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GOVERNMENT OF MAHARASHTRA  
IRRIGATION & POWER DEPARTMENT



# REPORT OF THE SOIL SURVEY

OF THE AREAS COMMANDED BY

## *Bhima Project*

IN SHOLAPUR DISTRICT  
OF MAHARASHTRA STATE

VOLUME I



By

**DR. D. G. KULKARNI.**

M. Ag., Ph. D.

DEPUTY DIRECTOR,  
SOIL SURVEY ORGANISATION, POONA.

(IN COLLABORATION WITH STAFF)

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Dr. D.G. Kulkarni,  
M. Ag. ; Ph. D.  
Deputy Director,  
Soil Survey Organisation,  
( In Collaboration With Staff. )

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Report of Soil Surveys of the areas commanded  
by the Bhima Canals in Sholapur District of  
Maharashtra State.

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Introduction :

The area in Sholapur District lies in the heart of Famine Stricken region in low rainfall belt of 23". The scarcity conditions arise almost every year in some part or the other. The only ghat fed river flowing in the Sholapur District with sizeable water potential is Bhima, waters from which are to be availed for irrigation in adjoining scarcity area in Madha, Mohol and Pandharpur Talukas of Sholapur District.

The project provides for the following works.

- i) Dam at Ujjani on Bhima river.
- ii) Storage at Phagane on Pawana river.
- iii) Left and Right Bank Canals of 77 and 106 miles length respectively.

The gross area under the command in the Pawana valley is 23000 acres and that under the Bhima canals - Left and Right bank canals together works out to about 4.9 lakh acres. The areas being under the semi-arid conditions, the development of soils is poor resulting in poor cropping in the area with very low yields.

2. Special features of the area :

1. The annual rainfall in the commanded area varies from 12 to 23 inches and is highly irregular. Rainfed agriculture in the area is a great gamble resulting into very low yields of crops with chronic famine conditions.

2. The areas being in the semi arid region, the soils in general are not well developed with the result that the soil cover over about 15% of gross area is not adequate for proper development of crops under the erratic conditions of rainfall.

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3. Seasonal irrigation from the existing Nira Right Bank Canal has been in operation for the part areas under command of the Right Bank Canal and partly as a result there of the number of wells in operation have been comparatively more i.e. about 9 wells per Square mile. Besides canal irrigation, tank and well irrigation are in progress to a small extent and cultivators are familiar with irrigated farming. The development of irrigation in the proposed area would soon be effected.

4. There is only a small fringe of deep soil along the river or nala banks which is likely to cause an obstruction to subsoil flow but could be remedied economically and is not likely to pose a problem.

5. Being virgin soils with high potentials the response to irrigation is expected to be very marked resulting into high yields of the newly introduced cropping and thus causing marked improvement in the economic conditions of the Agriculturists in the areas commanded by the two canals.

6. Sources of communications in the areas commanded by the two canals exist on a fairly good scale as also the marketing centers. Development of irrigation in the area is expected to be rapid.

7. Due to the light areas being about 32%, the contribution of water to subsoil is expected to be high. The subsoil waters being non-saline could be used for irrigation through wells.

8. Introduction of irrigation into these areas is likely to convert the scarcity area into an agriculturally progressive area.

### 3. Object of soil survey :

Soil Surveys have been taken up with a view to economise irrigation water by putting it on suitable areas to obtain increased yields of crops and contributing the

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nearest minimum seepage to the subsoil to save areas located in vallies from being damaged.

For this purpose the drainage classification of soils, comprising of the study of soils, subsoils and substrata in each subcatchment which for the pur-pose of survey comprises of the areas between two defined nalas crossing the canal alignment and meeting the river, is undertaken. The procedure followed in soil surveys is described below.

4. Method adopted for soil surveys. :

(a) Commencement of work --

The work of soil surveys of areas under command of Bhima canals was started in February 1963 and completed in April 1966. Shri.P.V.Tembe, Deputy Soil Survey Officer, Poona showed great keenness in planning and executing the work with care and speed.

(b) Preparing plans and dividing the area into suitable subcatchments and sections.

A combined reduced plan in the scale of 2" = 1 mile was prepared for use in the field. The area has been divided into 4 sections depending upon the major branches of the canal - 3 sections for the areas under the Left Bank Canal and one section for the areas under Right Bank Canal. Each section is further sub-divided into different subcatchments as shown below.

Name of Section.	Canal	Number of subcatchments
1. Bhima L.B.C.	L.B.C.	13( 1 to 13)
2. Kurul Branch	L.B.C.	7(12A to 13A)
3. Karamba Branch	L.B.C.	4(14 to 17)
4. Mangalwedha Branch.	R.B.C.	12(A,1A to 11A)

In addition to the above, areas under the Pawana Valley were surveyed. These areas were divided into 3 sub-

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catchments.

(c) Items on which work was carried out --

During the course of the soil survey the work was carried out on the following items.

- i) Noting the soil depth by means of a probe in the light soils.
- ii) Taking auger pits at 1320' square upto permeable sub-stratum or 8' depth.
- iii) Collecting soil samples at the rate of 2 Nos. in the first foot depth and one number for every foot in subsequent depths from every fourth bore.
- iv) Nala survey of the major nalas in the area to know the average slope, strata in bed and height and strata in banks.
- v) Observing water levels in existing wells in the area under command and collecting water samples from them.
- vi) Testing soil and water samples collected during the course of survey.
- vii) Collecting information regarding --
  - i) Crops grown at present (before irrigation) and the acreage under each crop.
  - ii) Crops irrigated under wells and acreage under each crop.
  - iii) Rainfall at few places in the area.
- viii) Carrying out infiltration and recuperation tests.
- ix) Working out unsuitable and suitable areas.

5. Brief details of every item of work. :

(a) Marking probe points or taking auger pits. --

For the purpose of marking probe points or taking auger pits at specific positions a combined reduced plan in the scale 2" = 1 mile is used. On this plan cross sections are marked at every 2 furlongs distance taking a base line preferably along the river and on the cross section probe points or pit positions are marked at a distance of 2 furlongs.

Actually while marking the probe points or taking auger pit, the exact location as per plan is found out in

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the field with reference to survey numbers and other village map details such as village boundaries, cart tracts etc. When the exact spot is located the probe points or an auger pit is taken with the help of 4" or 6" auger. The bores are taken to a permeable sub-stratum or upto 8' depth.

Some times in hard and stiff soils the bores cannot be dug to their full depth. In such cases water is added to moisten the soil. In case the bore cannot be taken to its full depth, even after the addition of water, it is left undone for taking an open pit if no profile in an unbuilt well is available for inspection. The colour and strata of every foot depth is noted in the pit book along with other observations, if any.

During the survey, the areas under the command of Bhima canals, they were divided into 467 cross sections; 305 on the Left Bank Canal and 162 on the Right Bank Canal. In addition to the above the area under the Pawana Project was divided into 92 cross sections. The number of probe points and auger bores taken under the different branches are shown in the table.

Name of Branch.	Name of Canal.	Number of cross section.	Number of probe points.	Number of auger bores.	REMARKS
1. Bhima LBC	L. B. C.	202	3513	2179	
2. Kurul Branch	L. B. C.	76	555	499	First 76 C.S. are common.
3. Karamba Branch	L. B. C.	103	565	957	
4. Mangalwedha Branch	R. B. C.	162	1486	2653	
		Total :-	6119	6286	
6. Pawana	Pawana canals.	92	498	169	

Out of the above, soil samples were collected from auger bores. No soil samples were collected from soil less

than 18" in depth. Since the areas under light soils have been very large, the soils occurring under slabs of 3" depths have been indicated to treat and utilise these soils in different ways to bring them under cultivation.

b) Distribution of soils. --

These M.I.Bs help to work out the distribution of the soils into 3 groups viz.,

1. Shallow or light soils. - depth from 0" to 18".
2. Medium soils. .. depth from 18" to 3'.
3. Deep soils. .. .. depth more than 3'.

Out of the above, shallow soils have a smaller soil column to hold water with the result that they are excessively drained unless water is very judiciously used on these areas. They are therefore, generally classed as soils unsuitable for economic irrigation although some of them are very responsive soils with economic doses of irrigation. In this particular project light soils form a high percentage of the total area under command and were therefore studied in further details to work out acreages under different slabs of soil cover over the disintegrated rock viz., Murum which generally is a highly permeable sub-stratum.

Table showing the acreages under different slabs of soil depths in light soils.

Name of Branch.	Acreages under different slabs.					
	0"-3"	3"-6"	6"-9"	9"-12"	12"-15"	15"-18"
1. Bhima LBC	7452	6405	17301	36591	47700	12900
2. Kurul Branch	1682	648	3220	8891	4792	592
3. Karamba "	1276	2466	5266	7747	3055	105
4. Mangalwedha Branch	4907	5790	12364	23342	14276	2191
TOTAL :	15317	15309	33651	76571	69823	15788
5. Pawana areas	294	145	2942	5100	6324	240

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Due to areas being located in the east at a greater distance from the mountain ranges, the proportion of shallow soils (less than 9") is comparatively smaller in the light soils as compared to areas located nearer to hill ranges. The areas under the light soils (9" to 13") work out to 122373 acres for the Bhima Left Bank Canal and 39809 acres for the Bhima Right Bank Canal. The medium and deep soils under the command of the two canals are shown below.

<u>Name of Canal</u>	<u>Medium Soils</u>	<u>Deep soils.</u>
Bhima Left Bank Canal	65283	79730
Bhima Right Bank Canal	37575	75655

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Statement No.1 of the report gives the villages for which soil surveys are carried out, showing the talukas in which concerned villages are located.

Statement No.2 of the report gives the distribution of soils for every village.

c) Collection of soil samples. --

Soil samples were collected from every fourth auger bore at the rate of two samples for the first foot depth and one for every subsequent foot depth. Soil samples were collected in cloth bags from 1732 profiles. The total number of soil samples collected and tested were 12093. The details of the samples tested appear in Appendices of the report.

d) Nala Surveys. --

Defined nalas (these are nalas starting from or crossing the canal and meeting the river) in the area under command were surveyed to obtain the following details.

- 1) Average and per mile slope of the nala.
  - ii) Strata in the bed of the nala.
  - iii) Height and strata in the sides of the nala.

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The nalas are the natural carriers of excess water drained through soils indicating the possibility of removal of excess water that is being contributed to subsoil after irrigation. Details of various nalas surveyed are given in statement No.7.

e) Observing water levels in existing wells and collecting water samples. --

Irrigation is a process of supplying water to crop in the fields to facilitate absorption of plant food material from the soil. An ideal condition of irrigation contemplates supply of water equal to requirements of crops which hardly hold good in practice with the result that considerable amount of irrigation water passes through or along the substrata to the lower areas, causing either the rise of water table or water-logging or swamps in the areas irrigated and thus damaging the areas under cultivation which prior to irrigation gave normal crops. For this reason it is very necessary to know the response of the areas to be brought under irrigation to the absorption of water during rains and irrigation, causing rise in subsoil water table and its further dropping down with time in subsequent seasons.

This aspect of examination has been given its due consideration by way of observing subsoil water table in wells existing in the area.

Collecting and testing of water samples gives the idea of the quality of subsoil water.

In observing water levels of wells the following points are noted.

1. Survey number and village.
2. Depths of water levels from ground level.
3. Crops irrigated on the well with acreage under each.

Statement No.3 of the report gives the number of wells observed in different villages, their water levels and

and composition of their waters.

Appendix 'A' of the report gives the water levels of all wells observed and laboratory results of water samples tested. Observations of water levels were recorded for 6942 wells.

f) Testing of soil and water samples collected. --

The soil and water samples collected during the course of survey are sent to laboratory for testing. In the laboratory the soil samples are dried (if they are wet) - pounded, sieved and prepared for various tests.

Following tests are carried out in the laboratory in respect of soil and water samples.

Tests for soil samples. :

1. Total soluble salts by conductivity.
2. pH values.
3. Saturation moisture.
4. Shrinkage.
5. Mechanical analysis.
6. Capillary rise in distilled water and in sodium chloride solution.

Tests for water samples. :

1. Total soluble salts by conductivity.
2. pH.

Total soluble salt content and pH value of all the soil samples are given in appendix B and their important details such as cases having high salt content, high pH value etc., are given in Appendix Nos. C, D, E, F, and G. results of mechanical analysis are given in Appendix H.

Results of testing of all the water samples collected are given in Appendix-A.

g) Collecting information - regarding --

- i) Crops grown at present and acreage under each crop.
- ii) Crops irrigated under wells and acreage under each crop.
- iii) Rainfall data at few places.

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This information is collected to have an idea about the (1) Present trend of cropping, (2) Acreage under different crops before irrigation, (3) Development of well irrigation in the area and the crops irrigated with their acreage. Information collected appears in statement No.5 and 8 of the report.

h) Carrying out recuperation and infiltration tests. --

In addition to above, few recuperation tests on wells have been carried out and the data in respect of these is given in statement No.4 of the report.

Results of infiltration tests done on different types of soils are given in statement No.6.

i) Working out unsuitable and suitable areas. --

Unsuitable areas on account of  $\frac{1}{4}$ th mile limit, 10' H.I.B. and areas under cut-up lands, exposed rock etc., are worked out and given for the different sections separately.

6. Important details and observations of the areas surveyed. :

a) Rainfall in the area under command --

The rainfall in the area is uncertain as regards its occurrence and the amount of precipitation at one time. The annual rainfall varies from 15" to 25". The average rainfall at different stations either in the area commanded or just outside are shown in the table below for different months during 1960 to 1965 for the areas commanded by the

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two canals.

Name of station.	Rainfall in inches						Total	Remarks
	Jan. to May.	June	July	Aug.	Sept.	Octr. to Decr.		
1. Indapur	2.63	3.95	2.25	2.25	7.73	3.79	22.66	L.B.C area.
2. Yevati ..	2.40	3.74	4.36	3.79	11.44	2.54	28.27	
3. Mohol. ..	2.36	4.20	3.83	4.08	7.39	3.23	25.14	
4. Pathari ..	-	3.14	3.42	4.36	7.57	0.88	19.37	
5. Ekruk. ..	2.17	2.62	2.24	2.92	4.53	2.08	16.51	
6. Velapur...	2.81	2.46	2.64	3.39	7.33	3.59	22.22	R.B.C. area.
7. Tisangi ..	1.46	1.78	1.29	1.37	3.37	2.55	12.32	
8. Pandharpur	2.33	4.79	4.65	3.23	7.13	3.67	25.80	
9. Mangalwedha.	2.00	4.63	2.83	2.93	5.59	2.95	21.03	

b) Area under the Bhima Project. --

The area under the command of Bhima Project is divided into --

- (a) Areas under the Pawana Canal.
- (b) Areas under the Bhima Left Bank Canal comprising of (i) Jamgaon Branch, ii) Kurul Branch, iii) Karamba Branch.
- (c) Areas under the Bhima Right Bank Canal comprising of areas under the Mangalwedha Branch.

The gross area commanded by the above is 5,12,432 acres and is spread over 255 villages. Variation in the areas of the villages under different branches is indicated in the table below.

Name of Branch	Total No. of villages in	Least area - Area in acres	Highest area - Area in acres	Average area per villages.
1) Jamgaon ..	87	48	9630	2475
2) Kurul ..	23	515	4280	1750
3) Karamba ..	32	110	5475	1310
4) Mangalwedha	74	50	25250	2400
5) Pawana Canal.	39	48	2130	530

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Under the Jangaon Branch(L.B.C.) there are 7 villages with an area of more than 5000 acres, there are two such villages under the Karamba branch and only 3 villages under the Right Bank Canal. Mangalwedha has the largest area of 25250 acres. Under the Pawana canal the area of the villages is small with an average of 530 acres per village.

c) Intensity of wells in the area under command. --

Total number of wells observed during the period of soil survey of the area was 6942 in an area of 800 Sq. miles. There are villages where the number of wells per village exceeds 100. Number of villages in groups with different number of wells are shown in the table below.

No. of wells	No. of villages.	Total number of wells
200	1	210
101 to 200	9	1182
51 to 100	33	2585
11 to 50	106	2650
1 to 10	59	315

Under Jangaon (L.B.C.) and Kurul branches, the intensity of wells per square mile has been above 10 and greater intensity is limited to few villages thereunder. In Mendhapuri village alone the number of wells has been 210 with an intensity of 14 wells per square mile.

d) Water levels in wells. --

The total number of wells was 6942 for which water levels were observed and their distribution in different groups is shown in the table below;

Name of Branch.	Number of wells observed.	DISTRIBUTION OF WELLS			Remarks.
		0-4'	4'-10'	10'-20'	
1. Bhima L.B.C	3301	129	843	1555	In the remaining wells water levels are below 20'
2. Kurul	793	3	91	443	
3. Karamba	652	9	97	282	
4. Mangalwedha	1933	21	290	847	
5. Pawana Canals	203	1	7	32	

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Hot Weather Observation --

Water levels in wells were observed in hot weather for few wells in Bhima Left Bank Canal with the following results.

