1896 Act as well, inasmuch as rights-of-way under the 1896 and 1901 statutes were revocable and therefore did not affect the fee or cloud the title; the latter matters remained within the jurisdiction of the Secretary of the Interior.<sup>732</sup> The Department of Agriculture has no regulation expressly purporting to implement either Act.

However, a permit revocable at will proved to be inadequate

<sup>728</sup> Act of February 15, 1901, 31 Stat. 790, as amended, 43 U. S. C. 959.

<sup>729</sup> *Utah Power & Light Co. v. United States*, 243 U. S. 389, 407 (1917).

<sup>730</sup> Regulations of June 6, 1908, 36 L. D. 567, 580. For current provisions, see 43 C. F. R. 245.

<sup>731</sup> Act of February 1, 1905, § 1, 33 Stat. 628, 16 U. S. C. 472.

<sup>732</sup> See 33 L. D. 609 (1905); 29 Ops. ATT'Y GEN. 303 (1912); 43 C. F. R. 245.4; 32 C. F. R. 552.7.

for the purposes of private development.<sup>733</sup> Later, the "head of the department having jurisdiction" over public lands, national forests, and other reservations of the United States was authorized in 1911 to grant easements for rights-of-way, for a period not exceeding 50 years, for electric poles, and lines for the transmission and distribution of electric power; and the extent of the easement permissible is 20 feet on each side of the center line of the right-of-way rather than 50, and it is limited to poles and lines, not including works for electric power production.<sup>734</sup> As to national forests, this authority was vested in the Secretary of Agriculture as "head of the department having jurisdiction."<sup>735</sup>

In 1920, Congress authorized the Federal Power Commission to issue 50-year licenses for dams, water conduits, reservoirs, power houses, transmission lines, or other project works necessary or convenient for the development and improvement of navigation and for the development, transmission, and utilization of power across, along, from, or in any stream or other body of water subject to the jurisdiction of Congress under the Commerce Clause, or upon any part of the public lands and reservations, except national monuments and national parks, of the United States; and to issue licenses for the development of power at federal dams.<sup>736</sup>

Any lands of the United States included in any proposed project or for which a license is sought from the Commission are, by the terms of the Act, reserved from disposal until otherwise directed by the Commission or by Congress.<sup>737</sup>

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<sup>733</sup> It has been observed elsewhere, in connection with revocable permits for dam sites, that revocable permits proved to be inadequate for the purpose of private development. See *supra*, pp. 273, 265-267.

<sup>734</sup> Act of March 4, 1911, 36 Stat. 1253, 16 U. S. C. 5 (National Parks); see also the same Act codified in 43 U. S. C. 961 (Public Lands), 16 U. S. C. 420 (National Military Parks), and 16 U. S. C. 523 (National Forests).

<sup>735</sup> 29 OPS. ATT'Y GEN. 303 (1912).

<sup>736</sup> Act of June 10, 1920, § 4, 41 Stat. 1063, 1065, as amended, 16 U. S. C. 797(e). "Reservations" are defined to exclude national parks and monuments. § 3, 41 Stat. 1063, as amended, 16 U. S. C. 796(2).

<sup>737</sup> Act of June 10, 1920, § 24, 41 Stat. 1063, 1075, as amended, 16 U. S. C. 818 (Supp. III).

The Federal Power Act has been construed as revoking the authority of the respective Secretaries to issue permits to the extent of the authority granted the Federal Power Commission, and to revoke as well the authority of the Secretaries to approve the transfer of permits issued prior to the passage of the Act.<sup>738</sup> It should also be noted that the Commission in 1941 held that transmission lines which are not "primary lines transmitting power from the power house or appurtenant works of a project to a point of junction with the distribution system or with the interconnected primary transmission system as set forth in section 3 (11) of the Act are not within the licensing authority of the Commission," but within the authority of the respective department heads.<sup>739</sup>

The authority of the Commission extends to all hydroelectric plants on the public lands, and thus the use of hydroelectric power sites cannot be obtained from the respective departments, leaving certain lines and the use of land for non-hydro plants under the jurisdiction of the departments.<sup>740</sup> This distinction in law between the jurisdiction of the Federal Power Commission and that of the departments does not, however, always make for a realistic distinction in fact—for in some situations the details of a proposed transmission line may be altered alternatively to permit application to be made to the Secretary of the Interior or the Federal Power Commission, whichever a proposed applicant feels may suit his purposes better.<sup>741</sup>

<sup>738</sup> 32 OPS. ATT'Y GEN. 525 (1921) ; 43 C. F. R. 245.2.

<sup>739</sup> 18 C. F. R. 2.2; § 3(11) is set forth as 16 U. S. C. 796(11); cf. 18 C. F. R. 4.75.

<sup>740</sup> See 43 C. F. R. 245.2. See also *supra*, n. 101, p. 277.

<sup>741</sup> See, e. g., Application of the Idaho Power Company for amendment to its authorization for a license for the Bliss Project to include two transmission lines in lieu of prior application for permits to the Secretary of the Interior. Re *Idaho Power Company*, Project No. 1975, October 13, 1949, Order superseding order authorizing issuance of license (major). Re *Idaho Power Company*, Project No. 1975, January 18, 1950, Order modifying order of October 13, 1949, authorizing issuance of license (major). *Idaho Power Co. v. Federal Power Commission*, Case No. 10,530 (C. A. D. C., 1950).

It should also be noted that the Secretary of the Army has authority to grant easements for rights-of-way in acquired lands under his control and in public lands permanently withdrawn or reserved for uses of the

*Rights-of-Way: Irrigation.*—A number of acts have made certain irrigation resources of the public domain available for private and state development.

The Act of 1866 expressly applied to the use of water for agricultural purposes, and under that Act whenever a right to water had vested and accrued, the right-of-way for ditches and canals was also acknowledged.<sup>742</sup> Later, Congress provided for the disposition of desert lands in California, Colorado, Oregon, Nevada, Washington, Idaho, Montana, Utah, Wyoming, Arizona, New Mexico, and North and South Dakota by those individuals intending to reclaim such lands by conducting water thereon, stipulating:<sup>743</sup>

That the right to the use of water by the person so conducting the same, on or to any tract of desert land of three hundred and twenty acres shall depend upon bona fide prior appropriation; and such right shall not exceed the amount of water actually appropriated, and necessarily used for the purpose of irrigation and reclamation; and all surplus water over and above such actual appropriation and use, together with the water of all lakes, rivers, and other sources of water supply upon the public lands and not navigable, shall remain and be held free for the appropriation and use of the public for irrigation, mining, and manufacturing purposes subject to existing rights.

Subsequently, the 1894 Carey Act made desert lands available free of charge to the states for reclamation, such grant being conditioned upon actual reclamation.<sup>744</sup>

In addition, rights-of-way through the public lands and reservations for private reclamation works have been the subject

Department of the Army for, among other purposes, substations for electric power transmission lines, and for any other purpose he deems advisable. Act of July 24, 1946, § 7, 60 Stat. 641, 643, 43 U. S. C. 931b.

<sup>742</sup> R. S. § 2339, from Act of July 26, 1866, § 9, 14 Stat. 251, 253, as amended, 43 U. S. C. 661.

<sup>743</sup> Act of March 3, 1877, 19 Stat. 377, as amended, 43 U. S. C. 321 *et seq.* See also *supra*, pp. 37-38.

<sup>744</sup> Act of August 18, 1894, § 4, 28 Stat. 372, 422, as amended, 43 U. S. C. 641 *et seq.* See also *supra*, pp. 180-181.

of other acts of Congress. An amended 1891 act grants rights-of-way to canal ditch companies or to districts formed for the purpose of irrigation or drainage to the extent of the ground occupied by waters of reservoirs and canals and 50 feet on each side of the marginal limits thereof, and such additional rights-of-way as may be necessary for operation and maintenance, as well as the right to use materials on the adjacent lands for construction of such canals and ditches.<sup>745</sup> The right contemplated by this act is neither a mere easement nor a fee simple absolute, but a limited fee on an implied condition of reverter in the event the grantee ceases to use or retain the land for the purpose indicated in the act.<sup>746</sup>

Originally, the purposes for which such a right-of-way could be used were expressly limited to the canal or ditch for irrigation and drainage,<sup>747</sup> but it was subsequently provided that such rights-of-way might be used:<sup>748</sup>

for purposes of a public nature; and said rights-of-way may be used for purposes of water transportation, for domestic purposes, or for the development of power, as subsidiary to the main purpose of irrigation or drainage.

This subsidiary nature of other uses extends to the term "purposes of a public nature" as well as others enumerated.<sup>749</sup> Subsequently, the granting of permits or easements for caretakers' quarters was authorized, except in national forests.<sup>750</sup>

With an exception for national forests, parks, and military or Indian reservations, the Secretary of the Interior was authorized in 1895 to permit the use of rights-of-way on public land for tramroads, canals, or reservoirs by anyone engaged in min-

<sup>745</sup> Act of March 3, 1891, § 18, 26 Stat. 1095, 1101, as amended, 43 U. S. C. 946; 43 C. F. R. 244.14.

<sup>746</sup> *Kern River Co. v. United States*, 257 U. S. 147, 152 (1921), citing *Rio Grande Western R. Co. v. Stringham*, 239 U. S. 44, 47 (1915). Cf. 43 C. F. R. 244.19, describing the right as in the nature of an easement, a right of use only, the fee title remaining in the United States.

<sup>747</sup> Act of March 3, 1891, § 21, 26 Stat. 1095, 1102, 43 U. S. C. 949.

<sup>748</sup> Act of May 11, 1898, § 2, 30 Stat. 404, as amended, 43 U. S. C. 951.

<sup>749</sup> *Kern River Co. v. United States*, 257 U. S. 147, 152-153 (1921).

<sup>750</sup> Act of March 1, 1921, 41 Stat. 1194, 43 U. S. C. 950.



ing, quarrying, or lumbering.<sup>751</sup> This authorization was later amended to include canals and reservoirs for the purposes of furnishing water for domestic, public, and other beneficial uses.<sup>752</sup> On top of that, the Act of February 15, 1901, describes the purposes for which revocable permits may be granted thereunder, to include all the purposes mentioned in the amended Act of 1895, except tramroads.<sup>753</sup>

*Rights-of-Way: General.*—As we have seen, a confusing variety exists under statutes providing for rights-of-way over federal lands in connection with water use, beginning with the 1866 Act. It was necessary, for example, that the matter of the present applicability of the 1866 statute be considered by the Solicitor of the Department of the Interior who determined, for action within the Department:<sup>754</sup>

In my opinion, therefore, the right-of-way clause in section 2339 of the Revised Statutes has been entirely superseded by subsequent statutes as follows:

1. *For purposes of irrigation and purposes subsidiary thereto.* By the act of March 3, 1891 (§§ 18-21, 26 Stat. 1095, 1101), as amended.

2. *For purposes of mining, quarrying or cutting timber and manufacturing lumber.* By the act of January 21, 1895 (28 Stat. 635). This act in turn was superseded by the 1901 act.

3. *For purposes of generating, manufacturing or distributing electric power.* By the act of May 14, 1896 (29 Stat. 120). This act in turn was superseded by the 1901 act.

4. *For purposes of furnishing water for domestic, public, and other beneficial uses.* By section 1 of the act of May 11, 1898 (30 Stat. 404). This act in turn was superseded by the 1901 act.

<sup>751</sup> Act of January 21, 1895, § 1, 28 Stat. 635, as amended, 43 U. S. C. 956.

<sup>752</sup> Act of May 11, 1898, § 1, 30 Stat. 404, see 43 U. S. C. 956.

<sup>753</sup> Act of February 15, 1901, 31 Stat. 790, as amended, 43 U. S. C. 959.

<sup>754</sup> 58 I. D. 29, 40 (1942). And see *United States v. Oklahoma Gas and Electric Co.*, 318 U. S. 206 (1942).

5. *For all purposes except irrigation and purposes subsidiary thereto.* By the act of February 15, 1901 (31 Stat. 790).

The confusion as to the right-of-way statutes was further compounded by the nature of the licensing authority granted to the Federal Power Commission by the Federal Power Act. For although outstanding power permits were left expressly unaffected, the departments could no longer approve the transfer of such permits; indeed, the scope of departmental authority here appears otherwise doubtful.<sup>755</sup>

*Financial and Technical Assistance.*—In addition to making the public lands and reservations and the water resources thereon available for nonfederal development, Congress has offered certain aids to nonfederal action in developing, utilizing, and conserving water resources. These may consist of loans, financial contributions, furnishing technical assistance and services, or providing for cooperative federal-state programs.

Outright financial contributions to nonfederal activity is the least prevalent form of assistance. We shall mention some of the more significant of the relevant statutes. But particular mention should first be made of the Soil Conservation and Domestic Allotment Act, which authorizes the Secretary of Agriculture "to furnish financial or other aid to, any agency, governmental or otherwise, or any person" for the purposes of the Act.<sup>756</sup> It further directs that states shall be entitled to grants, and the Secretary shall make grants to the states when state plans conform to the specified standards.<sup>757</sup> Provision is also made for grants to individual farmers measured, among other

<sup>755</sup> 32 OPS. ATT'Y GEN. 525, 528-531 (1925); Re *The Montana Power Company*, FPC Opinion No. 170, February 4, 1949; *The Montana Power Co. v. Federal Power Commission*, Case No. 10,200, C. A. D. C., decided October 4, 1950.

<sup>756</sup> Act of April 27, 1935, § 1, 49 Stat. 163, 16 U. S. C. 590a(3). See also *supra*, pp. 366-372.

<sup>757</sup> Act of February 29, 1936, § 7, 49 Stat. 1148, as amended, 16 U. S. C. 590g; the purposes of the act are "(1) preservation and improvement of soil fertility; (2) promotion of the economic use and conservation of land; (3) diminution of exploitation and wasteful and unscientific use of national soil resources; (4) the protection of rivers and harbors against the results of

things, by their treatment or use of land.<sup>758</sup> It further specifies that, in arid or semiarid sections, payments may be measured by water-conservation measures on individual farms, including measures to prevent run-off, the building of check dams and ponds, and facilities for applying water to the land.<sup>759</sup>

In the 1948 Water Pollution Control Act, Congress authorized limited appropriations for grants to states and interstate agencies for investigations, research, surveys, and studies of industrial waste pollution, and also authorized limited appropriations for limited grants to such agencies to aid in financing the cost of project planning and design.<sup>760</sup> Loans are also authorized to any state, municipality, or interstate agency for the design or construction of treatment works to prevent raw waste discharge into navigable streams.<sup>761</sup>

The Rural Electrification Administration may make loans at low interest rates in aid of rural electrification.<sup>762</sup>

As to additional measures of federal assistance, reference is made to the more detailed discussion elsewhere of the several statutes making the following provisions for financial and technical assistance:

Federal cooperation with the states in the production and distribution of forest-tree seeds and plants for reforestation;<sup>763</sup>

Investigations, experiments, and tests for forestry purposes;<sup>764</sup>

Cooperative arrangements between the Federal Government and private owners for sustained-yield forest management;<sup>765</sup>

Cooperative arrangements with state governments for the provision of technical services respecting forest management

soil erosion \* \* \*;" and (5) the reestablishment of farm purchasing power. § 7(a), 49 Stat. 1148, 16 U. S. C. 590g(a).

<sup>758</sup> § 8(b), 49 Stat. 1149, as amended, 16 U. S. C. 590h(b).

<sup>759</sup> *Id.*

<sup>760</sup> Act of June 30, 1948, § 8, 62 Stat. 1155, 1159, as amended, 33 U. S. C. 466g (Supp. III).

<sup>761</sup> §§ 5-6, 62 Stat. 1158, as amended, 33 U. S. C. 466d-466e.

<sup>762</sup> Act of May 20, 1936, 49 Stat. 1363, as amended, 7 U. S. C. 901 *et seq.* See also *supra*, p. 289.

<sup>763</sup> See *supra*, p. 358.

<sup>764</sup> See *supra*, p. 358.

<sup>765</sup> See *supra*, p. 359.

and the harvesting, marketing, and processing of forest products;<sup>766</sup>

Forest pest control measures;<sup>767</sup>

Experimental laboratories for, and the production and practical demonstration of fertilizer use and the distribution of fertilizer by the Tennessee Valley Authority;<sup>768</sup>

Credit assistance in the acquisition, repair, or improvement of farms and purchases of lands in reclamation projects;<sup>769</sup>

Research and education—agricultural experiment stations;<sup>770</sup> cooperative agricultural extension work with state agricultural colleges;<sup>771</sup>

Financial aid to states constructing wildlife refuges, and federal development of specific land and water areas as wildlife refuges;<sup>772</sup>

Financial aid to states for fish restoration and management projects;<sup>773</sup>

Cooperation with the states in devising means of preventing erosion of the shores of coastal and lake waters by waves and currents;<sup>774</sup> and

Financial assistance to states and local agencies in the construction of sewage-treatment works to prevent pollution, and in the conduct of pollution-control studies.<sup>775</sup>

Here, as in other federal water-resource activities, there is evidenced some measure of duplication and lack of coordination. An example of duplication is the availability, at least under statute, of soil-conservation services and assistance in the Tennessee Valley through both the Tennessee Valley Authority and the Department of Agriculture.<sup>776</sup>

<sup>766</sup> See *supra*, pp. 359-360.

<sup>767</sup> See *supra*, p. 360.

<sup>768</sup> See *supra*, pp. 362-364.

<sup>769</sup> See *supra*, p. 380.

<sup>770</sup> See *supra*, p. 380.

<sup>771</sup> See *supra*, p. 381.

<sup>772</sup> See *supra*, p. 327.

<sup>773</sup> See *supra*, p. 330.

<sup>774</sup> See *supra*, pp. 334-336.

<sup>775</sup> See *supra*, pp. 341-342.

<sup>776</sup> See *supra*, pp. 362-364, 366-372.

And there is the possibility of conflict of purposes between the affirmative legislative provision for soil conservation and the price-support legislation, previously noted.<sup>777</sup>

**REGULATION OF NONFEDERAL ACTIVITIES.**—In addition to federal construction and operation of water-resource projects and the direct conduct of other resource activities, projects are constructed and activities affecting water-resource development are conducted by nonfederal entities. It is obviously to be desired that such activities be coordinated with those of the Federal Government. This is an objective of several statutory provisions which are regulatory in their nature and summarized here.

*Hydroelectric Power.*—Nonfederal hydroelectric power dams in waters under the commerce jurisdiction of Congress or upon certain federal lands must be licensed by the Federal Power Commission.<sup>778</sup> In issuing licenses, the Commission must select the project “best adapted to a comprehensive plan for improving or developing” the waterway.<sup>779</sup> It may impose conditions upon licenses, and the statute specifically refers to some which may be imposed, these dealing notably with the protection of navigation.<sup>780</sup> The relationship between any licensed structure and other structures, of either the Federal Government or nonfederal entities, is recognized by a provision which permits the Commission to determine the payments which should be made by licensees for benefits received from a storage reservoir or other headwater improvement.<sup>781</sup> The same provision is equally applicable to the determination of payments which may be required from owners of unlicensed power projects for benefits they receive from construction work by the United States or its licensees.<sup>782</sup>

But the Federal Power Commission is not the only agency

<sup>777</sup> See *supra*, pp. 366-372, 372.

<sup>778</sup> Act of June 10, 1920, § 23, 41 Stat. 1063, 1075, as amended, 16 U. S. C. 817. See also *supra*, pp. 272-289.

<sup>779</sup> § 10(a), 41 Stat. 1068, as amended, 16 U. S. C. 803(a).

<sup>780</sup> § 10, 41 Stat. 1068, as amended, 16 U. S. C. 803. See also *supra*, pp. 276-277.

<sup>781</sup> § 10(f), 41 Stat. 1070, as amended, 16 U. S. C. 803(f).

<sup>782</sup> *Id.*

regulating nonfederal hydroelectric dams. The Secretary of the Army exercises regulatory functions in several ways. For example, before an FPC license may be issued affecting the navigable capacity of navigable waters, the plans must be approved by the Chief of Engineers and the Secretary of the Army.<sup>783</sup> Furthermore, the Secretary of the Army may direct the inclusion of navigation lights and signals and may prescribe rules in the interest of navigation governing the operation of project navigation facilities.<sup>784</sup>

Similarly, the Fish and Wildlife Service is authorized to recommend, as to the construction and operation of licensed non-federal dams as well as federal dams, adequate provision of the protection of fish and wildlife.<sup>785</sup>

In addition to the foregoing provisions, several statutes providing for the withdrawal of public lands suitable for certain public purposes are relevant to potential power development.<sup>786</sup> The Federal Power Commission may cause the withdrawal of lands for power purposes under these acts. Furthermore, the Federal Power Act automatically withdraws lands included within any application for a preliminary permit or license, and authorizes the Commission to release power withdrawals in appropriate cases.<sup>787</sup> And FPC licenses must contain conditions to protect any reservations of the United States.<sup>788</sup>

The Federal Power Commission also exercises regulatory functions as to rates, services, and the like which have a less direct significance for purposes of this discussion, and which are outlined elsewhere.<sup>789</sup> In this connection, however, one duty of the Commission is particularly pertinent to the integrating role of federal regulation: its duty to promote and encourage the voluntary interconnection and coordination of electric

<sup>783</sup> § 4(d), 41 Stat. 1065, as amended, 16 U. S. C. 797(e).

<sup>784</sup> § 18, 41 Stat. 1073, as amended, 16 U. S. C. 811.

<sup>785</sup> Act of August 14, 1946, § 2, 60 Stat. 1080, 16 U. S. C. 662.

<sup>786</sup> Act of February 15, 1901, 31 Stat. 790; Act of June 25, 1910, § 1, 36 Stat. 847, 43 U. S. C. 141; Act of March 4, 1911, 36 Stat. 1235, 1253.

<sup>787</sup> Act of June 10, 1920, § 24, 41 Stat. 1063, 1075, as amended, 16 U. S. C. 818 (Supp. III).

<sup>788</sup> Act of August 26, 1935, § 4(e), 49 Stat. 833, 840, as amended, 16 U. S. C. 797(e).

<sup>789</sup> See *supra*, pp.287-289.

facilities within and between regional power districts which it was directed to establish, but which have not yet been created.<sup>790</sup>

*Relative Spheres of Federal and Nonfederal Development.*—In the matter of regulation, even more significant is the possibility of a conflict between a proposal to license a nonfederal project and another proposal for federal construction of a similar or conflicting project. This difficulty is well illustrated by reference to an example previously set forth.<sup>791</sup> The origin of the difficulty lies in the failure of statutes in specific instances to define clearly when a particular development may be undertaken only by the United States or by others under license from the United States. Thus, much of the controversy in the example centers around the meaning of the word “approved.”<sup>792</sup>

*Nonpower River Structures.*—Nonpower structures in navigable streams and other obstructions to navigation are subject to the regulatory jurisdiction of the Chief of Engineers and the Secretary of the Army and also, as to some structures, to the consent of Congress.<sup>793</sup> As to bridges, dams, dikes, and causeways, an 1899 Act requires generally both the consent of Congress and the approval of plans by the Chief of Engineers and the Secretary of the Army prior to construction.<sup>794</sup> But bridges, dams, dikes, and causeways may be built under state authority in waterways, the navigable portions of which lie wholly within a single state, if the location and plans are first approved by the Chief of Engineers and the Secretary of the Army.<sup>795</sup>

Furthermore, under the 1946 General Bridge Act, Congress granted blanket consent for the construction, maintenance, and operation of bridges over navigable waters of the United States, subject to stipulated conditions.<sup>796</sup> The location and plans must still be approved, under the 1946 Act, by the Chief

<sup>790</sup> § 202 (a), as added by Act of August 26, 1935, 49 Stat. 838, 848, 16 U. S. C. 824a (a). See also *supra*, p. 287.

<sup>791</sup> See *supra*, pp. 440-441.

<sup>792</sup> See *supra*, pp. 440-441.

<sup>793</sup> See *supra*, pp. 113-118.

<sup>794</sup> See *supra*, pp. 113, 116.

<sup>795</sup> See *supra*, pp. 113, 116.

<sup>796</sup> See *supra*, pp. 113-114.

of Engineers and the Secretary of the Army and also, in the case of privately owned highway toll bridges, by the highway departments of the state or states in which the bridge is situated.<sup>797</sup> Or if two or more state highway departments involved are unable to agree, by the Public Roads Administration.<sup>798</sup>

Also, the Chief of Engineers and the Secretary of the Army may impose such conditions relating to bridge maintenance and operation as they deem necessary "in the interest of navigation."

In addition to control prior to construction, the Secretary of the Army has certain continuing authority with respect to river structures: in the regulation of tolls, the regulation of drawbridge operation, the maintenance of lights and signals, and the prescription of alterations to obstructive bridges.<sup>799</sup> As to the latter item, it has traditionally been required that such alterations be made at the expense of the bridge owners.<sup>800</sup> But two statutes with respect to certain bridges over the Columbia River and in the Tennessee Valley provided that the cost be borne by the United States.<sup>801</sup> In addition, a 1940 statute with respect to railroad bridges provides for the sharing of costs by the bridge owner and the United States.<sup>802</sup>

Through review by the Chief of Engineers and the Secretary of the Army, and through the conditions which may be imposed upon the approval of those officers, the construction of individual nonpower river structures can be better harmonized with river use by all persons for all purposes. In large measure, however, the statutes themselves and many responsibilities of the administering agency under other statutes place primary emphasis on protection and improvement of navigation.<sup>803</sup>

<sup>797</sup> See *supra*, pp. 113-114.

<sup>798</sup> See *supra*, p. 114.

<sup>799</sup> See *supra*, pp. 115-116, 115, 113, 114-115.

<sup>800</sup> See *supra*, p. 114.

<sup>801</sup> See *supra*, pp. 114-115.

<sup>802</sup> See *supra*, p. 115.

<sup>803</sup> An exception to this statement is the 1906 statute specifying certain conditions which apply to the construction and maintenance of bridges authorized by Congress, including provision as to the movement of mail, troops and munitions of war and the use of bridges for telephone, telegraph,



*Water Pollution.*—This is particularly illustrated by the several statutes authorizing the Secretary of the Army to control the deposit of refuse matter in navigable waters. For the most part, such legislation has been confined to impediments to navigation.<sup>804</sup> The act of most general application, for example, is limited in its scope to refuse matter "other than that flowing from streets and sewers and passing therefrom in a liquid state."<sup>805</sup> The subject of pollution control largely remains therefore one for regulation by other agencies and through other statutes.

The Fish and Wildlife Service and the Bureau of Mines have authority to investigate pollution in relation to wildlife.<sup>806</sup> And the Surgeon General of the Public Health Service is authorized under the 1948 Water Pollution Control Act to prepare a comprehensive program for eliminating or reducing the pollution of interstate waters.<sup>807</sup> Provision is also made for securing the abatement of pollution, although the Act in effect gives the state where the pollution originates a veto power over this enforcement procedure.<sup>808</sup>

*Regulation of Water Carriers.*—Generally, the regulation of water carriers is a function of the Interstate Commerce Commission, conducted according to a pattern substantially similar to the regulatory scheme applicable to rail and motor carriers.<sup>809</sup> The establishment and maintenance of navigation aids, such as lighthouses, buoys, lights, radio beacons, and radio-direction finder stations, and the prescription of rules for navigating in harbors and inland waterways and at sea are responsibilities of the United States Coast Guard operating under a number of statutory provisions.<sup>810</sup> Congress has delegated to

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and railroad purposes, in addition to matters relating strictly to navigation. Bridges authorized under the 1946 General Bridge Act are not, however, subject to the mandatory conditions of the 1906 statute. See *supra*, p. 113, and especially n. 220.

<sup>804</sup> See *supra*, pp. 118-119.

<sup>805</sup> See *supra*, pp. 118-119.

<sup>806</sup> See *supra*, p. 330.

<sup>807</sup> See *supra*, p. 340.

<sup>808</sup> See *supra*, p. 341.

<sup>809</sup> See *supra*, pp. 78-83.

<sup>810</sup> See *supra*, p. 76.

the Secretary of the Army, however, general authority to prescribe regulations for the navigation of navigable waters "covering all matters not specifically delegated by law to some other executive department."<sup>811</sup> Although the Coast Guard is recognized generally as the enforcement agency for navigation rules, the Chief of Engineers has the duty of enforcing rules concerning anchorage grounds where no Coast Guard vessel is available.<sup>812</sup> In the case of Pearl Harbor, the prescription of anchorage rules is the duty of the Secretary of the Navy.<sup>813</sup> The Commandant of the Coast Guard, the Secretary of the Army, and the Interstate Commerce Commission all have authority to issue certain rules respecting the transportation of explosives by water.<sup>814</sup>

*Regulation Through Conditions Imposed Upon Federal Benefits.*—Still further means of federal regulation should be mentioned—through conditions imposed upon permits, licenses, easements, rights-of-way, and other benefits. As indicated previously in the more detailed discussion of these matters, the administrative head responsible for the issuance of permits, easements, licenses, and the like also is usually authorized to impose suitable conditions upon the grant.<sup>815</sup> Thus, conditions may be imposed upon the use and occupation of the forests,<sup>816</sup> the national parks,<sup>817</sup> and watershed and submarginal lands acquired by the Department of Agriculture,<sup>818</sup> upon Taylor Grazing Act permits and leases,<sup>819</sup> hunting and fishing in the national forests,<sup>820</sup> the furnishing of technical advice on soil conservation under the Soil Conservation and Domestic Allotment Act,<sup>821</sup> the receipt of cash payments

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<sup>811</sup> See *supra*, pp. 77-78.

