

5

DATA COLLECTION

Large variety of data is collected from various Government agencies, Non Government agencies and other sources. Mainly data related to rainfall, runoff, evaporation, meteorology, topography, geology, soil and water table fluctuations are collected from various government agencies like Ground Water Resources Development Corporation (GWRDC), Gandhinagar, River Gauging Department, Soil Survey Department, Machhannala Irrigation Scheme offices, and State Water Data Centre (SWDC), Gandhinagar. The area under study falls in an activity area of an NGO named Shri N.M.Sadguru Water Development Foundation (NMSWDF), Chosala, Dahod so data related to check dams on river Machhan and some other details about study area was also collected from their office. Many similar data like rainfall and evaporation were collected from more than one agency. Several site visits were conducted to study the area actually.

Table – 5.1 Hydrogeology of Dahod District

Sr. No.	Details	Unit	Name of Taluka		
			Jhalod	Dahod	Limkheda
1	Total Geographical Area	Sq. km	798.20	874.7	1063.6
2	Total suitable area	Sq. km	743.66	874.7	901.36
3	Rainfall IMD (1961 to 2000)	m.m.	874	810	988
4	Avg. Annual Rainfall	m.m.	915	775	977
5	Specific Yield	%	1.5 to 2.7	1.8 to 3	1.8 to 3

(Source GWRDC)

Table – 5.2 Mean Monthly Meteorological Data (1970-2000)

Month	Maximum Temp.0C	Minimum Temp. 0C	Humidity %	Wind Velocity Km/Day	Sunshine Hours
January	26.0	12.1	51	147	9.0
February	30.3	14.5	36	164	9.8
March	34.9	19.3	29	225	10.0
April	38.4	24.0	29	294	10.7
May	39.4	26.0	39	432	11.0
June	35.9	25.6	60	544	9.4
July	30.4	24.0	80	527	4.1
August	29.0	23.0	83	389	4.2
September	30.0	22.6	78	285	6.4
October	33.3	20.0	59	147	9.3
November	31.5	15.3	47	104	9.4
December	29.1	12.7	47	121	9.0
Average	32.4	19.9	53	282	8.5

Source: Indian Meteorological Department (1999), Patadungari Station, Dahod, Gujarat, India

Table – 5.3 Rainfall Stations in Machhan River Basin

St. No.	Place of Rainfall Station	Agency Measuring	Latitude	Longitude
1	Dahod	Indian Meteorological Department	22°49'35"	74°12'54"
2	Jhalod	Indian Meteorological Department	23°05'58"	74°03'25"
3	Machhan Dam Site	River Gauging Department	23°05'59'	74°11'25'
4	Wankol	River Gauging Department	23°05'00"	74°08'58"

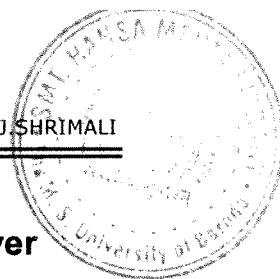
Table – 5.4 : Salient Features of Machhan River

Sr. No.	Feature	Description
1	Nature of bed	Gravel
2	Gradient	1 : 1100
3	'N' value (theoretical)	0.028 to 0.035
4	Average annual rainfall	878 mm.
5	Maximum W.M.R.	1456.44 mm.
6	Maximum Temperature	38.5 °C
7	Minimum Temperature	12 °C
8	Soils	Residual
9	Drainage	Well Drained
12	Moisture holding capacity of soil	21.5 to 61.4 %
13	Permeability of soil	Impervious to 5.49 cm/hr
14	Infiltration range	0.15 to 6.1 cm/hr

(Source : "Report of Machhan Nala Irrigation Scheme", Public Works Department, Gujarat State, Gandhinagar, Year: 1978.)

Table – 5.5 Check Dams in Jhalod Taluka – Dahod district

Sr. No	Name of Check Dam	Year of Const.	No. of Gala	Size of Gala	Useful Yes/No
1	Sutharvasa-1	1974	3	1.5 X 2	YES
2	Sutharvasa-2	1974	13	1.5 X 1.5	YES
3	Limdi-Machhan-1	1976	16	1.5 X 3	NO
4	Titodi Jalai Pana-1	1982	9	1.5 X 2.5	NO
5	Titodi	1982	4	1.5 X 2	YES
6	Titodi- Ashram	1988	8	1.5 X 1.5	YES
7	Limdi-Machhan-2	1988	12	1.5 X 2	YES
8	Navi Khedi-Pipliya	1988	8	1.5 X 1.5	NO
9	Golana	1988	12	1.5 X 1.5	NO
10	Sarmariya-1	1990	13	1.5 X 2.0	YES
11	Mundha Pareva	1990	18	1.5 X 2	NO
12	Sarmariya-2	1991	13	1.5 X 2	YES
13	Nenki-1(Chibota)	1992	11	1.5 X 2	YES
14	Sarmariya-3	1993	13	1.5 X 2	YES
15	Nenki-2(Chibota)	1993	12	1.5 X 1.5	YES
16	Kali Gam (Suki)	1994	12	1.5 X 1.5	YES
16	Suki	1994	12	1.5 X 2	NO
17	Vasiya (Dhavdi Falia)	1994	10	1.5 X 1.5	YES
18	Sutharvasa-3	1996	5	1.5 X 1.5	YES
19	Vasiya (Chor Falia)	1997	8	1.5 X 1.5	YES
20	Sutharvasa-4	1999	2	1.5 X 1.5	YES
21	Titodi	2000	9	1.5 X 2	YES
22	Pratappura	2000	6	4(1.5 X 2)	YES