<u>No. of wells</u>	<u>0-4'</u>	<u>4' to 10'</u>	<u>10' to 20'</u>
201	5	47	111

e) Salinity in sub-soil waters. --

Water samples were collected from 6683 wells in the areas under different branches and the cases of saline waters are indicated in the table below;

<u>Name of Branch.</u>	<u>Water samples collected and tested from wells.</u>	<u>Cases of saline water.</u>	
		<u>Conductivity 1000 to 2000 M.M.</u>	<u>More than 2000</u>
1. Bhima L.B.C ...	3238	567	403
2. Kurul ...	705	114	59
3. Karamba ...	539	97	47
4. Mangalwedha ...	1916	422	577
5. Pawana Canals ...	135	3	-

f) Crops irrigated on wells. --

During the soil survey data regarding areas irrigated on wells has been collected for 4408 wells under different branches in the command. The total area irrigated under these wells worked out to 11300 acres i.e. about 2.5 acres per well. The distribution of crops irrigated on wells is shown in the table below;

<u>Crop irrigated</u>	<u>Area in acres.</u>	<u>Percentage of the crop irrigated to the total irrigation.</u>
1. Sugarcane ...	1712	15.2
2. Other perennials.	295	2.6
3. Cotton.	674	6.0
4. Vegetables.	1471	13.0
5. Other crops mostly Jowar.	7146	63.2

g) Recuperation in wells. --

Rate of recuperation in wells was observed for 195 wells, for the first half an hour with the following results.

S. No.	Rate of recuperation in cusecs.	BRANCHES				
		Bhima L.B.C	Kurul	Karamba	Mangalwedha	Pawana
1.	Less than 0.1	17	23	17	20	1
2.	between 0.1 to 0.2	23	23	14	15	5
3.	" 0.2 to 0.3	6	9	5	2	6
4.	" 0.3 to 0.4	5	2	1	-	-
5.	" 0.4 to 0.5	-	-	1	-	-
Total :-		51	57	38	37	12

In about 40 percent cases the rate of recuperation is between 0.1 to 0.2. About the same percentage of wells have a recuperation less than 0.1. In about 20 percent case the recuperation is more than 0.2. Such cases are however, very few on Mangalwedha branch.

7. Sections into which the area under command is divided. :

Gross area surveyed under the command of Bhima Project comprised of 512432 a.p. i.e. 800,- Sq.miles spread over under five branches which in this case are termed as sections. The areas under the Pawana Branch are in the higher reaches to the North of Poona while the areas under the remaining four branches are in the District of Sholapur below the dam at Ujjani. These branches viz., (1) Jangaon (L.B.C.), (2)Kurul, (3)Karamba are on the Left Bank of the river Bhima while the Mangalwedha Branch is on the right bank of Bhima. The last four branches on the Left and Right banks of the Bhima river are therefore treated together while the Pawana branch is treated separately.

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Area under the Pawana canals is limited to 22720 acres comprising largely of the light soil areas most of which are brought under the industrial estates, and the land put to Agricultural use is limited.

The areas under the Bhima Left Bank Canal (Jangaon branch) are 2,15,332 acres while those under the Mangalwedha Branch on the Right Bank comprise of 1,76,100 acres. These together form about 3.91 lakh acres. The areas commanded by the Kurul and Karamba branch are comparatively small viz., 40245 and 57975 acres respectively.

Out of the total area of 765 sq. miles spread over 217 villages in the four sections (branches) 1/8th of the total area is covered by the 6 villages viz, Bembla, Bhosa, Mendharuri, Puluji, Mangalwedha and Bevala which have got an area more than 5000 acres each. Mangalwedha covers an area of 25250 acres. The average area per village under the four branches works out to 2260 acres.

### 3. Soils under the command of Bhima Canals. :

The soils under the command of various branches of Bhima canals comprise of light soils with varying percentages under the different branches. Under the Pawana canals the percentage of light soils is as high as 70 percent. It gets reduced to 60 percent under the Bhim Left Bank Canal. It is further reduced to 50 percent under the Kurul Branch and it is only 35 percent under the Karamba Branch. On the Right Bank Canal the percentage of light soils under the command is 36. Over all percentage of light soils under the Bhima Canals works out to a little less than 50%. Out of the light soils about 30 percent areas have a soil cover between 0 to 9" and are termed as shallow soils, the remaining 70 percent of the light soils have a soil cover between 9" to 18". Thus out of the total area of 5,12,432 acres surveyed the distribution of soils is as under the :

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different branches.

Name of Branch.	Total area surveyed.	Distribution of soils.			
		0" - 9" Shallow	9" - 18" Light.	18" - 36" Medium	36" - 72" Deep
1. Pawana Canals	22730	3381	11664	6453	1227
2. Bhima L.B.C.	215382	31658	97191	36943	49590
3. Kurul Branch	40245	5550	14275	11430	894
4. Karamba Branch	57975	9008	10908	16860	21200
5. Mangalwedha	176100	23061	39809	37575	75655
			162133	102858	155385

Thus excluding the areas under Pawana canals the areas under light soils (9" to 18") which are suitable for irrigation under Bhima canals in monsoon would work out to 1,62,133 acres. Besides the above, the total areas under medium and deep soils are as shown below;

1. Medium soils ... 102858 acres
2. Deep soils. ... 155385 "

Out of the medium and deep soils, the unsuitable areas due to 1/4th mile limit, ten feet H.I.B. cut-up areas and areas with exposed rock etc., work out as under;

1. Unsuitable areas .. 16966 acres under medium soils.
2. Unsuitable areas .. 21930 " under deep soils.

Deducting the unsuitable areas in medium and deep soils, the areas suitable work out as under;

1. Suitable areas in .. 85892 acres. medium soils.
  2. Suitable areas in .. 133455 " deep soils.
- 219347 "  
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It would be seen from the above that quite a large area under light soils (1,62,133 acres) is available for irrigation in monsoon besides the suitable areas in Medium and Deep soils.

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The above areas are spread over 217 villages under the 4 branches viz., 1) Bhima L.B.C. (2) Kurul, (3) Karamba (4) Mangalwedha.

There are 12 villages having an area of more than 5000 acres as shown below;

1. Bhima Left Bank Canal -

(1) Bambala (7523), (2) Bhosa (7877), (3) Mendhapuri (9680), (4) Gursale (5768), (5) Ashti (5376), (6) Tarapur (5520), (7) Puluji (7440).

2. Kurul.

No village with an area more than 5000 acres.

3. Karamba.

(1) Hiraj (5775), (2) Degaon (5350).

4. Mangalwedha.

(1) Jambud (5265), (2) Mangalwedha (25250), (3) Borala (6350).

Cases of stiff soils in the area.

Stiff soils occur in about 3 percent pits, half of which are met with under the Mangalwedha Branch. The stiff soils occur in the first 4' from the ground in about 2/3 cases.

9. Salinity and Alkalinity in soil profiles. :

The total number of profiles in the medium and deep soils from which soil samples were collected and tested work out to 1732. The distribution of total profiles under the different branches indicating the number of saline and alkaline profiles is shown below;

S.No.	Branch	Total profiles collected and tested.	Saline profiles.	Alkaline profiles.
1.	Bhima (L.B.C.)	670	162	83
2.	Kurul "	231	75	7
3.	Karamba "	335	39	12
4.	Mangalwedha (RBC)	496	168	72
Total:		1732	504	174

Cases of salinity are spread out over the whole area in the command but they are localised to 28 villages under the whole command where more than 5 saline profiles occur in a village. Cases of alkaline profiles are few and are limited to 6 villages under the Jangaon (L.B.C.) and Mangalwedha branches. There is no concentration of alkaline profiles in the villages under the Kurul and Karamba branches.

Cases of high salinity (total salt exceeding 1.0%) are localised to the following villages.

Name of village.	Total Number of profiles.	Number of saline profiles.	Name of Branch.
1. Shegaon	26	11	Jangaon(LBC)
2. Degaon (B)	30	13	"
3. Pohargaon	23	12	"
4. Puluji	48	14	"
5. Iravade	40	13	Kurul
6. Telgaon	32	17	Karamba
7. Chaiha	35	15	Mangalwedha
8. Mangalwedha	125	26	"

In the remaining 10 villages viz., Bhatumbra, Sasta, Anjansond, Tarapur, Vit, Kolegaon, Nandgaon, Pir-Takli, Kawtha, Bhoira, Pathari, Degaon, Pandharpur, Sakoli, Uchethan, Borala, Donaj, Sidapur, Arali, the saline cases vary between 5 to 10 cases each.

Alkaline soils (pH more than 9.0) are localised to the following villages.

Name of village.	Total number of profiles.	Alkaline profiles.	Name of Branch.
1. Bambala	10	8	Jangaon (LBC)
2. Karol	9	6	"
3. Devad	9	8	"
4. Bhosa	12	6	"
5. Mangalwedha	125	5	Mangalwedha(RBC)
6. Brahmapuri	26	6	"

10. Natural drainage in the area.

The areas under the command are drained by two rivers viz., Bhima and Sina and 13 nalas along the left bank canal and 4 major nalas along the right bank. Total river length works out to 106 miles for Bhima and 36 miles for Sina. The total length of the major nalas work out to 133 miles. Thus the over all draining length work out to 275 miles for an area of 765 Sq.miles. Excepting the deep soil areas near Mangalwedha, the other areas are fairly drained. The river and nala lengths and draining lengths per sq.mile under different branches are given in the table below;

Name of Branch.	Area in Sq.miles	River length in miles.	Nala length in miles.	Total draining length.	Draining length per Sq. mile.
1. Bhima L.B.C. (Jamgaon Branch)	336	106	74	180	0.54
2. Kurul Branch	63	28	23	51	0.81
3. Karamba branch	91	36	13	49	0.55
4. Mangalwedha. "	275	44	23	67	0.24

11. Distribution of soils according to drainage condition.

In the drainage classification of soils, the depth of the soil cover, the nature of the subsoil and substrata play an important role. The shallow soils having a soil cover upto 18" are excessively drained soils, making economic utilisation of irrigation water very difficult. The contribution of irrigation water to subsoil is very great. In this particular project about 35 percent of the area have a soil cover between 9" to 18" where seasonal irrigation could be propose

Contd....

Areas under medium soils with a soil cover of 18" to 4' are well drained. Under the 4 branches the total area under the medium soils form 15 percent of the total area.

Areas with 4' to 8' of soil cover have a fairly good drainage and respond well to irrigation.

Deep soils which have a soil cover of more than 8' are either feably drained or ill-drained. For about the full length of 106 miles of the Bhima river the strip of deep soil along its bank varies from 4 furlongs to about 2 miles - excepting the areas near Mangalwedha town, where deep soils are in a big stretch. Thus the deep soils would either be feably drained under this project or could be cut open in small lengths to relieve the sub-soil water in the medium soils above.

In the case of light soils upto 18" depth demarcation of the area is done by taking the probe points, instead of the auger bores. The number of probe points or auger pits in soils with varying soil cover and different drainage capacities are shown below;

Name of Branch.	Total number of probe points and auger bores.	Number of probe points,	Number of auger bores.		
			18" to 4' including stiff soil.	4' to 8' including stiff soil.	More than 8'
1. Bhima L.B.C	5690	3513	369	455	343
2. Kurul L.B.C.	1054	555	205	141	153
3. Karamba L.B.C.	1523	565	314	250	394
4. Mangalwedha R.B.C.	4139	1436	553	450	1645
TOTAL:	12406	6119	1946	1306	3035

12. An account of the unsuitable areas. :

Areas unsuitable for irrigation on account of the following are worked out and shown in statement No.9 for each branch.

1. Areas under 1/4th mile limit.

Contd...



2. Areas under 10' H.I.B,
3. Areas under cut-up lands, exposed rock at places.
4. Areas not properly commaded. These areas may better be worked out at the time of fixing X limits.

Total deductions of the areas on account of the above work out as shown below for the different branches.

Name of Branch.	Total deductions as unsuitable areas.	
	Medium Soil	Deep soil.
1. Bhima L.B.C. ...	7197	9955
2. Kurul ...	1355	1395
3. Karamba. ...	1613	2095
4. Mangalwedha. ...	6296	3484
Total :-	16966	21939

13. Areas suitable for irrigation. :

The areas under Bhima Project lie under the semi-arid zone with the result that there is no proper development of the soil for want of proper rainfall in the area. The light soil forms about 50.0 percent of the area which is an excessively drained area. Dividing these areas further into coarse soils with a soil cover of 0 to 9" the total area covered is 72658 acres. The remaining areas under the light soils with a soil cover of 9" to 13" are proposed to be supplimented by seasonal canal, irrigation with a view to develop these areas into suitable areas in due course. The total areas with a soil cover of 9" to 13" works out to 162183 acres which is a substantially a large area. The suitable areas in the medium and deep soils under the various branches are shown in the table below.

Name of Branch.	Total area surveyed.	Areas suitable for seasonal irrigation with soil cover of 9" to 13".	Suitable areas	
			Medium soil.	Deep soil.
1. Bhima LBC	215382	97191	29746	39635
2. Kurul	40345	14275	9525	7544
3. Karamba.	57975	10908	15243	19165
4. Mangalwedha.	176100	39809	31279	67171
Total :-	489802	162183	85892	133455

The saline areas are located to 23 villages under the 4 branches and alkaline areas are limited to 6 villages under the Jangaon branch (L.B.C.) and the Mangalwedha Branch under the R.B.C. Elsewhere they are spread out only to small areas depending upon the topographical conditions.

14, Existing cropping in the areas under command.

During the course of soil surveys, an inventory of crops being grown in the area is taken and the extent of the areas under different crops is ascertained from the register of the village officers. It gives an idea of the cropping prior to introduction of irrigation under dry condition and the cropping adopted under irrigation.

The areas under major crops in each branch are given in statement No.8 for respective branch. The figures for the whole project excluding the Pawana Branch are as shown below;

Name of Branch	Total command area	Culturable area	MAJOR CROPS (ACRES)						
			Sugar-cane	Garden crops	Vegetables	Cotton	Ground-nuts	Food crops	Pulses
Bhima LBC	215382	199377	676	193	2235	1774	6532	165593	8977
Kurul LBC	40385	37769	190	21	245	261	950	31601	347
Karamba LBC	57975	52249	702	21	247	184	3057	42268	4115
Mangal-wedha RBC	131255	124230	227	98	544	800	2857	105338	6252
<b>Total:-</b>	<b>444857</b>	<b>413625</b>	<b>1795</b>	<b>333</b>	<b>3271</b>	<b>3019</b>	<b>13446</b>	<b>345287</b>	<b>20801</b>

It would be seen that 85 percent of the cropped area is under the food crops. In cash crops sugarcane is 0.3 percent, cotton is just 0.7 percent, vegetables and garden crops about 1.0 percent, while ground-nut and pulses make up about 8.0 percent. Other crops are about 5 percent of the total.

The area under wells is about 2.5 percent of the culturable area. Of the area under wells 35 percent is under

the cash crops and 65.0 percent under the food crops.

The areas being fairly drained. The cropping pattern under canal irrigation needs to be reoriented.

15. Proposed crop pattern for the areas commanded by Bhima Canals. :

In the suitable areas of about 2,20,000 acres in medium and deep soils, the following crop pattern could be adopted.

- |                                             |     |             |
|---------------------------------------------|-----|-------------|
| 1. Sugarcane                                | ... | 10 percent. |
| 2. Cotton followed by H.W.Groundnut.        | ..  | 15 "        |
| 3. Paddy followed by Gram.                  | ... | 20 "        |
| 4. Kharif Jowar, followed by Wheat.         | 20  | "           |
| 5. Kharif groundnut followed by Rabi Jowar. | ... | 25 "        |
| 6. Green manuring....                       | ... | 10 "        |

Supplimentary irrigation in monsoon is recommended for light soil areas with a soil column of 9<sup>th</sup> to 18<sup>th</sup>.

BHIMA LEFT BANK  
CANAL

Name of the Project : Bhima L.B.C.

Dist : Sholapur  
Tals : Madha,  
Mohol,  
Pandharpur.