<sup>812</sup> See *supra*, p. 77.

<sup>813</sup> See *supra*, p. 77.

<sup>814</sup> See *supra*, p. 78.

<sup>815</sup> See *supra*, pp. 626-633.

<sup>816</sup> See *supra*, p. 355.

<sup>817</sup> See *supra*, p. 362.

<sup>818</sup> See *supra*, n. 27, p. 357, and p. 373.

<sup>819</sup> See *supra*, p. 365.

<sup>820</sup> See *supra*, pp. 333, 625.

<sup>821</sup> See *supra*, p. 368.

for proper soil-conservation practices,<sup>822</sup> and the construction of Department of Agriculture flood-control works,<sup>823</sup> and water facility projects.<sup>824</sup>

Many of these conditions have been crystallized in the form of published regulations.<sup>825</sup> Such conditions and regulations may be employed to integrate federal and nonfederal use of land in relation to water resources.

Passing reference may also be made to the resale rate requirements of such statutes as the Bonneville Project Act and the Tennessee Valley Authority Act, which provide further means of federal regulation in a limited sphere.<sup>826</sup>

### Conclusion

At different times and in different ways, law has responded to the changing needs for development, utilization, and conservation of water resources, including related uses of land. This process has produced a number of conflicts, duplications, and gaps. These should be eliminated along with any major revision of policy respecting water resources.

It should be emphasized, in this connection, that time has not permitted research sufficient to assure complete coverage by this survey of all relevant aspects of the law. Moreover, we have purposely omitted discussion of the vital matters of administrative organization, as such. We have sought to include discussion of the more significant substantive provisions. Further detailed research will be required to enable full statutory coordination.

Clearly, the benefits to be gained from a coordination of implementing laws attract the care and precision required. The interests of present and future generations demand it.

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<sup>822</sup> See *supra*, pp. 371-372.

<sup>823</sup> See *supra*, p. 376.

<sup>824</sup> See *supra*, p. 378.

<sup>825</sup> See *supra*, pp. 333, 625.

<sup>826</sup> See *supra*, pp. 305, 307.

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# Summaries of the Water-Law Doctrines of the Seventeen Western States

¶ These summaries include condensed statements of the principles relating to rights to the use of water for beneficial purposes as developed by constitutional and statutory provisions and judicial decisions.

They reflect the scope and application of the appropriation doctrine with respect to watercourses, waters subject to appropriation, the method or methods of acquiring appropriative rights, preferential use of water, and conditions under which rights are lost by statutory forfeiture.

For states in which riparian rights are recognized, the summaries include indications of the degree of recognition, the conflict of riparian and appropriative principles, and the extent to which conflicts have been reconciled.

Similarly indicated are principles governing the use of defined underground streams and of percolating waters, together with the statutory provisions, if any, relating to administrative control over rights to the use of ground waters. Brief reference is also made to methods of adjudicating water rights and the degree of participation of state officials in statutory adjudications, and to the public administration of water rights and distribution of water to holders of rights of use. ¶

These summaries have been independently prepared by Wells A. Hutchins, Department of Agriculture.

## Arizona

Appropriations of water may be made under an exclusive procedure prescribed by statute, the first step being the making of an application to the State Land Commissioner for a permit to appropriate water, and the final step being the issuance of a certificate to the applicant after he has satisfied all requirements.<sup>1</sup> Appropriations for the generation of hydroelectric energy are subject to certain special limitations; if the development is to exceed 25,000 horsepower, approval of the

<sup>1</sup> *Ariz. Code Ann. 1939, §§ 75-101 to 75-113. Exclusiveness of statutory procedure: Tattersfield v. Putnam, 45 Ariz. 156, 174, 41 Pac. (2d) 228 (1935); Parker v. McIntyre, 47 Ariz. 484, 489, 56 Pac. (2d) 1337 (1936).*

application must be authorized by an act of the legislature; and a certificate for the right to use water for power development must limit the right to a period of 40 years from the date of application, subject to a preference right of renewal under the laws existing at the time of expiration of the period.<sup>3</sup>

The general statute governing the appropriation of water and the State administrative functions relating to water rights, known as the State Water Code, was enacted in 1919. According to this statute, "The water of all sources, flowing in streams, canyons, ravines or other natural channels, or in definite underground channels, whether perennial or intermittent, flood, waste or surplus water, and of lakes, ponds and springs on the surface," is declared to belong to the public and to be subject to appropriation for beneficial use.<sup>4</sup> Unappropriated water may be appropriated for domestic, municipal, irrigation, stock watering, water power, wildlife (including fish), or mining uses, for the personal use of the appropriator or for delivery to consumers.<sup>4</sup> The foregoing uses of water are grouped by the statute according to their relative values to the public in the following order: First, domestic and municipal uses, domestic uses to be construed to include gardens not exceeding one-half acre to each family; second, irrigation and stock watering; third, water power and mining uses; and last, wildlife uses (including fish). If applications pending before the commissioner conflict, preference must be given according to the relative values to the public of the proposed uses as so declared.<sup>5</sup> Furthermore, applications for municipal uses may be approved to the exclusion of all subsequent appropriations if the commissioner determines that the estimated needs of the municipality so require.<sup>6</sup> Water may be appropriated for projects that overlap the State boundary line, as well as for those lying entirely within the State; but the commissioner, at his discretion, may decline to issue a permit if the proposed point of diversion is within Arizona and the place of beneficial use is in another state.<sup>7</sup> An applicant or any person whose rights are affected by the commissioner's decision may appeal to the superior court.<sup>8</sup> The water right is forfeited if the holder fails to exercise it for five successive years.<sup>9</sup>

"Any person," according to the literal terms of the statute, may appropriate water for the uses above noted,<sup>10</sup> and "Any person, includ-

<sup>3</sup> Ariz. Code Ann. 1939, §§ 75-106 and 75-111.

<sup>4</sup> Ariz. Code Ann. 1939, § 75-101.

<sup>4</sup> Ariz. Code Ann. 1939, § 75-102.

<sup>5</sup> Ariz. Code Ann. 1939, §§ 75-102 and 75-106.

<sup>6</sup> Ariz. Code Ann. 1939, § 75-106.

<sup>7</sup> Ariz. Code Ann. 1939, § 75-112.

<sup>8</sup> Ariz. Code Ann. 1939, § 75-113.

<sup>9</sup> Ariz. Code Ann. 1939, § 75-101.

<sup>10</sup> Ariz. Code Ann. 1939, § 75-102.

ing a municipality, the state, or the United States," intending to acquire the right to the beneficial use of water shall apply to the commissioner for a permit.<sup>11</sup> However, the Arizona Supreme Court has held that in order to appropriate water for irrigation purposes, the appropriator must be the owner or possessor of land susceptible of irrigation, and that if only a possessor, he must have a present intent and apparent future ability to acquire ownership of the land.<sup>12</sup>

Arizona water law is free from complications of conflicting riparian rights, because the riparian doctrine never has been recognized in that State. The Territorial legislature in 1887 declared that the "common-law doctrine or riparian water rights" should not obtain or be of any force or effect in the Territory,<sup>13</sup> and the State constitutional convention in 1910 adopted a similar provision for insertion in the ensuing State constitution.<sup>14</sup> In the meantime the Territorial supreme court also had disapproved of the common-law doctrine,<sup>15</sup> one such decision having been affirmed by the United States Supreme Court.<sup>16</sup> The State supreme court has taken the same position.<sup>17</sup>

Ground water flowing in "definite underground channels" is subject to appropriation under the Water Code, as noted above. Long prior to that enactment the Territorial supreme court had stated that subterranean streams flowing in natural channels between well-defined banks were subject to appropriation under the same rules as those relating to surface streams, but that waters percolating through the soil in undefined and unknown channels were not subject to appropriation but belonged to the owner of the soil.<sup>18</sup> This view of the ownership status of percolating water as against an attempted appropriation has been

<sup>11</sup> Ariz. Code Ann. 1939, § 75-105.

<sup>12</sup> *Tattersfield v. Putnam*, 45 Ariz. 156, 168-174, 41 Pac. (2d) 228 (1935). For earlier development of the principle, upon which the court in the *Tattersfield* case relied, see *Slosser v. Salt River Valley Canal Co.*, 7 Ariz. 376, 385-386, 65 Pac. 332 (1901); appeal dismissed, 195 U. S. 639 (1904).

<sup>13</sup> Ariz. Rev. Stats. 1887, § 3198. The foundation for this repudiation of the riparian doctrine was laid at the first Territorial legislative session in 1864; see Terr. Ariz. Bill of Rights, art. 22, and Howell Code, ch. LV, §§ 1 and 3 (October 4, 1864).

<sup>14</sup> Ariz. Const. art. XVII, § 1. Arizona was admitted to Statehood February 14, 1912.

<sup>15</sup> *Clough v. Wing*, 2 Ariz. 371, 380-381, 17 Pac. 453 (1888); *Chandler v. Austin*, 4 Ariz. 346, 350, 42 Pac. 483 (1895).

<sup>16</sup> *Boquillas Land & Cattle Co. v. Curtis*, 213 U. S. 339 (1909); affirming *Boquillas Land & Cattle Co. v. St. David Cooperative Commercial & Development Assn.*, 11 Ariz. 128, 135-139, 89 Pac. 504 (1907).

<sup>17</sup> *Pima Farms Co. v. Proctor*, 30 Ariz. 96, 102, 245 Pac. 369 (1926); *Tattersfield v. Putnam*, 45 Ariz. 156, 165, 41 Pac. (2d) 228 (1935).

<sup>18</sup> *Howard v. Perrin*, 8 Ariz. 347, 353-354, 76 Pac. 460 (1904); affirmed, *Howard v. Perrin*, 200 U. S. 71 (1906).

consistently held by the Arizona courts,<sup>19</sup> although it does not appear that in any of the cited cases were the rights of rival owners of lands overlying a common supply of percolating water in issue. In one of these decisions there is a dictum favoring the rule of reasonable use.<sup>20</sup>

In 1948 the legislature enacted a law (which "may be cited as the groundwater code of 1948") providing for the regulation of certain uses of ground water, which specifically "does not include water flowing in underground streams with ascertainable beds and banks."<sup>21</sup> This act defines a "critical groundwater area" as a ground-water basin or designated subdivision thereof not having sufficient ground water to provide a reasonably safe supply for irrigation of the cultivated lands in the basin at the then current rates of withdrawal, and provides for the designation of such areas. With certain exceptions, no irrigation well may be installed in any critical ground-water area without obtaining a permit therefor from the State Land Commissioner; and no permit may be issued for the installation of any irrigation well within any critical ground-water area for the irrigation of lands which at the effective date of the act were not irrigated, or which had not been cultivated within five years prior thereto.

Procedure for the determination of relative rights to the use of waters of streams or other water supplies, and for the reconciliation of determinations in different proceedings, is provided in the Water Code.<sup>22</sup>

<sup>19</sup> *McKenzie v. Moore*, 20 Ariz. 1, 5, 176 Pac. 568 (1918); *Brewster v. Salt River Valley Water Users' Assn.*, 27 Ariz. 23, 41, 229 Pac. 929 (1924); *Maricopa County M. W. C. Dist. v. Southwest Cotton Co.*, 39 Ariz. 65, 80-85, 4 Pac. (2d) 369 (1931); *Fourzan v. Curtis*, 43 Ariz. 140, 147, 29 Pac. (2d) 722 (1934); *Campbell v. Willard*, 45 Ariz. 221, 224-225, 42 Pac. (2d) 403 (1935). In the *Maricopa* case, *supra*, at 39 Ariz. 82-83, the supreme court stated that whether or not the statement in *Howard v. Perrin* was dictum, it had been accepted as the law in Arizona and still was the law.

<sup>20</sup> The point was raised, but not decided, in the *Maricopa* decision, *supra*, at 39 Ariz. 83-84. In *Fourzan v. Curtis*, *supra*, at 43 Ariz. 147, the court stated: "It is the law of Arizona that percolating waters belong to the owner of the land on which they are found. \* \* \* And he may convey them to other premises than those on which they are originally found, *provided no other rights are injured thereby*. \* \* \*" [Emphasis supplied.] In this case plaintiffs were claiming as landowners and defendants as appropriators, the rights of owners of other overlying lands being not involved.

<sup>21</sup> Ariz. Code Ann. 1939, Cum. Pocket Supp. 1949, §§ 75-145 to 75-160; Ariz. Laws 1948, 6th Special Session, ch. 5, approved April 1, 1948. In 1945 an act was passed providing, among other things, that all persons owning or operating irrigation or drainage wells should report certain data concerning such wells to the State Land Commissioner, and that in the future no person should drill or cause to be drilled any well for the development of ground water without first filing notice with the commissioner: Ariz. Code Ann. 1939, Cum. Pocket Supp. 1949, §§ 75-2101 to 75-2109; Ariz. Laws 1945, 1st Special Session, ch. 12.

<sup>22</sup> Ariz. Code Ann. 1939, §§ 75-114 to 75-127. The constitutionality of the procedure was upheld, under attack, in *Stuart v. Norviel*, 26 Ariz. 493 226 Pac. 908 (1924).



The State Land Commissioner, on his own initiative, may determine the rights of the various claimants, and is required to do so when petitioned by one or more water users if the circumstances justify it. Any State court in which an action is brought to determine such rights may transfer the action to the commissioner for determination. The Commissioner is authorized to make investigations, take testimony, and make findings of fact and an order of determination of the relative rights; and thereupon he is required to file the record in the superior court for a judicial determination of such rights. The court proceedings are comparable to those of a suit in equity, culminating in a judgment of adjudication affirming or modifying the order made by the commissioner.

Administration of the Water Code and of the distribution of waters according to rights of use is vested in the State Land Commissioner, excepting distribution reserved to water commissioners appointed by the courts under decrees existing when the Water Code was enacted.<sup>23</sup> Provision is made for the creation by the commissioner of water districts when necessary, for the appointment, duties, and powers of water superintendents for such districts, and for control structures at sources of supply.<sup>24</sup>

### California

California water law includes rights of use acquired by prior appropriation, and rights inherent in the ownership of lands riparian to natural streams or lakes and lands overlying ground-water supplies. The riparian and overlying rights are paramount, but all water rights of whatever character are now limited by constitutional mandate to the reasonable beneficial use of water.

The riparian doctrine is based upon the adoption of the common law in 1850, the year in which California was admitted to the Union.<sup>25</sup> Important as the riparian doctrine eventually became, it had no effect upon the use of water for mining during the years immediately following the discovery of gold in 1848; for the mining lands were part of the public domain, and the miners (in many cases technically trespassers) simply followed the expedient course of making and enforcing their own rules governing claims to the use of water as well as mining claims. These customs and rules, based upon priority of possession, diligence in constructing works and putting water to use, and beneficial use of the water, varied from one mining camp to another but followed the same general pattern. As such, they were recognized by the courts as

<sup>23</sup> Ariz. Code Ann. 1939, § 75-103.

<sup>24</sup> Ariz. Code Ann. 1939, §§ 75-128 to 75-136.

<sup>25</sup> *Lux v. Haggin*, 69 Calif. 255, 379-387, 10 Pac. 674 (1886).

valid local law, suited to the environment,<sup>26</sup> and became the basis of the first State legislation authorizing the appropriation of water, enacted in 1872.<sup>27</sup> Appropriations of water under the 1872 statute were initiated by posting notices, and by recording the notices and commencing construction of works within prescribed periods of time—a procedure that had been developed in the mining camps. An act known as the Water Commission Act, passed in 1913<sup>28</sup> and effective December 19, 1914, established State administrative control over the appropriation of water other than percolating ground water, and prescribed a procedure for making appropriations which the California Supreme Court has held to be exclusive of any other method.<sup>29</sup> This legislation was reenacted in 1943 as part of the Water Code.<sup>30</sup>

It was not until 1886, in the case of *Lux v. Haggin*,<sup>31</sup> that the riparian doctrine became firmly established in California jurisprudence. The court held that the right of a riparian proprietor to the natural flow of a watercourse is inseparably annexed to the soil of the tract contiguous thereto, and passes with the land, not as an easement or appurtenance, but as a parcel; that use does not create the right, and that disuse cannot destroy it except as a result of prescription; and that the riparian owner in California is entitled to a reasonable use of the water for irrigation in relation to the reasonable needs of all other riparian proprietors on the same stream. Subsequent litigation over water rights, including conflicts between riparian and appropriative claims on the same stream system, has been extensive. The appropriator, as time went on, was held to an increasing measure of reasonable beneficial use as a necessary element of his water right, not only as against other appropriators, but also when a claim of prescriptive title was being asserted against a riparian owner.<sup>32</sup> But until within the past quarter-century the converse was not true. That is, as stated by the supreme court in 1909,<sup>33</sup> the limitation of a riparian owner to reasonable use of water applied only as between different riparian proprietors; as against an appropriator, "He is not limited by any measure of reasonableness." The public became deeply interested in the ever-recurrent conflict as

<sup>26</sup> *Stiles v. Laird*, 5 Calif. 120, 122, 123, 63 Am. Dec. 110 (1855); *Irwin v. Phillips*, 5 Calif. 140, 145-147, 63 Am. Dec. 113 (1855); *Tartar v. Spring Creek Water & Min. Co.*, 5 Calif. 395, 399 (1855).

<sup>27</sup> Calif. Civ. Code, § 1410 *et seq.*

<sup>28</sup> Calif. Stats. 1913, ch. 586.

<sup>29</sup> *Crane v. Stevinson*, 5 Calif. (2d) 387, 398, 54 Pac. (2d) 1100 (1936).

<sup>30</sup> Calif. Water Code, §§ 100 to 4407.

<sup>31</sup> *Lux v. Haggin*, 69 Calif. 255, 390-409, 10 Pac. 674 (1886).

<sup>32</sup> *California Pastoral & Agricultural Co. v. Madera Canal & Irr. Co.*, 167 Calif. 78, 83-87, 138 Pac. 718 (1914).

<sup>33</sup> *Miller & Lux v. Madera Canal & Irr. Co.*, 155 Calif. 59, 64, 99 Pac. 502 (1907, 1909).

the result of a decision in 1926<sup>84</sup> which accorded to a riparian owner the right to the full flow of a river in order to support a flow over the riparian lands of a small fraction of the stream, the outcome of which was the adoption in 1928 of a constitutional amendment restricting riparian and other rights to the flow of watercourses to reasonable beneficial use under reasonable methods of diversion and use, and acknowledging riparian rights to that extent.<sup>85</sup> The supreme court has sustained the validity of this amendment and has declared it to be effective in all controversies relating to the use of water.<sup>86</sup> The riparian owner has a prior and paramount right to the reasonable beneficial use thus safeguarded him by the constitution; but excess waters above the quantities to which riparian and other lawful rights attach are public waters of the State, to be used, regulated, and controlled by the State or under its direction.<sup>87</sup>

Rights to the use of ground waters follow the legal distinction made in many jurisdictions between definite underground streams and percolating waters. A few decisions relating to defined underground streams have held that rights of use are subject to the same rules of law as those applying to surface streams;<sup>88</sup> and such ground waters—and only such—are subjected to appropriation by the provisions of the Water Code.<sup>89</sup>

Most of the rather numerous cases dealing with ground waters in California have involved so-called percolating waters, including waters

<sup>84</sup> *Herminghaus v. Southern California Edison Co.*, 200 Calif. 81, 107-108, 252 Pac. 607 (1926).

<sup>85</sup> Calif. Const. art XIV, § 3. A synopsis of the development of the two conflicting theories in California water law and of events leading up to the adoption of the constitutional amendment is given in the recent decision of the Supreme Court in *United States v. Gerlach Live Stock Co.*, 70 S. Ct. 955, 964-969 (1950). The United States Court of Claims, in *Gerlach Livestock Co. v. United States*, 76 Fed. Supp. 87 (1948), had allowed compensation to the owners of riparian lands that benefited from only the peak flood flows of San Joaquin River over their lands, such flows being eliminated by the operation of Friant Dam of the Central Valley Project. The court believed that these riparian landowners had not been deprived of all their rights by the 1928 amendment, and that they were entitled to continue to receive water that they could use beneficially, or else to compensation for deprivation of the right. The Supreme Court agreed that the Court of Claims had correctly applied the California law; and concluded that even if it were assumed that since the constitutional amendment claimants' right was no longer enforceable by injunction, it nevertheless would remain compensable (70 S. Ct. 969-970).

<sup>86</sup> *Peabody v. Vallejo*, 2 Calif. (2d) 351, 365-368, 40 Pac. (2d) 486 (1935).

<sup>87</sup> *Meridian v. San Francisco*, 13 Calif. (2d) 424, 445, 90 Pac. (2d) 537 (1939).

<sup>88</sup> *Los Angeles v. Pomeroy*, 124 Calif. 597, 632, 57 Pac. 585 (1899); *Vineland Irr. Dist. v. Azusa Irrigating Co.*, 126 Calif. 486, 495, 58 Pac. 1057 (1899). See dictum in *Hanson v. McCue*, 42 Calif. 303, 308, 10 Am. Rep. 299 (1871); and the refusal of the court to commit itself in *Hale v. McLea*, 53 Calif. 578, 584 (1879).

<sup>89</sup> Calif. Water Code, § 1200.

of artesian areas not shown to be parts of definite underground streams. After the rendition of several decisions following or at least favoring the English rule of absolute ownership of percolating waters, the supreme court in 1903, in *Katz v. Walkinshaw*,<sup>40</sup> discarded that principle and applied what has come to be known as the California doctrine of correlative rights. The controversy in question involved the relative rights of owners of land overlying a common artesian belt, the water of which was found to be broadly diffused, not part of a definite underground watercourse, and hence subject to the laws applicable to percolating waters. The new rule accorded to the owners of lands overlying the common supply equal rights for use on or in connection with their overlying lands, each to have a fair and just proportion in cases in which the supply should be not sufficient for all. The landowner's right extends only to the quantity of water necessary for use on his land, and any surplus that exists may be appropriated for distant use. Subsequent decisions have followed the rules suggested in *Katz v. Walkinshaw*, which were summarized in the syllabus of a case decided several years later.<sup>41</sup> It should be noted at this point, as indicated hereinafter, that there is no statutory procedure applicable to the appropriation of surplus percolating water. Such appropriations are effected as the result of diversion and use of the water.

As a result of appellate court decisions during the past half-century, and of noninterference by the Legislature, the correlative doctrine appears to be firmly established as the law of percolating waters in California. The supreme court as recently as 1949, in *Pasadena v. Alhambra*,<sup>42</sup> made the following comments: "Generally speaking, an overlying right, analogous to that of a riparian owner in a surface stream, is the right of the owner of the land to take water from the ground underneath for use on his land within the basin or watershed; the right is based on ownership of the land and is appurtenant thereto. \* \* \* Although the law at one time was otherwise, it is now clear that an overlying owner or any other person having a legal right to surface or ground water may

<sup>40</sup> *Katz v. Walkinshaw*, 141 Calif. 116, 128-137, 70 Pac. 663 (1902), 74 Pac. 766 (1903).

<sup>41</sup> *Burr v. Maclay Rancho Water Co.*, 154 Calif. 428, 98 Pac. 260 (1908). For various points involved in applying the doctrine, see *Cohen v. La Canada Land & Water Co.*, 142 Calif. 437, 439-440, 76 Pac. 47 (1904); *Newport v. Temescal Water Co.*, 149 Calif. 531, 537-539, 87 Pac. 372 (1906); *Barton v. Riverside Water Co.*, 155 Calif. 509, 516-519, 101 Pac. 790 (1909); *Hudson v. Dailey*, 156 Calif. 617, 625-628, 105 Pac. 748 (1909); *Corona Foothill Lemon Co. v. Lillibridge*, 8 Calif. (2d) 522, 530-532, 66 Pac. (2d) 443 (1937); *Hillside Water Co. v. Los Angeles*, 10 Calif. (2d) 677, 685-688, 76 Pac. (2d) 681 (1938).

<sup>42</sup> *Pasadena v. Alhambra*, 33 Calif. (2d) 908, 925-926, 928-933, 207 Pac. (2d) 17 (1949); cert. den., *California-Michigan Land & Water Co. v. Pasadena*, 70 S. Ct. 671 (1950).

take only such amount as he reasonably needs for beneficial purposes. \* \* \* Any water not needed for the reasonable beneficial uses of those having prior rights is excess or surplus water. In California surplus water may rightfully be appropriated on privately owned land for non-overlying uses, such as devotion to a public use or exportation beyond the basin or watershed. \* \* \* Proper overlying use, however, is paramount, and the right of an appropriator, being limited to the amount of the surplus, must yield to that of the overlying owner in the event of a shortage, unless the appropriator has gained prescriptive rights through the taking of nonsurplus waters. As between overlying owners, the rights, like those of riparians, are correlative and are referred to as belonging to all in common; each may use only his reasonable share when water is insufficient to meet the needs of all."

The actual decision in *Pasadena v. Alhambra, supra*,<sup>48</sup> is of fundamental importance in California ground-water law because of the principles therein applied to the adjustment of rights to the use of waters of a ground-water area (Raymond Basin) that had been overdrawn for many years. Claimants of most of the water rights, including "overlying" landowners and appropriators for distant use or for public service, were parties to the adjudication. The supreme court stated that there was an invasion to some extent of the rights of both overlying landowners and appropriators commencing in 1913-14, when the overdraft first occurred. From then until the suit was brought in 1937, the pumpage from the basin exceeded the safe yield in all excepting two years; but notwithstanding the overdraft, the parties continued their pumping, the effect of which was to continue the overdraft and lowering of the water table. Hence no user was immediately prevented from taking the water he needed; the injury "consisted of the continual lowering of the level and gradual reducing of the total amount of stored water, the accumulated effect of which, after a period of years, would be to render the supply insufficient to meet the needs of the rightful owners." The invasion thus was a partial one; but the pumping by each party necessarily interfered with the future possibility of pumping by each of the other parties. The court held that prescriptive rights were established by appropriations made after the commencement of the overdraft; that such rights were acquired against both overlying owners and prior appropriators; that the overlying owners and prior appropriators also obtained or preserved rights by reason of the water which they pumped; and that the production of water should be limited by a proportionate reduction in the amount each party had taken throughout the statutory period. The effect of the decision is that where overlying landowners and appropriators had been pumping from a ground-water basin for many years after the safe yield had been over-

<sup>48</sup> See *supra*, n. 42, p. 718.

drawn, no overlying owner or appropriator could claim a paramount right to the full quantity of water he had been pumping, nor had he fully lost his right to pump by reason of the continued pumping by others. All parties were restricted to a proportionate reduction in the quantities of water they had been pumping, the total annual pumpage from the basin being limited to the safe yield.

Administration of the Water Code provisions relating to the appropriation of water, determination of water rights, and distribution of water is vested in the State Department of Public Works and exercised through the State Engineer.<sup>44</sup> It is declared to be the established policy of the State that the use of water for domestic purposes is the highest use of water and that the next highest use is for irrigation;<sup>45</sup> and an application by a municipality to appropriate water for its use or the use of its inhabitants for domestic purposes is to be considered first in right, irrespective of whether it is first in time.<sup>46</sup> The right of a municipality to acquire and hold water rights not only for existing but for future use is specifically provided for, temporary appropriations by others being authorized with respect to the surplus over the existing needs of the municipality pending the time it is ready to use the surplus.<sup>47</sup>

Waters made subject to appropriation by the Water Code are only surface water, and "subterranean streams flowing through known and definite channels."<sup>48</sup> This necessarily excludes percolating water, the surplus of which over the needs of overlying landowners is appropriable pursuant to decisions of the supreme court, noted above, but not under the statutory procedure. The appropriability of return flow is indicated by the declaration that unappropriated water subject to appropriation includes "Water which having been appropriated or used flows back into a stream, lake or other body of water."<sup>49</sup> An appropriation is initiated by applying to the Department for a permit, the holder being issued a license upon completion of the project.<sup>50</sup> This is the exclusive method of acquiring an appropriative right to the use of any water to which the

<sup>44</sup> Calif. Water Code, § 1050.5.

<sup>45</sup> Calif. Water Code, § 106. The supreme court, in *East Bay Municipal Utility Dist. v. State Department of Public Works*, 1 Calif. (2d) 476, 477-481, 35 Pac. (2d) 1027 (1934), upheld the action of the State agency in imposing a condition, in issuing a permit to appropriate water for power purposes, that the right to store and use water under the permit should not interfere with future appropriations of such water for agricultural or municipal purposes.

<sup>46</sup> Calif. Water Code, § 1460.