**Table – 5.6 Details of Check Dams on Machhan River**

Sr. No	Name of Check Dam	Gross Length	Crest Length	Height	FSL	Bed Level	Catchment
		(m)	(m)	(m)	(m)	(m)	Sq.Mile
1	Kachumber	55.6	37.2	3	97.4	94.4	27.67
2	Wankol	57.1	32.25	2	97.3	95.3	33.69
3	Simaliya	96	65.75	2.6	99.5	96.9	36.37
4	Therka	101.1	77.55	5	99.4	94.4	104.70
5	Kharsana	101.10	86.10	3.5	98.2	94.7	140.59
6	Bambela	100	76	3.2	99.2	96	148.34
7	Mahudi	95.25	57.5	3	96.25	93.25	158.95
8	Rajudia	88.35	74.1	4	100.17	96.17	161.34
9	Kheda Amba Zaran	90.3	64.55	3.5	91.85	88.35	163.02
10	Thunthi-Kankasia	105	75.5	3.5	94	90.7	165

Table – 5.7 Storage Capacity of Check Dams on Machhan River

Sr. No.	Name of Check Dam	Storage Capacity (Mm ³)
1	Kachumber Falia	169800
2	Wankol	226400
3	Simaliya	198100
4	Therka	707500
5	Kharsana	339600
6	Bambela	452800
7	Mahudi	339600
8	Rajudia	254700
9	Kheda-Ambazaran	396200
10	Thunthi-Kankasiya	452800

Table – 5.8 Lift Irrigation Schemes on Machhan River

SR. No.	Name of L. I. Schemes	Design Command (Acre)
1	Kachumber	180
2	Wankol	108
3	Mahudi	100
4	Rajudia	300
5	Kheda-Amabazaran	270
6	Thuthikankasia	180
7	Bambela	202.5
8	Simaliya	180
9	Therka	195

Source: NMSWDF, Chosala, Dahod.

Table – 5.9 Area Irrigated by Different Check Dams

Year	Name of Check Dam				
	Kachumber	Wankol	Mahudi	Rajudia	Kheda-Amab.
	Area Irrigated in km ²				
1994	-	-	0.28	0.55	0.81
1995	0.34	0.24	0.29	0.57	0.75
1996	0.46	0.29	0.34	0.67	0.81
1997	0.51	0.37	0.33	0.76	0.7
1998	0.63	0.4	0.36	0.76	0.71
1999	0.28	0	0	0.04	0.18
2000	-	-	0.1	-	0.12
2001	0.06	0.08	0.13	0	0
2002	0.02	0.36	0.26	0	0
2003	0.45	0.44	0.28	0	0.4
2004	0.37	0.37	0.4	0	0.48
2005	0.28	0.42	0.36	0	0.8
2006	0.36	0.24	0.36	0	0.51

Source: NMSWDF, Chosala, Dahod.

Year	Name of Check Dam			
	Thuthikankasia	Bambela	Simaliya	Therka
	Area Irrigated in km ²			
1994	0.49	-	-	-
1995	0.3	-	-	-
1996	0.47	-	-	-
1997	0.54	0	-	-
1998	0.55	0	0	0
1999	0.12	0.1	0	0
2000	-	0	0	0
2001	0	0.08	0	0
2002	0.12	0	0	0.09
2003	0.38	0.26	0.23	0.59
2004	0.48	0.45	0.47	0.62
2005	0.7	0.55	0.72	0.76
2006	0.38	0.12	0.65	0.67

Source: NMSWDF, Chosala, Dahod.

Table – 5.10 Rainfall Characteristics – Jhalod

Year	Month	Max Daily Rainfall (mm)	Rainfall in Month (mm)	Rainy Days
1993	June	85	181	4
	July	122	548	16
	August	31	77	8
	September	31	50	5
	October	3	3	1
1994	June	96	282	10
	July	80	314	24
	August	135	437.5	23
	September	155	340	13
	October	0	0	0
1995	June	0	0	0
	July	78	382	15
	August	37	173	15
	September	54	72	5
	October	14	14	1
1996	June	29.5	49	5
	July	248	509	11
	August	233	399	18
	September	140	323	10
	October	6	17	4
1997	June	51	163	10
	July	141	285	10
	August	82	325	13
	September	25	41	5
	October	0	0	0