Statement No.1 showing villages with their Talukas and  
Districts in different subcatchments and the gross area  
- surveyed.

Subcatchment No.	District	Taluka	Villages	Gross area surveyed in acres.
1	Sholapur	Madha	1)Ranjani,2)Alegaon Bk 3)Rui, 4)Takali,5)Vadavali 6)Nagorli*,7)Alegaon, 8)Chandaj,9)Adhegaon.	17354
2			1)Nagorli*,2)Malegaon*, 3)Shevara,4)Tembhurni*	2746
3			1)Venegaon,2)Malegaon*, 3)Bembala*,4)Tembhurni* 5)Parita*,6)Akola B.	11066
4	-do-	Pandharpur	1)Parita*,2)Bembala*, 3)Ghoti, 4)Kanhapuri,5)Karol, 6)Umbra,7)Jaloli*,8)Sangvi*	14808
5			1)Sangvi*,2)Jaloli*,3)Badal- kot*,4)Karkamb*	2925
6			1)Badalkot*,2)Karkamb, 3)Nematwadi,4)Peha,5)Nan- dora,6)Avha,7)Taratgaon 8)Kuravali,9)Devad,10)Khed* 11)Shev, 12)Bhosa*,13)Holi*	B* 28052
7			1)Holi B*,2)Bhosa B*,3)Khed* 4)Mendhapuri*.	9753
8			1)Mendhapuri*,2)Bhatumbra, 3)Ropala B,4)Ahir-Babhul- gaon,5)Adhiv,6)Shegaon 7)Degaon B,8)Narayan-Chin- choli,9)Tungat*, 10)Ishwar-watar*,11)Gursala 12)Holi B*,13)Chincholi	38896

Contd...

9	Sholapur	Mohol	1) Ashti*, 2) Yevati, 3) Khardi 4) Khandali, 5) Papari, 6) -Penur*, Pandharpur 7) Ishwar-watar*, 8) Susta, 9) Arjunsoda, 10) Tungat*, 11) Tarapur*	20112
10		Mohol	1) Tarapur*, 2) Kharsoli, 3) Po- -hargaon, 4) Phul-chincholi* 5) Vit* 6) Penur*, Takli-Sikandar* 8) Patkul, 9) Adhegaon*	17280
11		Pandharpur	1) Takali-Sikandar*, 2) Adhe- -gaon, 3) Saudhana, 4) Varkuta* 5) Tambola*, 6) Avandhi*, 7) Phul-chincholi*, 8) Vit* 9) Puluji*.	12894
12		Mohol	1) Ambe-chincholi, 2) Puluji* 3) Shankargaon, 4) Nali, 5) Avandhi*, 6) Varkuta*, 7) Sej-Babhulgaon, 8) Tambola* 9) Akola, 10) Vardegaon, 11) Kotala, 12) Ardhanari, 13) Ijgaon, 14) Sohala, 15) Arbali 16) Yenki*, 17) Miri*, 18) Vagholi* 19) Ghodeswar (Begampur)	35256
13	South Shola-		1) Yenki*, 2) Miri*, 3) Wagholi* 4) Vatvata, 5) Jangaon B, 6) Jangaon K, 7) Vadapur.	4240
Total :-				215382

Note :- Villages marked with asteric come under more than one subcatchment.

Name of the Project : Bhima L.B.C.

Dist : Sholapur  
Tals : Mohol,  
Madhe,  
PandharpurStatement No.2 showing the distribution of soils(villagewise) in different subcatchments.

Subcatchment No.	Village	Total area surveyed (acres)	Distribution of soils		
			Light	Medium	Deep
1	2	3	4	5	6
1	Ranjani	1258	712	256	290
	Alegaon Bk.	2460	2460	-	-
	Rui	930	930	-	-
	Alegaon	1850	1850	-	-
	Takali	4200	2450	760	990
	Chandaj	3096	2776	260	60
	Vadavali	1824	1808	16	-
	Adhegaon	1376	1286	90	-
Nagorli	360	360	-	-	
		17354	14632	1382	11340
2	Nagorli	96	96	-	-
	Malegaon	610	435	90	85
	Shevara	1920	1735	110	75
	Tembhurni	120	120	-	-
		2746	2386	200	160
3	Malegaon	1470	1400	40	30
	Tembhurni	2800	2740	60	-
	Venegaon	104	44	60	-
	Bembala	5075	4460	285	330
	Parita	105	105	-	-
	Akbla B	1512	1341	155	16
		11066	10090	600	376
4	Parita	128	128	-	-
	Bembala	2448	2306	54	88
	Ghoti	1386	1208	170	8
	Kanhapuri	2832	2496	192	144
	Karol	2822	1070	800	952
	Umbra	3000	2440	176	384
	Sangvi	904	808	40	56
Jaloli	1288	1184	56	48	
		14808	11640	1488	1680

Contd...

1	2	3	4	5	6
5	Jaloli	280	280	-	-
	Sangvi	325	291	14	20
	Badalkot	1192	936	118	133
	Karkamb	1123	966	53	104
		2925	2473	190	262
6	Karkamb	1763	1664	40	64
	Nematwadi	1332	1332	-	-
	Badalkot	160	136	16	-3
	Peha	3136	3136	-	-
	Nandora	1243	753	225	265
	Avha	2344	1683	176	430
	Karavahi	4763	2336	1024	1403
	Davad-11	1638	72	456	1160
	Taratgaon	630	203	112	360
	Khed	1504	8	165	1331
	Shevata	4704	3109	937	603
	Bhosa B	4160	3824	272	64
	Hol B.	10	-	-	10
		28052	18321	3473	5753
7	Bhosa B	3717	1194	1523	995
	Khed	100	-	-	100
	Hol B	2624	220	66	2333
	Mendhapuri	3312	462	1407	1443
		9753	1876	3001	4376
8	Mendhapuri	6363	4443	1056	364
	Bhatumba	1504	416	576	512
	Ashti	3403	2344	356	203
	Ropala B	4112	1303	1552	752
	Ahir-Babhulgaon	4430	2736	992	752
	Adhiv	2443	1343	243	352
	Segaon	1616	-	264	1352
	Degaon B.	4832	330	1410	2542
	Narayan-Chincholi	2272	343	332	592
	Tungat	1134	-	320	364
	Ishwar-Watar	160	-	-	160
	Gursala	5163	3340	576	752
	Hol B	640	176	272	192
	Chincholi	704	-	43	656
		38396	19344	9002	10550
9	Ashti	1963	1003	430	430
	Yevati	2464	992	523	944
	Ishwar-Watar	1600	144	304	1152
	Susta	2633	272	1072	1344
	Anjansond	1440	25	50	1365
	Khardi	43	43	-	-
	Khandali	364	240	272	352
	Tungat	3403	1744	1024	640
	Papari	1303	1424	256	123

Contd...



1	2	3	4	5	6
9	Penur Tarapur	2560 1264	2202 480	150 256	208 528
		20112	8579	4392	7141
10	Tarapur Penur Kharsoli Pohargaon Patkul Phul-chincholi Vit Takali-Sikandar Adhegaon	4256 1328 2048 1408 3968 2208 896 1056 112	1563 1120 1120 128 2048 944 240 610 32	1792 160 272 192 1408 704 192 416 80	396 48 656 1088 512 560 464 30 7
		17280	7810	5216	4254
12	Phul-Chincholi Vit Puluj Takali-Sikandar Adhegaon Saudhana Varkuta Tambola Avandhi	1328 736 4992 2560 126 1552 1024 384 192	864 24 1536 2176 30 396 656 96 26	272 100 1088 272 64 480 304 144 48	192 612 2368 112 32 176 64 144 123
		12894	6304	2767	3828
13	Ambe-Chincholi Puluj Shankargaon Avandhi Varkuta Nali Sej-Babhulgaon Tambola Akola Kotala Ardhanari Godeshwar (Begam- -pur) Ijgaon Sohala Arbali Yenki Miri Wagholi Vardegaon	1904 2448 1568 1664 528 1120 2112 400 2192 2288 2160 1888 2432 1760 2384 2944 2208 664 -2562	464 400 384 728 304 926 1296 220 1704 1584 1552 976 2432 1620 2002 2536 336 598 1700	1296 336 384 352 128 64 680 80 448 400 48 240 - 114 1110 344 112 56 406	1104 1712 800 584 96 130 136 100 40 304 560 672 - 26 272 64 1760 10 336
		35256	21502	4856	8398
13	Miri Yenki Wagholi Vatvata Vadapuri Jamgaon K. Jamgaon B	64 288 368 2192 720 352 256	- 123 308 1728 620 352 256	- - 40 256 80 - -	64 160 20 208 20 - -
		4240	3302	376	472

Name of the Project : Bhima L, B.C.

DIST : SHOLAPUR  
Tals : Pandharpur  
Madha, Mohol.

Statement No.3 showing number of wells observed in different villages in different subcatchments, their distribution as per water levels & case of salinity. -

Sr. No.	Subcatchment No.	Village	No. of wells observ- -ed.	Distribution of wells as per depth of water level from Ground Level			No. of wells which samples are collected and tested.	No. of wells hav- ing conductivity.	
				0'-4'	4'-10'	10'-20'		1000 to 2000.	More than 2000
1	2	3	4	5			6	7	
1	1	Ranjani	9	-	3	3	9	-	-
2	1	Alegaon Bk.	10	-	3	6	10	-	-
3	1	Rui	4	2	1	1	4	-	-
4	1	Alegaon Kd.	2	-	1	1	2	1	-
5	1	Takali	3	-	5	3	3	2	-
6	1	Adhegaon	13	-	2	6	13	3	-
7	1	Vadavali	10	2	4	3	10	1	-
8	1	Chandaj	21	-	7	11	21	1	1
9	1,2	Nagorli	15	2	6	7	15	-	-
10	2	Shevra	7	-	1	5	6	-	-
11	2	Malegaon	11	-	-	6	11	-	-
12	2,3	Tembhurni	45	1	9	23	44	4	1
13	3	Venegaon	2	-	1	1	2	1	-
14	3	Akola B	13	-	3	7	12	3	2
15	3,4	Parita	-	-	-	-	-	-	-
16	3,4,	Bembla	33	2	6	20	33	3	1
17	4	Kanhapuri	20	-	3	6	20	-	-
18	4	Karol	2	-	-	-	2	-	-
19	4 b	Umra	29	-	4	12	29	-	-
20	4	Ghoti	16	-	3	9	16	1	-
21	4,5	Sangvi	15	-	3	3	15	-	-
22	4,5	Jaloli	35	-	4	10	35	-	-

Contd...

1	2	3	4	5	5	6	7
23	5,6	Badalkot	6	-	-	4	6
24	5,6	Karkamb	55	-	4	37	55
25	6	Nematwadi	29	1	12	6	29
26	6	Poha	27	-	4	17	27
27	6	Avha	20	-	-	9	20
28	6	Nandora	20	-	-	10	20
29	6	Devad	10	2	3	4	10
30	6	Kuraval3	26	6	3	16	26
31	6	Shevta	40	1	4	27	40
32	6	Taratgaon	-	-	-	-	-
33	6,7	Khed	12	-	1	3	12
34	6,7	Bhosa	195	-	44	112	193
35	6,7,8	Hol B.	42	1	7	15	42
36	7,8	Mendhapuri	210	-	48	127	203
37	8	Bhatumbra	4	-	-	2	4
38	8	Ahir-Babhul-	80	-	21	45	80
39	8	Ropla Bygaon.	-	-	-	-	-
39	8	Ropla B.	78	-	6	43	73
40	8	Adhiv	36	-	8	25	36
41	8	Segaon	1	-	-	1	1
42	8	Degaon B	73	-	13	30	73
43	8	Narayan-Chin- -choli	46	1	17	21	46
44	8	Gurusala	55	-	10	26	55
45	8	Chincholi	1	-	-	1	1
46	8,9	A shti	151	-	15	78	145
47	8,9	Tungat	55	-	20	17	55
48	8,9	Ishwar-Watar	9	-	2	2	9
49	8,9	Yevati	40	-	6	24	40
50	9	Susta	41	-	7	11	41
51	9	Anjansond	11	-	-	10	11
52	9	Khardi	-	-	-	-	-
53	9	Khandali	35	-	9	5	35
54	9	Papari	34	-	-	20	34
55	9,10	Penur	102	-	2	42	102
56	9,10	Tarapur	126	-	34	31	126

Contd...

1	2	3	4	5	5	6	7		
57	10	Kharsoli	18	-	-	4	13	5	2
58	10	Pohorgaon	17	-	-	6	17	2	3
59	10	Patkul	119	-	4	55	109	31	5
60	10,11	Adhegaon	13	1	6	6	13	-	-
61	10,11	Takali-Sikan- - dar.	70	6	38	11	70	7	4
62	10,11	Vit	27	2	8	15	27	6	11
63	10,11	Phul-chincholi	95	-	6	61	95	23	13
64	11	Saudhana	72	13	49	10	72	15	1
65	11,12	Tambola	46	15	23	3	46	9	-
66	11,12	Varkuta	54	3	21	27	54	7	1
67	11,12	Avandhi	71	1	15	42	71	29	24
68	11,12	Phuj	135	21	50	47	135	23	49
69	12	Ambe-chin- choli	4	-	1	1	4	-	1
70	12	Nali	15	-	4	9	15	-	-
71	12	Sej-Babhulgaon	55	20	29	6	55	3	-
72	12	Shankargaon	5	-	3	2	5	1	1
73	12	Akola	31	3	39	34	31	3	-
74	12	Vardegaon	32	3	40	37	32	11	-
75	12	Kotala	62	1	13	33	62	12	6
76	12	Ardhanari	13	-	5	5	13	-	2
77	12	Godeshwar	22	3	11	7	22	2	-
78	12	Ijgaon	33	3	15	33	33	3	2
79	12	Arboli	3	2	2	3	3	5	1
80	12	Sohala	33	1	30	25	33	5	-
81	12,13	Wagholi	17	-	12	4	17	1	-
82	12,13	Yenki	51	5	22	13	51	12	6
83	12,13	Miri	4	-	7	3	4	-	4
84	13	Vatvata	21	2	6	10	21	5	4
85	13	Vadapur	6	2	2	1	6	-	-
86	13	Jamgaon K	9	1	5	3	9	1	-
87	13	Jamgaon B.	8	-	3	4	8	1	-
			3301	129	343	1555	3233	567	403

Name of the Project : Bhima L.B.C.

Dist : Sholapur  
Tals : Pandharpur  
Madha, Mohol.

Statement No.4 showing the results of recuperation of wells.

Name of village.	Survey No.	Dia. of well	Rate of recuperation in $\frac{1}{2}$ hour.	Crops & area irrigated
1	2	3	4	5
Adhegaon	213	25'-0"	0.068	<u>Cotton</u> 0-20
Shevara	91	22'-0"	0.153	<u>S. cane, Cotton, Kadval</u> - 3-00 3-00 1-00 <u>Chillies</u> 0-20
Tembhurhi	111	24'-0"	0.145	<u>S. cane, Cotton, Kadval</u> 1-00 1-00 1-00 <u>Other Crops.</u> 0-20
Karkamb	235	26'-0"	0.074	<u>S. cane, Guava, Jowar.</u> 0-05 0-10 3-00
Karkamb	233A	24'-0"	0.082	<u>Gotton, Vegetable, Maize</u> 0-20 0-30 1-00
Bhosa	5	22'-0"	0.140	<u>S. cane, Cotton, Chillies</u> 3-00 1-20 2-20
Bhosa	110	17'-2"	0.208	<u>Cotton, Chillies, Jowar</u> 2-00 4-00 5-00
	225	26'-6"	0.153	<u>Chillies, Rice, Wheat, Onion</u> -20 0-02 0-20 1-00 <u>Gram</u> 1-00
	194	25'-0"	0.112	<u>S. cane, Bananas, Sweet Potato</u> 4-00 0-10 0-02 <u>Rice.</u> 0-10
	186	27'-0"	0.066	<u>S. cane, Jowar, Wheat.</u> 1-30 4-00 2-00
Hol B	99	28'-10"	0.091	<u>Jowar, Chillies, Wheat, Onion</u> 1-00 0-10 0-05 0-10
Mendhapuri	202	32'-3"	0.117	<u>S. cane, Jowar, Wheat</u> 0-10 5-0 0-20 <u>Chillies</u> 0-10
	243	24'-0"	0.186	<u>Jowar, Wheat.</u> 5-00 5-00

Contd...