<sup>47</sup> Calif. Water Code, §§ 106.5, 1203, and 1460 to 1464.

<sup>48</sup> Calif. Water Code, § 1200.

<sup>49</sup> Calif. Water Code, § 1202 (d).

<sup>50</sup> Calif. Water Code, §§ 1250 to 1677.

statute applies.<sup>51</sup> Failure to make use of the water for a period of three years results in forfeiture of the right.<sup>52</sup>

Procedure is provided in the Water Code for the determination of rights to the use of water (excluding percolating water) by the Department, upon petition by one or more claimants on a stream system; the order of determination being filed in the superior court, the proceedings therein following as nearly as practicable the rules governing civil actions, and culminating in a decree determining the rights of all parties.<sup>53</sup> It is also provided that in any suit brought to determine water rights, the court may order a reference to the Department, as referee, of any or all issues involved, or may refer the suit to the Department for investigation and report upon any or all of the physical facts involved.<sup>54</sup> This reference procedure is discretionary with the trial court; and it is subject to no limitation upon classes of water to which it is applicable.<sup>55</sup>

The Water Code makes provision for the creation of watermaster service areas by the Department when and where needed, for the appointment and duties of watermasters, and for the distribution of water in the service areas in accordance with rights of use.<sup>56</sup>

### Colorado

The constitution of Colorado declares that the unappropriated water of every natural stream is the property of the public, subject to appropriation, and that the right to divert such waters to beneficial uses shall never be denied.<sup>57</sup> It is also declared that priority of appropriation

<sup>51</sup> Calif. Water Code, § 1225; *Crane v. Stevinson*, 5 Calif. (2d) 387, 398, 54 Pac. (2d) 1100 (1936).

<sup>52</sup> Calif. Water Code, § 1241. Section 1411 of the Civil Code had declared that an appropriative right should cease when the appropriator ceased to use the water, but prescribed no time period. The supreme court, in *Smith v. Hawkins*, 110 Calif. 122, 127, 42 Pac. 453 (1895), by analogy to the periods fixed by law for the acquisition and loss of prescriptive rights, held that a continuous nonuser for five years would forfeit the appropriative right.

<sup>53</sup> Calif. Water Code, §§ 2500 to 2900.

<sup>54</sup> Calif. Water Code, §§ 2000 to 2050.

<sup>55</sup> The reference procedure was applied to the waters of Raymond Basin in *Pasadena v. Alhambra*, *supra*, footnote. 42. The trial court had referred the matter to the Department for a determination of the facts, and the report of the Department was received in evidence, pursuant to section 24 of the Water Commission Act and §§ 2000 to 2050 of the Water Code which replaced it. The reference in this case was approved by the supreme court.

<sup>56</sup> Calif. Water Code, §§ 4000 to 4407.

<sup>57</sup> Colo. Const., art. XVI, §§ 5 and 6.

shall give the better right as between those using water for the same purpose; but that in event of insufficiency of the supply, domestic purposes shall have first preference, and agricultural purposes shall have preference over manufacturing.<sup>58</sup> However, the Colorado Supreme Court has held that this section does not entitle one desiring to use water for domestic purposes to take the water from a prior appropriator for some other purpose, without just compensation.<sup>59</sup> The Colorado Supreme Court has recognized the right of the City of Denver to appropriate water not only for immediate use but for the needs resulting from a normal increase in population within a reasonable time in the future, and to lease the use of water pending its need by the city;<sup>60</sup> and the city is protected by statute against the vesting of rights under such leasing that would defeat the city's right to make eventual use of the water.<sup>61</sup>

The method of acquiring appropriative rights to the use of waters of natural streams in Colorado is a logical result of the constitutional prohibition against denying the right to make such appropriations. The intending appropriator does not apply to a State agency for a permit to appropriate water, subject to refusal if statutory conditions require or authorize denial of the application, as is the case in many of the Western States. In Colorado, one who proposes to appropriate unappropriated water of a stream commences the construction or enlargement of the necessary diversion or storage works, and within 60 days thereafter he files a claim therefor with the State Engineer. If the facts are adequately presented, the State Engineer accepts the claim for filing, after which reproductions are made and filed in the appropriate county records.<sup>62</sup> The foregoing is the statutory procedure for initiating an appropriation; but the requirements for filing maps and statements have been so construed by the supreme court as to restrict their purpose and effect to matters of evidence.<sup>63</sup> That is to say, it

<sup>58</sup> Colo. Const., art. XVI, § 6.

<sup>59</sup> *Montrose Canal Co. v. Loutsenhizer Ditch Co.*, 23 Colo. 233, 236-237, 48 Pac. 532 (1896); *Sterling v. Pawnee Ditch Extension Co.*, 42 Colo. 421, 426-427, 94 Pac. 339 (1908). And see *Strickler v. Colorado Springs*, 16 Colo. 61, 72-75, 26 Pac. 313 (1891).

<sup>60</sup> *Denver v. Sheriff*, 105 Colo. 193, 203-208, 96 Pac. (2d) 836 (1939).

<sup>61</sup> Colo. Stats. Ann. 1935, ch. 193, § 398 (Laws 1931, ch. 172). This statute provides that if a city with population of 200,000 or more leases water not needed for immediate use, no rights shall become vested to a continued leasing or to a continuance of conditions concerning return water from irrigation so as to defeat the right of the city to terminate the leases or to change the place of use.

<sup>62</sup> Colo. Stats. Ann. 1935, ch. 90, §§ 27 to 33.

<sup>63</sup> *De Haas v. Benesch*, 116 Colo. 344, 351-352, 181 Pac. (2d) 453 (1947); *Schulter v. Burlington Ditch, Res. & Land Co.*, 117 Colo. 284, 289, 188 Pac. (2d) 253 (1947); *Archuleta v. Boulder & Weld County Ditch Co.*, 118 Colo. 43, 52, 53, 192 Pac. (2d) 891 (1948).



is held that water rights in Colorado are not based upon the filing of maps or statements and that the lack thereof does not invalidate the appropriations; the question as to whether or not the documents were filed being a matter of evidence only and not the substance of the appropriation. "A compliance with the statutory requirements in question is not strictly a part of the act of appropriation; the appropriation is completed when the ditch or conduit is constructed and the water is diverted therethrough and applied to a beneficial use. The filing of maps and statements under our irrigation statutes is a means of fixing and holding the rights which a party already has acquired by appropriation and are only prima facie evidence of the appropriation."<sup>64</sup>

The riparian doctrine never has been a part of the water law of Colorado. The repudiation of that doctrine was foreshadowed in very early cases,<sup>65</sup> and became specific when the supreme court declared, in 1882, that the common-law doctrine of riparian rights was inapplicable to Colorado and that the doctrine of appropriation had existed from the time of the earliest appropriations of water within the boundaries of the State.<sup>66</sup> True, there were some later observations by the same court concerning common-law rights of riparian owners to take water for domestic purposes,<sup>67</sup> but the statements to that effect in both of the cited cases were dicta; in neither case was there an actual adjudication of a water right based upon ownership of riparian land. Also, shortly thereafter, a Federal court decided that insofar as diversions of water from streams for manufacturing, mining, or mechanical purposes were concerned, the riparian doctrine was the law in Colorado;<sup>68</sup> but that decision was expressly disapproved in a later decision by a higher Federal court as being not in accord with the decisions of the Colorado Supreme Court and as being not sustained by the better reasoning.<sup>69</sup>

<sup>64</sup> *Archuleta v. Boulder & Weld County Ditch Co.*, 118 Colo. 43, 53, 192 Pac. (2d) 891 (1948).

<sup>65</sup> *Yunker v. Nichols*, 1 Colo. 551, 553-555, 570 (1872); *Schilling v. Rominger*, 4 Colo. 100, 103, 104 (1878).

<sup>66</sup> *Coffin v. Left Hand Ditch Co.*, 6 Colo. 443, 446-447 (1882).

<sup>67</sup> *Montrose Canal Co. v. Loutsenhizer Ditch Co.*, 23 Colo. 233, 237, 48 Pac. 532 (1896); *Broadmoor Dairy & Live Stock Co. v. Brookside Water & Improvement Co.*, 24 Colo. 541, 546, 550, 52 Pac. 792 (1898).

<sup>68</sup> *Schwab v. Beam*, 86 Fed. 41, 43-44 (C. C. D. Colo., 1898).

<sup>69</sup> *Snyder v. Colorado Gold Dredging Co.*, 181 Fed. 62, 68 (C. C. A. 8th, 1910). The court stated, at 181 Fed. 65: "The common-law doctrine in respect of the rights of riparian proprietors in the waters of natural streams never has obtained in Colorado. From the earliest times in that jurisdiction the local customs, laws, and decisions of courts have united in rejecting that doctrine and in adopting a different one which regards the waters of all natural streams as subject to appropriation and diversion for beneficial uses and treats priority of appropriation and continued beneficial use as giving the prior and superior right." The United States Supreme Court, in *Wyoming v. Colorado*, 259 U. S. 419, 459 (1922), stated with respect to Colorado and Wyoming: "The common-law rule respecting riparian rights in flowing water never obtained in either State."

Notwithstanding these few inconsistencies, a long and unbroken line of decisions of the State courts of Colorado has followed the appropriation doctrine exclusively in settling controversies over rights to the use of stream waters, and with the one exception above noted the Federal courts have followed the same course; the question of repudiation of the riparian doctrine so far as Colorado is concerned having been settled definitely a long time ago.<sup>70</sup>

The law with respect to the use of waters of definite underground streams, of the subflow of surface streams, and of ground waters tributary to watercourses, apparently is well settled in Colorado—rights to the use of all such ground waters are governed by the doctrine of prior appropriation. This excludes percolating waters occurring naturally in the ground but not tributary to watercourses, concerning which it may be reasonably assumed—but only assumed—that the appropriation doctrine applies. The rules are as follows:

Waters flowing in well-defined and known underground channels the course of which can be distinctly traced are governed by the same rules as the waters of streams flowing upon the surface.<sup>71</sup> The underflow is as much a part of a watercourse as is the surface flow, and the rights of prior appropriators on the stream are protected against such interference with the underflow as would impair the proper exercise of their rights.<sup>72</sup> All sources of supply of a stream, whether they reach it by percolation through the soil, by subterranean channels, or by surface channels, are a part of the stream system and are open to appropriation, subject to prior appropriative rights that have attached to the stream.<sup>73</sup> A statute declares that the utilization of waste, seepage, and spring waters shall be governed by the same laws of priority of right as the utilization of water of running streams; "provided, that the person upon whose lands the seepage or spring waters first arise, shall have the prior

<sup>70</sup> In *Sternberger v. Seaton Min. Co.*, 45 Colo. 401, 402-404, 102 Pac. 168 (1909), plaintiffs asserted common-law riparian rights with respect to lands acquired prior to the adoption of the State constitution and before defendant's appropriation was made. The supreme court stated: "At this late day it would seem to us, as it evidently did to the trial court, idle to make such contention in this state. The latter has long ago been set at rest. \* \* \* The doctrine in this state that the common-law rule of continuous flow of natural streams is abolished, is so firmly established by our constitution, the statutes of the territory and the state, and by many decisions of this court, that we decline to reopen or reconsider it, however interesting discussion thereof might otherwise be, and notwithstanding its importance."

<sup>71</sup> *Medano Ditch Co. v. Adams*, 29 Colo. 317, 326, 68 Pac. 431 (1902).

<sup>72</sup> *Platte Valley Irr. Co. v. Buckers Irr., Mill. & Improvement Co.*, 25 Colo. 77, 82, 53 Pac. 334 (1898); *Buckers Irr., Mill. & Improvement Co. v. Farmers' Independent Ditch Co.*, 31 Colo. 62, 71, 72 Pac. 49 (1903).

<sup>73</sup> *McClellan v. Hurdle*, 3 Colo. App. 430, 434, 33 Pac. 280 (1893); *In re German Ditch & Res. Co.*, 56 Colo. 252, 268, 271, 139 Pac. 2 (1913); *Faden v. Hubbell*, 93 Colo. 358, 368-369, 28 Pac. (2d) 247 (1933).

right to such waters if capable of being used upon his lands.”<sup>74</sup> The supreme court has held that where the waters of a spring form no part of a natural stream, and cannot reach a stream except when carried along by a flood, the proviso above quoted is applicable;<sup>75</sup> but that notwithstanding the proviso, where such water would reach a natural stream if not intercepted, it does not belong to the landowner but is a part of the stream and subject to prior rights thereto.<sup>76</sup> A considerable part of the percolating water that feeds the streams flowing through irrigated regions consists of return flow from irrigation. All such water that escapes from the control of the original appropriator, and that would, if left to itself, reach a natural stream by underground percolation, is a part of the stream to the same extent as tributary percolating water originating from natural sources.<sup>77</sup>

No rule appears to have been announced by the courts with respect to rights of use of percolating water occurring naturally in the ground but not tributary to any watercourse, such as water cut off from a stream by an impervious formation. If such waters are added to a stream as developed, or foreign waters, they may be taken by the person so making them available, or appropriated independently, according to the circumstances.<sup>78</sup> Otherwise, however, in view of the consistent water-law philosophy of Colorado, it is reasonable to assume that the

<sup>74</sup> Colo. Stats. Ann. 1935, ch. 90, § 20.

<sup>75</sup> *Haver v. Matonock*, 79 Colo. 194, 196-197, 244 Pac. 914 (1926); *Lomas v. Webster*, 109 Colo. 107, 110, 122 Pac. (2d) 248 (1942); *Webster v. Lomas*, 112 Colo. 74, 75, 145 Pac. (2d) 978 (1944).

<sup>76</sup> *Neuius v. Smith*, 86 Colo. 178, 180-183, 279 Pac. 44 (1928, 1929); *Faden v. Hubbell*, 93 Colo. 358, 368-369, 28 Pac. (2d) 247 (1933); *De Haas v. Benesch*, 116 Colo. 344, 351, 181 Pac. (2d) 453 (1947).

<sup>77</sup> In *Fort Morgan Res. & Irr. Co. v. McCune*, 71 Colo. 256, 261, 206 Pac. 393 (1922), the supreme court stated: "Beginning with the Ramsay case the principle upon which the decisions are based appears to be that water escaping from a reservoir, or ditch, *underground*, and becoming percolating water which will naturally reach a public stream, must be regarded as a part of the stream.

\* \* \* These cases show that it has been held by this court that the question of diligence in attempting a recapture, or the time during which the seepage has run, or the question whether or not the water was appropriated when not needed for direct irrigation, is not material. When it has become, potentially, under the rule above stated, a part of the river, it belongs to the appropriators in the order of their priorities whenever needed." The decision usually referred to as the starting point of the Colorado rule is *Comstock v. Ramsay*, 55 Colo. 244, 133 Pac. 1107 (1913). For the development of the Colorado rule, see National Resources Planning Board, "State Water Law in the Development of the West", pp. 30-32 (1943).

<sup>78</sup> *Ripley v. Park Center Land & Water Co.*, 40 Colo. 129, 133, 90 Pac. 75 (1907); *San Luis Valley Irr. Dist. v. Prairie Ditch Co. and Rio Grande Drainage Dist.*, 84 Colo. 99, 106, 268 Pac. 533 (1928). A person who claims that by his own efforts he has increased the flow of a stream has the burden of proving his contention: *Leadville Mine Development Co. v. Anderson*, 91 Colo. 536, 537-538, 17 Pac. (2d) 303 (1932).

appropriation doctrine would be applied as against a claim by a landowner that, irrespective of whether or not he has made actual use of the water percolating through his land, he has a paramount right thereto.

The statutes of Colorado do not provide for the forfeiture of appropriative rights by reason of failure to use the water for specified periods of time, as is the case in many Western States. Many decisions of the supreme court, however, have been concerned with the loss of water rights by abandonment. In a recent case involving abandonment there was no dispute as to the nonuse of the ditch and the water for almost 40 years, and the trial court found that the ditch and its priority had been abandoned.<sup>87</sup> In affirming the judgment of the trial court, the supreme court reviewed various decisions relating to abandonment of water rights and thus summarized the controlling principles:

We conclude from these statements that while the burden of proof of intent to abandon is on him who asserts it, yet such intent may be proved by evidence of acts and failure to act as well as by mere words; that nonuse constitutes such failure to act; that proof of nonuse for an unreasonable period establishes a presumption of abandonment and is prima facie proof thereof; that nonuse for the period here proved is an unreasonable period; that to rebut the presumption of abandonment arising from such long period of nonuse, there must be established not merely expressions of desire or hope or intent, but some fact or condition excusing such long nonuse. In the instant case, the existence of such a fact or condition was an issue to be determined by the trial court and the evidence amply supports its determination.

Jurisdiction of all questions concerning the determination of water rights is vested exclusively in the courts.<sup>88</sup> The State Engineer is called upon by the courts in adjudication proceedings for filings of appropriations in his office,<sup>89</sup> and decrees of adjudication become effective when certified copies thereof have been filed in the offices of the State Engineer and of the irrigation division engineer for the guidance of the State water officials in regulating the distribution of water accordingly;<sup>90</sup>

<sup>87</sup> *Mason v. Hills Land & Cattle Co.*, 119 Colo. 404, 407, 408-409, 204 Pac. (2d) 153 (1949). The principles so stated would be generally applicable in other Western jurisdictions as well, with respect to abandonment as distinguished from statutory forfeiture of appropriative rights.

<sup>88</sup> Colo. Stats. Ann., 1947, Cum. Supp., ch. 90, § 189 (2). The statutory provisions governing the adjudication of priority rights to the use of water were repealed and replaced by new provisions in 1943: Colo. Laws 1943, ch. 190, codified in 1947 Cum. Supp., ch. 90, §§ 189 (1) to 189 (25).

<sup>89</sup> Colo. Stats. Ann. 1935, ch. 90, § 193.

<sup>90</sup> Colo. Laws 1943, ch. 190, § 15; 1947 Cum. Supp., ch. 90, § 189 (15).

but the adjudication proceedings from start to finish are judicial. However, a large, active organization headed by the State Engineer administers the decrees of adjudication of water rights and distributes the water according to them.<sup>85</sup> The State is divided by statute into irrigation divisions comprising principal drainage areas, administered by irrigation division engineers who are under the general supervision of the State Engineer.<sup>86</sup> Each division in turn comprises a number of water districts, likewise created by statute, which are administered by water commissioners under the supervision of the irrigation division engineer.<sup>86</sup>

### Idaho

The constitution of Idaho declares that the right to divert and appropriate the unappropriated waters of any natural stream to beneficial uses shall never be denied, except that the State may regulate and limit the use thereof for power purposes.<sup>86</sup> Other provisions of the same section of the constitution are: Priority of appropriation gives the better right; but when the waters of a stream are not sufficient for all who desire to use them, domestic purposes (subject to such limitations as may be prescribed by law) have the first preference, and agricultural purposes have preference over manufacturing. In any organized mining district, mining purposes or milling purposes connected with mining have preference over manufacturing or agricultural purposes. The usage by such subsequent appropriators, however, is subject to the laws regulating the taking of private property by condemnation for public and private use. The Idaho Supreme Court has recognized the preference thus accorded users of water for domestic purposes, expressly subject, however, to the payment of compensation by those taking for superior purposes water already appropriated by others.<sup>87</sup> The court has also held that the constitutional preference accorded to mining and milling purposes in an organized mining district does not authorize parties engaged in mining or any other occupation to fill up the natural channel of a public stream to the injury of any other user of the water of such stream.<sup>88</sup>

The statute relating to the appropriation of water declares that all waters when flowing in their natural channels, including the waters

<sup>85</sup> Colo. Stats. Ann. 1935, and 1947 Cum. Supp., ch. 90, §§ 201 to 345; Laws 1943, ch. 190, § 15, codified 1947 Cum. Supp., ch. 90, § 189 (15).

<sup>86</sup> Colo. Stats. Ann. 1935, and 1947 Cum. Supp., §§ 224 to 248.

<sup>87</sup> Colo. Stats. Ann. 1935, and 1947 Cum. Supp., §§ 249 to 345.

<sup>88</sup> Idaho Const., art XV, § 3.

<sup>89</sup> *Montpelier Mill. Co. v. Montpelier*, 19 Idaho 212, 219, 220, 113 Pac. 741 (1911); *Basinger v. Taylor*, 30 Idaho 289, 294, 295, 164 Pac. 522 (1917).

<sup>90</sup> *Hill v. Standard Min. Co.*, 12 Idaho 223, 233, 85 Pac. 907 (1906); *Ravndal v. North Fork Placers*, 60 Idaho 305, 311, 91 Pac. (2d) 368 (1939).

of natural springs and lakes, are the property of the State, and that the right to the use of the waters of "rivers, streams, lakes, springs, and of subterranean waters" may be acquired by appropriation.<sup>90</sup> The statute also provides that all rights to the use of water shall be "lost and abandoned" by failure for a period of five years to make the beneficial use for which the water was appropriated; such loss of right being stated by the supreme court to be in fact a statutory forfeiture as distinguished from a true abandonment.<sup>90</sup>

As a result of the constitutional prohibition against the denial of appropriations of water, there are two methods of appropriating water in Idaho, of equal validity. One method is the procedure provided by statute, under which the right originally was initiated by posting and recording a notice of appropriation, but now is initiated by filing with the State Department of Reclamation an application for a permit to make the appropriation. The Department issues a certificate to the water user upon completion of construction of the works; and upon application of the water to beneficial use and a showing that the law has been fully complied with, the Department issues to the water user a license confirming such use.<sup>91</sup> The extant water appropriation statute declares that all rights to divert and use the waters of the State for beneficial purposes shall be acquired and confirmed under the provisions of the statute.<sup>92</sup> Notwithstanding this declaration, it is well settled in Idaho that the statutory procedure in effect at the time of making a particular appropriation (initiation by posting and recording notice, or by applying to the State for a permit, as the case may be) has not been and is not now the exclusive method of appropriating water, and that equally valid rights may be acquired by diverting water and applying it to beneficial use without pursuing the statutory method.<sup>93</sup> The method of appropriating water by mere diversion and use is often referred to as the "constitutional" method, as distinguished from the

<sup>90</sup> Idaho Code, §§ 42-101 and 42-103.

<sup>91</sup> Idaho Code, § 42-222. In *Carrington v. Crandall*, 65 Idaho 525, 532, 147 Pac. (2d) 1009 (1944), the court pointed out that while the statute designates the loss as "abandonment," it is in fact a statutory forfeiture; that there is another kind of abandonment that is *actual*, not dependent upon length of time, the essential element of which is intent to relinquish the right.

<sup>92</sup> Idaho Code, §§ 42-202 to 42-311. The license is only *prima facie* evidence of the water right: *Basinger v. Taylor*, 36 Idaho 591, 597-598, 211 Pac. 1085 (1922).

<sup>93</sup> Idaho Code, sec. 42-201.

<sup>94</sup> *Sand Point Water & Light Co. v. Panhandle Development Co.*, 11 Idaho 405, 413, 83 Pac. 347 (1905); *Nielson v. Parker*, 19 Idaho 727, 730-731, 733, 115 Pac. 488 (1911); *Youngs v. Regan*, 20 Idaho 275, 279, 118 Pac. 499 (1911); *Furey v. Taylor*, 22 Idaho 605, 611, 612, 127 Pac. 676 (1912); *Washington State Sugar Co. v. Goodrich*, 27 Idaho 26, 38, 147 Pac. 1073 (1915); *Bachman v. Reynolds Irr. Dist.*, 56 Idaho 507, 514, 55 Pac. (2d) 1314 (1936).

"statutory" method.<sup>94</sup> The advantage of following the statutory method lies in the application of the doctrine of relation, or "relation back" as it sometimes is termed. That is, the priority of a right acquired by the so-called "constitutional" method dates from the completion of the appropriation, which takes place upon the application of the water to beneficial use; whereas the priority of a right perfected by strict compliance with the statute relates back to, and therefore dates from, the time of filing the application with the State agency, the statutory procedure being the exclusive method by which the right can relate back to the initiation of the appropriation.<sup>95</sup>

The riparian doctrine is not recognized in Idaho with respect to the use of water of streams. The supreme court, in its first reported decision in a controversy over rights to the use of water, stated the law of the Territory to be that the first appropriation of water for a useful or beneficial purpose gave the better right thereto.<sup>96</sup> And in its second reported decision in this field of law, the supreme court affirmed the judgment of the trial court in favor of a prior appropriator of water of a stream as against a party who, after the making of such appropriation, entered and patented land contiguous to the stream and claimed the right to use the stream water as a riparian proprietor.<sup>97</sup> In 1909 the court held that the legislature had full authority to provide the method of appropriating public waters by all persons, whether riparian owners or not.<sup>98</sup> The court held, in the same year, that a riparian proprietor in Idaho could not successfully assert a prior or superior right to the right of an appropriator, to which extent the common-law doctrine or riparian rights had been abrogated by the constitution and statutes; but that the riparian owner's right to use the water for domestic- and stock-watering purposes was "superior to any right of a stranger, intermeddler or interloper," that is, under the facts of the case, one who had interfered with the flow of the water at a time when he did not occupy the status of a legal appropriator.<sup>99</sup> Notwithstanding this statement based upon the circumstances of the case, no question

<sup>94</sup> *Pioneer Irr. Dist. v. American Ditch Assn.*, 50 Idaho 732, 737, 1 Pac. (2d) 196 (1931).

<sup>95</sup> *Crane Falls Power & Irr. Co. v. Snake River Irr. Co.*, 24 Idaho 63, 81-82, 133 Pac. 655 (1913); *Reno v. Richards*, 32 Idaho 1, 10-11, 178 Pac. 81 (1918); *Silkey v. Tiegs*, 51 Idaho 344, 353, 5 Pac. (2d) 1049 (1931). Only when there is a full compliance with the statutes can the doctrine of relation be invoked: *Rabido v. Furey*, 33 Idaho 56, 63, 190 Pac. 73 (1920); *Bachman v. Reynolds Irr. Dist.*, 56 Idaho 507, 520, 55 Pac. (2d) 1314 (1936).

<sup>96</sup> *Malad Valley Irr. Co. v. Campbell*, 2 Idaho 411, 414, 18 Pac. 52 (1888).

<sup>97</sup> *Drake v. Earhart*, 2 Idaho 750, 757, 23 Pac. 541 (1890).

<sup>98</sup> *Idaho Power & Transportation Co. v. Stephenson*, 16 Idaho 418, 429, 101 Pac. 821 (1909).

<sup>99</sup> *Hutchinson v. Watson Slough Ditch Co.*, 16 Idaho 484, 491-494, 101 Pac. 1059 (1909).

remains or has remained for many years as to the repudiation of the riparian doctrine in Idaho.<sup>100</sup>

The appropriation statute, as noted above, includes "subterranean waters" in the classes of waters named as subject to appropriation. The supreme court has rendered several decisions with respect to rights to the use of ground waters which, while not uniform in the development of principles, with one exception have tended toward the doctrine of appropriation<sup>101</sup> and finally have embraced that doctrine completely.<sup>102</sup> Percolating waters, like waters of surface streams, may be appropriated either by the statutory permit method or by actual diversion and application to a beneficial use; and "a valid appropriation first made under either method will have priority over a subsequent valid appropriation however made."<sup>103</sup>

Water rights in Idaho may be adjudicated only in proceedings initiated by claimants of rights to the use of water. The water-rights statute originally provided for the bringing of suits by State water commissioners for the adjudication of water rights, but the sections in question were declared unconstitutional by the State supreme court.<sup>104</sup> However, the supreme court has upheld the validity of a section authorizing the judge, if a suit is brought for the purpose of adjudicating water rights, to request the State Department of Reclamation to make and furnish a hydrographic survey of the stream in litigation.<sup>105</sup> The statutes provide for the distribution of water under the immediate direction and control of the Department of Reclamation; for the crea-

<sup>100</sup> *Jones v. McIntire*, 60 Idaho 338, 352, 91 Pac. (2d) 373 (1939); *Schodde v. Twin Falls Land & Water Co.*, 224 U. S. 107 (1912).

<sup>101</sup> For decisions prior to 1922, apparently leaning toward the appropriation doctrine, see: *LeQuime v. Chambers*, 15 Idaho 405, 413-414, 98 Pac. 415 (1908); *Bower v. Moorman*, 27 Idaho 162, 181, 147 Pac. 496 (1915); *Jones v. Vanauddeln*, 28 Idaho 743, 156 Pac. 615 (1916). In *Public Utilities Commission v. Natatorium Co.*, 36 Idaho 287, 300, 305, 306, 211 Pac. 533 (1922), it was held that percolating water, as distinguished from water in a defined underground stream, was not public water but belonged to the owner of the soil, hence a company delivering such water to consumers was not a public utility. In *Union Central Life Insurance Co. v. Albrethsen*, 50 Idaho 196, 202-204, 294 Pac. 842 (1930), waters of a natural ground-water storage basin supplying the flow of a stream were held subject to appropriation.

<sup>102</sup> *Hinton v. Little*, 50 Idaho 371, 379-380, 296 Pac. 582 (1931); *Noh v. Stoner*, 53 Idaho 651, 652-653, 26 Pac. (2d) 1112 (1933).