1	2	3	4	5
Mendhapuri	157	29'-0"	0.335	<u>S. cane, Wheat, Jowar.</u> 2-20 1-20 3-00
Ashti	575	23'-6"	0.241	<u>Ground-nut.</u> 3-00
	562	27'-0"	0.344	<u>Sugarcane, Bananas</u> 5-00 3-00
	352	30'-0"	0.131	<u>Bringal, Jowar.</u> 0-10 3-00
Ahir-Babhul-gaon.	113	24'-0"	0.270	<u>S. cane, Wheat, Maize.</u> 1-30 3-30 1-00
	68	32'-6"	0.269	<u>S. cane, Wheat, Onion.</u> 3-00 2-00 0-30
	210	32'-0"	0.301	<u>S. cane, Maize, Chillies</u> 0-05 0-30 1-00 <u>Kadval.</u> 0-10
	189	24'-0"	0.165	<u>S. cane, Chillies, Kadval</u> 1-00 3-00 1-10
Adhiv	8	26'-0"	0.269	<u>Ground-nut.</u> 2-00
	22	21'x27'	0.079	<u>Vegetable, Kadval.</u> 0-10 1-00
Ropala	211	27'-0"	0.079	<u>Groundnut, Kadval.</u> 1-00 0-10
	310	23'-0"	0.085	<u>Cotton, Kadval, Groundnut.</u> 0-10 0-20 1-20
	331	16'-6"	0.059	<u>S. cane, Cotton, Kadval.</u> 0-20 0-20 0-05
	163	36'-0"	0.188	<u>Sugarcane, Kadval.</u> 0-05 1-20
	333	34'-0"	0.126	<u>S. cane, Bananas, Kadval.</u> 1-00 0-05 0-15
Degaon	119	27'-6"	0.110	<u>Kadval, Chillies, Maize</u> 2-00 1-00 0-20
Anjansond	10	20'-0"	0.174	<u>S. cane, Onion, G. Nut, Fodder</u> 1-00 0-20 2-30 2-0
Ashti	152	31'-0"	0.140	<u>S. cane, Cotton, Chillies</u> 0-05 1-20 0-05 <u>Maize, Kadval.</u> 1-00 3-00
	13	26'-0"	0.170	<u>S. cane, Fruits, Kadval.</u> 2-20 1-0 0-20 <u>Chillies</u> 3-00

Contd..

1	2	3	4	5
Ashti	169	25'-0"	0.089	<u>Cotton, Chillies, Kadval</u> 0-20 0-10 1-00
Yevati	72	27'-0"	0.318	<u>Sugarcane, Kadval.</u> 2-20 1-20
	92	33'-0"	0.397	<u>Chillies, G.nut, Kadval.</u> 1-00 2-0 0-20
	5	28'-0"	0.199	<u>Cotton, Kadval.</u> 0-10 1-20
Patkul	234	20' x 20'	0.083	<u>S.cane, Bananas, Cotton,</u> 0-20 0-20 1-00 <u>Chillies, Ground-nut</u> 0-05 0-20
	129	20'-0"	0.044	<u>Chillies, Kadval, Maize.</u> 0-10 0-10 2-20
	230	30'-0"	0.130	<u>S.cane, Cotton, Kadval.</u> 0-15 2-20 0-10 <u>Groundnut, Chillies</u> 0-10 0-10
	124	30'-0"	0.164	<u>Cotton, Maize, Chillies</u> 1-00 0-10 0-02
	136	36'-0"	0.140	<u>Rice, Chillies, Kadval</u> 0-20 0-20 0-20 <u>Onion</u> 0-30
Takli-Sikan -dar	124	20'-0"	0.072	<u>Bananas, Chillies.</u> 2-20 1-20
Penur	115	26'-0"	0.072	---
Puluj	203	34'-0"	0.063	---
	229	22'-0"	0.104	<u>Chillies, Tobacco, Veg.,</u> 1-00 1-00 1-20 <u>Onion</u> 2-00
Godeshwar (Begampur)	75	38'-0"	0.157	<u>Jowar, Wheat.</u> 2-00 0-20
Vardegaon	105B	13' x 17' + 3'	0.086	<u>S.cane, Lemon, Wheat</u> 0-02 0-02 0-30 <u>Chillies.</u> 0-01
Yenki	8	25'-0"	0.067	<u>Sugarcane.</u> 3-00
Ardhanari	23	33'-0"	0.268	<u>S.cane, Maize, Jowar</u> 3-00 1-00 2-00
Arbali	27	40' x 35'	0.130	<u>Bananas, Wheat, Jowar</u> 0-15 1-20 1-20
Sohala	58	34'-0"	0.126	<u>S.cane, Veg., Wheat, Jowar</u> 1-00 0-02 0-20 1-20

Name of the Project : Bhima L.B.C.

Dist : Sholapur  
Tals : Pandharpur  
Madha, Mohol.

Statement No.5 showing areas irrigated in the commanded area of

Bhima L.B.C.

Subcatchment No.	No. of wells observed.	Area irrigated in acres	Sugar cane.	Other Perennial	Cotton	Vegetable	Other crop.
1	37	23-25	2-20	1-05	-	6-25	13-05
2	3	1-35	1-00	0-05	-	0-10	0-20
3	59	55-30	5-00	0-15	21-00	9-35	19-20
4	82	200-30	2-20	0-25	74-30	38-10	84-25
5	35	69-35	3-10	0-10	26-30	14-30	24-35
6	240	559-35	31-05	26-00	189-15	174-00	138-15
7	164	547-00	85-00	14-15	16-00	82-25	348-00
8	375	803-05	134-25	34-00	33-00	65-25	535-35
9	240	456-00	98-25	13-00	70-10	68-00	206-05
10	127	398-00	62-10	22-20	57-35	71-05	184-10
11	238	419-25	50-35	24-35	47-15	135-05	161-15
12	569	1539-05	146-25	28-30	1-20	153-05	1109-05
13	38	90-15	26-20	1-10	-	7-20	55-05
Total :-	2207	5163-00	650-05	167-10	537-35	926-35	2880-35

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Name of the Project : Bhima L.B.C.

Dist : Sholapur  
Tals : Pandharpur  
Madhe, Mohol.

Statement No.6 showing results of infiltration tests.

Sr. No.	Subcatch ment No.	Village & survey No.	Cross Section No.	Pit No.	Depth @ which test is carried out.	Rate of infiltration inches/hour
1	1	Adhegaon 214	19	2	1'-3"	1.45
2		Takali 187	10	19	8'-0"	0.60
3	2	Nagorli 134	28	2	1'-6"	2.12
4		Malegaon 75	34	4	8'-0"	0.47
5	3	Bembale 45	40	18	8'-0"	0.07
6	4	Bembale 153	48	8	8'-0"	0.174
7		Karol 78	43	31	Surface	0.169
8		Kanhapuri 29	52	24	Surface	1.674
9		Umbra 14	49	33	Surface	0.621
10	5	Karakamb 235	75	2	Surface	0.145
11	6	Kuravali 235	62	27	Surface	0.136
12		Devad 22	66	27	Surface	0.252
13		Shevata 157	67	24	Surface	0.315
14		Bhosa 336	77	17	Surface	0.213
15	7	Hol B 99	81	17	Surface	0.029
16		Bhosa 225	87	13	Surface	0.200
17		Mendhapuri 194	89	6	Surface	0.330
18		Mendhapuri 202	92	10	Surface	1.116
19	8	Degaon 105	106	43	Surface	0.101
20		Ropala 298	108	22	Surface	0.073
21		Shegaon 50	108	52	Surface	0.073
22		Ishwar- Watar 33	120	30	Surface	0.111
23	9	Arjunsonda 32	118	5	Surface	0.092
24		Yevati 70	119	14	Surface	0.111
25	10	Tarapur 7	133	21	Surface	0.247
26		Kharsoli 66	136	35	Surface	0.359
27	12	Begampur 76	175	26	Surface	0.155
28		Miri 79	191	79	Surface	0.184

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Name of the Project : Bhima L.B.C.

Dist : Solapur  
Tals : Pandharpur  
Madha, Mohol

Statement No.7 showing the results of the studies of the existing natural drainage for different sub-catchments.

Sub catchment	Nala No. with local name, if any.	Length of nala	Slope in different length of the nalas										Aver age slope	No. of places having out crop in bed	
			1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th			
1	Nagori, Nali	2.54	1:93	1:89	1:131	-	-	-	-	-	-	-	-	1:94	7
2	Tembhurni	2.72	1:314	1:212	1:230	-	-	-	-	-	-	-	-	1:186	6
3	Parita	3.94	1:120	1:160	1:192	1:357	-	-	-	-	-	-	-	1:175	9
4	Jaloli	3.33	1:96	1:178	1:153	1:159	-	-	-	-	-	-	-	1:135	4
5	Karkamb	4.54	1:280	1:296	1:185	1:257	1:261	This nala is not surveyed to its full length.					1:247	4	
6	Bhosa	6	4.88	1:146	1:251	1:221	1:173	1:329	-	-	-	-	-	1:206	8
7	Mendhapuri	7	8.10	1:116	1:243	1:305	1:294	1:342	1:365	1:371	1:303	-	-	1:263	5
8	Ashti	8	15.00	1:326	1:134	1:273	This nala is not surveyed to its full length					1:537	1		
9	Penur	9	4.39	1:190	1:153	1:195	1:251	1:180	-	-	-	-	-	1:190	6
10	Adhegaon	10	8.20	1:319	1:623	1:326	1:250	1:418	1:418	1:364	1:300	1:276	-	1:333	11
11	Tambola	11	8.31	1:151	1:285	1:274	1:419	1:572	1:415	1:464	1:301	1:233	-	1:339	6
12	Wagholi	12	6.14	1:198	1:196	1:253	1:401	1:532	1:627	1:235	-	-	-	1:310	8
13	Wadapur	13	1.32	1:160	1:110	-	-	-	-	-	-	-	-	1:107	1

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Name of the Project : Bhima L.B.C.

Dist : Sholapur  
Tals : Pandharpur  
Mohol, Madha

Statement No.8 showing the distribution of major crops grown in the  
different subcatchments.

Subcatchment No.	Total commanded area (acres)	Culturable area (acres)	Major crops grown (acres)							
			Sugar cane.	Garden	Vege-table.	Cotton	Ground nut.	Food crops	Pulses.	Other crops
1	17354	14088	5	-	36	13	286	11830	299	1634
2	2746	5474	-	-	2	1	32	2087	45	3307
3	11066	9674	2	-	8	91	197	8260	120	996
4	14808	13692	9	-	41	454	340	11097	410	1341
5	2925	2727	9	-	13	27	52	2339	28	259
6	28052	26130	60	9	101	94	376	23994	625	871
7	9753	9557	72	32	122	29	137	8668	163	334
8	38896	33792	181	40	291	238	998	29309	1726	1009
9	20112	18755	101	5	160	147	1189	14849	1574	730
10	17280	16480	63	51	545	225	828	12680	1435	653
11	12894	12518	43	40	412	247	496	9714	630	936
12	35256	32446	119	15	515	178	1553	27109	1758	1199
13	4240	4044	12	1	9	25	98	3642	164	93
<b>TOTAL :</b>	<b>215382</b>	<b>199377</b>	<b>676</b>	<b>193</b>	<b>2235</b>	<b>1774</b>	<b>6582</b>	<b>165578</b>	<b>8977</b>	<b>13362</b>

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KARAMBA BRANCH

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KARAMBA BRANCH.

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Name of the Project : Bhima  
( Karamba - Branch )

Dist : Sholapur  
Tals.: North -  
-Sholapur  
Mohol.

Statement No.1 showing villages with their Talukas and District in different subcatchments and the gross area surveyed.

Sub catchment	District	Taluka	Villages	Area surveyed in acres
14	Sholapur	Mohol	1) Bhoira, 2) Juri, 3) Hingani, 4) Bhambewadi, 5) Ashti, 6) Khuneshwar.	.. 3990
15		North-Sholapur	1) Moranchi*, 2) Sirapur, 3) Lamboti, 4) Arjunsoda, 5) Savaleshwar*, 6) Popli 7) Iravda Kd. 8) Darphal Bibi*, 9) Pakni*	.. 13565
16		Mohol North-Sholapur:	1) Chincholi, 2) Savaleshwar* 3) Darphal Bibi*, 4) Pakni* 5) Kondi, 6) Shini., 6) Hiraj, 7) Kegaon, 8) Tirha, 9) Bala 10) Degaon*, 11) Belati, 12) Pathri, 13) Telgaon*, 14) Dongaon*.	.. 31205
17			1) Sholapur, 2) Degaon*, 3) Belati*, 4) Kavtha, 5) Dongaon*, 6) Telgaon*, 7) Nandur, 8) Hatur, 9) Sam- shapur, 10) Soregaon.	.. 9215
Total :-				57975

Note :- Villages marked with asterisk come under more than one subcatchment.

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Name of the Project : Bhima  
( Karamba - Branch )

Dist : Sholapur.  
Tal. : North  
Sholapur,  
Mohol.

Statement No.2 showing the distribution of soils -  
-(villagewise) in different subcatchments.

Subcatchment No.	Village	Total area surveyed (acres)	DISTRIBUTION OF SOILS		
			Light	Medium	Deep
1		3	4	5	
14	Bhoira	830	80	85	275
	Hingani	110	45	40	5
	Ashti	1070	375	85	1010
	Bhambewadi	1510	370	65	275
	Sirapur	5	-	-	5
	Khuneshwar	145	-	50	15
		3990	770	295	555
15	Moranchi	1300	770	95	305
	Sirapur	1030	150	125	1135
	Lamboti	1725	95	55	515
	Anjansonda	2040	1080	70	940
	Popli	2050	495	590	905
	Iravda Kd.	1230	405	375	490
	Pakni	180	-	40	140
	Savaleshwar	1380	290	470	490
	Darphal Bibi	370	15	70	385
		13575	5350	2940	5775
16	Darphal Biki	430	135	175	150
	Chincholi	225	215	10	-
	Savaleshwar	1440	520	495	425
	Pakni	3195	1350	910	935
	Kondi	1310	1210	50	50
	Kegaon	930	930	-	-
	Bala	870	200	100	510
	Shivni	1330	10	230	1090
	Hiraj	5475	2820	1185	470
	Degaon	2935	830	1490	1020
	Tirha	2900	1015	1335	500
	Belati	2200	1030	335	135
	Pathri	4000	230	2930	1050
	Telgaon	2075	-	110	1955
	Dongaon	150	-	-	150
		31205	12485	9575	9155

Contd....

	1	2	3	4	5	6
17	Sholapur	855	-	-	65	790
	Degaon	1415	-	-	785	620
	Belati	220	-	-	-	220
	Kavtha	1040	-	-	880	160
	Telgaon	40	5	-	5	30
	Dongaon	1945	430	-	1145	370
	Nandur	1415	785	-	160	470
	Samshapur	340	80	-	50	210
	Soregaon	50	-	-	35	15
	Hatur	1895	10	-	535	1350
		9215	1310	-	3660	4245

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Name of the Project : Bhima

( Karamba - Branch )

Dist : Sholapur  
Tals : North -  
Sholapur  
Mohol.

Statement No.3 showing number of wells observed in different villages in different subcatchments, their distribution as per water levels and cases of -  
- salinity.

S. No.	Subcatchment No.	Village	No. of wells observed.	Distribution of wells as per depth of water level from Ground Level			No. of wells from which samples are collected and tested.	No. of wells having conductivity.	
				0'-4'	4'-10'	10'-20'		1000 to 2000	More than 2000
1	14	Bhoira	5	-	-	3	5	-	-
2	14	Hingani	-	-	-	-	-	-	-
3	14	Bhambewadi	26	-	-	5	24	3	-
4	14	Ashti	20	-	-	-	19	6	-
5	14	Khuneshwar	-	-	-	-	-	-	-
6	15	Moranchi	17	2	4	7	16	1	1
7	15	Sirapur	23	+	1	11	22	1	3
8	15	Lamboti	14	-	3	3	12	3	-
9	15	Arjunsonda	36	-	6	27	35	7	1
10	15,16	Savalseshwar	61	+	7	30	54	10	7
11	15	Popli	13	-	2	10	12	-	-
12	15	Travda Kd.	1	-	-	-	1	-	-
13	15,16	Pakni	40	3	7	18	37	7	1
14	15,16	Darphal Bibi	17	-	4	12	13	4	-
15	16	Chincholi	2	+	-	1	-	-	-
16	16	Kondi	26	-	4	19	24	-	-
17	16	Shivni	4	-	-	-	3	1	1
18	16	Hiraj	73	1	18	23	66	8	5
19	16	Kegaon	5	-	1	4	4	-	-
20	16	Tirha	41	?	5	26	34	9	10

Contd..

1	2	3	4	5	6	7	6	7	
21	16	Bala	13	-	-	9	10	-	
22	16,17	Degaon	94	-	8	15	87	17	
23	16,17	Belati	30	-	2	15	30	6	
24	16	Pathri	20	-	2	11	18	6	
25	16,17	Telgaon	-	-	-	-	-	-	
26	16,17	Dongaon	37	-	14	16	34	3	
27	17	Sholapur	7	-	5	2	7	3	
28	17	Kavtha	7	1	-	4	6	-	
29	17	Nandur	10	-	2	2	7	1	
30	17	Hatur	8	-	2	2	7	-	
31	17	Samshapur	2	-	-	2	2	1	
32	17	Soregaon	-	-	-	-	-	-	
Total :-			652	9	97	282	589	97	47

C.S./

Name of the Project : Bhima  
( Karamba - Branch )

Dist : Sholapur  
Tals : North  
Sholapur  
Mohoi.

Statement No.4 showing the rate of recuperation in  
wells.

Name of village.	Survey No.	Dia. of well.	Rate of recuperation in $\frac{1}{2}$ hour.	Crops & area irrigated
Ashti	36	42'-0"	0.195	<u>S. cane, Banana, Onion, Wheat</u> 2-00 0-05 1-00 0-20
Bhambewadi	40	28'-0"	0.027	<u>S. cane, Onion, Groundnut</u> 0-20 0-20 1-00
	139A	20'-9"	0.0745	<u>Sugarcane, Wheat.</u> 0-20 0-20
	7	41'-0"	0.187	<u>S. cane, Wheat, Vegetable</u> 1-00 1-00 0-05
Sirapur	95	32'-0"	0.261	<u>S. cane, Maize, Veg., Grapes</u> 1-20 1-00 0-20 0-20
	113	30'-0"	0.065	<u>Wheat, Maize, Wangi</u> 1-00 0-20 0-05
Savaleshwar	105	32'-0"	0.109	<u>Sugarcane, Wheat.</u> 0-20 0-10
	2	42'-9"	0.155	<u>Chillies, Jowar</u> 1-00 1-00
	117	35'-11"	0.047	<u>Chillies, Jowar</u> 0-02 2-00
	135	36'-0"	0.094	<u>Chillies, Sugarcane</u> 0-10 0-25
Darphal Bibi	214	25'-0"	0.078	<u>Jowar, Wheat.</u> 1-20 2-00
Arjunsonda	69	32'-0"	0.223	<u>S. cane, Wheat, Onion,</u> 0-30 0-30 1-00 <u>Chillies, Maize.</u> 0-10 1-00
	72	32'-6"	0.113	<u>Jowar, Onion, Chillies</u> 2-00 0-20 0-10 <u>Maize, Wheat.</u> 0-20 1-30
	55	25'-6"	0.165	<u>S. cane, Jowar, Maize</u> 2-00 1-30 0-20
Lamboti	22A	27'-0"	0.393	<u>S. cane, Wheat.</u> 2-00 2-00

Contd...

	1	2	3	4	5
Lamboti	19	27' -0"	0.171	<u>Wheat, Maize, Onion, G.nut</u> 4-00 0-20 0-20 0-20	
	22	30' -0"	0.098	<u>Sugarcane</u> 7-00	
Hiraj	67A	42' x36'	0.071	<u>Wheat, Jowar.</u> 2-00 0-20	
	114	42' -0"	0.195	<u>S. cane, Wheat, Jowar, Gram</u> 6-00 0-20 2-00 0-10	
	67A	36' -0"	0.094	<u>Jowar.</u> 1-20	
	200	50' x50"	0.440	<u>Sugarcane.</u> 9-00	
Tirha	43	41' -8"	0.127	<u>Wheat, S. Potato</u> 1-00 5-00	
	44	27' -0"	0.053	<u>Wheat, Onion</u> 0-35 0-10	
Belati	71A	38' -0"	0.102	<u>Jowar, Turmaric, Wheat.</u> 3-00 0-05 0-10	
	47	45' x45'	0.419	<u>Sugarcane, Wheat.</u> 3-00 0-10	
	69	27' -3" x 25' -9"	0.057	<u>Sugarcane, Chillies</u> 1-00 0-10	
Pakni	113A	26' -9"	0.026	<u>Wheat, Chillies.</u> 1-00 0-20	
	113	27' -0"	0.053	<u>Lemon, Jowar, Wheat</u> 0-20 2-00 2-00	
	127	38' -6"	0.270	<u>Grapes, Onion, Wheat</u> 0-20 1-00 0-05	
Pathri	119	30' -0"	0.065	<u>Sugarcane, Chillies</u> 1-00 0-20	
	120	38' x38'	0.133	<u>Sugarcane, Onion</u> 0-20 0-30	
Hondi	113A	30' -0"	0.032	<u>S. cane, Jowar, Wheat, Maize</u> 1-00 1-00 0-20 0-20	
	94	37' -0"	0.075	<u>Sugarcane, Jowar.</u> 1-00 2-00	
Degaon	116	45' -0"	0.2188	<u>Sugarcane, Wheat</u> 5-00 0-20	

Contd...

1	2	3	4	5
Degaon	168	47'-0"	0.161	<u>Sugarcane</u> , <u>Jowar</u> . 1-10 1-00
	151A	27'-0"	0.212	<u>S.cane</u> , <u>Wheat</u> , <u>Gram</u> 3-00 0-20 2-00
	189B	36' x 39'	0.169	<u>S.cane</u> , <u>Jowar</u> , <u>Wheat</u> 1-00 2-00 0-25
	11	30'-0"	0.197	<u>S.cane</u> , <u>Wheat</u> , <u>Onion</u> , <u>Brinjal</u> 3-20 0-20 0-05 0-05



Name of the Project : Bhima

( Karamba Branch )

Dist : Sholapur  
Tals : North Sholapur  
Mohol.

Statement No. 3 showing areas irrigated on wells in the commanded area  
of - Karamba - Branch

Subcatchment No.	No. of wells observed.	Area irrigated in acres.	Sugar cane	Other perennial	Cotton	Vegetables	Jowar and other crops.
14	41	165-31	10-02	1-10	-	11-77	143-12
15	104	269-29	44-77	1-12	-	20-30	203-20
16	234	692-77	147-25	1-32	0-10	20-35	518-25
17	45	118-00	39-30	4-20	-	5-30	68-00
Total :	424	1245-27	241-24	8-34	0-10	61-22	933-17

C.S./

Name of the Project : Bhima  
( Karamba Branch )

Dist : Sholapur  
Tals : North -  
Sholapur  
Mohol.

Statement No.6 showing results of infiltration tests.

Sr. No.	Subcatchment No.	Village & Survey No.	Cross Section No.	Pit No.	Depth @ which test is carried out.	Rate of infiltration inches/hour.
1	2	3	4	5	6	7
1	14	Ashti 4	13	19	1'-0"	0.18
2	14	Bhambewadi 18	17	11	1'-0"	0.335
3	14	Bachira 139	2	2	1'-0"	0.32
4	15	Arjunsonda 8	29	9	1'-0"	0.16
5	15	Savaleshwar 4	35	9	1'-0"	0.16
6	15	Lamboti 17	22	9	1'-0"	0.39
7	16	Degaon 189	67	9	1'-0"	0.159
8	16	Pathari 97	71	17	1'-0"	0.24
9	17	Sholapur 445	71	4	1'-0"	0.148
10	17	Dongaon 60	83	4	1'-0"	0.42

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C.S./

Name of the Project : Bhima

( Karamba - Branch )

Dist : Sholapur.  
Tals : North-  
Sholapur,  
Mohol.

Statement No.7 showing the results of the studies of the existing natural  
drainage for different sub-catchments. -

Subcatchment No.	Nala No.with local name if any.	Length of nala.	Slopes in different length of the nala						Average slope	No.of places having out crop in bed
			1st	2nd	3rd	4th	5th	6th		
14	Bhambewadi	5.56	1:660	1:401	1:469	1:656	1:247	1:255	1:423	7
15	Darphal Bibi	5.19	1:456	1:511	1:500	1:380	1:275	1:300	1:400	1
17	Hatur	2.65	1:220	1:339	1:116	-	-	-	1:226	-

D.S./



Name of the Project : Bhima  
 ( Karamba Branch )

Dist : Sholapur.  
 Tals : North Sholapur  
 Mohol.

Statement No.8 showing the distribution of major crops grown in the  
 different subcatchments.

Subcatchment No.	Total commanded area. (acres)	Culturable area (acres)	Major crops grown (acres)							
			Sugar cane.	Garden -table.	Vege-	Cotton	Ground-nut	Food crops	Pulses	Other crops
14	3990	3498	8	1	30	80	81	2807	314	177
15	13565	11541	44	2	70	51	569	9273	11146	386
16	31205	28410	513	8	104	32	1524	22979	2543	707
17	9215	8800	137	10	43	21	883	7209	112	385
	57975	52249	702	21	247	184	3057	42268	4115	1655

C.S./

Name of the Project : Bhima  
(Karamba - Branch)

Dist : Sholapur.  
Tals : North-  
Sholapur,  
Mchol.

Statement No.9 showing deductions in medium and  
deep soil in different subcatchments.

Sub catchment	Area under $\frac{1}{4}$ mile limit		Area under 10' H.I.B.		Cut up lands, exposed rock.		Total deductions as unsuitable area	
	Medium	Deep	Medium	Deep	Medium	Deep	Medium	Deep
14	53	155	-	-	10	48	63	203
15	378	529	197	211	10	74	585	814
16	242	495	704	533	24	50	970	1078
<b>Total :-</b>	<b>673</b>	<b>1179</b>	<b>901</b>	<b>744</b>	<b>44</b>	<b>172</b>	<b>1613</b>	<b>2095</b>

G.S./

KURUL BRANCH

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KURUL - BRANCH

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Name of the Project : Bhima  
( Kurul - Branch )

Dist : Sholapur.  
Tals : Mohol.

Statement No.1 showing villages with their Talukas and District in different subcatchments and the gross area surveyed.

Sub catchment	District	Taluka	Villages	Area surveyed in acres.
12A	Sholapur	Mohol	1)Ghatna,2)Mohol*	2460
13A			1)Mohol*,2)Vadval*,3)Kolgaon	4230
14A			1)Vadval*,2)Ramhingani*	1540
15A			1)Vadval*,2)Ramhingni*, 3)Gotewadi*,4)Dok-babhulgaon 5)Mundhewadi.	3695
16A			1)Dok-Babhulgaon*,2)Sayad- Varavada,3)Gotewadi,4)Katewadi 5)Nandgaon,6)Kurul,7)Iravda B* 8)Parmeshwar-Pimpri*.	8660
17A			1)Iravda B*,2)Parmeshwar- -Pimpri*,3)Shirapur,4)Pir- -Takli,5)Kamathi B*,6)Kamathi K* 7)Shingoli,8)Taratgaon, 9)Datpur.	13765
18A			1)Kamathi B*, 2)Kamathi K* 3)Koravli, 4)Gunjegaon	5895

Total :- 40245

Note : Villages marked with asteric come under more than one subcatchment.

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Name of the Project : Bhima  
( Kurul Branch )

Dist : Sholapur.  
Tals : Mohol.

Statement No.2 showing the distribution of soils  
(villagewise) in different subcatchments.

Subcatchment No.	Village	Total area surveyed (acres)	Distribution of soil.		
			Light	Medium	Deep
12A	Ghatna	990	180	225	585
	Mohol	1470	65	486	920
		2460	245	710	1505
13A	Mohol	1220	935	205	80
	Kolgaon	2270	670	545	1055
	Vadval	740	395	300	45
		4230	2000	1050	1180
14A	Vadval	1530	575	715	240
	Ram Hingani	10	-	-	10
		1540	575	715	250
15A	Vadval	200	105	45	50
	Ram Hingani	1280	630	550	100
	Mundhewadi	1240	350	500	390
	Gotewadi	560	400	160	-
	Dok Bahulgaon	235	320	65	-
	Nandgaon	30	-	5	25
		3695	1805	1325	565
16A	Dok Bahulgaon	130	130	-	-
	Gotewadi	1230	575	430	275
	Nandgaon	770	-	30	740
	Syad Varvada	290	290	-	-
	Katewadi	2640	1040	860	740
	Iravda B.	840	-	70	770
	Kurul	2335	1835	450	50
	Parmeshwar--Pimpri.	375	350	20	5
		8060	4220	1860	2580

Contd...

1	2	3	4	5	6
17A	Parameshwar -Pimpri.	655	520	115	20
	Dalpur	2400	2260	110	30
	Iravda B	3440	870	1700	870
	Sirapur	850	-	640	210
	Pir Takli	1810	895	485	430
	Taratgaon	830	20	540	270
	Shingoi	1010	225	365	420
	Kamathi B	865	690	175	-
	Kamathi K	1905	1390	450	65
		13765	6870	4580	2315
18A	Kamathi B	370	270	100	-
	Kamathi K	2065	1105	675	285
	Koravli	3330	2735	465	130
	Gunjegaon	130	-	-	130
		5895	4110	1240	545
	Grand Total	40245	19825	11480	8940

( Kurul Branch )

Statement No.3 showing number of wells observed in different villages in different subcatchments, their distribution as per water-level and - cases of salinity.

S. Subcatchment		Village	No. of wells observed.	Distribution of wells as per depth of water level from ground level			No. of wells which samples are collected and tested.	No. of wells having conductivity.	
No.	No.			0'-4'	4'-10'	10'-20'		1000 to 2000	More than 2000
1	2	3	4	5			6	7	
1	12A	Ghatna	4	-	-	1	4	-	-
2	12A, 13A	Mohol	33	-	3	18	31	-	9
3	13A	Kolgaon\	17	-	-	6	14	6	2
4	13A, 14A, 15A	Vadval	90	1	12	60	84	15	7
5	14A, 15A	Ram-Hingni	34	-	4	20	27	7	-
6	15A	Murjhewadi	17	-	-	6	16	-	1
7	15A, 16A,	Gotewadi	65	-	3	32	53	14	8
8	15A, 16A	Dok-Babhulgaon	11	-	-	6	11	4	1
9	16A	Sayad Varavada	5	-	-	4	5	2	-
10	16A	Katewadi	58	-	10	40	53	18	6
11	16A, 15A	Nandgaon	7	1	5	1	3	-	3
12	16A	Kurul	82	-	6	37	77	16	1
13	16A, 17A	Iravda B	58	-	12	26	49	14	6
14	16A, 17A	Parmeshwar-Pimpri.	33	-	8	23	29	1	1
15	17A	Shirapur	7	-	1	6	3	2	-
16	17A	Pir-Takli.	52	6	6	37	45	3	7
17	17A, 18A	Kamathi B	24	-	4	20	24	1	-
18	17A, 18A	Kamathi K	103	1	7	75	83	8	3
19	17A	Shingoli	6	-	1	5	5	1	4

Contd...



Name of the Project : Bhima

Dist : Sholapur.

Tals : Mohol.

( Kurul Branch )

Statement No.3 showing number of wells observed in different villages in different subcatchments, their distribution as per water-level and - cases of salinity.

S. No.	Subcatchment No.	Village	No. of wells observed.	Distribution of wells as per depth of water level from ground level			No. of wells which samples are collected and tested.	No. of wells having conductivity.	
				0'-4'	4'-10'	10'-20'		1000 to 2000	More than 2000
1	2	3	4	5			6	7	
1	12A	Ghatna	4	-	-	1	4	-	-
2	12A,13A	Mohol	33	-	3	18	31	-	9
3	13A	Kolgaon\	17	-	-	6	14	6	2
4	13A,14A,15A	Vadval	90	1	12	60	84	15	7
5	14A,15A	Ram-Hingni	34	-	4	20	27	7	-
6	15A	Murjhewadi	17	-	-	6	16	-	1
7	15A,16A,	Gotewadi	65	-	3	32	58	14	8
8	15A,16A	Dok-Babhulgaon	11	-	-	6	11	4	1
9	16A	Sayad Varavada	5	-	-	4	5	2	-
10	16A	Katewadi	58	-	10	40	53	18	6
11	16A,15A	Nandgaon	7	1	5	1	3	-	3
12	16A	Kurul	82	-	6	37	77	16	1
13	16A,17A	Iravda B	58	-	12	26	49	14	6
14	16A,17A	Parmeshwar-Pimpri.	33	-	8	23	29	1	1
15	17A	Shirapur	7	-	1	6	3	2	-
16	17A	Pir-Takli.	52	6	6	37	45	3	7
17	17A,18A	Kamathi B	24	-	4	20	24	1	-
18	17A,18A	Kamathi K	103	1	7	75	88	8	3
19	17A	Shingoli	6	-	1	5	5	1	4

Contd...