<sup>103</sup> *Silkey v. Tiegs*, 51 Idaho 344, 351-353, 5 Pac. (2d) 1049 (1931).

<sup>104</sup> *Bear Lake County v. Budge*, 9 Idaho 703, 75 Pac. 614 (1904).

<sup>105</sup> Idaho Code, § 42-1401. The section states that the judge "shall" request the Department to make the examination. The supreme court, in *Boise City Irr. & Land Co. v. Stewart*, 10 Idaho 38, 57, 77 Pac. 25, 321 (1904), held that this legislative declaration was directory, the question of making the request being left to the sound discretion of the judge. See *Blaine County Investment Co. v. Gallet*, 35 Idaho 102, 204 Pac. 1066 (1922), for a construction of the legislative provision for payment of costs.



tion by the Department of water districts to include stream systems or independent sources of supply the rights of use of which have been adjudicated; for the election of watermasters by holders of adjudicated rights; and for the powers and duties of the watermasters and the responsibilities of the water users.<sup>106</sup>

### Kansas

The water law of Kansas is particularly noteworthy in the fundamental change that has occurred recently in the relative importance of the appropriation and common-law doctrines. In 1944 the Kansas Supreme Court rendered a decision strongly reaffirming the common-law right of the landowner to running water and ground water on his land, as against an attempted appropriation. In 1945 the legislature passed an act intended to establish the effectiveness of the appropriation doctrine, as against claimants under the common law. In 1949 this legislation was approved unqualifiedly by the supreme court.

The first legislation authorizing the appropriation of water, enacted in 1886, provided for the posting and filing of notices of appropriation.<sup>107</sup> In 1917 the legislature authorized appropriations of surface or ground waters initiated by application to the Kansas Water Commission, the duties of which were transferred in 1927 to the Division of Water Resources of the State Board of Agriculture.<sup>108</sup> The two methods of making appropriations were in effect until 1941, when the original 1886 provisions were repealed.<sup>109</sup> In 1945 the legislature declared that no appropriative right could be acquired without first obtaining the approval of the Chief Engineer of the Division of Water Resources, except in the case of persons using water for domestic purposes as defined in the statute.<sup>110</sup> Apparently, the exclusiveness of the statutory procedure is established for uses of water other than those so excepted.<sup>111</sup>

Prior to the enactment in 1886 of the earliest appropriation statute, the Kansas Supreme Court had stated, first, that the riparian right extended to the entire flow of the stream "without diminution or altera-

<sup>106</sup> Idaho Code, §§ 42-601 to 42-802.

<sup>107</sup> Kans. Laws 1886, ch. 115.

<sup>108</sup> Kans. Laws 1917, ch. 172; Gen. Stats. Ann. 1935, §§ 24-901 to 24-905.

<sup>109</sup> Kans. Laws 1941, ch. 261.

<sup>110</sup> Kans. Laws 1945, ch. 390; Gen. Stats. Supp. 1947, § 82a-705. "Domestic uses" means the use of water for household purposes, the watering of livestock, poultry, farm and domestic animals and the irrigation of gardens and lawns."

<sup>111</sup> The Kansas Supreme Court, in *Clark v. Allaman*, 71 Kans. 206, 240, 80 Pac. 571 (1905), stated that prior to 1886 there had been no recognition in Kansas of rights to the use of water by priority of possession, and that local customs to that effect had been invalid.

tion,"<sup>112</sup> and later that the riparian owner might lawfully use water for his own domestic and stock-watering purposes.<sup>113</sup> In 1905, in *Clark v. Allaman*,<sup>114</sup> the court extensively reviewed the subject of riparian and appropriative rights; held that the common-law doctrine of riparian water rights was fundamental in the jurisprudence of the State; that the common-law doctrine included the reasonable use of water for irrigation purposes after the primary uses for domestic purposes had been subserved; and that the common-law doctrine had been modified by statutes authorizing the appropriation of water which, however, could not lead to the destruction of previously vested common-law rights. The two doctrines, it was believed, could exist in the same State. There was no departure from these principles until the supreme court rendered its decision in 1949 construing the legislation of 1945, although the cases involving riparian rights that reached the supreme court during that period were not numerous.<sup>115</sup> It was held in 1936 that the appropriation statute of 1886 did not confer upon a riparian owner any priority as against other riparian owners whose titles antedated the statute.<sup>116</sup> In 1944, in a case involving ground waters, the common-law doctrine was reaffirmed with respect to both surface and ground waters;<sup>117</sup> and in 1949 theories concerning the relative rights of upper and lower riparian owners to the use of water were expounded.<sup>118</sup>

Various legislative acts relating to the use of ground waters were passed and some of them amended from time to time,<sup>119</sup> and a few decisions of the supreme court prior to 1944 indicated an early adoption of the rule of absolute ownership of percolating waters and a later tendency toward modification of the strict rule;<sup>120</sup> but the status of the law of ground waters seemed uncertain. In 1944 the supreme court

<sup>112</sup> *Shamleffer v. Council Grove Peerless Mill Co.*, 18 Kans. 24, 33 (1877).

<sup>113</sup> *Emporia v. Soden*, 25 Kans. 588, 604, 606, 37 Am. Rep. 265 (1881). In *Campbell v. Grimes*, 62 Kans. 503, 505, 64 Pac. 62 (1901), the upper riparian owner was limited to such water as was needed "for his own beneficial uses."

<sup>114</sup> *Clark v. Allaman*, 71 Kans. 206, 80 Pac. 571 (1905).

<sup>115</sup> For statements by the court during the earlier part of the period, see *Wallace v. Winfield*, 96 Kans. 35, 40, 149 Pac. 693 (1915); *Atchison, Topeka & Santa Fe Ry. v. Shriver*, 101 Kans. 257, 258, 166 Pac. 519 (1917).

<sup>116</sup> *Frizell v. Bindley*, 144 Kans. 84, 92, 58 Pac. (2d) 95 (1936). See also *Smith v. Miller*, 147 Kans. 40, 42, 75 Pac. (2d) 273 (1938).

<sup>117</sup> *State ex rel Peterson v. State Board of Agriculture*, 158 Kans. 603, 605, 610, 149 Pac. (2d) 604 (1944).

<sup>118</sup> *Heise v. Schulz*, 167 Kans. 34, 41-44, 204 Pac. (2d) 706 (1949).

<sup>119</sup> See "Selected Problems in the Law of Water Rights in the West," U. S. Dept. Agr. Misc. Pub. No. 418, pp. 219-223.

<sup>120</sup> *Emporia v. Soden*, 25 Kans. 588, 608-609, 37 Am. Rep. 265 (1881); *Jobling v. Tuttle*, 75 Kans. 351, 360, 89 Pac. 699 (1907); *Gilmore v. Royal Salt Co.*, 84 Kans. 729, 731, 115 Pac. 541 (1911).

rendered a decision in an original action in quo warranto to inquire into the authority of the Division of Water Resources to regulate the taking of ground waters for beneficial uses; the State agency being involved because of its hearing of protests against the application of a city to appropriate ground water.<sup>121</sup> The court held that water rights in Kansas were governed by the common law except as modified by statute; that ground waters were a part of the real property in which they occurred, and that both surface and ground waters were owned by the owner of the soil; and that no statute authorized the State administrative agency to regulate or otherwise to interfere with the use and consumption of ground waters or to conduct a hearing upon the application of anyone who desired to use them.

Later in the same year (1944) a committee appointed by the Governor recommended legislation that would modify the common law sufficiently to effectuate rights of prior appropriation, and at the ensuing session in 1945 the legislature took action accordingly.<sup>122</sup> The act provided that "All water within the state of Kansas is hereby dedicated to the use of the people of the state, subject to the control and regulation of the state in the manner herein prescribed." It also provided that subject to vested rights, all waters within the State might be appropriated for beneficial use, and specifically stated that surface or ground waters might be so appropriated. Nothing in the act was to impair the vested right of any person except for nonuse. Vested rights were defined as rights to continue the use of water actually applied to any beneficial use at the time of passage of the act or within three years prior thereto, as well as rights to begin use with works then under construction provided the works were completed and the water applied to beneficial use within a reasonable time thereafter. Common-law claimants were declared to be entitled to compensation in an action at law for proved damages for property taken by an appropriator in connection with an appropriation. Appropriators under the statute were afforded injunctive relief against subsequent diversions by common-law claimants "without being required to first condemn possible private rights," as well as against uses of water by subsequent appropriators if necessary to protect their prior rights.

The supreme court upheld the validity of the foregoing legislation in an action in the nature of quo warranto for determination as to its constitutionality, upon questions submitted for determination and facts stipulated by the parties.<sup>123</sup> The court frankly took a different approach

<sup>121</sup> *State ex rel. Peterson v. State Board of Agriculture*, 158 Kans. 603, 149 Pac. (2d) 604 (1944). See also *Arensman v. Kück*, 160 Kans. 783, 791, 165 Pac. (2d) 441 (1946).

<sup>122</sup> Kans. Laws 1945, ch. 390; Gen. Stats. Supp. 1947, ch. 82a, art. 7.

<sup>123</sup> *State ex rel. Emery v. Knapp*, 167 Kans. 546, 555-556, 207 Pac. (2d) 440 (1949).

from that taken in the solution of water-right questions in previous decisions. Theretofore the court had approached these questions largely on the basis of individual interest alone; but under the declaration that all water within the State was dedicated to the use of the people, subject to State control and regulation, "we now approach them upon the basis of the interest of the people of the state without losing sight of the beneficial use the individual is making or has the right to make of the water. Unused or unusable rights predicated alone upon theory become of little if any importance." Broad statements in earlier opinions—such as statements to the effect that the riparian owner is entitled to the flow of the stream without diminution or alteration—must now be disregarded or modified to harmonize with this declaration. All of the questions submitted to the court, asking if the legislation was unconstitutional upon specific grounds, were answered in the negative.

The 1945 law vests control of the water resources of the State in accordance with rights of prior appropriation in the Chief Engineer of the Division of Water Resources. Appropriations for different purposes that conflict take precedence in the following order: "Domestic, municipal, irrigation, industrial, recreational, and water power uses." The right terminates when the holder ceases for three years or more to use it for the purposes authorized in his permit or certificate. Provision is made for determinations of rights by the Chief Engineer, subject to appeal to the district court, and for the distribution of water according to decrees of adjudication.

### Montana

The statutes provide that "the unappropriated water of any river, stream, ravine, coulee, spring, lake, or other natural source of supply" may be appropriated. Also, "an appropriator may impound flood, seepage, and waste waters in a reservoir and thereby appropriate the same."<sup>124</sup>

Montana has no centralized State administrative procedure for the acquisition of appropriative water rights. A statutory procedure governs the appropriation of water from adjudicated streams, and a separate procedure provided by statute applies to unadjudicated streams but apparently is optional with the intending appropriator; but the State Engineer has no control in any case. The procedures are as follows:

With respect to *unadjudicated* waters, the statute provides that the appropriator shall post a notice at the point of intended diversion, file a notice of appropriation in the county records and begin construction within prescribed periods of time, and prosecute the appropriation

<sup>124</sup> Mont. Rev. Codes 1947, Ann., § 89-801.

diligently to completion. It is further provided that failure to comply with the statutory requirements deprives the appropriator of the right to the use of water as against a subsequent claimant who complies therewith, and that by compliance, the right of use relates back to the date of posting notice, the first step in the procedure.<sup>125</sup> This method of appropriation was first prescribed by statute in 1885.<sup>126</sup> Prior to that enactment, no notice or record of appropriation was required; "A person acquired a right to the use of water by digging a ditch, tapping a stream, and turning water into it, and applying the water so diverted to a beneficial use. This constituted a valid appropriation of water."<sup>127</sup> In such cases, if the appropriator exercised reasonable diligence in completing his appropriation, the priority of his right related back to the date of commencement of the work.<sup>128</sup> The Montana Supreme Court has held that the legislature, by the law of 1885, did not abolish the preexisting method of appropriating water by diversion and use; it provided an additional and alternative method of making an appropriation which controlled exclusively the doctrine of relation with respect to appropriations thereafter made.<sup>129</sup> That is, only by compliance with the statute could the benefits of the doctrine of relation be claimed with respect to an appropriation made after the enactment.<sup>130</sup> But, in the view of the supreme court, the legislature did not intend that one who failed to comply with the statute, but who nevertheless actually diverted water, could be deprived of it by another who complied with the statute at a time subsequent to the former's completed appropriation.<sup>131</sup> It seems to be settled that with regard to unadjudicated waters, a valid appropriation of water can be made even where there is no compliance with the statute, where water actually is diverted and

<sup>125</sup> Mont. Rev. Codes 1947, Ann., §§ 89-810 to 89-812.

<sup>126</sup> Mont. Laws 1885, p. 130 (March 12, 1885).

<sup>127</sup> *Murray v. Tingley*, 20 Mont. 260, 268, 50 Pac. 723 (1897).

<sup>128</sup> *Wollman v. Garringer*, 1 Mont. 535, 544 (1872); *Murray v. Tingley*, 20 Mont. 260, 268, 50 Pac. 723 (1897); *Wright v. Cruse*, 37 Mont. 177, 181-183, 95 Pac. 370 (1908); *Bailey v. Tintinger*, 45 Mont. 154, 171, 122 Pac. 575 (1912); *Maynard v. Watkins*, 55 Mont. 54, 56, 173 Pac. 551 (1918).

<sup>129</sup> *Murray v. Tingley*, 20 Mont. 260, 268-269, 50 Pac. 723 (1897); *Bailey v. Tintinger*, 45 Mont. 154, 171-172, 122 Pac. 575 (1912).

<sup>130</sup> *Murray v. Tingley*, 20 Mont. 260, 269, 50 Pac. 723 (1897); *Bailey v. Tintinger*, 45 Mont. 154, 168-170, 122 Pac. 575 (1912); *Maynard v. Watkins*, 55 Mont. 54, 56, 173 Pac. 551 (1918); *Allen v. Petrick*, 69 Mont. 373, 384, 222 Pac. 451 (1924). Necessity of diligence in completing a statutory appropriation: *Anaconda National Bank v. Johnson*, 75 Mont. 401, 408-410, 244 Pac. 141 (1926); *Anderson v. Spear-Morgan Livestock Co.*, 107 Mont. 18, 29, 79 Pac. (2d) 667 (1938).

<sup>131</sup> *Murray v. Tingley*, 20 Mont. 260, 269, 50 Pac. 723 (1897).

applied to beneficial use; that "compliance is important only with regard to the doctrine of 'relation back' \* \* \*, on due compliance."<sup>133</sup>

With respect to *adjudicated* waters, the appropriator must employ an engineer to make a survey of the diversion works, and must file a petition with the county court containing a declaration that the water rights sought to be acquired shall be subject to the terms of any adjudication decree. Parties who may be affected are made defendants; and on conclusion of the trial the court may enter an interlocutory or permanent decree allowing the appropriation subject to prior adjudicated rights. Failure to comply with the statutory provisions deprives the appropriator of the right to use water as against a subsequent appropriator mentioned in or bound by a decree of the court.<sup>133</sup> The procedure under the present law, originally enacted in 1921, replaced a procedure provided for in 1907 which included posting of notice, prosecuting the work to completion with reasonable diligence, filing of application with the court to have the ditch capacity determined, examination by an engineer, and order by the court after hearing of objections if any should be filed.<sup>134</sup> The supreme court held that insofar as the act of 1907 was concerned, the legislature did not intend to declare that one who failed to comply with the terms of the statute, but who in the absence of any conflicting adverse right nevertheless had actually impounded, diverted, and put the water to a beneficial use, should acquire no title thereto;<sup>135</sup> but that the 1921 legislature unquestionably intended that an appropriation of the waters of an adjudicated stream should not be made thereafter without a substantial compliance with the requirements of the statute then enacted, and that the method prescribed therein must be held to be exclusive.<sup>136</sup> One who thus appropriates water from an adjudicated stream is simply a junior appropriator, with the rights and disabilities of an appropriator whose right is junior to the rights adjudicated in the original decree.<sup>137</sup>

<sup>133</sup> *Vidal v. Kensler*, 100 Mont. 592, 594-595, 51 Pac. (2d) 235 (1935). As recently as 1949 the supreme court stated that a person may make a valid appropriation of water by actual diversion and use thereof without filing a notice of appropriation as defined in the sections of the statute relating to the appropriation of unadjudicated waters: *Clausen v. Armington*, — Mont. —, 212 Pac. (2d) 440, 447-448 (1949).

<sup>134</sup> Mont. Rev. Codes 1947, Ann., §§ 89-829 to 89-844; Mont. Laws 1921, ch. 228.

<sup>135</sup> Mont. Laws 1907, ch. 185.

<sup>136</sup> *Donich v. Johnson*, 77 Mont. 229, 246, 250 Pac. 963 (1926). The question as to whether the method provided by the 1907 law was intended to be exclusive had been reserved in *Anaconda National Bank v. Johnson*, 75 Mont. 401, 409, 244 Pac. 141 (1926).

<sup>137</sup> *Anaconda National Bank v. Johnson*, 75 Mont. 401, 411, 244 Pac. 141 (1926); *Donich v. Johnson*, 77 Mont. 229, 246, 250 Pac. 963 (1926).

<sup>138</sup> *Quigley v. McIntosh*, 88 Mont. 103, 109, 290 Pac. 266 (1930).

The riparian doctrine has been repudiated in Montana. For many years there was doubt as to the proper classification of the State with respect to this feature of water law, occasioned by observations concerning the riparian doctrine made from time to time in decisions of the supreme court. Those comments, however, were characterized as purely dicta by that court in a decision rendered in 1921 in a case in which, for the first time in the judicial history of Montana, there was squarely presented for consideration a claim of riparian right as against a claim of appropriative right.<sup>138</sup> The court, feeling at liberty to treat the matter as one of first impression, concluded that the common-law doctrine of riparian rights had never prevailed in the jurisdiction since the enactment of the Bannack Statutes in 1865.<sup>139</sup> The repudiation of the riparian doctrine is complete; it applies to the use of water for "the so-called natural purposes: domestic use and watering livestock," as well as to irrigation.<sup>140</sup>

The distinction commonly made between ground waters flowing in defined subterranean channels and percolating waters is observed in Montana. It is held that subsurface water flowing in defined channels reasonably ascertainable is subject to the same rules of law as water flowing in surface streams, which in this jurisdiction is the appropriation doctrine.<sup>141</sup> The subsurface supply of a stream, whether coming from tributary swamps or flowing in the sand and gravel constituting the bed of the stream, is as much a part of the stream as is the surface flow and is governed by the same rules.<sup>142</sup> In the very few decisions in which rights of use of percolating waters were discussed, the rule of ownership by the owner of the overlying land, subject to the limitation that the use be made without malice or negligence, has been acknowledged or conceded.<sup>143</sup> The supreme court stated, in a recent decision involving water deposited in "pot holes" which soon thereafter disappeared entirely in the earth below: "When that happens, it loses its character as flow water and is no longer subject to the regulations of law which govern while it is capable of direction and control. Its identity and its ownership then become the same as that of the soil of

<sup>138</sup> *Mettler v. Ames Realty Co.*, 61 Mont. 152, 165, 166, 170-171, 201 Pac. 702 (1921).

<sup>139</sup> The First Territorial Legislative Assembly passed an act, approved January 12, 1865, authorizing owners or holders of possessory rights in land on or in the neighborhood of any stream to use the water for irrigation and to have rights of way for ditches over intervening property: Bannack Statutes, p. 367.

<sup>140</sup> *Wallace v. Goldberg*, 72 Mont. 234, 244, 231 Pac. 56 (1925).

<sup>141</sup> *Hilger v. Sieben*, 38 Mont. 93, 95, 98 Pac. 881 (1909); *Ryan v. Quinlan*, 45 Mont. 521, 533-534, 124 Pac. 512 (1912).

<sup>142</sup> *Smith v. Duff*, 39 Mont. 382, 390, 102 Pac. 984 (1909).

<sup>143</sup> *Ryan v. Quinlan*, 45 Mont. 521, 532-533, 124 Pac. 512 (1912); *Rock Creek Ditch & Flume Co. v. Miller*, 93 Mont. 248, 260, 17 Pac. (2d) 1074 (1933).

which it forms a part."<sup>144</sup> Seepage water forming a natural accretion to a stream is a part of the stream; an appropriator on the stream has the right to all such tributary flow even as against the owner of the land on which it rises.<sup>145</sup>

Appropriative rights in Montana are not subject to statutory forfeiture, that is, to loss for nonuse occurring over a prescribed period of years. The statutes provide that upon abandonment and cessation of use of water by the appropriator or his successor in interest, the right ceases; but that questions of abandonment shall be questions of fact, to be determined as other questions of fact.<sup>146</sup> Issues of abandonment of water rights have been raised in a number of cases decided by the supreme court.<sup>147</sup>

Determinations of water rights are made solely by the courts, but a procedure is provided by statute under which the State Water Conservation Board may initiate adjudications of rights of use of the waters of streams by directing the State Engineer to bring actions. The State Engineer or any party may apply to the court for the appointment of a referee to whom the court may submit any and all issues of fact. The making of hydrographic surveys by the State Engineer, to be introduced in evidence, is provided for.<sup>148</sup> Commissioners may be appointed by the courts, upon petition of parties affected, for the purpose of distributing water to the holders of decreed water rights.<sup>149</sup>

### Nebraska

The constitution of Nebraska dedicates the use of the water of every natural stream to the people of the State, and provides that the right to divert unappropriated waters thereof for beneficial use shall never be denied except when such denial is demanded by the public interest.<sup>150</sup> It is also declared that the necessity of water for domestic and irrigation purposes is a natural want;<sup>151</sup> that priority of appropriation shall give the better right as between users of water for the same purpose, but that in the event of insufficiency of supply domestic purposes have first preference and agriculture has preference over manufacturing; pro-

<sup>144</sup> *Woodward v. Perkins*, 116 Mont. 46, 52, 147 Pac. (2d) 1016 (1944), citing *Ryan v. Quinlan*, 45 Mont. 521, 532, *supra*, footnote 143.

<sup>145</sup> *Beaverhead Canal Co. v. Dillon Electric Light & Power Co.*, 34 Mont. 135, 140-141, 85 Pac. 880 (1906); *Woodward v. Perkins*, 116 Mont. 46, 53-54, 147 Pac. (2d) 1016 (1944).

<sup>146</sup> Mont. Rev. Codes 1947, Ann., § 89-802.

<sup>147</sup> The principles of abandonment are well stated in *Thomas v. Ball*, 66 Mont. 161, 166-168, 213 Pac. 597 (1923).

<sup>148</sup> Mont. Rev. Codes 1947, Ann., §§ 89-847 to 89-855.

<sup>149</sup> Mont. Rev. Codes 1947, Ann., §§ 89-1001 to 89-1024.

<sup>150</sup> Nebr. Const., art. XV, §§ 5 and 6.

<sup>151</sup> Nebr. Const., art. XV, § 4.



vided, that no inferior right may be acquired by a superior right without just compensation.<sup>152</sup> The constitution provides further that the use of water for power purposes shall never be alienated, but may be leased or otherwise developed as prescribed by law.<sup>153</sup> The statute governing the appropriation of water requires the holder of an approved application for water power, before using the water, to lease from the State the use of all water so appropriated, such lease to run for not more than 50 years. Upon expiration of the lease the value of improvements is to be appraised by the State Department of Roads and Irrigation, subject to appeal to court, and the value as finally determined is to be paid to the lessee owning such improvements by any subsequent lessee.<sup>154</sup>

Jurisdiction over all matters pertaining to water rights for irrigation, power, or other useful purposes is vested in the Department of Roads and Irrigation.<sup>155</sup> The statute provides an exclusive procedure for appropriating water, the first step being the making of an application to the Department for a permit, the Department to issue a certificate when the prerequisites for a completed appropriation have been complied with.<sup>156</sup> When the use of appropriated water ceases, the right ceases. It is the duty of the Department, if it finds that an appropriation has not been used beneficially for more than three years, to hold a hearing to determine whether the right shall not be declared forfeited,

<sup>152</sup> Nebr. Const., art. XV, § 6. The preference in favor of domestic purposes was placed in the constitution in 1920. A similar statutory preference (Rev. Stats. 1943, § 46-204), enacted much earlier, did not provide for compensation; but the Nebraska Supreme Court held that vested rights of completed appropriations could not be destroyed without compensation: *Kearney Water & Electric Powers Co. v. Alfalfa Irrigation Dist.*, 97 Nebr. 139, 146, 149 N. W. 363 (1914). In a case decided in 1942, a public power and irrigation district contended that it had the right to take water in excess of its appropriation as against a prior appropriation for power purposes, as long as the water could be put to beneficial use in the irrigation of farm lands: *Loup River Public Power Dist. v. North Loup River Public Power & Irr. Dist.*, 142 Nebr. 141, 151-152, 156, 5 N. W. (2d) 240 (1942). The supreme court stated: "It was clearly the intention of the framers of our Constitution to provide that water previously appropriated for power purposes may be taken and appropriated for irrigation use upon the payment of just compensation therefor. It never was the intention of the framers of the Constitution to provide that water appropriated for power purposes could thereafter arbitrarily be appropriated for irrigation without the payment of compensation. \* \* \* We necessarily come to the conclusion that a senior appropriative right for power purposes may not be destroyed by a superior user except by the employment of formal condemnation proceedings and the tender of compensation prior to interference."

<sup>153</sup> Nebr. Const., art. XV, § 7.

<sup>154</sup> Nebr. Rev. Stats. 1943, § 46-236.

<sup>155</sup> Nebr. Rev. Stats. 1943, § 46-209.

<sup>156</sup> Nebr. Rev. Stats. 1943, §§ 46-233 to 46-243. Exclusiveness of present statutory procedure: *Enterprise Irr. Dist. v. Tri-State Land Co.*, 92 Nebr. 121, 147-148, 138 N. W. 171 (1912); *Kersenbrock v. Boyss*, 95 Nebr. 407, 409-411, 145 N. W. 837 (1914).

appeal lying to the supreme court from the Department's decision.<sup>157</sup>

The riparian doctrine is a part of the water law of Nebraska, but its practical importance in relation to that of the appropriation doctrine has been substantially reduced as the result of decisions of the supreme court. The existence of the riparian doctrine, as modified by the irrigation statutes, was recognized in several early decisions.<sup>158</sup> Two decisions rendered in 1903, on the same day, thoroughly considered the law of riparian rights and held it applicable to every part of the State except as altered or supplemented by legislation.<sup>159</sup> Two other decisions, rendered on rehearing in 1905 on the same day, had the effect of putting the riparian owner who does not make actual use of the water before the time of vesting of appropriative rights in a position where he has no recourse other than to recover such damages for the impairment of his riparian rights as he can actually prove, thus eliminating much of the common-law advantage of location of the riparian land with respect to appropriative rights on the same stream.<sup>160</sup>

The Nebraska Supreme Court in 1933 approved what it termed the American rule of reasonable and beneficial use of percolating ground waters upon the overlying land, with a reasonable proportion to each owner of overlying land if the supply is insufficient for all.<sup>161</sup> Such approval was given in a decision in which it was not necessary, in sustaining the trial court's judgment, to adopt the rule in question. However, the supreme court stated subsequently, referring to that case: "We are committed to the rule: "The owner of land is entitled to appro-

<sup>157</sup> Nebr. Rev. Stats. 1943, § 46-229, amended Sess. Laws 1947, ch. 172. Prior to the 1947 amendment, the section had provided that an appeal might be taken to the district court of the county in which the point of diversion was situated. Based upon that statutory authorization, the supreme court held in 1930 that the taking of appeal to the district court instead of directly to the supreme court was proper: *State v. Oliver Bros.*, 119 Nebr. 302, 303, 228 N. W. 864 (1930). The provision is not unconstitutional: *Kersenbrock v. Boyes*, 95 Nebr. 407, 409-411, 145 N. W. 837 (1914); *Dawson County Irr. Co. v. McMullen*, 120 Nebr. 245, 247, 250, 231 N. W. 840 (1930).

<sup>158</sup> *Eidemiller Ice Co. v. Guthrie*, 42 Nebr. 238, 253, 60 N. W. 717 (1894); *Clark v. Cambridge & Arapahoe Irr. & Improvement Co.*, 45 Nebr. 798, 806, 64 N. W. 239 (1895); *Slattery v. Harley*, 58 Nebr. 575, 577, 79 N. W. 151 (1899).

<sup>159</sup> *Crawford Co. v. Hathaway*, 67 Nebr. 325, 339, 342, 93 N. W. 781 (1903); *Meng v. Coffee*, 67 Nebr. 500, 511-512, 93 N. W. 713 (1903).