1 2 3 4 5 6 7

20	17A	Taratgaon		No wells			
21	17A	Datpur	34	6	20	33	1
22	18A	Koravli	53	3	38	46	1
23	18A	Gunjegaon		No wells			

793 3 91 481 705 114 59

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C.S./

Name of the Project : Bhima

Dist : Sholapur.

Tals : Mohol.

( Kurul Branch )

Statement No.4 showing the rate of recuperation in wells.

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Name of village.	Survey No.	Dia. of wells	Rate of Recuperation in $\frac{1}{2}$ hour.	Crops & area irrigated.
Mohol	216	33'-6"	0.245	<u>Sugarcane, Chillies, Veg.</u> 1-0 0-20 0-15 <u>Onion, Jowar, Wheat.</u> 0-15 4-00 3-00
	191	28'-0"	0.227	<u>S. cane, Wheat, Jowar.</u> 1-00 0-20 2-0
	189B	21'-6"	0.067	<u>S. cane, Banana, Veg. Jowar, Wheat</u> 2-20 0-15 0-10 2-0 2-00
Kolgaon	67A	17'-3"	0.042	<u>S. cane, Jowar, Wheat</u> 1-00 0-20 1-00
	68	39'-0"	0.264	<u>S. cane, Onion, Veg. Jowar</u> 2-00 0-10 0-05 2-20
Vadval	71	23'-0"	0.121	<u>S. Cane, Veg., Jowar, Wheat</u> 0-20 0-25 3-00 1-00
Vadval	114	25'-6"	0.094	<u>S. cane, Jowar.</u> 2-00 4-00
	4A	26'-3"	0.148	<u>S. cane, Turmaric, Wheat, Jowar</u> 3-00 0-20 1-0 3-20
	129	27'-6"	0.110	<u>S. cane, Jowar.</u> 0-30 2-00
	27	23'-3"	0.137	<u>S. cane, Wheat, Jowar.</u> 3-00 2-20 7-00
Mundhewadi	28B	23'-0"	0.152	<u>S. cane, Wheat, Jowar.</u> 4-00 1-20 1-20
	8	21'-0"	0.048	<u>Chillies, Wheat, Jowar.</u> 0-10 0-20 3-00
	7	28'-0"	0.071	<u>Turmaric, Veg., Chillies,</u> 0-05 0-05 0-10 <u>Jowar, Wheat.</u> 2-20 1-20
Ram. Hingni	45	20'-3"	0.037	<u>S. cane, Cotton, Veg., Jowar</u> 1-00 0-20 0-15 2-00
	42A	22'-3"	0.053	<u>S. cane, Veg., Wheat, Jowar</u> 1-20 0-10 2-00 4-00

Contd...

	1	2	3	4	5
Gotewadi	45	26'-6"	0.152	<u>S. cane,</u> <u>Chillies,</u> <u>Jowar</u> 1-00 0-10 5-00	
	58	27'-3"	0.134	<u>S. cane,</u> <u>Wheat,</u> <u>Jowar</u> 1-20 1-00 4-00	
	10	30'-9"	0.173	<u>Onion, Maize, Wheat, Jowar.</u> 0-10 1-00 4-00 5-00	
	6	36'-0"	0.260	<u>S. cane,</u> <u>Wheat,</u> <u>Jowar.</u> 2-00 3-00 3-00	
	4	33'-3"	0.120	<u>Onion,</u> <u>Wheat,</u> <u>Jowar.</u> 1-00 0-20 2-20	
	8	31'-3"	0.179	<u>S. cane,</u> <u>Wheat,</u> <u>Jowar.</u> 2-00 3-00 3-00	
Kurul	8	28'-0"	0.284	<u>S. cane, Banana, Garlic, Onion</u> 4-20 2-20 0-10 0-10 <u>Jowar.</u> 26-00	
	9	31'-0"	0.139	<u>S. cane,</u> <u>Wheat,</u> <u>Jowar.</u> 7-00 1-20 19-00	
	85	29'-6"	0.252	<u>S. cane, Banana, Lemon, Grapese</u> 5-00 2-00 0-20 0-20 <u>Jowar, Wheat.</u> 8-20 4-00	
	36	24'-9"	0.095	<u>S. cane,</u> <u>Onion,</u> <u>Jowar</u> 4-00 1-00 2-00	
	92	24'-6"	0.099	<u>S. cane, Banana, Guava, Lemon</u> 2-00 0-05 0-15 0-20 <u>Jowar.</u> 1-00	
	92A	31'-8"	0.146	<u>S. cane, Lemon, Pomogranate</u> 5-00 0-10 0-10 <u>Banana, Mosambi.</u> 0-10 0-20	
	73	32'-6"	0.172	<u>S. cane,</u> <u>Guava,</u> <u>Banana</u> 5-00 0-10 0-20	
	57	33'-6"	0.326	<u>S. cane, Lemon, Onion, Wheat</u> 1-00 0-20 4-00 4-00 <u>Jowar..</u> 6-00	
Katewadi	87	33'-6"	0.163	<u>S. cane, G. nut, Maize, Jowar</u> 2-00 1-20 1-00 0-20	
	40	24'-6"	0.064	<u>S. cane, Chillies, Jowar, Wheat</u> 0-20 0-20 9-10 0-20	
	86	20'-0"	0.072	<u>Jowar,</u> <u>Wheat.</u> 5-00 3-00	

Contd...

1	2	3	4	5
Katewadi	38	27'-6"	0.165	<u>S. cane, Chillies, Onion, Jowar</u> 3-00 0-20 1-20 2-00 <u>Wheat</u> 2-00
	1	22'-6"	0.092	<u>S. cane, Jowar.</u> 2-20 4-00
Parmeshwar- -Pimpri.	7	27'-6"	0.082	<u>Chillies, Veg., Wheat, Jowar</u> 0-10 0-05 1-20 2-00
	16A	39'-6"	0.227	<u>Cotton, Guava, Chillies,</u> 2-00 0-10 1-00 <u>Wheat, Jowar.</u> 1-00 7-0
Iravda B.	205	42'-0"	0.256	<u>S. cane, Veg., Maize, Wheat.</u> 1-00 0-10 0-20 0-20
	125	35'-6"	0.319	<u>S. cane, Onion, Wheat, Jowar</u> 1-20 1-20 0-20 1-00
	60	31'-3"	0.107	<u>S. cane, Chillies, Jowar, Onion</u> 1-20 0-20 4-00 2-20
	86	32'-3"	0.076	<u>Veg., Chillies, Jowar, Onion</u> 0-05 0-20 4-30 0-20
	110	32'-0"	0.091	<u>S. cane, Veg., Jowar, Wheat</u> 0-30 0-05 2-00 0-20
	201	36'-0"	0.0188	<u>Sugarcane, Jowar.</u> 3-20 1-20
	65	25'-0"	0.135	<u>S. cane, Guava, Paddy, Wheat</u> 2-00 3-20 1-20 2-00 <u>Jowar</u> 12-00
	47	18'-0"	0.043	<u>S. cane, Guava, Veg., Wheat</u> 0-20 2-00 0-10 0-20 <u>Jowar</u> 10-00
Kamathi K	65	49'-3"	0.204	<u>S. cane, Wheat, Jowar, Maize</u> 5-00 4-00 5-00 0-10
Kamathi B	96	25'-0" x 15'-0"	0.071	<u>S. cane, Veg., Wheat, Jowar</u> 1-00 0-15 2-00 2-00
	111	32'-0"	0.074	<u>S. cane, Veg., Wheat, Jowar</u> 0-20 0-20 2-20 5-00
	1A	19'-6" x 19'-6"	0-105	<u>S. cane, Guava, Wheat, Jowar</u> 2-00 2-00 1-20 2-20
	4	16'-5" x 16'-6"	0.192	<u>Sugarcane, Guava.</u> 3-10 1-00
	4D	22'-0"	0.070	<u>S. cane, Guava, S. Potato, Wheat</u> 2-20 0-20 0-20 0-20

Contd...

1	2	3	4	5
Kamathi B	5	44'-0"	0.071	<u>S. cane, Guava, Veg., Wheat</u> 2-00 1-00 1-20 1-00
Kamathi K	117	30'-3"	0.133	<u>S. cane, Veg., Jowar, Wheat</u> 1-30 1-00 6-00 1-00
Koravli	108	29'-9"	0-128	<u>S. cane, Veg., Jowar, Maize</u> 2-00 0-10 1-20 1-00 <u>Wheat.</u> 3-20
	193	25'-0"	0.135	<u>Sugarcane, Wheat</u> 5-00 3-00
	205	35'-6"	0.109	<u>S. cane, Veg., Wheat, Jowar</u> 2-00 0-20 2-00 1-20
	209	24'-3"	0.085	<u>S. cane, Veg., Jowar</u> 2-20 0-10 2-00
	128	19'-5"	0.069	<u>S. cane, Chillies, Jowar,</u> 2-00 0-20 2-00 <u>Wheat.</u> -20

C.S./

Name of the Project : Bhima  
( Kurul Branch )

Dist : Sholapur.  
Tals : Mohl.

Statement No.5 showing areas irrigated in the  
- commanded area of Kurul Branch.

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Sub catchment	Number of wells observed.	Area irrigated.	Sugar cane	Other Perennials.	Cotton	Vegetable.	Other crops
12A	7	30-20	-	-	-	1-00	29-20
13A	52	209-27	21-15	1-2	-	8-10	179-00
14A	27	146-20	18-00	-	-	6-05	128-15
15A	69	271-24	9-15	0-10	0-20	24-24	236-35
16A	141	814-28	81-30	23-30	7-00	54-38	647-10
17A	170	907-37	44-10	11-25	3-35	58-02	790-05
18A	70	348-27	44-20	7-15	2-20	17-27	276-25
	536	2729-23	219-10	44-02	13-35	170-26	2281-30

Name of the Project : Bhima

Dist : Sholapur.

( Kurul Branch )

Tals : Mohol.

Statement No.6 showing results of infiltration tests.

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Sr. Subcatch Village and Cross Pit Depth @ Rate of  
No. -ment No. Survey No. Section No. No. which infiltration  
test is inches/hour.  
carried  
out.  
-----

1	12A	Ghatna	21	5	6	1'-0"	0.45
2	13A	Kolgaon	6	19	15	1'-0"	0.14
3	14A	Vadval	38	24	6	1'-0"	0.30
4	16A	Gotewadi	6	32	7	1'-0"	0.39
5	16A	Nandgaon	-	39	17	1'-0"	0.17
6	16A	Katewadi	51	30	9	1'-0"	0.26
7	16A	Kurul	8	42	2	1'-0"	0.33
8	17A	Shirapur	33	51	18	1'-0"	0.21
9	17A	Shingoli	13	59	8	1'-0"	0.26
10	18A	Koravli	111	67	5	1'-0"	0.34

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C.S./



Name of the Project : Bhima  
( Kurul Branch )

Dist : Sholapur.  
Tals : Mohol.

Statement No.7 showing the results of the studies of the existing natural drainage  
- for different subcatchment.

Subcatchment No.	Nala No. with local name if any.	Length of nala.	Slope in different length of the nala.					Average slope.	No. of places having out crop in bed.
			1st	2nd	3rd	4th	5th		
12A	Mohol nala	2.40	1:677	1:320	1:184	-	1.355	2	
13A	Vadval "	3.12	1:233	1:200	1:221	1:134	1.211	1	
14A	Ram Hingani	1.84	1:151	1:126	-	-	1.139	-	
15A	Gotewadi	3.80	1:179	1:1250	1:287	1:173	1.214	-	
16A	Parmeshwar Pimpri.	3.31	1:179	1:264	1:149	1:139	1.180	5	
17A	Kamathi Ek	3.65	1:137	1:263	1:194	1:134	1.172	3	
18A	Gunjegaon	5.00	1:234	1:167	1:176	1:231	1:155 1.187	5	

C.S./

Name of the Project : Bhima

( Kurual Branch )

Dist : Sholapur.  
Tals.: Mohol.

Statement No.8 showing the distribution of major crops grown in  
the different subcatchments.

Subcatchment No.	Total commanded area (acres)	Culturable area (acres)	Major crops grown (acres)							
			Sugar cane	Garden	Vegetable	Cotton	Ground nut	Food crops	Pulses	Other crops
12A	2460	2544	36	-	13	6	24	2316	36	103
13A	4230	4157	30	-	8	-	90	3394	23	612
14A	1541	1522	15	-	10	10	15	1180	12	280
15A	3695	3517	20	-	29	45	92	2680	63	538
16A	3660	8311	80	20	80	70	270	7042	316	433
17A	13765	12474	7	-	63	75	306	10395	246	1382
18A	5895	5244	2	1	37	55	153	4596	151	249
	40245	37769	190	21	245	261	950	31603	847	3652

C.F./

Name of the Project : Bhima  
 ( Kurul Branch )

Dist : Sholapur.  
 Tal. : Mohol.

Statement No.9 showing deductions in medium and deep  
 - soils in different subcatchment.

Sub catchment No.	Area under $\frac{1}{4}$ mile limit		Areas under 10' H.I.B.		Cut up lands exposed rock		Total deduction as unsuitable area.	
	Medium	Deep.	Medium	Deep	Medium	Deep	Medium	Deep
12A	25	90	-	16	-	-	25	106
13A	235	-	10	-	-	100	245	100
14A	100	-	60	30	-	45	160	30
15A	245	120	50	20	-	45	295	135
16A	270	130	40	95	5	115	315	390
17A	490	250	130	55	35	235	655	540
18A	85	-	50	-	25	45	160	45
1450		640	340	216	65	540	1355	1396

MANGALWEDHA  
BRANCH

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BHIMA RIGHT BANK CANAL  
(MANGALWEDHA BRANCH)

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Name of the Project : Bhima

Dist.: Sholapur  
Tal. :- Malshiras  
Pandharpur  
Mangalwedha

( Mangalwedha Branch).

Statement No.1 showing number of villages in each sub-catchment and the gross area surveyed.

Subcatchment No.	District	Taluka	Village	Gross area surveyed. (acres)
	Shola-	Mal -	1) Mahalung, 2) Mira, 3) Nevra, 4) Umra, 5) Jambud* 6) Borgaon, 7) Malkhamba*	9350
1A	-pur.	-shiras.		
	-do-	Pandhar-	1) Jambud*, 2) Malkhambi* 3) Velapur, 4) Bondla, 5) Khalva 6) Dhanor, 7) Tondla, 8) Dasur - 9) Bhalavani*	10985
2A		-pur		
			1) Segaoon*, 2) Wadi Kuravli*, 3) Dhondevadi, 4) Kuravli*, 5) Bhalavani*.	6785
3A				
			1) Supli, 2) Segaoon*, 3) Wadi- -Kuravli*, 4) Kuravli*.	3650
4A				
			1) Kautli*, 2) Khed, 3) Shelva 4) Segaoon*, 5) Upri, 5) Palsi	8480
5A				
			1) Korti*, 2) Vakhari*, 3) Shir- -dhon, 4) Kautli*.	5595
6A				
			1) Pandharpur*, 2) Takli*, 3) Isbavi, 4) Vakhri*, 5) Korti*	5565
7A				
			1) Pandharpur*, 2) Kasegaon* 3) Takli*.	2420
8A				
			1) Anvali*, 2) Kasegaon*, 3) Gopalpur*.	3020
9A				
			1) Sarkoli, 2) Ojhevadi, 3) Ne- -patgaon, 4) Amba, 5) Taratgaon 6) Shirgaon, 7) Ranjni, 8) Shinde- -wadi, 9) Chalha, 10) Chinchumba 11) Anvali*, 12) Tavshi, 13) Eklas- -pur, 14) Kondarki, 15) Mundhe- -wadi, 16) Gopalpur*, 17) Tanali	33060
10A				
	-do-	Mangal-	1) Borala*, 2) Rahatewadi, 3) Dongig*, 4) Machnur, 5) Mundhe- -wadi, 6) Marvada*, 7) Bhale- -wadi, 8) Mangalwedha, 9) Tal- -sangi, 10) Brahmapuri, 11) Khom- -nal, 12) Bathan, 13) Uchethan 14) Mundvi, 15) Dharamgaon, 16) Dhavlas, 17) Devgaon, 18) Male -wadi, 19) Gharnigi, 20) Akola, 21) Marapur, 22) Gunjegaon.	60665
	-wedha.			

1	2	3	4	5
11A	Shola- -pur	Mangal- -wedha	1) Sidapur, 2) Nandur, 3) Arali, 4) Tandur, 5) Borala*, 6) Donig*, 7) Tamdardi, 8) Marvada*	21525
			Grand Total	176100

\* Villages marked with asteric come under more than one subcatchment.

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C.S./

Name of the Project ; Bhima  
( Mangalwedha Branch )

Dist. Sholapur  
Tal.: Malshiras  
Pandharpur  
Mangalwedha

Statement No.2 showing the distribution of soils  
(villagewise) in different sub-catchments.

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Subcatchment No.	Village	Total area surveyed (acres)	-Distribution of soil -		
			Light	Medium	Deep
1	2	3	4	5	6
A	Mahalung	435	10	425	
	Mira	640	15	625	
	Nevra	2960	2560	-	
	Umra	290	290	-	
	Jambud	2720	130	2510	80
	Borgaon	2065	290	1745	30
	Malkhambi	240	50	175	15
		9350	3745	5480	125
1A	Jambud	2545	610	1310	625
	Malkhambi	560	530	30	-
	Velapur	370	320	50	-
	Bondla	1105	990	30	85
	Khalva	2430	1230	625	575
	Dhanor	50	-50	-	-
	Tondla	1430	885	545	-
	Dasur	1505	430	1025	50
	Bhalavani	990	400	400	190
		10985	5445	4015	1525
2A	Segaon	130	-	15	115
	Vadikuravli	1280	735	255	290
	Dhondewadi	350	305	30	15
	Kuravli	4770	1490	1165	2115
	Bhalavani	255	130	125	-
		6785	2660	1590	2535
3A	Supli	610	95	335	180
	Segaon	2175	240	590	1345
	Wadikuravli	800	-	30	770
	Kuravli	65	-	-	65
		3650	335	955	2360
4A	Kautli	1120	-	30	1090
	Khed	1650	690	255	705
	Shelva	2450	160	190	2100
	Segaon	1535	1230	225	30

Contd...



1	2	3	4	5	6
4A	Upari	750	465	285	-
	Palsi	975	575	270	130
		8480	3170	1255	4055
5A	Korti	190	30	160	-
	Vakhari	1215	110	430	675
	Shirdhon	1790	210	65	1515
	Kautli	2400	175	495	1730
			5595	525	1150
6A	Pandharpur	1935	590	80	1265
	Takli	350	350	-	-
	Isbavi	1140	830	100	160
	Vakhari	1590	1070	190	330
	Korti	550	515	20	15
		5565	3405	390	1770
7A	Pandharpur	720	410	30	280
	Kasegaon	1330	1330	-	-
	Takli	370	370	-	-
		2420	2110	30	280
8A	Anvali	510	385	100	25
	Kasegaon	960	940	20	-
	Gopalpur	1550	530	190	780
		3020	1905	310	805
9A	Sarkoli	4470	1840	540	2090
	Ojhewadi	1540	700	510	330
	Amba	3470	2320	190	960
	Nepatgaon	1310	900	60	350
	Taratgaon	900	660	50	190
	Shirgaon	2200	1640	290	270
	Ranjani	4390	4170	210	10
	Shindevadi	1920	750	465	705
	Chalha	4480	1840	625	2015
	Chinchumba	750	240	160	350
	Anvali	3440	2640	670	130
	Tavshi	3550	530	640	2380
	Eklaspur	530	110	290	130
	Kondarki	1470	1390	50	30
	Mundhewadi	1650	95	370	1185
	Gopalpur	1040	750	130	160
Tanli	950	10	390	550	
		38060	20585	5640	11835

Contd...

	1	2	3	4	5	6
10A	Borala	3200	-	-	-	3200
	Rahatewadi	1520	-	-	20	1490
	Donig	1220	65	65	50	1105
	Machnur	2175	675	675	880	620
	Mundhewadi	2420	-	-	5	2415
	Maravade	785	95	95	190	500
	Balevadi	990	420	420	170	400
	Mangalwedha	25250	3745	3745	4640	16865
	Talsingi	2100	1250	1250	385	465
	Brahmpuri	3920	400	400	415	3105
	Khomnal	640	515	515	125	-
	Bathan	1950	175	175	590	1185
	Uchethan	2580	655	655	1105	820
	Mundhavi	2500	175	175	415	1910
	Dharangaon	880	-	-	270	610
	Dhavlasi	1550	-	-	175	1375
	Devgaon	450	115	115	125	210
	Malewadi	850	130	130	240	480
	Gharhiji	1440	210	210	205	925
	Akola	420	275	275	130	15
	Marapur	2285	1215	1215	625	545
	Gunjegaon	1440	450	450	465	525
		60665	10565	10565	11335	38765
11A	Sidapur	4210	385	385	1355	1970
	Nandur	4195	2675	2675	1330	190
	Arali	3090	960	960	830	1300
	Tandur	1665	560	560	270	835
	Borala	3150	2095	2095	480	575
	Donig	2720	1170	1170	720	830
	Tambardi	2080	-	-	385	1695
	Marvade	415	50	50	80	285
		21525	7895	7895	5950	7680
	<u>Grand Total</u>	<u>176100</u>	<u>62870</u>	<u>62870</u>	<u>37575</u>	<u>75655</u>

Name of the Project : Bhima  
( Mangalwedha Branch )

Dist : Sholapur  
Tal. : Malshiras  
Pandharpur  
Mangalwedha

Statement No.3 showing number of wells observed in different villages  
in different subcatchments, their distribution as per water levels and  
- cases of salinity.

S. No.	Subcatchment No.	Village	No. of wells observed.	Distribution of wells as per depth of water level from Ground Level			No. of wells which samples are collected and tested.	No. of wells having conductivity.	
				0'-4'	4'-10'	10'-20'		1000 to -2000	More than 2000
1	2	3	4	5			6	7	
1	1A	Tondale	22	-	2	10	21	2	1
2	1A	Dasur	28	-	1	13	28	9	9
3	1A	Bhalwani	11	1	1	5	12	3	3
4	2A	Kuroli	18	-	4	12	18	1	3
5	2A	Dhondewadi	2	-	1	11	2	-	-
6	2A,3A,4A	Shegaon	68	-	8	41	64	16	10
7	2A,3A	Wadikuroli	26	-	3	16	23	7	6
8	3A	Supali	16	-	3	8	16	3	3
9	4A	Upari	12	-	1	3	12	-	-
10	4A	Palshi	13	1	-	9	12	-	-
11	4A	Shelwa	18	-	-	12	6	3	-
12	4A	Khed	12	-	2	-	3	3	-
13	4A,5A	Kautali	19	-	-	12	1	-	-
14	6A	Isbavi	15	-	5	8	14	1	-
15	5A,6A	Wakhri	43	-	18	17	39	6	-
16	6A	Korti	10	-	2	4	10	1	-
17	6A,7A	Wakali	13	-	-	11	11	1	-
18	6A,7A	Pandharpur	41	1	5	22	41	9	8
19	7A,8A	Kasegaon	20	-	4	13	19	2	4
20	8A,9A	Gopalpur	32	-	-	18	28	7	4
21	8A,9A	Anvali	80	1	12	46	80	11	2
22	9A	Chalha	52	-	1	25	52	2	5

1	2	3	4	5	6	6	7		
24	9A	Tavashi	103	-	12	20	99	14	68
25	9A	Nepatgaon	45	-	1	8	44	11	7
26	9A	Taratgaon	14	-	-	1	12	4	6
27	9A	Tanli	9	-	-	6	9	1	4
28	9A	Shinde-wadi	67	-	7	15	67	17	35
29	9A	Kondarki	17	-	3	9	17	-	-
30	9A	Ekhaspur	33	2	16	14	33	6	3
31	9A	Chichumba	17	-	5	3	17	11	3
32	9A	Ojhewadi	67	-	6	12	67	26	27
33	9A	Amba	47	2	15	22	47	12	12
34	9A	Shirgaon	50	-	5	20	50	9	7
35	9A	Ranjani	74	5	11	47	74	3	-
36	9A, 10A	Mundhewadi	13	-	1	5	11	6	-
37	10A	Talsangi	41	1	18	19	41	12	10
38	10A	Bhalewadi	18	-	1	12	13	4	12
39	10A	Uchethan	14	-	-	3	14	5	6
40	10A	Mangalwedha	153	1	15	79	153	40	59
41	10A	Dharamgaon	23	-	-	-	23	4	18
42	10A	Dhavalas	27	-	-	-	27	2	24
43	10A	Mundvi	47	-	-	5	46	13	29
44	10A	Marapur	48	-	2	17	48	10	25
45	10A	Gunjegaon	40	-	5	20	40	5	11
46	10A	Devgaon	8	-	1	6	8	-	2
47	10A	Malewadi	25	-	-	5	25	10	13
48	10A	Khomnal	11	-	1	8	11	5	-
49	10A	Bathan	9	-	-	-	9	1	5
50	10A	Brahmpuri	4	-	-	1	4	1	3
51	10A	Machnur	1	-	-	-	1	1	-
52	10A	Gharnigi	25	-	-	5	25	2	23

Contd...

1	2	3	4	5	6	7			
53	10A	Akola	3	-	-	3	1	2	
54	10A	Rahatewadi	-	-	-	-	-	-	
55	10A, 11A	Borala	71	-	13	48	71	19	24
56	10A, 11A	Donig	70	-	20	39	70	19	24
57	10A, 11A	Marvada	42	-	15	21	41	16	20
58	11A	Sidapur	3	-	1	2	3	1	1
59	11A	Tamdardi	2	-	1	-	2	-	2
60	11A	Tandur	4	-	-	1	4	1	2
61	11A	Arli	21	2	4	9	21	4	9
62	11A	Nandur	96	4	34	50	96	23	19
			1988	21	290	847	1915	425	577

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C.S./

Name of the Project : Bhima  
( Mangalwedha Branch )

Dist : Sholapur.  
Tals. : Malshiras  
Pandharpur  
Mangalwedha

Statement No. 4 showing the rate of recuperation in wells.

Sub-Name of cat village. ch	Survey No.	Dia. of well.	Rate of recupe- ration in $\frac{1}{2}$ hour.	Crops & area irrigated.
1	2	3	4	5
GA Isbavi	13	32' - 0"	0.054	<u>Rice</u> <u>Chilly</u> , <u>Jowar</u> 1-00 0-10 2-00
Pandharpur	156	14' - 0"	0.014	<u>Chilly</u> , <u>Jowar</u> , <u>Wheat</u> 0-10 2-00 1-00
	44	28' - 0"	0.028	<u>Veg.</u> , <u>Cotton</u> , <u>Chilly</u> , <u>Jowar</u> 3-00
7A	19	36' - 9"	0.101	<u>Cotton</u> , <u>Chilly</u> , <u>Jowar</u> , <u>Tomato</u> 0-20 0-02 2-30 0-02
	36A	20' - 0"	0.086	<u>Onion</u> , <u>Chilly</u> , <u>Jowar</u> . 1-00 0-20 2-00
8A Gopalpur	109	35' - 0"	0.09	<u>Sugarcane</u> , <u>Chilly</u> . 2-00 0-20
	110	20' - 0"	0.174	<u>Garden</u> , <u>Jowar</u> , <u>Cotton</u> , <u>Chilly</u> 0-02 1-00 0-10 0-02
Anoli	151	25' - 0"	0.272	<u>Sugarcane</u> , <u>Jowar</u> . 2-20 2-00
	155	15' - 6"	0.008	<u>Sugarcane</u> , <u>Jowar</u> , <u>Chilly</u> . 1-00 1-00 0-20
9A	98	23' - 0"	0.114	<u>S. Cane</u> , <u>Chilly</u> , <u>Jowar</u> , <u>Rice</u> 2-20 0-03 2-20 0-05
	180	30' - 0"	0.130	<u>S. Cane</u> , <u>Maize</u> , <u>Kadval</u> 3-00 1-00 3-00
	179	30' - 0"	0.164	<u>Kadval</u> , <u>Banana</u> , <u>Cotton</u> , <u>S. cane</u> 1-00 2-00 1-00 5-00
	181	20' - 6"	0.135	<u>Banana</u> , <u>Jowar</u> , <u>S. Cane</u> , <u>Rice</u> . 0-10 2-00 0-05 0-10
Ranjani	105	33' - 0"	0.053	<u>Cotton</u> , <u>Banana</u> , <u>Chilly</u> . 0-02 0-02 1-00
	85	26' - 0"	0.084	<u>S. cane</u> , <u>Cotton</u> , <u>Kadval</u> 2-00 1-00 1-00
	88	30'	0.167	<u>Sugarcane</u> , <u>Jowar</u> . 7-20 2-00
	86	20' - 0"	0.044	<u>Sugarcane</u> , <u>Jowar</u> 4-00 2-00
Chalha	196	32' - 0"	0.149	<u>Onion</u> , <u>Chilly</u> . 0-05 0-05

Contd.,

1	2	3	4	5
9A Chalha	83	25'-0"	0.135	<u>Chilly, Bananas, Kadval</u> 0-15 0-05 0-03
Amba	196	28'-0"	0.171	<u>Sugarcane</u> 2-00
Ojhewadi	94	15'-0"	0.041	<u>Rice, Kadval, Onion, Chilly</u> 0-10 0-20 0-10 0-10
Ekalaspur	397	27'-0"	0.078	<u>Chilly, Maize, Kadval, Lemon</u> 1-00 2-00 2-0 0-02
Shindewadi	132	15'-0"	0.098	<u>Kadval, Cotton, Chilly.</u> 1-00 0-30 0-15
	19	9'-6"	0.070	<u>Onion, Chilly.</u> 1-30 0-05
Nepatgaon	70	21'-4"	0.082	<u>Jowar, Cotton.</u> 5-00 0-30
10A Gharnigi	10	10'-4"	0.022	<u>Maize, Chilly, Kadval</u> 4-00 0-20 3-00
	5	7'-2"	0.007	<u>Maize, Kadval, Chilly</u> 2-00 1-00 0-20
Malewadi	78	23'-3"	0.139	<u>S. cane, Cotton, Rice, Jowar</u> 0-30 1-30 2-00 2-30
	64	30'-0"	0.130	<u>Jowar, Gram</u> 2-0 0-30
	31	15'-6"	0.060	<u>Bananas, Jowar.</u> 0-10 6-0
Dharangaon	51	8'-4"	0.020	<u>Jowar</u> 3-00
Dhavalas	54	16'-4"	0.118	---
	80	7'-6"	0.008	<u>Jowar, Chilly.</u> 6-00 0-05
	88	16'-0"	0.028	<u>Jowar</u> 5-00
Mangalwedha	725	20'-0"	0.217	<u>Sugarcane</u> 3-00
Talsingi	105	36'-6"	0.082	<u>Sugarcane, Kadval</u> 2-00 0-20
Marvada	15	36'-6"	0.137	<u>Cotton, Kadval</u> 2-00 2-00

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Name of the Project : Bhima

Dist : Sholapur  
Tals.: Malshiras  
Pandharpur  
Mangalwedha

Statement No.5 showing areas irrigated in the commanded area of Mangalwedha Branch.

Subcatchment No.	Number of wells - observed.	Area irrigated.	Sugar cane.	Garden	Cotton	Vegetable	Wheat	Rice	Jowar	Other crops.
6A	61	173-30	65-15	2-35	4-05	8-00	-	1-00	73-15	19-00
7A	19	51-35	1-25	8-00	2-20	1-05	-	-	38-20	0-05
8A	23	34-30	6-00	13-20	0-10	1-15	1-20	1-35	7-00	3-10
9A	503	929-35	252-00	13-00	65-30	124-10	1-00	21-15	312-30	139-30
10A	340	502-05	174-10	6-10	43-10	24-25	0-15	-	176-25	76-30
11A	177	240-30	36-10	10-25	5-05	44-20	45-05	-	72-35	26-10
	1123	1938-05	535-20	54-10	121-00	203-35	48-00	24-10	636-05	265-05

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C.S./



Name of the Project : Bhima  
( Mangalwedha Branch )

Dist. : Sholapur  
Tal. : Malshiras  
Pandharpur  
Mangalwedha.