<sup>160</sup> *McCook Irr. & Water Power Co. v. Crews*, 70 Nebr. 109, 121-127, 96 N. W. 996 (1903), 102 N. W. 249 (1905); *Cline v. Stock*, 71 Nebr. 70, 80-83, 98 N. W. 454 (1904), 102 N. W. 265 (1905). For later decisions in which riparian rights were considered, see: *Southern Nebraska Power Co. v. Taylor*, 109 Nebr. 683, 686-687, 192 N. W. 317 (1923); *Slattery v. Dost*, 121 Nebr. 418, 420, 237 N. W. 301 (1931); *Fairbury v. Fairbury Mill & Elevator Co.* 123 Nebr. 588, 592, 243 N. W. 774 (1932); *Osterman v. Central Nebraska Public Power & Irr. Dist.*, 131 Nebr. 356, 362-366, 268 N. W. 334 (1936); *McGinley v. Platte Valley Public Power & Irr. Dist.*, 132 Nebr. 292, 296-298, 271 N. W. 864 (1937).

<sup>161</sup> *Olson v. Wahoo*, 124 Nebr. 802, 811, 248 N. W. 304 (1933).

private subterranean waters found under his land, but his use thereof must be reasonable, and not injurious to others who have substantial rights in such waters.' ”<sup>162</sup> Even more recently, in affirming judgment for damages against a public power district, the supreme court rejected the district's contention that the common law was in force in Nebraska as to subsurface percolating waters and that it had a lawful right to dig on its own land without liability for resulting drainage of subsurface waters from adjacent lands, and reaffirmed the principle that the American rule of reasonable use, in conflict with the common law, had been adopted in Nebraska and was the law in that State.<sup>163</sup>

Determinations of water rights are made by the Department,<sup>164</sup> from which appeal may be taken to the supreme court.<sup>165</sup> If not appealed from, these determinations constitute final adjudications and cannot be collaterally attacked.<sup>166</sup> This statutory procedure of adjudication of water rights was taken from the procedure established in Wyoming. The supreme court held in 1943 that the legislative grant of jurisdiction to the Department did not include the power to adjudicate vested rights or to make an adjudication with respect to the apportionment of water between users after diversion into common private ditches, that being a function belonging to the courts.<sup>167</sup> Distribution of water from streams to the holders of water rights is made, under the direction of the Department, by superintendents of two statutory water divisions and

<sup>162</sup> *Osterman v. Central Nebraska Public Power & Irr. Dist.*, 131 Nebr. 356, 365, 268 N. W. 334 (1936), citing *Olson v. Wahoo*, *supra* (footnote 161).

<sup>163</sup> *Luchsinger v. Loup River Public Power Dist.*, 140 Nebr. 179, 181-183, 299 N. W. 549 (1941). The supreme court stated that subirrigation in the natural condition of land used for farming was a valuable property right attached to the land itself, citing the *Osterman* case (footnote 162) which in turn cited *Olson v. Wahoo* (footnote 161). The court went on to state that a rule of law in conflict with the common law of England had been adopted in Nebraska in language quoted from *Olson v. Wahoo* stating the principles of the American rule. "It is argued, however, that this is dictum in the opinion in which it appears and not binding on defendant in the present controversy. Whatever may be thought of its applicability to the case in which the rule was adopted, it answers for itself as a sound proposition of law essential to the protection of property rights of private individuals and is consistent with the Constitution and with morality and justice. \* \* \* The American rule is not only law in Nebraska, but it applies to property damaged for public use as well as to property taken for public use. \* \* \*

<sup>164</sup> Nebr. Rev. Stats. 1943, §§ 46-226, 46-230 to 46-232.

<sup>165</sup> Nebr. Rev. Stats. 1943, § 46-210.

<sup>166</sup> *Farmers' Irr. Dist. v. Frank*, 72 Nebr. 136, 152, 100 N. W. 286 (1904); *Enterprise Irr. Dist. v. Tri-State Land Co.*, 92 Nebr. 121, 135, 149-150, 138 N. W. 171 (1912), writ of error dismissed, *Enterprise Irr. Dist. v. Farmers Mutual Canal Co.*, 243 U. S. 157 (1917); *In re Claim Affidavit of Parsons*, 148 Nebr. 239, 243, 27 N. W. (2d) 190 (1947).

<sup>167</sup> *Plunkett v. Parsons*, 143 Nebr. 535, 540, 10 N. W. (2d) 469 (1943).

by commissioners of water districts created by the Department within the water divisions.<sup>170</sup>

### Nevada

The water of all sources of water supply, whether above or below the surface of the ground, is declared by statute to belong to the public and, subject to existing rights, to be available for appropriation for beneficial use.<sup>170</sup> An exclusive procedure for the appropriation of water is provided, the first step being an application to the State Engineer for a permit; the applicant being entitled to the issuance of a certificate upon making satisfactory proof that the appropriation has been completed in accordance with the requirements of the statute.<sup>170</sup> Appropriations of water for watering range livestock are subject to special procedure, which includes applications to the State Engineer, and which protects subsisting rights to water range livestock at particular places.<sup>171</sup> In case of failure to make beneficial use of water during five successive years, the right is forfeited and the water so formerly appropriated may be appropriated again by any qualified person.<sup>172</sup>

The Nevada Supreme Court had for decision in 1949<sup>173</sup> the question as to whether a water right could be acquired by prescription against the owner of a right vested by diversion and beneficial use prior to 1903,<sup>174</sup> the adverse use beginning in 1933. The court cited an early decision<sup>175</sup> as authority for the settled principle that prior to the enactment of the water law, a water right already in existence might be acquired by another by adverse use, and stated that it was not then prepared to overrule that decision nor to read into the water law something not found there even by implication. However, this conclusion was reached reluctantly; the court believed "that adverse use is wholly unwarranted, unnecessary and clearly dangerous to the appropriation and distribution of public property" and expressly invited the attention

<sup>170</sup> Nebr. Rev. Stats. 1943, §§ 46-215 to 46-225.

<sup>171</sup> Nev. Comp. Laws 1929, §§ 7890 and 7891.

<sup>172</sup> Nev. Comp. Laws 1929, §§ 7944 to 7962.

<sup>173</sup> Nev. Comp. Laws 1929, §§ 7979 to 7985.

<sup>174</sup> Nev. Comp. Laws 1949 Supp., § 7897 (amendment by Sess. Laws 1949, ch. 83). The legislature had the right to provide for forfeiture of appropriative rights acquired after the date of enactment; but the only way in which preexisting rights could be lost was by intentional abandonment, for forfeiture would impair such rights contrary to another section of the statute providing that nothing contained therein should impair any vested right to the use of water: *In re Mouse Spring and Its Tributaries*, 60 Nev. 280, 289-291, 108 Pac. (2d) 311 (1940).

<sup>175</sup> *Application of Filippini*, — Nev. —, 202 Pac. (2d) 535, 539-541 (1949).

<sup>176</sup> The office of State Engineer was created by Nev. Sess. Laws 1903, p. 18; and the procedure of initiating appropriations of water by making application to the State Engineer was provided by Sess. Laws 1905, p. 66.

<sup>177</sup> *Authors v. Bryant*, 22 Nev. 242, 38 Pac. 439 (1894).

of the legislature to the problem. The legislature, then in session, amended the water appropriation statute to provide that no prescriptive right to the use of any public water whether appropriated or unappropriated could be acquired by adverse use or adverse possession for any period of time whatsoever; that any such right to appropriate any water must be initiated by making application to the State Engineer for a permit and not otherwise.<sup>196</sup>

The riparian doctrine, although at one time recognized in Nevada, was repudiated in 1885.<sup>197</sup> The supreme court, in so rejecting that doctrine, specifically overruled a former decision<sup>198</sup> in which land patented by the United States prior to the congressional enactment of July 26, 1866<sup>199</sup> was held to have riparian rights as against a prior appropriator. There has been no recognition of the riparian doctrine in subsequent decisions.<sup>200</sup>

Early decisions or expressions of opinion by the Nevada Supreme Court were to the effect that percolating waters belonged to the owner of the overlying land, except in the case of water percolating to a creek from a spring which supplied water to the creek.<sup>201</sup> In 1939 a comprehensive act relating to the appropriation of ground waters was passed,<sup>202</sup> which repealed and replaced earlier legislation<sup>203</sup> and which was extensively amended in 1947 and 1949.<sup>204</sup> All ground waters are declared to belong to the public and to be subject to appropriation only

<sup>196</sup> Nev. Sess. Laws 1949, ch. 83, amending Comp. Laws 1929, § 7897; Comp. Laws 1949 Supp., § 7897.

<sup>197</sup> *Jones v. Adams*, 19 Nev. 78, 84-88, 6 Pac. 442 (1885). Riparian rights were referred to, but were not the basis of decision in: *Lobdell v. Simpson*, 2 Nev. 274, 276-278 (1866); *Ophir Silver Min. Co. v. Carpenter*, 4 Nev. 534, 543 (1869); *Covington v. Becker*, 5 Nev. 281, 282-283 (1869).

<sup>198</sup> *Vansickle v. Haines*, 7 Nev. 249, 256-257 (1872). To the same effect: *Union Mill & Min. Co. v. Ferris*, 2 Saw. 176, 24 Fed. Cas. 594 (1872).

<sup>199</sup> 14 Stat. L. 253, § 9, U. S. Rev. Stats., § 2339.

<sup>200</sup> See *Reno Smelting, Mill & Reduction Works v. Stevenson*, 20 Nev. 269, 21 Pac. 317 (1889); *Twaddle v. Winters*, 29 Nev. 88, 105-107, 85 Pac. 280 (1906), 89 Pac. 289 (1907); *In re Humboldt River*, 49 Nev. 357, 361-362, 246 Pac. 692 (1926); *Steptoe Live Stock Co. v. Gully*, 53 Nev. 163, 172, 295 Pac. 772 (1931); *In re Manse Spring and Its Tributaries*, 60 Nev. 280, 286, 108 Pac. (2d) 311 (1940).

<sup>201</sup> *Mosier v. Caldwell*, 7 Nev. 363, 366-367 (1872); *Strait v. Brown*, 16 Nev. 317, 321, 323 (1881). See comments and citations in *Cardelli v. Comstock Tunnel Co.*, 26 Nev. 284, 295-297, 66 Pac. 950 (1901), in which, however, the question of rights of owners of overlying lands to percolating waters was not passed upon.

<sup>202</sup> Nev. Sess. Laws 1939, ch. 178; Comp. Laws 1941 Supp., §§ 7993.10 to 7993.24.

<sup>203</sup> Nev. Sess. Laws 1915, ch. 210; Comp. Laws 1929, §§ 7987 to 7993; amended Sess. Laws 1935, ch. 184, and Sess. Laws 1937, ch. 149.

<sup>204</sup> Nev. Sess. Laws 1947, ch. 43, and Sess. Laws 1949, ch. 103; Comp. Laws 1949 Supp., §§ 7993.11 to 7993.21.

under the State laws relating to the appropriation of water; but the development of ground water for domestic purposes where the draught does not exceed two gallons per minute is exempted from regulation. Appropriations are made under the procedure provided in the general water law, the first step in which is an application to the State Engineer for a permit to make the appropriation. Certain provisions, however, relate to the time of installation of the well in relation to the dates of enactment of earlier legislation.<sup>185</sup> Failure for five successive years to make beneficial use of ground water works a forfeiture of an undetermined right and an abandonment of a determined right. Administration of the provisions of the act, which cover the acquirement and loss of rights, adjudication of rights, and withdrawal of water in time of shortage, is vested in the State Engineer.

| The State Engineer, either upon his own initiative or upon petition of one or more water users, may determine the rights to the use of the waters of a stream. His order of determination is filed in court, whereupon it has the legal effect of a complaint in a civil action. At the conclusion of the trial a decree is entered affirming or modifying the order of the State Engineer.<sup>186</sup> The administration of the statutes providing for the distribution of water and for the creation of water districts is vested in the State Engineer.<sup>187</sup> |

### New Mexico

The constitution of New Mexico declares that the unappropriated water of every natural stream, perennial or torrential, belongs to the public and is subject to appropriation for beneficial use, priority of appropriation giving the better right.<sup>188</sup>

The general water appropriation statute contains a provision with respect to appropriable waters similar to the constitutional provision above noted.<sup>189</sup> It provides also that flood waters may be appropriated upstream under conditions that would result in a considerable return flow above the works of other appropriators.<sup>190</sup> "Artificial surface waters" escaping from projects or constructed works are declared to be primarily private and subject to beneficial use by the owner or developer. However, when such waters pass unused beyond his control and into a natural stream, and have not been used beneficially by him for a period of four years from their first appearance, they are subject to appropriation, but the appropriator gains no right to compel the

<sup>185</sup> Nev. Sess. Laws 1947, ch. 43, § 9; Comp. Laws 1949 Supp., § 7993.18.

<sup>186</sup> Nev. Comp. Laws 1929, §§ 7905 to 7923.

<sup>187</sup> Nev. Comp. Laws 1929, §§ 7939 to 7942.

<sup>188</sup> N. Mex. Const., art XVI, § 2.

<sup>189</sup> N. Mex. Stats. 1941, Ann., § 77-101.

<sup>190</sup> N. Mex. Stats. 1941, Ann., § 77-528.

owner or developer to continue the water supply otherwise than by contract, grant, dedication, or condemnation.<sup>191</sup> An intending appropriator must make application to the State Engineer for a permit; upon completion of works the State Engineer issues to the permittee a certificate of construction, and upon application of the water to beneficial use, a license to appropriate the water.<sup>192</sup> Apparently this is the exclusive procedure for appropriating waters to which the statute applies.<sup>193</sup> The water right is forfeited if the holder fails to use the water beneficially for a period of four years, except in the case of water for storage reservoirs; but the present statute contains a proviso to the effect that forfeiture shall not necessarily occur if circumstances beyond the control of the holder have caused nonuse, such that the water could not be placed to beneficial use by his diligent efforts.<sup>194</sup> Stockmen or stock owners who construct water tanks or ponds having a capacity of 10 acre-feet or less, for watering stock, are exempted from the requirements of the water appropriation statute.<sup>195</sup> An early statute, still extant, accords certain preference rights to the use of waters to unincorporated communities in which the population exceeds 3,000.<sup>196</sup>

The riparian doctrine has been consistently rejected in New Mexico. The Territorial supreme court held that the common law as to rights

<sup>191</sup> N. Mex. Stats. 1941, Ann., § 77-525.

<sup>192</sup> N. Mex. Stats. 1941, Ann., §§ 77-501 to 77-521.

<sup>193</sup> See *Farmers' Development Co. v. Rayado Land & Irr. Co.*, 28 N. Mex. 357, 368, 213 Pac. 202 (1923).

<sup>194</sup> N. Mex. Stats. 1941, Ann., § 77-526. The proviso was enacted in 1941: N. Mex. Laws 1941, ch. 126. Prior to the enactment of this proviso, the section had been construed by the New Mexico Supreme Court in several cases. The court held in 1911 that this legislation was declaratory of previous judicial law, except that previously no specific time limit had been set: *Hagerman Irr. Co. v. McMurry*, 16 N. Mex. 172, 179-180, 113 Pac. 823 (1911). The court held later that this section refers to quantity of water and not to period of use; that is, the appropriator under the present statute may hold his right by using, in good faith, at any time during the year, the quantity of water so appropriated: *Harkey v. Smith*, 31 N. Mex. 521, 528-529, 247 Pac. 550 (1926). In 1937 it was stated that when water fails to reach the point of diversion without the fault of the appropriator and he is at all times ready and willing to put the water to the usual beneficial use, there is no forfeiture of his right for nonuser: *New Mexico Products Co. v. New Mexico Power Co.*, 42 N. Mex. 311, 321, 77 Pac. (2d) 634 (1937). In 1950 the court held that a forfeiture did not take place where, throughout the periods of nonuse, irrigation was impractical or impossible because of droughts: *Chavez v. Gutierrez*, 54 N. Mex. 76, 213 Pac. (2d) 597, 600 (1950). Referring to § 77-526 of the 1941 Compilation, which contained the proviso above noted, the court stated: "Our statutes recognize the unfairness in loss of a water right through nonuse where conditions beyond the control of the owner of such right prevent use."

<sup>195</sup> N. Mex. Stats. 1941, Ann., § 77-803. Applied in: *First State Bank of Alamogordo v. McNew*, 33 N. Mex. 414, 427, 269 Pac. 56 (1928).

<sup>196</sup> N. Mex. Laws 1889, ch. 70; Stats. 1941, Ann., § 14-4501.

of riparian owners was not in force in that jurisdiction;<sup>197</sup> that the law of prior appropriation had existed under the Republic of Mexico and had been the settled law of the Territory by legislation, custom, and judicial decision;<sup>198</sup> and that the appropriation doctrine had superseded the riparian doctrine as a matter of necessity arising from the climatic and agricultural conditions of the region.<sup>199</sup> The State supreme court has held to the same effect.<sup>200</sup>

New Mexico, while not the first State to enact ground-water legislation, has pioneered in this field in that its ground-water administrative statute, after having been declared unconstitutional and subsequently reenacted in corrected form, was the first of the Western State ground-water statutes to be put into active operation and has set the pattern for much of the subsequent legislation in that field in the West. The first New Mexico statute, enacted in 1927,<sup>201</sup> was declared invalid in *Yeo v. Tweedy*<sup>202</sup> because it violated a constitutional prohibition against legislation by mere reference to title of preexisting legislation. However, the supreme court held in that case that the 1927 statute, while objectionable in form, was declaratory of existing law, was not subversive of vested rights of owners of lands overlying the waters of an artesian basin the boundaries of which had been ascertained, and was fundamentally sound. At the ensuing session of the legislature the present law was enacted; and it has been amended or supplemented subsequently in various particulars.<sup>203</sup> This law provides that the waters of underground streams, channels, artesian basins, reservoirs, or lakes, having reasonably ascertainable boundaries, belong to the public and are subject to appropriation. Intending appropriators for *irrigation or industrial uses* of water must first make application to the State Engineer for permits. Claimants of vested ground-water rights may file declarations of their claims. Water rights not exercised for four years are forfeited. In certain instances artesian conservancy districts and the State Engineer have concurrent authority in regulating the installation and use of artesian wells.<sup>204</sup>

<sup>197</sup> *Trambley v. Luteran*, 6 N. Mex. 15, 25, 27 Pac. 312 (1891).

<sup>198</sup> *United States v. Rio Grande Dam & Irr. Co.*, 9 N. Mex. 292, 306, 51 Pac. 674 (1898).

<sup>199</sup> *Albuquerque Land & Irr. Co. v. Gutierrez*, 10 N. Mex. 177, 236-237, 61 Pac. 357 (1900); *Hagerman Irr. Co. v. McMurry*, 16 N. Mex. 172, 181-182, 113 Pac. 823 (1911).

<sup>200</sup> *Snow v. Abalos*, 18 N. Mex. 681, 693, 140 Pac. 1044 (1914); *Carlsbad Irr. Dist. v. Ford*, 46 N. Mex. 335, 341, 128 Pac. (2d) 1047 (1942).

<sup>201</sup> N. Mex. Laws 1927, ch. 182.

<sup>202</sup> *Yeo v. Tweedy*, 34 N. Mex. 611, 286 Pac. 970 (1930).

<sup>203</sup> N. Mex. Laws 1931, ch. 131; Stats. 1941, Ann., §§ 77-1101 to 77-1111; Laws 1943, ch. 70; Laws 1947, ch. 21; Laws 1949, ch. 178.

<sup>204</sup> N. Mex. Stats. 1941, Ann., §§ 77-1201 to 77-1212. See *Pecos Valley Artesian Conservancy Dist. v. Peters*, 50 N. Mex. 165, 183, 173 Pac. (2d) 490 (1945, 1946).



The constitutionality of the ground-water law, which for nearly two decades has been taken for granted, now is under attack in a group of cases on appeal to the Supreme Court of New Mexico.<sup>205</sup> The trial court held in these cases that both the artesian waters and the shallow ground waters in litigation were public waters, a valid right to the use of which could be obtained after the effective date of the 1931 law only by compliance with the provisions of that law. It was further held that the law of 1931 did not infringe either the State constitution or the Federal constitution, but was a valid exercise of the police power of the State in the regulation of the use of its public waters; and that the decision in *Yeo v. Tweedy* had become a rule of property and should not be disturbed or reconsidered. The appeal was argued before the supreme court in August 1950. Counsel for the defendants contended in the argument, according to a newspaper account,<sup>206</sup> that there was no basis in law or custom for the decision in *Yeo v. Tweedy*, which resulted in enactment of the 1931 law, whereas counsel for the State contended that that decision had become a rule of property in the State and that upsetting it would involve millions of dollars in damages.

Adjudications of water rights are made exclusively in the courts. Upon completion of the hydrographic survey of any stream system by the State Engineer, the Attorney General is authorized to initiate a suit on behalf of the State to determine all water rights concerned, unless such suit has been brought by private parties. In any suit to determine water rights all claimants are to be made parties, and the court is required by statute to direct the State Engineer to furnish a complete hydrographic survey.<sup>207</sup> The State Engineer has supervision over the apportionment of waters, may create water districts, and may appoint watermasters upon application of water users within districts.<sup>208</sup> The statute provides that such supervision shall extend to the apportionment of water according to licenses issued by the State Engineer and adjudications of the courts.<sup>209</sup> The old established "community acequias", which base their rights upon Spanish and Mexican laws and customs and some of which antedated the acquisition of the territory by the United States, are accorded certain preferences in respect to public regulation.<sup>210</sup>

<sup>205</sup> *State ex rel. Bliss, State Engineer v. Doritz et al.*, in the District Court of Chavez County, New Mexico, Nos. 13791, 13883, and 14928.

<sup>206</sup> Albuquerque Journal, Albuquerque, N. Mex., August 29, 1950.

<sup>207</sup> N. Mex. Stats. 1941, Ann., §§ 77-402, 77-404 to 77-410.

<sup>208</sup> N. Mex. Stats. 1941, Ann., §§ 77-201 to 77-305.

<sup>209</sup> N. Mex. Stats. 1941, Ann., § 77-209. See *Vanderwork v. Hewes*, 15 N. Mex. 439, 443-446, 449, 110 Pac. 567 (1910); *Pueblo of Isleta v. Tondre*, 18 N. Mex. 388, 392, 137 Pac. 86 (1913).

<sup>210</sup> N. Mex. Stats. 1941, Ann., §§ 77-502 and 77-802. *Pueblo of Isleta v. Tondre*, 18 N. Mex. 388, 392, 137 Pac. 86 (1913).

## North Dakota

The constitution of North Dakota provides that all flowing streams and natural watercourses shall forever remain the property of the State for mining, irrigating, and manufacturing purposes.<sup>211</sup>

It is provided by statute that all waters from all sources of supply belong to the public and are subject to appropriation for beneficial use.<sup>212</sup> Appropriations of water are initiated by making application to the State Engineer for permits; the State Engineer, subject to the approval of the Water Conservation Commission, may grant water rights. On completion of works a certificate of construction is issued, and on application of the water to beneficial use, a license to appropriate the water is issued.<sup>213</sup> Failure to use water beneficially for three years results in forfeiture of the right.<sup>214</sup> Another statute provides for the reversion to the public of water formerly appurtenant to land but the use of which has been abandoned.<sup>215</sup>

The possessor or owner of agricultural land desiring to utilize for irrigation or stock watering purposes the flood waters of any draw, coulee, stream, or watercourse having a flow of not to exceed one-third cubic foot per second during the greater part of the year, may file a location certificate with the State Engineer. This is approved and becomes a permit to appropriate water if no objection is filed; if objections are filed, the general appropriation procedure governs.<sup>216</sup>

Riparian rights in the Territory of Dakota were recognized by the United States Supreme Court in *Sturr v. Beck*,<sup>216a</sup> a case appealed from the supreme court of the Territory. Reference was made in that decision to a Territorial statute to the effect that the owner of land owned water standing on or flowing over or under the surface of the ground but not forming a definite stream, and that the landowner might use the water of a definite natural surface or subterranean stream while on his land but that he might not prevent its natural flow.<sup>217</sup> That statute was carried over into the laws of the State of North Dakota and is still on the statute books.<sup>218</sup> The State supreme court held that the common-law doctrine of riparian rights was in force in the Territory at the time of the adoption of the State constitution, and that such rights could not be divested by the constitutional provision declaring that all streams and watercourses shall remain the property of the State for

<sup>211</sup> N. Dak. Const., § 210.

<sup>212</sup> N. Dak. Rev. Code 1943, § 61.0101.

<sup>213</sup> N. Dak. Rev. Code 1943, §§ 61.0230, 61.0402 to 61.0415.

<sup>214</sup> N. Dak. Rev. Code 1943, § 61.1402.

<sup>215</sup> N. Dak. Rev. Code 1943, § 61.1404.

<sup>216</sup> N. Dak. Rev. Code 1943, §§ 61.0418 to 61.0421.

<sup>216a</sup> *Sturr v. Beck*, 133 U. S. 541, 547, 551 (1890).

<sup>217</sup> Terr. Dak. Civ. Code, § 255.

<sup>218</sup> N. Dak. Rev. Code 1943, §47.0113.

certain designated purposes,<sup>219</sup> referred to above.<sup>220</sup> The supreme court has adhered to the riparian doctrine in the very few cases in which riparian rights have been considered.<sup>221</sup>

The statute relating to the ownership of water above noted, originally enacted by the Territory of Dakota and still a part of the State law,<sup>222</sup> states a rule of unqualified ownership of ground water not forming a definite stream—that is, percolating water—on the part of the owner of overlying land; and it accords only a right of use of a definite underground stream to the landowner, no greater and no less than in case of a surface stream. Apparently no decisions of the supreme court have been rendered with respect to ground waters.

The water appropriation statute provides procedure for the adjudication of water rights in actions brought by the Attorney General upon completion of hydrographic surveys by the State Engineer, and for the making of such surveys for use in complete stream adjudications initiated by private parties.<sup>223</sup> The State Engineer is appointed by the Water Conservation Commission and is the Commission's secretary and chief engineer.<sup>224</sup> He is authorized to make rules and regulations for the discharge of his functions; but his rules and regulations relating to applications to appropriate water, inspection of works, issuance of licenses, and determination of rights are subject to modification if required by a vote of the Commission on appeal from a decision of the State Engineer.<sup>225</sup> The Commission is vested with full control over all unappropriated public waters to the extent necessary to discharge its functions,<sup>226</sup> and is granted certain powers with respect to the control of the flow of streams.<sup>227</sup>

### Oklahoma

A statute, copied from a very early enactment of the Territory of Dakota,<sup>228</sup> and retained by the legislatures of both North Dakota and South Dakota, declares that the owner of land owns water standing

<sup>219</sup> See *supra*, n. 211, p. 748.

<sup>220</sup> *Bigelow v. Draper*, 6 N. Dak. 152, 162–163, 69 N. W. 570 (1896).

<sup>221</sup> See *supra*, n. 217, p. 748, and n. 218, p. 748.

<sup>222</sup> See *McDonough v. Russell-Miller Mill. Co.*, 38 N. Dak. 465, 471–473, 165 N. W. 504 (1917); *Johnson v. Armour & Co.*, 69 N. Dak. 769, 776–779, 291 N. W. 113 (1940). Reference was made in both cases to the statute according to the owner of land the right to use the water of a definite stream so long as it remains on his land, now N. Dak. Rev. Code 1943, § 47.0113, footnote 9 above.

<sup>223</sup> N. Dak. Rev. Code 1943, §§ 61.0315 to 61.0319.

<sup>224</sup> N. Dak. Rev. Code 1943, § 61.0301.

<sup>225</sup> N. Dak. Rev. Code 1943, §§ 61.0313 and 61.0314.

<sup>226</sup> N. Dak. Rev. Code 1943, §§ 61.0226 and 61.0229.

<sup>227</sup> N. Dak. Rev. Code 1943, § 61.0214, amended by Laws 1944–1945, ch. 328, and §§ 61.0235 to 61.0245.

<sup>228</sup> Terr. Dak. Civ. Code, § 255.

on or flowing over or under the surface, but not forming a definite stream, and that he may use the water of a definite natural surface or underground stream so long as it remains on his land but may not prevent its natural flow.<sup>229</sup>

Acquisition of the right to make beneficial use of any water is initiated by making application to the Oklahoma Planning and Resources Board for a permit to appropriate the water. On completion of the works a certificate of completion of construction is issued, and on application of the water to beneficial use, a license to appropriate the water.<sup>230</sup> The Oklahoma Supreme Court has placed a construction upon the procedure for acquiring appropriative rights for irrigation purposes that is unique in Western water law; viz., that a hydrographic survey and court adjudication of existing water rights are conditions precedent to the granting by the State administrator of a valid permit to appropriate water for irrigation.<sup>231</sup> The court in 1943 referred to the fact that in *Owens v. Snider*<sup>232</sup> a court decree determining water rights for irrigation under the general water appropriation act had been held to be a condition precedent to the issuance of a permit to irrigate; but decided that a determination of water rights had not been made a preliminary requirement to the issuance by the Conservation Commission (predecessor of the Planning and Resources Board) of a permit to a power corporation to develop water power.<sup>233</sup> Forfeiture of the appropriative right results from failure to use the water for a period of two years;<sup>234</sup> and on abandonment of the use of water appurtenant to land, the water becomes public water subject to appropriation.<sup>235</sup>

The riparian doctrine has been referred to in various cases decided by the Oklahoma Supreme Court, chiefly in controversies relating to stream pollution or interference with the natural flow of streams for purposes other than irrigation.<sup>236</sup> The court, in a controversy over the use of a pond, formed in a former stream channel, for a fish hatchery and fishing resort, quoted the statute relating to the use by the land-

<sup>229</sup> Okla. Stats. 1941, Tit. 60, § 60.

<sup>230</sup> Okla. Stats. 1941, Tit. 82, §§ 21 to 59.

<sup>231</sup> *Gay v. Hicks*, 33 Okla. 675, 684-685, 124 Pac. 1077 (1912); *Owens v. Snider*, 52 Okla. 772, 775, 778-781, 153 Pac. 833 (1915).

<sup>232</sup> See *supra*, n. 231.

<sup>233</sup> *Grand Hydro v. Grand River Dam Authority*, 192 Okla. 693, 695-696, 139 Pac. (2d) 798 (1943).

<sup>234</sup> Okla. Stats. 1941, Tit. 82, § 32.

<sup>235</sup> Okla. Stats. 1941, Tit. 82, § 34.

<sup>236</sup> See *Markwardt v. Guthrie*, 18 Okla. 32, 37, 54, 90 Pac. 26 (1907); *Chicago, R. I. & P. Ry. v. Groves*, 20 Okla. 101, 111, 93 Pac. 755 (1908); *Zalaback v. Kingfisher*, 59 Okla. 222, 223, 158 Pac. 926 (1916); *Burkett v. Bayes*, 78 Okla. 8, 10, 187 Pac. 214 (1918, 1920); *Enid v. Brooks*, 132 Okla. 60, 61-63, 269 Pac. 241 (1928); *Oklahoma City v. Tytenicz*, 171 Okla., 519, 520-521, 43 Pac. (2d) 747 (1935); *Martin v. British American Oil Producing Co.*, 187 Okla. 193, 195, 102 Pac. (2d) 124 (1940).

owner of a definite stream<sup>237</sup> and stated that the stream in litigation was a definite stream; that the parties had reciprocal rights; and that each was entitled to a reasonable use of the stream.<sup>238</sup> In 1946 a controversy between riparian owners was decided, the lower owners having brought suit to enjoin the upper owners and their lessees from obstructing the stream and taking water to nonriparian lands for drilling operations.<sup>239</sup> The court referred to the statute above noted, and to previous decisions; stated that in Oklahoma "the common law definition of riparian rights substantially obtains"; and held that as between riparian owners each was limited to a reasonable use with regard to the rights and necessities of the others, and that to be entitled to relief, lower owners must show that they have suffered injury to their riparian rights. The doctrine of appropriation likewise has been recognized by the Oklahoma Supreme Court as applicable to conditions in Oklahoma,<sup>240</sup> and the extant appropriation statute has been construed by that court.<sup>241</sup> However, apparently no decisions have been rendered by the supreme court in controversies involving conflicts between claimants of riparian rights on the one hand and of appropriative rights on the other to the use of the same water supply.

A statute to be cited as the "Oklahoma Ground Water Law," providing for State control over rights to the use of ground water other than ground water flowing in underground streams with ascertainable beds and banks, was enacted in 1949.<sup>242</sup> Previously, the statute declaring the ownership of ground water not forming a definite stream—that is, percolating water—to be vested in the owner of overlying land<sup>243</sup> had been construed by the supreme court as not intended to convey such an absolute ownership as to result in unreasonable injury to one's neighbor, who has a similar ownership.<sup>244</sup> On the contrary, according to the court, each landowner must be restricted to a reasonable exercise of his own rights in view of the similar rights of others, and exhaustion of a neighbor's ground-water supply for transport to distant lands does not conform to this requirement of reasonableness. The 1949 law provides for priority of claims for the appropriation of ground water according to priority of right, but exempts uses for domestic purposes

<sup>237</sup> See *supra*, n. 229, p. 750.

<sup>238</sup> *Broady v. Furray*, 163 Okla. 204, 205, 21 Pac. (2d) 770 (1933).

<sup>239</sup> *Smith v. Stanolind Oil & Gas Co.*, 197 Okla. 499, 501-502, 172 Pac. (2d) 1002 (1946).

<sup>240</sup> *Gates v. Settlers' Mill., Canal & Res. Co.*, 19 Okla. 83, 89-91, 91 Pac. 856 (1907).

<sup>241</sup> *Gay v. Hicks*, 33 Okla. 675, 682-685, 124 Pac. 1077 (1912); *Owens v. Snider*, 52 Okla. 772, 775, 778-781, 153 Pac. 833 (1915).

<sup>242</sup> Okla. Laws 1949, Tit. 82, Chap. 11, p. 641; Stats., 1949 Cum. Supp., Tit. 82, §§ 1001 to 1019.

<sup>243</sup> See *supra*, n. 229, p. 750.

<sup>244</sup> *Canada v. Shawnee*, 179 Okla. 53, 54-57, 64 Pac. (2d) 694 (1936).

and the watering of stock that are made without waste. Claims of rights in basins, the waters of which have not been adjudicated, are recorded by means of applications filed with the Oklahoma Planning and Resources Board. Provision is made for adjudications by the courts of rights to the use of waters of ground-water basins upon completion of surveys by the Board, and for decrees of adjudication containing findings of safe yield and annual recharge. After an adjudication, the remaining ground water subject to appropriation may be taken only by license issued by the Board upon application therefor. The Board is prohibited from issuing a permit where the result would be depletion of the ground-water supply in excess of the average annual rate of recharge; and likewise may not issue a permit to an applicant who does not own land overlying the ground-water basin or hold a valid lease from a landowner permitting withdrawal of water from the basin. Administration of rights of priority is vested in the Board.

The general water appropriation statute provides for determinations of water rights, in suits brought by the Attorney General upon completion of hydrographic surveys by the Board, as well as in suits initiated by private parties.<sup>245</sup> The Board is given supervision over the apportionment of water according to licenses and decreed rights, with power to create water districts and appoint water masters.<sup>246</sup>

### Oregon

All water from all sources of water supply is declared by statute to belong to the public and, subject to existing rights, to be available for appropriation for beneficial use under the exclusive procedure provided in the statute.<sup>247</sup> However, certain waters of the State have been withdrawn from appropriation in a series of enactments, chiefly to preserve the natural flow for scenic and recreational purposes and the protection of fishlife. It is provided by statute that the laws relating to priorities of right to utilize the waters of running streams shall apply likewise to waste, spring, or seepage waters, but that the person on whose lands the seepage or spring waters first arise shall have the right to the use of such waters.<sup>248</sup> The preference thus accorded to the landowner has been upheld by the Oregon Supreme Court in cases in which the flow from the spring did not pass from the land on which the spring was located, or did not form a natural stream.<sup>249</sup> However,

<sup>245</sup> Okla. Stats. 1941, Tit. 82, §§ 11 to 14, 29.

<sup>246</sup> Okla. Stats. 1941, Tit. 82, §§ 57 to 83.

<sup>247</sup> Oreg. Comp. Laws Ann., §§ 116-401 and 116-402.

<sup>248</sup> Oreg. Comp. Laws Ann., § 116-701.

<sup>249</sup> *Morrison v. Officer*, 48 Oreg. 569, 570, 87 Pac. 896 (1906); *David v. Brokaw*, 121 Oreg. 591, 601, 256 Pac. 186 (1927); *Henrici v. Paulson*, 134 Oreg. 222, 224-225, 293 Pac. 424 (1930); *Klamath Development Co. v. Lewis*, 136

if the flow from the spring constitutes or discharges into a natural stream, it is subject to the law of watercourses.<sup>250</sup>

The appropriative right for most uses of water is initiated by making application to the State Engineer for a permit to appropriate the water; and upon perfection of the appropriation, a certificate is issued.<sup>251</sup> Appropriations of water for the generation of electricity, however, are governed by the hydroelectric act, except in the case of developments by the United States or by cities, towns, municipal corporations, or utility districts.<sup>252</sup> The needs of municipalities for water are provided for by declaring that applications for municipal water supplies may be approved by the State Engineer to the exclusion of all subsequent appropriations, if the exigencies of the case so demand;<sup>253</sup> that water may be appropriated for such future reasonable and usual municipal purposes as may be reasonably anticipated;<sup>254</sup> and that the State Engineer shall reject, or grant subject to municipal uses, all applications where in his judgment the appropriation of the waters applied for would impair a municipal water supply.<sup>255</sup> An early statute provides that when the waters of a natural stream are inadequate for all users, first preference shall be given to domestic purposes, subject to such limitations as may be prescribed by law, and that agricultural purposes shall have preference over manufacturing purposes.<sup>256</sup> Apparently this statute has not been interpreted by the supreme court; but that court, in referring to the statute providing that applications for the appropriation of municipal water supplies may be approved to the exclusion of subsequent appropriations,<sup>257</sup> noted that no precedence was thereby given to a municipal corporation as such, as against prior claimants, and that priorities of appropriation constitute a species of property which cannot be taken from the holder without compensation.<sup>258</sup> If the owner of a perfected and developed water right fails to use the appropriated water for a period of five successive years, abandonment of the water right is

Oreg. 445, 450, 299 Pac. 705 (1931); *Skinner v. Silver*, 158 Oreg. 81, 96-98, 75 Pac. (2d) 21 (1938); *Messinger v. Woodcock*, 159 Oreg. 435, 443-444, 80 Pac. (2d) 895 (1938).

<sup>250</sup> *Low v. Schaffer*, 24 Oreg. 239, 244, 33 Pac. 678 (1893); *Low v. Rizer*, 25 Oreg. 551, 559, 37 Pac. 82 (1894); *Boyce v. Cupper*, 37 Oreg. 256, 261, 61 Pac. 642 (1900); *Brosnan v. Harris*, 39 Oreg. 148, 150-151, 65 Pac. 867 (1901); *Morrison v. Officer*, 48 Oreg. 569, 570, 87 Pac. 896 (1906); *Hildebrandt v. Montgomery*, 113 Oreg. 687, 690, 693-694, 234 Pac. 267 (1925); *Minton v. Coast Property Corp.*, 151 Oreg. 208, 217, 46 Pac. (2d) 1029 (1935).

<sup>251</sup> Oreg. Comp. Laws Ann., §§ 116-419 to 116-427.

<sup>252</sup> Oreg. Comp. Laws Ann., §§ 119-101 to 119-302.

<sup>253</sup> Oreg. Comp. Laws Ann., § 116-421.

<sup>254</sup> Oreg. Comp. Laws Ann., § 116-437.

<sup>255</sup> Oreg. Comp. Laws Ann., § 116-1021.

<sup>256</sup> Oreg. Comp. Laws Ann., § 116-601.

<sup>257</sup> See *supra*, n. 253.

<sup>258</sup> *In re Schollmeyer*, 69 Oreg. 210, 215, 138 Pac. 211 (1914).

conclusively presumed; but the water rights of cities and towns for all reasonable and usual municipal purposes are exempted from this provision.<sup>259</sup>

As a result of legislation and judicial decisions, Oregon has become essentially an appropriation-doctrine State notwithstanding cases in which the riparian doctrine, to some extent at least, was considered to be a part of the State water law. In various decisions up to and including the first decade of the present century, the supreme court recognized that riparian owners had certain rights to the use of water,<sup>260</sup> but also recognized the applicability of the appropriation doctrine to rights acquired on the public domain pursuant to authority contained in acts of Congress, as against riparian claims incident to lands subsequently passing to private possession,<sup>261</sup> and the resulting modification of the common-law doctrine.<sup>262</sup> The incompatibility of the riparian and appropriation doctrines was acknowledged, and there became established the principle that a settler upon public land contiguous to a stream could elect to make a prior appropriation of the water, or to insist upon his riparian right, but that he could not do both.<sup>263</sup> In the leading case of *Hough v. Porter*,<sup>264</sup> the supreme court held that

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<sup>259</sup> *Oreg. Comp. Laws Ann.*, § 116-437. Abandonment and forfeiture of water rights acquired under laws enacted prior to the "water code" of 1909 are covered in *Comp. Laws Ann.*, §§ 108-309, 116-411, and 116-417.

<sup>260</sup> *Taylor v. Welch*, 6 *Oreg.* 198, 200 (1876); *Coffman v. Robbins*, 8 *Oreg.* 278, 282 (1880); *Shively v. Hume*, 10 *Oreg.* 76, 77 (1881); *Shook v. Colohan*, 12 *Oreg.* 239, 244, 6 *Pac.* 503 (1885); *Weiss v. Oregon Iron & Steel Co.*, 13 *Oreg.* 496, 498-502, 11 *Pac.* 255 (1886); *Low v. Schaffer*, 24 *Oreg.* 239, 245-246, 33 *Pac.* 678 (1893); *Jones v. Conn.*, 39 *Oreg.* 30, 34, 36-37, 39-41, 44-46, 64 *Pac.* 855, 65 *Pac.* 1068 (1901); *Cox v. Bernard*, 39 *Oreg.* 53, 61, 64 *Pac.* 860 (1901); *Bauers v. Bull*, 46 *Oreg.* 60, 66, 78 *Pac.* 757 (1904); *Brown v. Gold Coin Min. Co.*, 48 *Oreg.* 277, 286, 86 *Pac.* 361 (1906).

<sup>261</sup> *Lewis v. McClure*, 8 *Oreg.* 273, 274-275 (1880); *Tolman v. Casey*, 15 *Oreg.* 83, 88, 13 *Pac.* 669 (1887); *Curtis v. LaGrande Water Co.*, 20 *Oreg.* 34, 42, 23 *Pac.* 808 (1890); *Speake v. Hamilton*, 21 *Oreg.* 3, 6, 8, 26 *Pac.* 855 (1890); *Simmons v. Winters*, 21 *Oreg.* 35, 42, 27 *Pac.* 7 (1891); *Brown v. Baker*, 39 *Oreg.* 66, 68-69, 65 *Pac.* 799, 66 *Pac.* 193 (1901); *Morgan v. Shaw*, 47 *Oreg.* 333, 337, 83 *Pac.* 534 (1906); *Porter v. Pettengill*, 57 *Oreg.* 247, 249, 110 *Pac.* 393 (1910).

<sup>262</sup> *Carson v. Gentner*, 33 *Oreg.* 512, 515-516, 52 *Pac.* 506 (1898).

<sup>263</sup> *North Powder Mill. Co. v. Coughanour*, 34 *Oreg.* 9, 22, 54 *Pac.* 223 (1898); *Brown v. Baker*, 39 *Oreg.* 66, 70, 65 *Pac.* 799, 66 *Pac.* 193 (1901); *Davis v. Chamberlain*, 51 *Oreg.* 304, 311, 98 *Pac.* 154 (1908). See *Low v. Schaffer*, 24 *Oreg.* 239, 245-246, 33 *Pac.* 678 (1893). See also footnote 269, below.

<sup>264</sup> *Hough v. Porter*, 51 *Oreg.* 318, 383-406, 95 *Pac.* 732 (1908), 98 *Pac.* 1083 (1909), 102 *Pac.* 728 (1909). Approved and applied in *Hedges v. Riddle*, 63 *Oreg.* 257, 259-260, 127 *Pac.* 548 (1912). Riparian rights for lands acquired from the Government prior to the enactment of the Desert Land Act were held to include irrigation purposes in *Norris v. Eastern Oregon Land Co.*, 112 *Oreg.* 106, 109-112, 227 *Pac.* 1111 (1924).



the effect of the Desert Land Act of 1877<sup>265</sup> was to abrogate the modified common-law doctrine of riparian rights, except for domestic use and the watering of stock essential to the sustenance of riparian landowners, so far as public lands entered after the date of that act were concerned. The water appropriation statute of 1909 contained provisions defining and limiting vested riparian rights to the extent of the actual application of water to beneficial use prior to the passage of the act, or within a reasonable time thereafter by means of works then under construction, all such rights to be adjudicated under the statutory procedure therein provided;<sup>266</sup> and the supreme court upheld the validity of this legislative definition of vested riparian rights, stating that it was within the province of the legislature, by that act, to define a vested riparian right or to establish a rule governing the conditions under which it should be deemed to be created.<sup>267</sup> In the development of the principle that one cannot claim both riparian and appropriative rights for the same use of water,<sup>268</sup> the court has held repeatedly that the election of one of these two claims is in substance a waiver of the other, and that to claim a right to use a specified quantity of water from a specified date, to the exclusion of use by others, is to waive one's riparian right for the purpose of the proceeding in which the claim is made and to assume the character of an appropriator.<sup>269</sup> No right can be adjudicated under the statutory procedure except for the use of a specific quantity of water and with a fixed date of priority—in other words, on an appropriative basis.<sup>270</sup> The measure of the vested right of a riparian landowner is beneficial

<sup>265</sup> 19 Stat. L. 377 (March 3, 1877).

<sup>266</sup> Oreg. Laws 1909, ch. 216, § 70; Comp. Laws Ann., § 116-403.

<sup>267</sup> *In re Hood River*, 114 Oreg. 112, 174-182, 227 Pac. 1065 (1924). The Federal Circuit Court of Appeals, Ninth Circuit, concluded that the Oregon riparian owner's right to the natural flow of a stream, substantially undiminished, had been validly abrogated by the Oregon statute of 1909 as construed in the *Hood River* case: *California-Oregon Power Co. v. Beaver Portland Cement Co.*, 73 Fed. (2d) 555, 567-569 (C. C. A. 9th, 1934). The United States Supreme Court affirmed the judgment of the Circuit Court of Appeals, but passed over this particular question inasmuch as the ground upon which the Supreme Court's affirmance was based made the consideration of this question unnecessary: *California Oregon Power Co. v. Beaver Portland Cement Co.*, 295 U. S. 142, 153, 165 (1935).

<sup>268</sup> See *supra*, n. 263, p. 754.

<sup>269</sup> *Caviness v. LaGrande Irr. Co.*, 60 Oreg. 410, 421-423, 119 Pac. 731 (1911); *Little Walla Walla Irr. Union v. Finis Irr. Co.*, 62 Oreg. 348, 358, 124 Pac. 666, 125 Pac. 270 (1912); *Bowen v. Spaulding*, 63 Oreg. 392, 395, 128 Pac. 37 (1912); *In re Schollmeyer*, 69 Oreg. 210, 212, 138 Pac. 211 (1914); *In re Sucker Creek*, 83 Oreg. 228, 234-237, 163 Pac. 430 (1917); *Norwood v. Eastern Oregon Land Co.*, 112 Oreg. 106, 111-112, 227 Pac. 1111 (1924); *In re Deschutes River and Tributaries*, 134 Oreg. 623, 692, 703-706, 286 Pac. 563, 294 Pac. 1049 (1930).

<sup>270</sup> *In re Deschutes River and Tributaries*, 134 Oreg. 623, 704, 705, 286 Pac. 563, 294 Pac. 1049 (1930).

use of the water,<sup>271</sup> which right, to have an enforceable priority, must be adjudicated with the elements of an appropriative right. The net result of the Oregon legislation and court decisions has been a virtual abrogation of the substance of the riparian doctrine except as to certain vested rights chiefly for domestic and stock-watering purposes. That is to say, the riparian doctrine in Oregon appears to be little more than a legal fiction.

The Oregon Supreme Court has held that water flowing underground in a known and defined channel constitutes a watercourse and is governed by the laws applicable to surface streams, not by the laws applicable to percolating waters.<sup>272</sup> The few statements of the court with reference to the law of percolating waters are to the effect that such waters belong to the owner of the overlying land.<sup>273</sup>

A statute applicable only to the counties lying east of the summit of the Cascade Mountains provides that subject to existing rights, waters found in underground streams, channels, artesian basins, reservoirs, or lakes, the boundaries of which may reasonably be ascertained, belong to the public and may be appropriated for any purpose other than for domestic and culinary use, stock, or the watering of lawns and gardens not exceeding one-half acre in area.<sup>274</sup> Appropriations are made under the procedure governing appropriations from surface streams, with certain modifications pertinent to the differences in character of surface and ground-water supplies. The issuance of permits is restricted to the safe yield of the ground-water basin, contingent upon a reasonable or feasible pumping lift in case of pumping developments, or a reasonable or feasible reduction of pressure in case of artesian developments.

The statutory procedure for the adjudication of water rights provides for determinations by the State Engineer, upon petition of one or more water users, the findings of fact and definitions of rights being filed with the circuit court, which hears the matter under proceedings similar to those of a suit in equity and upon final hearing enters a decree of adjudication affirming or modifying the order of the State Engineer.<sup>275</sup> This method of statutory adjudication, which has been copied in several other States, is a variation from the previously developed Wyoming system; that is, under the Oregon system the State

<sup>271</sup> Concurring opinion, Justice Coshov: *In re Hood River*, 114 Oreg. 112, 207, 227 Pac. 1065 (1924).

<sup>272</sup> *Taylor v. Welch*, 6 Oreg. 198, 200 (1876); *Hayes v. Adams*, 109 Oreg. 51, 58, 218 Pac. 933 (1923); *Bull v. Siegrist*, 169 Oreg. 180, 186, 126 Pac. (2d) 832 (1942).

<sup>273</sup> *Taylor v. Welch*, 6 Oreg. 198, 200-201 (1876); *Boyce v. Cupper*, 37 Oreg. 256, 260-261, 61 Pac. 642 (1900); *Hayes v. Adams*, 109 Oreg. 51, 57, 218 Pac. 933 (1923).

<sup>274</sup> Oreg. Comp. Laws Ann., §§ 116-443 to 116-453.

<sup>275</sup> Oreg. Comp. Laws Ann., §§ 116-801 to 116-823.

Engineer's determination is not final, but must be filed in court as the initiation of a judicial action and is subject either to affirmance or to alteration by the court as the result of hearings upon exceptions taken by interested parties, whereas the Wyoming system contemplates adjudications by the State Board of Control which are final unless appealed to the courts. The Oregon procedure has been upheld by the United States Supreme Court as not violative of the due process clause of the Federal constitution.<sup>276</sup> The statute also provides for complete determinations in suits brought by private parties,<sup>277</sup> for transference of such suits to the State Engineer at the court's discretion,<sup>278</sup> and for hydrographic surveys by the State Engineer in suits in which the State is a party.<sup>279</sup>

The State Engineer is charged with the duty of administering the water laws of the State, and of dividing the State into water districts as the necessity therefor arises. He may appoint a watermaster for each district who, under the general control of the State Engineer, distributes water according to the several rights thereto.<sup>280</sup>

### South Dakota

The water appropriation statute declares that subject to vested rights and with certain other exceptions, all waters belong to the public and, *except navigable waters*, are open to appropriation for beneficial use.<sup>281</sup> Subject to the laws relating to artesian wells and water, the owner of land owns water standing on or flowing over or under the surface but not forming a definite stream, and he may use the water of a definite natural surface or subterranean stream while on his land but may not interfere with the flow of the stream or its source other than under the laws relating to the appropriation of water; this law in its original form having been derived from a statute of the Territory of Dakota.<sup>282</sup> Beneficial use means the use of water for domestic, stock-watering, irrigation, mining, milling, power, fish culture, fire protection, and public recreational purposes.<sup>283</sup> Appropriations of water for power purposes in excess of 25 horsepower may not be made for periods exceeding 50

<sup>276</sup> *Pacific Live Stock Co. v. Lewis*, 241 U. S. 440, 451-455 (1916).

<sup>277</sup> *Oreg. Comp. Laws Ann.*, § 116-412.

<sup>278</sup> *Oreg. Comp. Laws Ann.*, § 116-801.

<sup>279</sup> *Oreg. Comp. Laws Ann.*, § 116-822.

<sup>280</sup> *Oreg. Comp. Laws Ann.*, §§ 116-206 to 116-308.

<sup>281</sup> *S. Dak. Code 1939*, § 61.0101.

<sup>282</sup> *S. Dak. Code 1939*, § 61.0101. This declaration of ownership and/or rights of use of water by the landowner, without the qualifications relating to artesian wells and water and laws regarding the appropriation of water, was adopted by the State of South Dakota from a statute of the Territory of Dakota: *Terr. Dak. Civ. Code*, § 255.

<sup>283</sup> *S. Dak. Code 1939*, § 61.0102, amended by *Laws 1939*, ch. 289.

years, but the appropriator and his assigns have the prior right of reappropriation.<sup>284</sup>

Appropriations are initiated by making application to the State Engineer for permits. A certificate of construction is issued on completion of construction, and a license to appropriate the water upon its application to beneficial use.<sup>285</sup> Failure to use appropriated water beneficially for three years results in forfeiture of the right.<sup>286</sup> Likewise, water appurtenant to land reverts to the public upon abandonment of the use of the water on the land.<sup>287</sup>

Holders of agricultural lands may obtain rights, for irrigation or livestock purposes, to the flood waters in any "dry draw" or watercourse not having a flow of at least 20 miner's inches during the greater part of the year. The prospective user files a location certificate in the county records, posts a copy, and sends a copy to the State Engineer. He may obtain from the State Engineer a certificate of right upon petition; but these dry-draw rights are not subject to the rules and regulations of the State Engineer or under his jurisdiction.<sup>288</sup>

Riparian rights in South Dakota have been recognized in a number of court decisions. The United States Supreme Court, in *Sturr v. Beck*,<sup>289</sup> recognized the existence of such rights in the Territory of Dakota, and cited the statutory declaration by the Territory that the landowner may use the water of a definite stream while it remains on his land but may not prevent its natural flow.<sup>290</sup> The State statute containing the same declaration, derived from the Territorial statute, was stated by the South Dakota Supreme Court to have been a concise statement of the common-law doctrine applicable to the rights of riparian owners,<sup>291</sup> and "should be regarded as merely declaratory of the common law as understood by the commissioners when their report was prepared."<sup>292</sup> Riparian rights are incident to and part of the

<sup>284</sup> S. Dak. Code 1939, § 61.0152.

<sup>285</sup> S. Dak. Code 1939, §§ 61.0122 to 61.0132.

<sup>286</sup> S. Dak. Code 1939, § 61.0139.

<sup>287</sup> S. Dak. Code 1939, § 61.0141.

<sup>288</sup> S. Dak. Code 1939, § 61.0133; Laws 1947, ch. 420.

<sup>289</sup> *Sturr v. Beck*, 133 U. S. 541, 547, 551 (1890).

<sup>290</sup> See *supra*, n. 282, p. 757.

<sup>291</sup> *Lone Tree Ditch Co. v. Cyclone Ditch Co.*, 15 S. Dak. 519, 525-526, 91 N. W. 352 (1902).

<sup>292</sup> *Redwater Land & Canal Co. v. Reed*, 26 S. Dak. 466, 474, 128 N. W. 702 (1910). "Commissioners" refers to the Code commissioners of New York. The South Dakota court stated that section 278 of the Revised Civil Code of South Dakota (which was taken from section 255 of the Civil Code of the Territory of Dakota) was the same as section 256 of the New York Civil Code as proposed by the Code commissioners of that State. "There is no suggestion in the report of the commissioners of an intention to change the common law respecting riparian rights. Therefore section 278 of our Civil Code should be regarded as merely declaratory of the common law as understood by the commissioners when their report was prepared."

land itself;<sup>298</sup> where vested, they could not be affected by the provision of the water appropriation act of 1907 dedicating all waters within the State to the public, nor by the provision for forfeiture of a right when not exercised for three years.<sup>294</sup> Various features of the riparian doctrine and its operation in the State were involved in several decisions of the supreme court rendered in 1910 and 1911;<sup>295</sup> and a decision in 1932 dealt with the rights of a city resulting from ownership of a tract of riparian land.<sup>296</sup>

The South Dakota Supreme Court ruled in 1922 that public lands entered after the enactment of the Desert Land Act in 1877<sup>297</sup> were divested of all riparian rights except for domestic purposes,<sup>298</sup> but rendered a decision to the contrary in 1940.<sup>299</sup> The court stated in this later decision that it had erred previously in holding that Congress, by the Desert Land Act, had intended to set up "appropriation" as the governing rule under which rights in surplus water on the public domain were to be acquired; that inasmuch as the South Dakota decisions rendered prior to 1922 had held that riparian rights could be acquired by means of settlement on riparian land and appropriative rights by proceeding under the statute, the rights of a riparian owner must be determined by the law thus established.

Ground waters flowing in well-defined and known channels, the course of which can be distinctly traced, are governed by the same rules of law that govern streams flowing upon the surface; but in order that the riparian owner or appropriator may invoke these rules, the flows must constitute regular and constant streams, otherwise the presumption will be that they have their sources in ordinary percolations through the soil.<sup>300</sup>

Ground waters not forming a definite stream were declared by the early Territorial law to belong to the owner of overlying land, without qualification.<sup>301</sup> This law of unqualified ownership, carried over into

<sup>293</sup> *Stenger v. Tharp*, 17 S. Dak. 13, 23-24, 94 N. W. 402 (1903).

<sup>294</sup> *St. Germain Irrigation Ditch Co. v. Hawthorne Ditch Co.*, 32 S. Dak. 260, 266-267, 268, 143 N. W. 124 (1913). The statute referred to is S. Dak. Laws 1907, ch. 180, which with various amendments is a part of the extant code: S. Dak. Code 1939, Title 61, ch. 61.01.