Statement No.6 showing results of infiltration  
t e s t s :

Sr. No.	'Subcatch' ment No.	Village & Survey No.	Cross Section No.	'Pit' No.	'Depth @' which test is carried out.	'Rate of' infiltration inches/ hour.
1	5A	Wakhri 172	105	10	Surface	0.26
2	7A	Pandharpur 7	90	12	Surface	0.24
3	8A	Gopalpur 93	85	9	Surface	0.3
4	9A	Sindewadi 129	64	13	Surface	0.404
5	10A	Mangal-wedha. 930	47	4	Surface	0.33
6	10A	63	61	4	Surface	0.345
7	11A	Nandur 59	6	8	Surface	0.23
8	11A	Sidapur 90	8	9	Surface	0.18
9	11A	Donig 128	23	4	Surface	0.18
10	11A	Maravada 99	24	2	Surface	0.15

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C.S./

Name of the Project : Bhima.

( Mangalwedha - Branch ).

Dist : Solapur,  
Tals : Malshiras,  
Pandharpur,  
Mangalwedha.

Statement No.7 showing the results of the studies of the existing natural drainage for the  
different sub-catchments.

Sub catchment	Local name	Length of nala.	Slope in different length of the nalas										Aver. No. of rock places			
			1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th		11th	12th	
Wakhari		5.26	1:400	1:128	1:192	1:353	1:243	1:182							1:226	3
Gopalpur		2.56	1:221	1:290	1:154										1:221	5
Anoli		3.47	1:104	1:165	1:207	1:107									1:189	8
Marawada		11.72	1:246	1:400	1:642	1:849	1:991	1:950	1:668	1:1114	1:834	1:1435	1:546	1:1290	1:653	1

C.S./

Name of the Project : Bhima  
( Mangalwedha Branch )

Dist : Sholapur  
Tal. : Malshiras  
Pandharpur  
Mangalwedha.

Statement No.8 showing the distribution of major crops grown in  
the different subcatchments.

Subcatch- ment No.	total commanded area. (acres).	Cultura- ble area (acres)	Major crops grown ( acres )								
			Sugar cane.	Garden	Vege- -table	Cotton	Ground- -nut.	Food crops	Pulses	Other crops.	
6A	5565	3805	19	23	20	30	124	3415	112	62	
7A	2420	2075	15	1	13	21	32	1889	69	35	
8A	3020	2293	14	5	16	23	26	2061	78	70	
9A	38060	36161	98	31	196	350	562	31543	1976	1405	
10A	60665	59924	68	29	174	215	1212	50980	2919	4327	
11A	21525	19972	13	9	125	161	901	15950	1798	1005	
			124230	227	98	544	800	2357	105838	6952	6914

C.S./

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Name of the Project : Bhima  
( Mangalwedha Branch)

Dist : Sholapur  
Tal. : Malshiras  
Pandharpur  
Mangalwedha.

Statement No.9 showing deductions in medium and  
- deep soils in different subcatchments.

Sub-catchment	Area under $\frac{1}{4}$ mile limit		Areas under 10' H.I.B.		Cut up lands exposed rock		Total deductions as unsuitable area	
	Medium	Deep	Medium	Deep	Medium	Deep	Medium	Deep
A	190	344	1232		590	-	2012	344
1A	139	130	230	120	165	-	534	250
2A	80	80	15	125	-	-	95	205
3A	35	160	30	10	-	-	65	170
4A	180	350	20	15	-	-	200	365
5A	80	360	-	-	-	-	80	360
6A	25	695	60	190	5	15	90	900
7A	-	70	-	-	-	-	-	70
8A	40	50	20	30	-	25	60	105
9A	570	1335	450	305	70	400	1090	2040
10A	570	1195	305	1010	115	565	990	2770
11A	450	330	580	575	-	-	1030	905
Total	2359	5099	2992	2380	945	1005	6296	8484

PAWNA PROJECT

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PAWANA BRANCH.

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Name of the Project : Pawana

Dist : Poona  
Tals : Haveli,  
Maval,  
Mulshi.

Statement No.1 showing villages with their Talukas  
and District in different sub-catchments and the  
- gross area surveyed.

Subcatchment No.	District	Taluka	Village.	Area surveyed in acres.
1	Poona	Maval	1) Bendsa, 2) Kala, 3) Yelsi, 4) Kadadh, 5) Karuj, 6) Baur, 7) Sadoli, 8) Vardhara, 9) Adhe, 10) Urea, 11) Parana- - dawa, 12) Somtan, 13) Shir- - gaon, 14) Gahunja,	
		Haveli	15) Kivale, 16) Rawet, 17) Mamurli 18) Akurdi, 19) Chinchwad.	... 8190
2		Maval	1) Shivane, 2) Pimpalkhota, 3) Bhamana, 4) Bebadvohol, 5) Godhambra, 6) Salambra, 7) Dharumbra, 8) Sangwade, 9) Jambhe, 10) Punvale, 11) Thergaon.*	
		Mulshi		
		Haveli	12) Tathavade.	... 5220
3		Mulshi	1) Thergaon*, 2) Wairad, 3) Hin- - jawade, 4) Man, 5) Pimpal- - saudagar, 6) Pimpal-gurav, 7) Sangavi, 8) Rahatna, 9) Pimpal- - naika.	... 9320
Total :-				22730

Note :- Villages marked with asterisk come  
under more than one sub-catchment.

Name of the Project : Pawana

Dist : Poona  
Tals : Haveli,  
Maval,  
Mulshi.

Statement No.2 showing the distribution of soils  
(villagewise) in different subcatchments.

Subcatchment No.	Name of village	Total area surveyed in acres.	Distribution of soil		
			Light	Medium	Deep
			acres		
1	Bandsa	43	40	8	-
	Kala	240	240	-	-
	Yelshi	432	330	90	12
	Kadadhe	320	210	110	-
	Karuj	290	220	70	-
	Baur	370	340	30	-
	Sadoli	170	110	60	-
	Varghora	170	140	30	-
	Adhe	190	165	25	-
	Urea	430	280	200	-
	Parandwadi	320	190	130	-
	Samtan	320	190	105	25
	Shirgaon	390	320	70	-
	Gahunja	430	300	160	20
	Kivala	560	280	190	90
	Rawet	910	530	385	25
	Mamurli	130	130	-	-
Akurdi	240	240	-	-	
Chinchwad	2130	1600	400	130	
		3190	5355	2033	302
2	Shivane	150	140	10	-
	Pimpal-kotha	130	140	40	-
	Bhamana	610	390	190	30
	Bebadvohol	420	240	120	60
	Godhmbra	310	130	130	-
	Salambra	500	220	230	-
	Darumbra	290	190	90	10
	Sangwade	430	80	345	5
	Jambhe	560	270	210	80
	Punawale	570	290	270	-
	Thergaon	340	240	100	-
	Tathawade	360	540	260	60
			5220	2920	2045
3	Thergaon	500	430	20	-
	Wakad	1730	840	370	70
	Hinjwade	1270	910	330	60
	Man	1020	740	150	130
	Pimpal-Saudagar	990	420	440	130
	Pimpal-gurav	330	530	120	130
	Sangavi	320	530	200	40
	Rahatna	1040	830	150	60
	Pimpal-naika	1070	940	130	-
			9320	6270	2330
Grand Total		22730	15045	6453	1227



Name of the Project : Pawana

Dist : Poona  
Tals : Haveli, Maval  
Mulshi.

Statement No.3 showing the number of wells observed in different villages in different sub-catchments, their distribution as per water levels and cases - of salinity.

Sr. No.	Subcatchment No.	Village	No. of wells observed.	Distribution of wells as per depth of water level from ground level			No. of wells which samples are collected and tested.	No. of wells having conductivity	
				0'-4'	4'-10'	10'-20'		1000 to 2000	More than 2000
1	1	Bendsa	-	-	-	-	-	-	
2		Kala	-	-	-	-	-	-	
3		Yelshi	-	-	-	-	-	-	
4		Kadadh	-	-	-	-	-	-	
5		Karuj	-	-	-	-	-	-	
6		Baur	-	-	-	-	-	-	
7		Sadoli	-	-	-	-	-	-	
8		Varghara	-	-	-	-	-	-	
9		Adhe	-	-	-	-	-	-	
10		Urea	-	-	-	-	-	-	
11		Parandwadi	-	-	-	-	-	-	
12		Sontan	4	-	-	1	4	-	
13		Shirgaon	1	-	-	1	1	-	
14		Gahunja	3	-	-	1	2	1	
15		Kivale	13	-	-	11	12	-	
16		Rawet	10	-	-	9	9	-	
17		Mamurli	-	-	-	-	-	-	
18		Akurdi	-	-	-	-	-	-	
19		Chinchwad	2	-	-	1	2	-	
20	2	Shivane	-	-	-	-	-	-	
21		Pimpalkhota	1	-	-	-	-	-	
22		Damna	-	-	-	-	-	-	

Contd.

1	2	3	4	5	6	7
23	2	Bebadvohol	-	-	-	-
24		Godhambra	-	-	-	-
25		Salambra	2	-	-	1
26		Darumbra	-	-	-	-
27		Sangwada	5	-	3	3
28		Jambe	12	-	7	11
29		Punvale	22	2	9	20
30		Tathawade	13	-	3	12
31	2,3	Thergaon	8	-	4	7
32	3	Vakad	42	1	7	37
33		Hinjawade	14	-	3	13
34		Man	8	1	5	8
35		PimpalSaudha- -gar	13	-	8	15
36		Pimpal-gurav	-	-	-	-
37		Sangvi	7	-	3	7
38		Rathana	23	1	6	21
39		Pimpal-Naikha	-	-	-	-
			208	1	7	32
					185	3

Name of the Project : Pawana.

Dist : Poona.  
Tals : Haveli,  
Maval,  
Mulshi

Statement No.4 showing the results of recuperation of wells.

Name of village	Survey No.	Dia. of well	Rate of recuperation in 1st $\frac{1}{2}$ hour. in cusecs.	Crops & area irrigated		
Kivale	99A	26'-0"	0.294	<u>S. cane,</u> 2-00	<u>Veg.,</u> 2-00	<u>Maize.</u> 1-00
	99B	22'-9"	0.225	<u>S. cane,</u> 2-00	<u>Veg.,</u> 1-00	<u>Maize.</u> 1-00
Rawet	123	22'-9"	0.225	<u>S. cane,</u> 2-20	<u>Onion,</u> 4-00	<u>Maize.</u> 0-20
	9	21'-4" x21' x4"	0.116	<u>Guava,</u> 2-20	<u>Vegetable.</u> 2-00	
Punavale	41F	17'-0"	0.115	<u>Guava,</u> 4-00	<u>Mosambi,</u> 2-00	<u>Onion</u> 2-00
	54B	27'-0"	0.264	<u>S. cane,</u> 2-20	<u>Veg.,</u> 0-00	<u>Lemon</u> 0-50
Jambe	42	26'-0"	0.224	<u>Mosambi,</u> 2-00	<u>Veg.,</u> 1-00	<u>Onion</u> 0-20
Tathawade	168	16'-6"	0.108	<u>Guava,</u> 1-00	<u>Lemon,</u> 1-00	<u>Onion.</u> 2-20
Wakad	100	14'-6"	0.092	<u>S. cane,</u> 3-00	<u>Veg.,</u> 2-00	<u>Onion.</u> 5-00
Man	436	32'-6"	0.230	<u>Vegetable, Onion</u> 2-00 1-00		
Hinjawade	274	23'-3"	0.196	<u>S. cane,</u> 4-00	<u>Veg.,</u> 1-00	<u>Onion</u> 2-00
	271	19'-9"	0.155	<u>S. cane,</u> 4-00	<u>Veg.,</u> 2-00	<u>Onion</u> 1-00

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Name of the Project : Pawana

Dist : Poon.   
 Tals : Haveli, Maval,   
 Mulshi.

Statement No.5 showing areas irrigated on wells in the commanded area of   
 Pawana Project.

Subcatchment No.	No. of wells observed	Area irrigated in acres.	Sugar cane	Other Perennials	Cotton	Vegetable	Other crops.
1	19	58-10	34-35	2-20	-	11-10	9-25
2	33	64-15	10-30	17-00	-	26-05	10-20
3	61	99-20	20-30	1-15	-	70-30	6-25
	113	222-05	66-15	20-35	-	108-05	26-30

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Name of the Project : Pawana

Dist : Poona  
Tals : Haveli,  
Maval,  
Mulshi.

Statement No.6 showing results of infiltration tests.

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Sr. No.	Subcatch ment No.	Village & Survey No.	Gross Section No.	Pit No.	Depth @ which test is carried out.	Rate of infiltration inches/hour.
1	1	Kivale 98	57	4	1'-0"	0.13
2		Parandwadi 4	39	7	1'-0"	0.29
3		Chinchwad 243	76	8	1'-0"	0.42
4	2	Tathawade 3	69	6	1'-0"	0.44
5		Sangwade 30	52	5	1'-0"	0.15
6	3	Man 86	70	12	1'-0"	0.17
7		Pimpal-Saudagar 102	83	4	1'-0"	0.29

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Name of the Project : Pawana

Dist : Poona  
Tals : Haveli,  
 Maval,  
 Mulshi.

Statement No.8 showing the distribution of major crops grown in the different  
 - sub-catchments.

Subcatch- ment No.	Total commanded area. (acres).	Cultura- ble area. (acres)	Major crops grown (acres)							
			Sugar cane	Other Perenni- -als.	Vege- table.	Cotton	Ground- -nut	Food crops	Pulses	Other crops
			A.G.	A-G.	A-G.	A-G.	A-G.	A-G.	A-G	A- G.
1	8190	8164-19	52-22	44-35	188-39	-	199-2	5189-36	234-6	2251-39
2	5220	6316-37	22-16	-	179-13	-	159-30	4489-32	299-23	1666-3
3	9320	9048-07	33-11	8-1	276-34	-	103-37	6639-92	285-31	1701-1
	22730	24029-13	111-09	51-36	645-06	-	462-29	16319-20	819-20	5619-03

C.S./

Name of the Project : Pawana.

Dist : Poona.  
Tals : Haveli,  
Maval,  
Mulshi.

Statement No.9 showing deductions in medium  
and deep soil in different subcatchments.

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Sub catchment	Area under $\frac{1}{4}$ mile limit		Area under 10' H.I.B.		Area under cut-up lands, exposed rock.		Total deduction as unsuitable area	
	Medium	Deep	Medium	Deep	Medium	Deep	Medium	Deep
1	30	2	5	-	-	-	35	2
2	5	10	-	-	-	-	5	10
3	27	10	-	-	-	-	27	10
<b>TOTAL :</b>	<b>62</b>	<b>22</b>	<b>5</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>67</b>	<b>22</b>

Note :- Instead of deducting  $\frac{1}{4}$ th mile limit of village areas only the area of - village site is deducted.

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Name of the Project : Pawana.

Dist : Poona.  
Tals : Haveli,  
Maval,  
Mulshi.

Statement No.11 showing the names of the staff  
members of different categories worked on the-  
- Project.

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Soil Survey Officer :-

Shri. C.G. Joshi.

Dy. Soil Survey Officer :-

Shri. P.V. Tembe.

FIELD STAFF

1) Overseer

Shri. N.C. Kale.

2) Jr. Survey Assistant

Shri. S.D. Malwade.

3) Mukadams - 1) Shri.D.M.Landge,

2) Shri.Y.A.Shaikh.

LABORATORY STAFF

1) Soil Analyst - 1) Shri.R.V.Kelkar,

2) Research Assistants

1. Shri.S.R.Padture

2. Shri.S.K.Bhat,

3. Shri.S.R.Pawagi,

4. Shri.D.V.Shete,

3) Laboratory Assistants

1. Shri.L.S.Kalshetti,

2. Shri.V.N.Sondur,

3. Shri.P.R.Gandhi,

4. Shri.N.A.Sant,

5. Shri.B.N.Saikar,

6. Shri. A.V.Vaidya.

DRAWING BRANCH

Tracers -

1. Shri. D.R.Tathe,

2. Shri. S.M.Pawar,

3. Miss.L.K. Purandhare.

Cyclostyling :

Shri.C.H.Girme.

Stencilling - 1) Miss. C.S.Vedpathak.

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C.S./





REFERENCES

- CANAL
- SHALLOW SOIL
- MEDIUM SOIL
- DEEP SOIL
- AREA SURVEYED BY I. D. D. PANNA
- AREA COMING UNDER VIR PROJECT

**DISTRIBUTION OF SOILS OF BHIMA PROJECT**  
SCALE 1" = 3 MILES

EDITED BY:

CHECKED BY:

DEPUTY DIRECTOR  
WATER DEPARTMENT