<sup>295</sup> *Lone Trees Ditch Co. v. Cyclone Ditch Co.*, 26 S. Dak. 307, 310-313, 128 N. W. 596 (1910); *Redwater Land & Canal Co. v. Reed*, 26 S. Dak. 466, 475-477, 481, 487-488, 489-490, 128 N. W. 702 (1910); *Redwater Land & Canal Co. v. Jones*, 27 S. Dak. 194, 202-204, 205-206, 130 N. W. 85 (1911).

<sup>296</sup> *Sayles v. Mitchell*, 60 S. Dak. 592, 594-595, 245 N. W. 390 (1932).

<sup>297</sup> 19 Stat. L. 377 (March 3, 1877).

<sup>298</sup> *Cook v. Evans*, 45 S. Dak. 31, 40, 185 N. W. 262 (1921), 45 S. Dak. 43, 186 N. W. 571 (1922). See also *Haaser v. Englebrecht*, 45 S. Dak. 143, 146-147, 186 N. W. 572 (1922).

<sup>299</sup> *Platt v. Rapid City*, 67 S. Dak. 245, 248-250, 291 N. W. 600 (1940).

<sup>300</sup> *Deadwood Central R. R. v. Barker*, 14 S. Dak. 558, 565-566, 86 N. W. 619 (1901).

<sup>301</sup> Terr. Dak. Civ. Code, § 255.

the statutes of South Dakota, was cited by the State supreme court as authority for the principle that subterranean percolating water in South Dakota is a part of the realty.<sup>302</sup> The court stated in 1932 that in view of the rule announced in previous decisions (cited in footnote 302), which had been based upon the statute, "there can be no serious contention but that the owner of the soil is the absolute owner of percolating subterranean water."<sup>303</sup> The right to install artesian wells on one's own land, within certain limitations, is accorded by statute.<sup>304</sup> An act providing for the regulation of the use of artesian waters and taxation of artesian wells, and imposing certain duties upon the State Engineer with respect thereto, was passed in 1919 and extensively revised in 1939, the sections relating to taxation having been repealed in 1941.<sup>305</sup> According to the supreme court, this law of 1919 did not change the statutory and judicial rule of ownership of percolating water by the owner of the overlying land; it "attempts to do nothing more than establish rules and regulations concerning artesian wells," leaving in effect the previous legislation (relating to unqualified ownership of ground water not forming a definite stream) except as to artesian water.<sup>306</sup> As a result, the rule of absolute ownership of percolating waters still prevails; but artesian wells are subjected by statute to reasonable use, primarily to prevent waste of the water.<sup>307</sup>

Participation of the State Engineer in adjudications of water rights was made largely inoperative as the result of a supreme court decision in 1913 to the effect that a riparian proprietor or appropriator exercising a lawful right could not be required, without his consent, to bear any portion of the expense of a hydrographic survey in connection with a statutory adjudication.<sup>308</sup> Amendments made in connection with the 1939 codification provide that when an action for the determination of water rights has been begun, the court shall request

<sup>302</sup> *Metcalf v. Nelson*, 8 S. Dak. 87, 89, 65 N. W. 911 (1895); *Deadwood Central R. R. v. Barker*, 14 S. Dak. 558, 565, 570-571, 86 N. W. 619 (1901).

<sup>303</sup> *Madison v. Rapid City*, 61 S. Dak. 83, 87, 246 N. W. 283 (1932).

<sup>304</sup> S. Dak. Code 1939, § 61.0401 to 61.0406.

<sup>305</sup> S. Dak. Laws 191, ch. 100; Code 1939, §§ 61.0407 to 61.0415. S. Dak. Laws 1941, ch. 369, repealed §§ 61.0408, 61.0409, 61.0410, 61.0411, 61.0412, and 61.0413 of the Code of 1939.

<sup>306</sup> *Madison v. Rapid City*, 61 S. Dak. 83, 87-88, 246 N. W. 283 (1932). The phrase "Subject to the provisions of this code relating to artesian wells and water" was placed at the head of the section declaring ownership of percolating water in the 1919 codification: S. Dak. Rev. Code 1919, § 348.

<sup>307</sup> The supreme court stated by way of dictum in 1913: "The private owner of real estate, who sinks an artesian well on his premises, is the absolute owner of the water flowing therefrom and may control the whole thereof as he may see fit so long as he does no injury thereby to others; \* \* \*." *St. Germain Irrigating Ditch Co. v. Hawthorne Ditch Co.*, 32 S. Dak. 260, 267, 143 N. W. 124 (1913).

<sup>308</sup> *St. Germain Irrigating Ditch Co. v. Hawthorne Ditch Co.*, 32 S. Dak. 260, 269, 143 N. W. 124 (1913).

the State Engineer to make a complete hydrographic survey, the State Engineer to proceed therewith whenever funds are made available from legislative appropriations or other sources, no costs incurred on behalf of the State to be charged against private parties without their express consent.<sup>809</sup> Water commissioners may be appointed for the distribution of water when the State Engineer or the court having jurisdiction considers such appointment necessary.<sup>810</sup> A statute enacted in 1935 vests the full control of waters of definite streams, so far as they relate to "irrigation or other riparian rights," in the State Engineer, whose duty it is to apportion the waters on request of five or more landowners having riparian rights.<sup>811</sup>

### Texas

The constitution declares that the conservation and development of all of the natural resources of the State, specifically including waters, are public rights and duties, and directs the legislature to pass all such laws as may be appropriate thereto.<sup>812</sup>

The statute relating to the appropriation of water declares that the "waters of the ordinary flow and underflow and tides of every flowing river or natural stream, of all lakes, bays or arms of the Gulf of Mexico, and the storm, flood or rain waters of every river or natural stream, canyon, ravine, depression or watershed" within the State are the property of the State, and that the right to the use thereof may be acquired by appropriation in the manner provided in the statute; and it vests in the State Board of Water Engineers the administration of the laws enacted for the maximum judicious employment of the State waters in the public interest.<sup>813</sup> Water may be appropriated for irrigation, mining, milling, manufacturing, development of power, construction and operation of waterworks for cities and towns, stock raising, public parks, game preserves, recreation and pleasure resorts, power and water supply for industrial purposes and plants, and domestic use.<sup>814</sup> The Supreme Court of Texas has held that this statute has no application to diffused surface waters on lands granted prior to its enactment.<sup>815</sup> Appropriations of water are initiated by application to the State Board of Water Engineers for permits to appropriate the water, the permittee being required to begin construction work within a period designated by the statute subject to extension by the Board and to prosecute the work diligently and continuously to completion.<sup>816</sup> It is not necessary

<sup>809</sup> S. Dak. Code 1939, § 61.0119.

<sup>810</sup> S. Dak. Code 1939, § 61.0121.

<sup>811</sup> S. Dak. Laws 1935, ch. 214; Code 1939, §§ 61.0104 and 61.0105.

<sup>812</sup> Tex. Const., art XVI, § 59a.

<sup>813</sup> Tex. Vernon's Ann. Civ. Stats., arts. 7467 and 7472c.

<sup>814</sup> Tex. Vernon's Ann. Civ. Stats., arts. 7470 and 7470a.

<sup>815</sup> *Turner v. Big Lake Oil Co.*, 128 Tex. 155, 170, 96 S. W. (2d) 221 (1936).

<sup>816</sup> Tex. Vernon's Ann. Civ. Stats., arts. 7492 to 7519.

to obtain a permit, however, to construct on one's own property a dam and reservoir to impound not to exceed 50 acre-feet of water for domestic and livestock purposes.<sup>317</sup> Apparently the statutory procedure is the exclusive method of appropriating water in Texas.<sup>318</sup> Any appropriation of water "wilfully abandoned" during any three successive years is forfeited.<sup>319</sup>

The statutes contain several provisions relating to preferences in the use of water. In the allotment and appropriation of water, preference is accorded in the following order: (1) Domestic and municipal uses, including water for domestic animals; (2) conversion of materials into higher forms, including electric power other than hydroelectric; (3) irrigation; (4) mining and mineral recovery; (5) hydroelectric power; (6) navigation; (7) recreation and pleasure.<sup>320</sup> Preference is to be given also to applications contemplating the maximum utilization of waters.<sup>321</sup> Priority over all other applicants is accorded an intending appropriator of water for storage by channel dams for irrigation, mining, milling, manufacturing, development of power, water for cities and towns, or stock raising.<sup>322</sup> The owner of land through which water flows has preference for a designated period over an applicant for a permit to appropriate the water for mining purposes.<sup>323</sup> Except on any stream constituting the international boundary between the United States and Mexico, appropriations for other than domestic or municipal purposes are to be granted subject to the right of any municipality to make further appropriation of such water thereafter without the necessity of condemnation or payment of compensation.<sup>324</sup>

The riparian doctrine has been recognized as a fundamental part of the water law of Texas from the time of the earliest litigation on the subject. That recognition has extended throughout the long series of conflicts between claimants of riparian lands and claimants of rights to use water on nonriparian lands under the irrigation statutes enacted from time to time, but the appropriation doctrine likewise has been recognized for many decades and has become of great importance in

<sup>317</sup> Tex. Vernon's Ann. Civ. Stats., art. 7500a.

<sup>318</sup> The statute provides no alternative method, but on the contrary makes the taking or appropriation of water, without first complying with all the provisions of the act, a misdemeanor: Tex. Vernon's Ann. Civ. Stats., art. 7520. See references to "statutory appropriation" in *Biggs v. Miller*, 147 S. W. 632, 636, 637 (Tex. Civ. App. 1912), decided prior to the enactment of the present law. See also reference to the extant statute in *Clark v. Briscoe Irr. Co.*, 200 S. W. (2d) 674, 682 (Tex. Civ. App. 1947).

<sup>319</sup> Tex. Vernon's Civ. Stats., art. 7544.

<sup>320</sup> Tex. Vernon's Civ. Stats., art. 7471.

<sup>321</sup> Tex. Vernon's Civ. Stats., art. 7472c.

<sup>322</sup> Tex. Vernon's Civ. Stats., art. 7545.

<sup>323</sup> Tex. Vernon's Civ. Stats., art. 7467.

<sup>324</sup> Tex. Vernon's Civ. Stats., arts. 7472 and 7472a.



the water law of the State. The common-law doctrine was stated by the supreme court as early as 1863.<sup>325</sup> Contention over the question as to whether irrigation was a "natural" use of the water, extending over many years, was settled by holding that domestic uses had preference over irrigation and manufacturing uses as among riparians, and that subject to this preferred right of "natural" domestic use by other riparian proprietors, each riparian owner was entitled to make a reasonable use of the stream for irrigation purposes, all having equal rights.<sup>326</sup> The riparian right is a part and parcel of the land,<sup>327</sup> but is not inseparable from riparian land because it may be sold to or condemned by an appropriator.<sup>328</sup> Vested rights of riparian proprietors have been protected against infringement by claimants under legislative acts.<sup>329</sup> However, while the riparian owner who holds a valid riparian right has first claim upon the quantity of water reasonably sufficient for his needs, as against the excess the statutory appropriation is effective.<sup>330</sup> The supreme court in 1926, in *Mott v. Boyd*,<sup>331</sup> held that riparian waters are the waters of the ordinary flow and underflow of the stream, and that stream waters when they rise above the line of highest ordinary flow are flood waters to which riparian rights do

<sup>325</sup> *Rhodes v. Whitehead*, 27 Tex. 304, 309, 315, 84 Am. Dec. 631 (1863).

<sup>326</sup> *Watkins Land Co. v. Clements*, 98 Tex. 578, 585-589, 86 S. W. 733 (1905). Earlier Texas decisions were discussed in the *Watkins* case. The reasonable needs of riparian owners for domestic and stock-watering purposes have preference over irrigation requirements of other riparian owners: *Martin v. Burr*, 111 Tex. 57, 62, 228 S. W. 543 (1921). Apportionment of water among riparian owners: *Matagorda Canal Co. v. Markham Irr. Co.*, 154 S. W. 1176, 1180 (Tex. Civ. App. 1913). See also *Biggs v. Miller*, 147 S. W. 632, 636 (Tex. Civ. App. 1912).

<sup>327</sup> *Parker v. El Paso County W. I. Dist. No. 1*, 116 Tex. 631, 642-643, 297 S. W. 737 (1927); *Zavala County W. I. Dist. No. 3 v. Rogers*, 145 S. W. (2d) 919, 923 (Tex. Civ. App. 1940). See *Bigham Bros. v. Port Arthur Canal & Dock Co.*, 91 S. W. 848, 853 (Tex. Civ. App. 1905).

<sup>328</sup> *Matagorda Canal Co. v. Markham Irr. Co.*, 154 S. W. 1176, 1181 (Tex. Civ. App. 1913).

<sup>329</sup> *Mud Creek Irr., Agricultural & Manufacturing Co. v. Vivian*, 74 Tex. 170, 173, 11 S. W. 1078 (1889); *Barratt v. Metcalfe*, 12 Tex. Civ. App. 247, 252-253, 33 S. W. 758 (1896); writ of error refused, 93 Tex. 679; *Bigham Bros. v. Port Arthur Canal & Dock Co.*, 100 Tex. 192, 201, 97 S. W. 686 (1906); *Matagorda Canal Co. v. Markham Irr. Co.*, 154 S. W. 1176, 1180 (Tex. Civ. App. 1913).

<sup>330</sup> *Biggs v. Lee*, 147 S. W. 709, 710-711 (Tex. Civ. App. 1912); writ of error dismissed, 150 S. W. xix. See also *Santa Rosa Irr. Co. v. Pecos River Irr. Co.*, 92 S. W. 1014, 1016 (Tex. Civ. App. 1906); writ of error denied; *McGhee Irr. Ditch Co. v. Hudson*, 85 Tex. 587, 589-592, 22 S. W. 398, 967 (1893); *Biggs v. Leffingwell*, 62 Tex. Civ. App. 665, 667-668, 132 S. W. 902 (1910).

<sup>331</sup> *Mott v. Boyd*, 116 Tex. 82, 108, 111, 124, 286 S. W. 458 (1926). See also *Humphreys-Mexia Co. v. Arsenaux*, 116 Tex. 603, 610, 611, 297 S. W. 225 (1927); *Parker v. El Paso County W. I. Dist. No. 1*, 116 Tex. 631, 643, 297 S. W. 737 (1927); *Texas Co. v. Burkett*, 117 Tex. 16, 28, 296 S. W. 273 (1927); *Chicago, R. I. & Gulf Ry. v. Tarrant County W. C. & I. Dist. No. 1*, 123 Tex. 432, 449, 73 S. W. (2d) 55 (1934).

not attach but which are subject to appropriation; that grantees of public land granted prior to the enactment of the appropriation act of 1889 had become invested with riparian rights in the waters of streams to which the lands were riparian; and that the appropriation acts of 1889 and following years down to and including the act of 1917 (the extant statute) were valid insofar as they authorized the appropriation of storm and flood waters and other waters without violation of existing riparian rights. A section of the statute provides that an appropriator, after three years' use of water under his statutory appropriation, shall be deemed to have acquired a title by limitation against other claimants including riparian owners;<sup>332</sup> but the Texas Court of Civil Appeals has held that this section is not operative as against the rights of riparian landowners.<sup>333</sup> Various features of the riparian doctrine have been involved in other decisions of the Texas courts.<sup>334</sup>

The water appropriation statute includes the underflow of streams among waters subject to appropriation,<sup>335</sup> and the supreme court has stated that riparian waters include the underflow of streams.<sup>336</sup> The few court decisions relating to percolating waters have recognized the principle that such waters are the property of the owner of the overlying

<sup>332</sup> Tex. Vernon's Ann. Civ. Stats., art. 7592.

<sup>333</sup> *Freeland v. Peltier*, 44 S. W. (2d) 404, 407-408 (Tex. Civ. App. 1931).

<sup>334</sup> Navigable waters: *Barrett v. Metcalfe*, 12 Tex. Civ. App. 247, 254, 33 S. W. 758 (1896); *Bigham Bros. v. Port Arthur Canal & Dock Co.*, 91 S. W. 848, 852-853 (Tex. Civ. App. 1905); *Mott v. Boyd*, 116 Tex. 82, 111, 286 S. W. 458 (1926).

Spring source of watercourse: *Fleming v. Davis*, 37 Tex. 173, 194-195 (1872); *Watkins Land Co. v. Clements*, 98 Tex. 578, 584-585, 86 S. W. 733 (1905).

Limits of riparian land: *Watkins Land Co. v. Clements*, 98 Tex. 578, 585, 86 S. W. 733 (1905); *Matagorda Canal Co. v. Markham Irr. Co.*, 154 S. W. 1176, 1180 (Tex. Civ. App. 1913).

Use of water by riparian owner on nonriparian land: *Watkins Land Co. v. Clements*, 98 Tex. 578, 585, 86 S. W. 733 (1905); *Humphreys-Mexia Co. v. Arsenaux*, 116 Tex. 603, 610, 297 S. W. 225 (1927); *Texas Co. v. Burkett*, 117 Tex. 16, 25-26, 296 S. W. 273 (1927); *Fort Quitman Land Co. v. Mier*, 211 S. W. (2d) 340, 344 (Tex. Civ. App. 1948).

Storage of water: *Stacy v. Delery*, 57 Tex. Civ. App. 242, 248, 122 S. W. 300 (1909); *Chicago, R. I. & Gulf Ry. v. Tarrant County W. C. & I. Dist No. 1*, 123 Tex. 432, 448, 73 S. W. (2d) 55 (1934).

Appropriation of unappropriated water by riparian owner: *Mott v. Boyd*, 116 Tex. 82, 124, 286 S. W. 458 (1926).

City as riparian proprietor: *Grogan v. Brownwood*, 214 S. W. 532, 536-538 (Tex. Civ. App. 1919).

Prescription by riparian owner against downstream riparian owner: *Martin v. Burr*, 111 Tex. 57, 65-67, 228 S. W. 543 (1921).

Loss of riparian right: *Baker v. Brown*, 55 Tex. 377, 381 (1881); *Freeland v. Peltier*, 44 S. W. (2d) 404, 409 (Tex. Civ. App. 1931).

<sup>335</sup> Tex. Vernon's Ann. Civ. Stats., art. 7467.

<sup>336</sup> *Mott v. Boyd*, 116 Tex. 82, 111, 286 S. W. 458 (1926); *Texas Co. v. Burkett*, 117 Tex. 16, 28, 296 S. W. 273 (1927).

land.<sup>337</sup> The Texas Court of Civil Appeals in 1948 adhered to that principle, but held that such ownership does not include the right to intercept and waste percolating water to the detriment of an adjoining landowner, waste of natural resources being against the public policy of the State.<sup>338</sup>

Two statutes providing for the regulation of water wells, in order to prevent waste of water and pollution of ground-water supplies, under the administration of the Board of Water Engineers, have been in existence for a number of years.<sup>339</sup> In 1949 the legislature added to the water control and improvement district act a section authorizing the creation of underground water conservation districts, their purpose being the conservation, preservation, protection, and recharging and the prevention of waste of ground water in underground reservoirs or subdivisions thereof that have been designated by the Board of Water Engineers.<sup>340</sup> The district may issue permits to drill wells, but no landowner may be denied a permit to drill a well on his own land and produce water therefrom, subject however to the district's rules and regulations designed to prevent waste. The statute specifically recognizes the ownership and rights of the owner of land in ground water, subject to the rules and regulations of the district; and it specifically provides that the priorities and provisions of the law of surface water shall not apply to ground water.

The water appropriation act of 1917 authorized the Board of Water Engineers, on petition of any water user, to make a determination of the relative rights to the use of waters of a stream or other source of supply; that appeals might be taken to the courts from the Board's order, the order to be in force pending the determination of the appeal; and that the Board might create water districts and appoint water commissioners to distribute water to the users in accordance with its determinations.<sup>341</sup> The supreme court in 1921, in *Board of Water Engineers v. McKnight*,<sup>342</sup> held that those portions of the statute relating to determinations of rights were invalid as attempting to vest judicial powers in a branch of the executive department of the State without the express permission of the Constitution; an inquiry involving the most intricate

<sup>337</sup> *Houston & Texas Central Ry. v. East*, 98 Tex. 146, 149, 81 S. W. 279 (1904); *Texas Co. v. Giddings*, 148 S. W. 1142, 1144 (Tex. Civ. App. 1912); *Farb v. Theis*, 250 S. W. 290, 292 (Tex. Civ. App. 1923); *Texas Co. v. Burkett*, 117 Tex. 16, 29, 296 S. W. 273 (1927).

<sup>338</sup> *Cantwell v. Zinser*, 208 S. W. (2d) 577, 579 (Tex. Civ. App. 1948).

<sup>339</sup> Tex. Vernon's Ann. Civ. Stats., arts. 7600 to 7616; Vernon's Ann. Penal Code, art. 848a.

<sup>340</sup> Tex. Laws 1949, ch. 306, amending Laws 1925, ch. 25, to include § 3c (Vernon's Ann. Civ. Stats., art. 7880-3c).

<sup>341</sup> Tex. Laws 1917, ch. 88.

<sup>342</sup> *Board of Water Engineers v. McKnight*, 111 Tex. 82, 92-97, 229 S. W. 301 (1921).

questions of law and of fact that are presented in a determination of water rights, and resulting in the adjudication of property rights, being strictly judicial. The provisions of the statute relating to the determination of rights and distribution of water were omitted from the Revised Civil Statutes of 1925 and were thereby repealed.<sup>343</sup>

The Texas Supreme Court distinguished *Board of Water Engineers v. McKnight* in a decision rendered in 1945 in a controversy involving the constitutionality of statutes relating to the conservation of oil and gas, in which counsel had contended that the statutes in question conferred purely judicial duties upon an administrative body and, on the authority of the *McKnight* case, were therefore invalid.<sup>344</sup> The supreme court pointed out that the water legislation declared invalid in the *McKnight* case became effective June 19, 1917, whereas on August 21, 1917, there became effective a constitutional provision declaring the conservation and development of all natural resources to be public rights and duties and directing the legislature to pass all laws appropriate thereto.<sup>345</sup> Therefore, the validity of the water legislation was to be determined by the terms of the constitution in force when that legislation was enacted, prior to the adoption of the constitutional provision of August 21, 1917. The oil and gas statutes, on the other hand, were adopted after the constitutional provision in question became effective, and hence must be considered in the light of that provision and not under the provisions of the constitution as they existed when the water legislation of June 19, 1917, was enacted. It was held, therefore, that the decision in the *McKnight* case did not control with respect to the validity of the oil and gas statutes.

## Utah

All waters in the State, whether above or under the ground, are declared by statute to be the property of the public, subject to existing rights of use.<sup>346</sup> A right to the use of unappropriated water is initiated by making an application to the State Engineer; and when the holder of an approved application has shown to the satisfaction of the State Engineer that he has perfected his appropriation, he receives a certificate of appropriation which is prima facie evidence of the holder's right to the use of the water as specified in the certificate, subject to prior rights.<sup>347</sup> It is provided that in times of scarcity of water, the use for

<sup>343</sup> Vernon's Tex. Stats., 1936 Rev. Civ. Stats., Final Title, § 2, p. 1569.

<sup>344</sup> *Corzelius v. Harrell*, 143 Tex. 509, 511-514, 186 S. W. (2d) 961 (1945).

<sup>345</sup> Tex. Const., art. XVI, § 59a.

<sup>346</sup> Utah Code Ann., 1943, § 100-1-1.

<sup>347</sup> Utah Code Ann., 1943, §§ 100-3-2 to 100-3-18. The statute contains a provision to the effect that before an application to appropriate water from a navigable lake or stream contemplating the removal of salts and other minerals therefrom may be approved, the applicant must file with the State Engineer a

domestic purposes without unnecessary waste shall have preference over all other uses, and that agricultural purposes shall have preference over all other purposes except domestic use.<sup>348</sup> If the holder of an appropriative right abandons or ceases to use the water for a period of five years, the right ceases; but the holder may be granted extensions of time by the State Engineer, upon a showing of reasonable cause for nonuse of the water, after publication of the application and hearing of protests.<sup>349</sup>

The statutory procedure is the exclusive method of appropriating water in Utah. There was some question as to this as the result of a statement made in 1935 in the prevailing opinion in *Wrathall v. Johnson*,<sup>350</sup> even though that statement appears to have been dictum; but shortly after the rendering of that decision, the legislature amended the appropriation statute to provide explicitly that no appropriation of water could be made and no right to the use thereof initiated otherwise than in the manner provided in the statute.<sup>351</sup> The Utah Supreme Court stated in 1948, with reference to a use of water first made in 1925 or 1926, that at that time the only way in which the right of use could be initiated was by filing an application with the State Engineer, and the only way in which the water could be appropriated was through the statutory procedure.<sup>352</sup> And in 1949 the court stated that the 1935 amendment, "enacted immediately after the Wrathall decision and undoubtedly with this holding in mind, leaves no doubt that thereafter no right to the use of the unappropriated public waters of this state can be acquired without complying with the statutory requirements."<sup>353</sup> The question as to whether title to a water right might be acquired solely by adverse use, or after abandonment by a prior appropriator without making a new statutory appropriation, also was the subject of controversy;<sup>354</sup> and again the legislature acted by providing that the statute relating to abandonment or forfeiture of the appropriative right should be applicable whether the unused or abandoned water is per-

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copy of a contract for the payment of royalties to the State: Utah Code Ann. 1943, § 100-3-8. The enforcement of this requirement with respect to an application to appropriate water from Great Salt Lake for the purpose of recovering salt was approved by the supreme court: *Deseret Livestock Co. v. State*, 110 Utah 239, 243-245, 171 Pac. (2d) 401 (1946).

<sup>348</sup> Utah Code Ann., 1943, § 100-3-21.

<sup>349</sup> Utah Code Ann., 1943, § 100-1-4.

<sup>350</sup> *Wrathall v. Johnson*, 86 Utah 50, 108-120, 40 Pac. (2d) 755 (1935).

<sup>351</sup> Utah Laws 1935, ch. 105; Utah Code Ann., 1943, § 100-3-1.

<sup>352</sup> *Smith v. Sanders*, 112 Utah 517, 520, 189 Pac. (2d) 701 (1948).

<sup>353</sup> *Hanson v. Salt Lake City*, — Utah —, 205 Pac. (2d) 255, 260 (1949).

See also *Riordan v. Westwood*, — Utah —, 203 Pac. (2d) 922, 927 (1949).

<sup>354</sup> *Hammond v. Johnson*, 94 Utah 20, 28-33, 66 Pac. (2d) 894 (1937), 94 Utah 35, 39-40, 75 Pac. (2d) 164 (1938); *Adams v. Portage Irr., Res. & Power Co.*, 95 Utah 1, 16, 72 Pac. (2d) 648 (1937), 95 Utah 20, 21-22, 81 Pac. (2d) 368 (1938).

mitted to run to waste or is used by others without right, and that no right to the use of water either appropriated or unappropriated could be acquired by adverse use or adverse possession.<sup>355</sup>

The doctrine of prior appropriation has been the law in Utah from the time the Mormon pioneers entered Great Salt Lake Basin in 1847, to the exclusion of any recognition of riparian rights. It was many years after the first settlement and use of water before the Territorial supreme court was called upon to recognize and apply the doctrine of appropriation,<sup>356</sup> although in the meantime that doctrine had been adopted and applied by custom in the various irrigation communities.<sup>357</sup> And it was not until 1891 that the supreme court had occasion to express its repudiation of the doctrine of riparian rights, in emphatic terms, as utterly inapplicable to the conditions within the Territory and as never having been recognized by the legislature or by the practices and usages of the inhabitants.<sup>358</sup> "In Utah the doctrine of prior appropriation for beneficial use is, and always has been, the basis of acquisition of water rights."<sup>359</sup>

Waters in definite underground streams have been held consistently to be the subject of appropriation.<sup>360</sup> With respect to other ground waters, however, the decisions of the supreme court have passed through the stages of recognizing first the rule of absolute ownership of percolating water as against appropriations initiated after the water-bearing lands had passed to private ownership, but of holding that

<sup>355</sup> Utah Laws 1939, ch. 111; Code Ann., 1943, §§ 100-1-4 and 100-3-1.

<sup>356</sup> *Crane v. Winsor*, 2 Utah 248, 253 (1878); *Munroe v. Ivie*, 2 Utah 535, 537-538 (1880); *Lehi Irr. Co. v. Moyle*, 4 Utah 327, 340, 9 Pac. 867 (1886); *Elliott v. Whitmore* (Utah), 24 Pac. 673 (1890).

<sup>357</sup> The earliest legislation concerning water made grants of water privileges and authorized public officials to make grants: Laws and Ordinances of the State of Deseret (Utah), Compilation 1851, Shepard Book Co., Salt Lake City, Utah, 1919. A statute passed in 1880 recognized accrued rights to water acquired by appropriation or adverse use: Utah Laws 1880, ch. XX. The first statutory authorization for the future appropriation of water was provided by Laws 1897, p. 219, *et seq.*

<sup>358</sup> *Stowell v. Johnson*, 7 Utah 215, 225-226, 26 Pac. 290 (1891). See also *Salt Lake City v. Salt Lake City Water & Electrical Power Co.*, 25 Utah 456, 464, 71 Pac. 1069 (1903); *State v. Rolio*, 71 Utah 91, 101-107, 262 Pac. 987 (1927); *Wrathall v. Johnson*, 86 Utah 50, 93-94, 40 Pac. (2d) 755 (1935); *Whitmore v. Salt Lake City*, 89 Utah 387, 398, 57 Pac. (2d) 726 (1936); *Spanish Fork West Field Irr. Co. v. District Court*, 99 Utah 527, 534, 104 Pac. (2d) 353 (1940); *Moyle v. Salt Lake City*, 111 Utah 201, 216, 176 Pac. (2d) 882 (1947); *Clark v. Nash*, 198 U. S. 361, 370 (1905).

<sup>359</sup> *Gunnison Irr. Co. v. Gunnison Highland Canal Co.*, 52 Utah 347, 354, 174 Pac. 852 (1918).

<sup>360</sup> *Willow Creek Irr. Co. v. Michaelson*, 21 Utah 248, 254, 60 Pac. 943 (1900); *Herriman Irr. Co. v. Keel*, 25 Utah 96, 110, 69 Pac. 719 (1902); *Howcroft v. Union & Jordan Irr. Co.*, 25 Utah 311, 316, 71 Pac. 487 (1903); *Whitmore v. Utah Fuel Co.*, 26 Utah 488, 497-498, 73 Pac. 764 (1903); *Chandler v. Utah Copper Co.*, 43 Utah 479, 486, 135 Pac. 106 (1913).

water taken from land on the public domain is subject to appropriation, whether it is percolating or stream water;<sup>322</sup> then the rule of correlative rights as between owners of land overlying a common artesian basin;<sup>323</sup> and finally the doctrine of appropriation of artesian water.<sup>324</sup>

In 1935 the legislature amended the statute relating to the appropriation of water in order to bring the acquisition and administration of rights to the use of all ground waters under the State Engineer,<sup>325</sup> and at subsequent sessions has further amended and enlarged the applicable sections of the law. Rights to the use of any unappropriated ground waters may be acquired only as provided by the statute, the first step being the making of an application to the State Engineer, as in case of appropriations from surface supplies. Claimants of rights are required to file notice of their claims with the State Engineer.<sup>326</sup> The right of replacement of water may be exercised by a junior appropriator of ground water where the appropriation may diminish the quantity or impair the quality of ground water already appropriated.<sup>327</sup> The State Engineer may hold hearings to determine if ground waters are inadequate for existing claims, a supply found to be inadequate to be divided in accordance with the respective rights of the claimants.<sup>328</sup> The State Engineer is authorized to plug, repair, or otherwise control artesian wells that are wasting public water.<sup>329</sup>

In 1949 the Utah Supreme Court had for consideration a proposal to appropriate water from a small spring area on private land, which water was said to be widely diffused through the soil through which it slowly percolated, the course of which could not be traced to any lands other than those on which the water was found, and which in its natural state produced plant life and thereby beneficially affected the land.<sup>330</sup> Such water, said the court, is percolating water, a part of the

<sup>322</sup> *Sullivan v. Northern Spy Min. Co.*, 11 Utah 438, 441, 40 Pac. 709 (1895); *Crescent Min. Co. v. Silver King Min. Co.*, 17 Utah 444, 451, 54 Pac. 244 (1898); *Willow Creek Irr. Co. v. Michaelson*, 21 Utah 248, 254, 257, 60 Pac. 943 (1900); *Herriman Irr. Co. v. Keel*, 25 Utah 96, 109-110, 69 Pac. 719 (1902); *Garns v. Rollins*, 41 Utah 260, 265-266, 125 Pac. 867 (1912); *Stokey v. Green*, 53 Utah 311, 317-318, 178 Pac. 586 (1919); *Holman v. Christensen*, 73 Utah 389, 395, 274 Pac. 457 (1929).

<sup>323</sup> *Horns v. Utah Oil Refining Co.*, 59 Utah 279, 301-305, 202 Pac. 815 (1921); *Glover v. Utah Oil Refining Co.*, 62 Utah 174, 177-181, 218 Pac. 955 (1923); *Utah Copper Co. v. Stephen Heyes Estate*, 83 Utah 545, 555-556, 31 Pac. (2d) 624 (1934).

<sup>324</sup> *Wrathall v. Johnson*, 86 Utah 50, 103-106, 126-127, 40 Pac. (2d) 755 (1935); *Justesen v. Olson*, 86 Utah 158, 170-172, 176-177, 40 Pac. (2d) 802 (1935); *Hanson v. Salt Lake City*, — Utah —, 205 Pac. (2d) 255, 258 (1949).

<sup>325</sup> Utah Laws 1935, ch. 105.

<sup>326</sup> Utah Code Ann., 1949 Cum. Supp., §§ 100-5-12 and 100-5-13.

<sup>327</sup> Utah Code Ann., 1943, § 100-3-23.

<sup>328</sup> Utah Code Ann., 1943, § 100-5-1.

<sup>329</sup> Utah Laws 1945, ch. 136; Code Ann., 1949 Cum. Supp., § 100-2-21.

<sup>330</sup> *Riordan v. Westwood*, — Utah —, 203 Pac. (2d) 922, 929-930 (1949).

soil; and not being public water, a right to the use thereof cannot be acquired by appropriation under the appropriation statute. But the court stated that waters, even though diffused and percolating through the soil, which do not sustain plant life or otherwise benefit the land, "are not necessarily a part thereof and to the end that they might be placed to a beneficial use should belong to the public and be subject to appropriation the same as other waters." Hence, as it seemed probable that there was more than sufficient water in this spring area to sustain the plant life, it was held that the application to appropriate excess water must be approved.

Procedure for the determination of water rights is provided by statute in suits filed by the State Engineer upon petition of water users or by private parties.<sup>370</sup> In suits filed by the State Engineer, and in general determinations begun by private parties, the State Engineer provides the court with lists of all claimants so far as known, and makes hydrographic surveys and proposed determinations of water rights, the final judgment of the court determining and establishing the rights being entered after the hearing of objections by claimants. The State Engineer has general administrative supervision of the waters of the State.<sup>371</sup> He may appoint water commissioners for the distribution of water from any source of supply, after consultation with the water users and in accordance with their recommendations if they can agree.<sup>372</sup> He also has authority to establish water districts<sup>373</sup> and to define ground-water administrative areas.<sup>374</sup>

### Washington

The law regulating the appropriation of water provides that subject to existing rights, all waters within the State belong to the public, and that any right to the use thereof may be acquired by appropriation in the manner provided in the statute and not otherwise.<sup>375</sup> The administration of the act is vested in an engineer designated as the State Supervisor of Hydraulics,<sup>376</sup> who is an assistant director in the Department of Conservation and Development. An intending appropriator must apply to the State Supervisor of Hydraulics for a permit to make the appropriation; and when the permittee has made a satisfactory showing that his appropriation has been perfected, he receives a certificate of appropriation.<sup>377</sup>

<sup>370</sup> Utah Code Ann., 1943, and 1949 Cum. Supp., §§ 100-4-1 to 100-4-24.

<sup>371</sup> Utah Code Ann., 1943, § 100-2-1.

<sup>372</sup> Utah Code Ann., 1943, § 100-5-1.

<sup>373</sup> Utah Code Ann., 1943, § 100-2-1.

<sup>374</sup> Utah Code Ann., 1943, § 100-5-1.

<sup>375</sup> Wash. Rem. Rev. Stats., § 7351.

<sup>376</sup> Wash. Rem. Rev. Stats., § 7355.

<sup>377</sup> Wash. Rem. Rev. Stats., §§ 7378 to 7387, 7390.



Any person may condemn an inferior use of water for a superior use.<sup>878</sup> The court in the condemnation proceedings is to determine what use will be for the greatest public benefit, and that use is to be deemed a superior one. However, the statute further provides that no person may be deprived of the use of water reasonably necessary for the irrigation of his land then under irrigation, by the most economical method of artificial irrigation, in favor of another irrigation use, the court to determine the most economical method. The Supreme Court of Washington allowed the condemnation, primarily for domestic purposes, of a water supply on another's land not then being used by the landowner, pursuant to this statute, holding that the use of water for domestic purposes is a public purpose when the domestic use desired is the foundation of an agricultural enterprise.<sup>879</sup>

The riparian doctrine has been recognized repeatedly in the court decisions of Washington. Very early decisions of the supreme court acknowledged the validity of appropriations of water on public lands of the United States pursuant to local laws and customs, under authority granted by Acts of Congress;<sup>880</sup> and in a number of subsequent cases the supreme court, in stating the appropriative principle, carefully restricted its applicability to the public domain.<sup>881</sup> Adoption of the riparian principle likewise appeared in early cases,<sup>882</sup> qualified by the recognition of prior appropriations on public lands.<sup>883</sup> In 1897 the Washington Supreme Court held that riparian rights existed in the arid as well as the humid portions of the State, and that such rights attached to lands passing to private ownership at the inception of title thereto and would be protected as against subsequent appropriations.<sup>884</sup> But the time element works in favor of appropriative rights likewise; that is, an appropriation of water, validly acquired, is superior to riparian

<sup>878</sup> Wash. Rem. Rev. Stats., § 7354.

<sup>879</sup> *State ex rel. Andersen v. Superior Court*, 119 Wash. 406, 410-411, 205 Pac. 1051 (1922).

<sup>880</sup> *Thorpe v. Tenem Ditch Co.*, 1 Wash. 566, 569-570, 20 Pac. 588 (1889); *Geddis v. Parrish*, 1 Wash. 587, 589-592, 21 Pac. 314 (1889); *Isaacs v. Barber*, 10 Wash. 124, 128-132, 38 Pac. 871 (1894).

<sup>881</sup> See *Benton v. Johncox*, 17 Wash. 277, 289, 49 Pac. 495 (1897); *Sander v. Bull*, 76 Wash. 1, 5, 135 Pac. 489 (1913); *Hough v. Taylor*, 110 Wash. 361, 364-365, 188 Pac. 458 (1920); *in re Doan Creek*, 125 Wash. 14, 20, 215 Pac. 343 (1923).

<sup>882</sup> *Crook v. Hewitt*, 4 Wash. 749, 750, 754, 31 Pac. 28 (1892); *Shotwell v. Dodge*, 8 Wash. 337, 339, 36 Pac. 254 (1894); *Rigney v. Tacoma Light & Water Co.*, 9 Wash. 576, 582-583, 38 Pac. 147 (1894).

<sup>883</sup> *Isaacs v. Barber*, 10 Wash. 124, 128-129, 38 Pac. 871 (1894).

<sup>884</sup> *Benton v. Johncox*, 17 Wash. 277, 279-283, 288-290, 49 Pac. 495 (1897). Reaffirmed in *Nesalhaus v. Walker*, 45 Wash. 621, 623-624, 88 Wash. 1032 (1907). See *In re Doan Creek*, 125 Wash. 14, 20, 215 Pac. 343 (1923).

rights of lands entered after the date of the appropriation.<sup>385</sup> The common-law doctrine has been modified by imposing upon the riparian claimant the necessity of beneficial use of the water, and by subjecting to appropriation for use on nonriparian land the waters of nonnavigable streams in excess of the quantity that can be used beneficially, either directly or prospectively, within a reasonable time, on or in connection with riparian lands.<sup>386</sup> The supreme court has stated that "The common-law rule of riparian rights has been stripped of some of its rigors \* \* \*,"<sup>387</sup> and that "For years past, the trend of our decisions and the tenor of our legislation have been to restrict and narrow the common law of riparian rights \* \* \*."<sup>388</sup> As a result, the advantage of position of riparian lands with reference to water rights has been materially reduced.<sup>389</sup>

The supreme court stated in an early decision that an underground stream with defined course and boundaries would be protected to the same extent as such a stream on the surface, but that such rule would not apply to water percolating through sand or gravel the limits of which were not defined.<sup>390</sup> Subsequently the court adopted a rule of reasonable use and correlative rights in percolating waters as among

<sup>385</sup> *In re Doan Creek*, 125 Wash. 14, 20, 215 Pac. 343 (1923); *Weitensteiner v. Engdahl*, 125 Wash. 106, 108-116, 215 Pac. 378 (1923); *In re Alpowa Creek*, 129 Wash. 9, 13, 224 Pac. 29 (1924); *Hunter Land Co. v. Laugenour*, 140 Wash. 558, 569-571, 250 Pac. 41 (1926); *In re Sinalhekin Creek*, 162 Wash. 635, 642-643, 299 Pac. 649 (1931).

<sup>386</sup> *Brown v. Chase*, 125 Wash. 542, 549, 553, 217 Pac. 23 (1923). See also *Proctor v. Sim*, 134 Wash. 606, 616-619, 236 Pac. 114 (1925); *State v. American Fruit Growers*, 135 Wash. 156, 161, 237 Pac. 498 (1925); *Hunter Land Co. v. Laugenour*, 140 Wash. 558, 569-571, 250 Pac. 41 (1926).

<sup>387</sup> *In re Alpowa Creek*, 129 Wash. 9, 13, 224 Pac. 29 (1924).

<sup>388</sup> *Proctor v. Sim*, 134 Wash. 606, 616, 236 Pac. 114 (1925).

<sup>389</sup> Holdings and statements concerning the nature and extent of the riparian right, other than as noted above, are included in various cases of which typical ones are here noted. Reasonable use of water as among riparian owners: *McEvoy v. Taylor*, 56 Wash. 357, 358, 105 Pac. 851 (1909). Impounding of water: *Tacoma Eastern R. R. v. Smithgall*, 58 Wash. 445, 452, 108 Pac. 1091 (1910). Right to overflows of streams; impounding of water; applicability of Desert Land Act: *Still v. Palouse Irr. & Power Co.*, 64 Wash. 606, 610-613, 117 Pac. 466 (1911). Riparian lands: *Miller v. Baker*, 68 Wash. 19, 20-22, 122 Pac. 604 (1912). Relation to navigability of waters: *State ex rel. Ham, Yearsley & Ryrie v. Superior Court*, 70 Wash. 442, 451-453, 126 Pac. 945 (1912). Impounding of water: *Sumner Lumber & Shingle Co. v. Pacific Coast Power Co.*, 72 Wash. 631, 640-641, 131 Pac. 220 (1913). Nonnavigable waters; applicability of Desert Land Act: *Bernot v. Morrison*, 81 Wash. 538, 559-560, 143 Pac. 104 (1914). Riparian lands; apportionment of water: *Mally v. Weidensteiner*, 88 Wash. 398, 402, 153 Pac. 342 (1915). Right to overflows of streams: *Longmire v. Yakima Highlands Irr. & Land Co.*, 95 Wash. 302, 305-306, 163 Pac. 782 (1917). Riparian lands: *Yearsley v. Cater*, 149 Wash. 285, 288-289, 270 Pac. 804 (1928).

<sup>390</sup> *Meyer v. Tacoma Light & Water Co.*, 8 Wash. 144, 147, 35 Pac. 601 (1894).

owners of overlying lands;<sup>391</sup> and held in 1935 that in line with that doctrine, a city that had excavated a ditch in order to operate more efficiently a gravel pit, thereby cutting off percolating water supplying neighboring lands, was making a reasonable use of its own property and was not liable for the resulting effect on the ground-water supply.<sup>392</sup>

The legislature in 1945 enacted a statute for the express purpose of extending the application of the surface-water statutes to the appropriation and beneficial use of ground waters, and amended the act in 1947 and 1949.<sup>393</sup> Ground waters are defined as all bodies of water that exist beneath the land surface and that there saturate the interstices of rocks or other materials—that is, the waters of underground streams or channels, artesian basins, underground reservoirs, lakes or basins, the existence or boundaries of which may be reasonably established or ascertained. The act recognizes a distinction between water that exists in underground storage wholly because of natural processes, which it terms “natural ground water”, and water that is made available in underground storage artificially, either intentionally or incidentally to irrigation, which is designated as “artificially stored ground water.” Subject to existing rights, all natural ground waters, and all artificial ground waters not abandoned or forfeited, are made subject to appropriation. Exempted are withdrawals of ground waters for stock-watering purposes, or for the watering of lawns or noncommercial gardens not exceeding one-half acre in area, or for single or group domestic uses or industrial purposes not exceeding 5,000 gallons per day; but the party using ground water not exceeding such quantity may elect to make a formal appropriation thereof under the procedure provided in the act for withdrawals of ground water in excess of that quantity. Provision is made for the filing of declarations of claims of preexisting vested rights and for the issuance of certificates of appropriation with respect thereto. The Supervisor of Hydraulics has authority to designate ground-water areas or subareas, and separate depth zones therein, after hearings, and to regulate withdrawals of water when the supply is inadequate to supply all rights. A proceeding is provided for the determination by the Supervisor of abandonment of ground-water rights where the withdrawal and use of the water has been discontinued for a period of five years.

The Supervisor of Hydraulics is authorized to initiate proceedings for the determination of water rights, upon petition of one or more claimants, or when in his judgment the interest of the public will be served thereby.<sup>394</sup> A statement is filed with the court, which is required

<sup>391</sup> *Patrick v. Smith*, 75 Wash. 407, 414–415, 134 Pac. 1076 (1913).

<sup>392</sup> *Evans v. Seattle*, 182 Wash. 450, 457–460, 47 Pac. (2d) 984 (1935).

<sup>393</sup> Wash. Laws 1945, ch. 263; Laws 1947, ch. 122; Laws 1949, ch. 63; Wash. Rem. Rev. Stats., Supps. 1945, 1947, and 1949, §§ 7400–1 to 7400–19.

<sup>394</sup> Wash. Rem. Rev. Stats., §§ 7364 to 7377.

to refer the proceedings to the Supervisor for the taking of testimony as referee. When the transcript and report have been filed, the court hears the matter and renders its decree. Supervision of public waters and administration of the provisions of the water appropriation statutes are vested in the Supervisor of Hydraulics, who has supervision over the distribution of water according to rights and priorities.<sup>395</sup> He is authorized to designate water districts from time to time as required, and to appoint watermasters therefor upon petition by interested parties. He is also required to appoint stream patrolmen for designated streams the water rights of which have been adjudicated, upon application of interested parties and approval of the district watermaster if one has been appointed for such area, for whatever periods of time local conditions justify.

### Wyoming

The constitution of Wyoming declares that the control of water must be in the State, which in providing for its use shall guard equally all the various interests involved.<sup>396</sup> It declares also that the water of all natural streams, springs, lakes or other collections of still water within the State are the property of the State; that priority of appropriation for beneficial uses shall give the better right; and that no appropriation shall be denied except when such denial is demanded by the public interests.<sup>397</sup> The constitution provides for the appointment of a State Engineer; for the division of the State by the legislature into four water divisions and the appointment of superintendents thereof; and for a Board of Control to be composed of the State Engineer and superintendents of the water divisions, the State Engineer being president.<sup>398</sup> The supervision of the waters of the State and of their appropriation, distribution, and diversion is vested by the constitution in the Board of Control, its decisions being made subject to review by the courts.<sup>399</sup>

An appropriative right is initiated by making application to the State Engineer for a permit to make the appropriation; and the final step, after the appropriation has been perfected in accordance with the permit, is the adjudication of the right by the Board of Control and the issuance by the Board of a certificate of appropriation.<sup>400</sup> Since the adoption of the present water-appropriation statute in 1890, at the first session of the State legislature, compliance with the procedure so provided for the acquisition of water rights is a condition precedent to

<sup>395</sup> Wash. Rem. Rev. Stats., §§ 7351-1 to 7351-4 and 7355 to 7363.

<sup>396</sup> Wyo. Const., art. I, § 31.

<sup>397</sup> Wyo. Const., art. VIII, §§ 1 and 3.

<sup>398</sup> Wyo. Const., art. VIII, §§ 2, 4, and 5.

<sup>399</sup> Wyo. Const., art. VIII, § 2.

<sup>400</sup> Wyo. Comp. Stats., 1945, §§ 71-238 to 71-250.

the making of a valid appropriation.<sup>401</sup> Failure to make use of appropriated water for five successive years is to be considered an abandonment of the same, and works a forfeiture of the water right.<sup>402</sup> Procedure is provided for the declaration of such abandonment by the Board of Control after a hearing, on the initiative of any water user who might be affected thereby. The declaration is filed in court; if no objection is filed, judgment affirming the Board's order is issued; if there is objection, the water user who initiated the proceeding becomes plaintiff and the objector defendant, and the issue is tried as to whether or not the water right has in fact been abandoned.<sup>403</sup>

The water appropriation statute defines preferred uses as including rights for domestic and transportation purposes, and these include: First, drinking; second, municipal; third, steam engines and general railway use; and fourth, culinary, laundry, bathing, refrigeration, and heating plants. Likewise, the use of water for irrigation is to be preferred to any use through "turbine or impulse water wheels" for power purposes. Existing rights that are not preferred may be condemned to supply water for preferred uses.<sup>404</sup> Procedure is provided for changing a use to a preferred use under the direction of the Board of Control, just compensation to be paid if the change of use is approved.<sup>405</sup>

Riparian rights never have been recognized in Wyoming. The unsuitability of the common-law doctrine to local conditions, and the fact that such rule never had obtained in that State, which on the contrary had recognized a "different principle better adapted to the

<sup>401</sup> *Wyoming Hereford Ranch v. Hammond Packing Co.*, 33 Wyo. 14, 30-38, 236 Pac. 764 (1925). See *Campbell v. Wyoming Development Co.*, 55 Wyo. 347, 388, 395, 100 Pac. (2d) 124 (1940). In 1949, in *Laramie Rivers Co. v. LeVasseur*, 65 Wyo. 414, 431, 202 Pac. (2d) 680 (1949), the court stated, citing the *Wyoming Hereford* case: "We have heretofore held that no water right may be initiated under our present laws except pursuant to a permit; that hence the requirement of such permit is mandatory."

<sup>402</sup> Wyo. Comp. Stats., 1945, § 71-701.

<sup>403</sup> Wyo. Comp. Stats., 1945, §§ 71-702 to 71-707. The statute has been construed in several decisions. See *Wyoming Hereford Ranch v. Hammond Packing Co.*, 33 Wyo. 14, 23-27, 236 Pac. 764 (1925); *Van Tassel Real Estate & Livestock Co. v. Cheyenne*, 49 Wyo. 333, 349-355, 54 Pac. (2d) 906 (1936); *Horse Creek Conservation Dist. v. Lincoln Land Co.*, 54 Wyo. 320, 329-345, 92 Pac. (2d) 572 (1939); *Campbell v. Wyoming Development Co.*, 55 Wyo. 347, 400-404, 100 Pac. (2d) 124 (1940). In such proceeding the burden of proving the issue of abandonment rests upon the one who petitions to have the water right declared abandoned: *Ramsay v. Gottsche*, 51 Wyo. 516, 529-530, 69 Pac. (2d) 535 (1937). See also *Laramie Rivers Co. v. LeVasseur*, 65 Wyo. 414, 449, 202 Pac. (2d) 680 (1949). It was held in *Ramsay v. Gottsche*, *supra*, at 51 Wyo. 532, and in *Scherck v. Nichols*, 55 Wyo. 4, 23-24, 95 Pac. (2d) 74 (1939), that abandonment must be voluntary, and does not result if nonuse is caused by facts not under the appropriator's control.

<sup>404</sup> Wyo. Comp. Stats., 1945, § 71-402.

<sup>405</sup> Wyo. Comp. Stats., 1945, § 71-403. See *Newcastle v. Smith*, 28 Wyo. 371, 205 Pac. 302 (1922).

material conditions of this region"—that is, the doctrine of prior appropriation—were emphasized by the Supreme Court of Wyoming in the decision rendered in *Moyer v. Preston* in 1896.<sup>406</sup> The court stated that it inclined strongly to the view that had been expressed some years before by the Supreme Court of Colorado<sup>407</sup> to the effect that the right of prior appropriation, and the obligation to protect it, had existed prior to any legislation on the subject.

The supreme court held in 1919 that the constitutional declaration of public waters included natural but not artificial springs, and that a spring developed artificially, and supplied by percolating waters, is not subject to appropriation but is the private property of the landowner.<sup>408</sup>

The legislature in 1947 enacted a law extending the principle of prior appropriation to rights to the use of ground waters.<sup>409</sup> Exempted are developments solely for domestic, culinary, or stock use on a ranch or farm, and irrigation of lawns and gardens not exceeding four acres in area. Claimants of ground-water rights antedating the enactment of the statute are required to file statements of their claims with the State Engineer on or before December 31, 1950.<sup>410</sup> Appropriations after the passage of the act are made by developing the ground water and filing with the State Engineer registrations of the wells or other means of obtaining the water. After the State Engineer has determined the water-bearing capacity of an underground formation, the Board of Control is authorized to adjudicate the water rights thereto and to issue certificates of appropriation based upon priority of appropriation. The procedure for declaring abandonments of surface-water rights is made applicable to ground waters.

Statutory adjudications of water rights are initiated and made by the Board of Control.<sup>411</sup> The State Engineer in the original adjudication of a stream makes a hydraulic survey, and the water division superintendent takes testimony with respect to claims of water rights. The record is transmitted to the Board of Control, which enters an order determining and establishing the priorities, each party whose right is thus adjudicated being issued a certificate. Any aggrieved

<sup>406</sup> *Moyer v. Preston*, 6 Wyo. 308, 318-319, 44 Pac. 845 (1896). See also *Farm Investment Co. v. Carpenter*, 9 Wyo. 110, 122, 61 Pac. 258 (1900). The United States Supreme Court, in *Wyoming v. Colorado*, 259 U. S. 419, 458-459 (1922), stated with regard to the litigant States: "The common-law rule respecting riparian rights in flowing water never obtained in either State."

<sup>407</sup> *Coffin v. Left Hand Ditch Co.*, 6 Colo. 443, 446 (1882).

<sup>408</sup> *Hunt v. Laramie*, 26 Wyo. 160, 168-169, 181 Pac. 137 (1919).

<sup>409</sup> Wyo. Laws 1947, ch. 107; Comp. Stats., 1949 Cum. Supp., §§ 71-408 to 71-420.

<sup>410</sup> By amendment of § 5, ch. 107, Wyo. Laws 1947, the filing time was extended to December 31, 1950: Wyo. Laws 1949, ch. 22.

<sup>411</sup> Wyo. Comp. Stats., 1945, §§ 71-203 to 71-216, 71-224 to 71-237. and 71-256 to 71-263.

party may appeal to the district court. The final orders or decrees of the Board in the adjudication of water rights are conclusive, subject to procedural provisions of law relating to rehearings and reopening of orders or decrees, and subject to the right of appeal to the courts.<sup>412</sup> The Wyoming Supreme Court held this statutory determination of water rights to be a valid exercise of legislative authority, the power of the Board being quasi-judicial only, and properly conferred upon executive officers.<sup>413</sup> This "Wyoming method" of determining water rights by an administrative agency acting in a quasi-judicial capacity, without a court hearing unless an aggrieved party appeals to the court, was adopted by the legislature of Nebraska and was held constitutional by the supreme court of that State, and was also adopted in Texas but held invalid there.<sup>414</sup>

Pursuant to constitutional mandate,<sup>415</sup> the legislature divided the State into four water divisions and provided for the appointment of superintendents thereof,<sup>416</sup> who together with the State Engineer constitute the Board of Control. The Board of Control has the responsibility of creating water districts within the water divisions, each district having a water commissioner. Each division superintendent has general control of the water commissioners within his division, and under the general supervision of the State Engineer, has charge of the distribution of water according to rights of appropriation.<sup>417</sup>

<sup>412</sup> Wyo. Comp. Stats., 1945, § 71-258.

<sup>413</sup> *Farm Investment Co. v. Carpenter*, 9 Wyo. 110, 132-135, 143, 61 Pac. 258 (1900).

<sup>414</sup> The Nebraska Supreme Court considered the validity of the procedure at length and upheld it, in *Crawford Co. v. Hathaway*, 67 Nebr. 325, 365-368, 93 N. W. 781 (1903). The Texas Supreme Court, in *Board of Water Engineers v. McKnight*, 111 Tex. 82, 92-97, 229 S. W. 301 (1921), ruled similar legislation invalid as being in conflict with the constitution of that State in effect when the legislation was enacted. However, in 1945, in *Corzelius v. Harrell*, 143 Tex. 509, 511-514, 186 S. W. (2d) 961 (1945), the Texas Supreme Court pointed out that a constitutional provision authorizing legislation for the conservation and development of natural resources was not in effect when the water statute was enacted but was in effect prior to the enactment of legislation for the control of oil and gas; hence the *McKnight* case did not control the validity of the oil and gas legislation, which was held constitutional.

<sup>415</sup> Wyo. Const., art. VIII, § 4.

<sup>416</sup> Wyo. Comp. Stats., 1934, §§ 71-101 and 71-102.

<sup>417</sup> Wyo. Comp. Stats., 1945, §§ 71-103 to 71-108, and 71-301 to 71-309.