Year	Month	Max Daily Rainfall (mm)	Rainfall in Month (mm)	Rainy Days
1998	June	31	61	5
	July	52	222	16
	August	62	201	12
	September	185	521	15
	October	27	65	4
1999	June	86	161	5
	July	88	244	10
	August	26	31	4
	September	41	142	8
	October	40	82	3
2000	June	50	92	3
	July	37	109	9
	August	15	45	5
	September	7	11	2
	October	0	0	0
2002	June	33	144	8
	July	34	55	4
	August	46	166	8
	September	52	116	6
	October	0	0	0
2003	June	53	195	11
	July	35	187	13
	August	0	0	0
	September	68	126	5
	October	0	0	0
2004	June	18	70.1	7
	July	66	226	10
	August	77	482	19
	September	6	7	2
	October	0	0	0

Year	Month	Max Daily Rainfall (mm)	Rainfall in Month (mm)	Rainy Days
2005	June	7	19	4
	July	120	278	12
	August	83	165	9
	September	45	210	14
	October	0	0	0
2006	June	48	133	5
	July	180	478	13
	August	129	847	18
	September	116	173	4
	October	0	0	0
2007	June	13	30	5
	July	237	684	14
	August	86	293	18
	September	77	201	10
	October	0	0	0

(Source : River Gauging Department, Vadodara)

Table – 5.11 Rainfall Characteristics - Dahod

Year	Month	Max Daily Rainfall (mm)	Rainfall in Month (mm)	Rainy Days
1996	June	21	60	6
	July	139	256	13
	August	85	312	15
	September	68	241	9
	October	19	38	4
1997	June	101	256	11
	July	94	197	9
	August	189	459	15
	September	17	48	5
	October	0	0	0
1998	June	49	109	6
	July	45	228	16
	August	21	46	12
	September	68	294	13
	October	42	74	5
1999	June	59	127	5
	July	24	66	10
	August	14	22	4
	September	35	76	9
	October	47	73	4
2000	June	12	24	3
	July	50	125	13
	August	15	52	9
	September	16	30	5
	October	0	0	0

Year	Month	Max Daily Rainfall (mm)	Rainfall in Month (mm)	Rainy Days
2001	June	103	232	8
	July	36	152	26
	August	25	94	8
	September	14	25	4
	October	13	33	4
2002	June	40	173	8
	July	67	115	9
	August	64	218	13
	September	136	216	7
	October	0	0	0
2003	June	170	367	11
	July	109	483	22
	August	48	87	11
	September	24	78	11
	October	0	0	0
2004	June	11	20	3
	July	36	158	15
	August	140	898	23
	September	23	47	4
	October	2	2	1
2005	June	39	46	3
	July	98	187	11
	August	26	70	13
	September	30	160	16
	October	0	0	0

Year	Month	Max Daily Rainfall (mm)	Rainfall in Month (mm)	Rainy Days
2006	June	47	76	5
	July	73	351	19
	August	107	568	25
	September	72	151	9
	October	4	8	3
2007	June	18	69	10
	July	83	351	15
	August	55	187	20
	September	33	129	10
	October	0	0	0

(Source : River Gauging Department, Vadodara)

Table - 5.12 Observed Runoff in mm for Machhan River Basin

Year	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Day												
01-Jun	0	0.000	0	0.000	0	0	0	0	0	0	0	0
02-Jun	0.000	0.000	0	0.000	0	0	0	0	0	0	0	0
03-Jun	0.000	0.000	0	0.000	0	0	0	0	0	0	0	0
04-Jun	0.000	0.000	0	0.000	0	0	0	1.338	0	0	0	0
05-Jun	0.000	0.000	0	0.000	0	0	0	0.334	0	0	0	0
06-Jun	0.000	0.000	0	0.000	0	0	0	0.279	0	0	0	0
07-Jun	0.000	0.000	0	0.000	0	0	0	0.209	0	0	0	0
08-Jun	0.000	0.000	0	0.000	0	0	0	0.000	0	0	0	0
09-Jun	0.000	0.000	0	0.000	0	0	0	0.000	0	0	0	0
10-Jun	0.000	0.000	0	0.000	0	0	0	0.000	0	0	0	0
11-Jun	0.000	0.000	0	0.000	0	0	0	0.000	0	0	0	0
12-Jun	0.000	0.000	0	0.000	0	0	0	0.000	0	0	0	0
13-Jun	0.000	0.000	0	0.000	0	0	0	0.000	0	0	0	0
14-Jun	0.000	0.000	0	0.000	0	0	0	0.000	0	0	0	0
15-Jun	0.000	0.000	0	0.000	0	0	0	0.000	0	0	0	0
16-Jun	0.000	0.000	0	0.000	0	0	0	0.000	0.822	0	0	0
17-Jun	0.000	0.000	0	0.000	0	0	0	0.000	0.488	0	0	0
18-Jun	0.000	0.000	0	0.000	0	0	0	0.000	3.665	0	0	0
19-Jun	0.000	0.000	0	0.000	0	0	0	0.000	0.711	0	0	0
20-Jun	0.000	0.000	0	0.000	0	0	0	0.000	0.516	0	0	0
21-Jun	0.000	0.000	0	0.000	0	0	0	0.000	0.390	0	9.995	0
22-Jun	0.000	0.000	0	0.000	0	0	0	0.000	0.265	0	0.871	0
23-Jun	0.000	0.000	0	0.000	0	0	0	0.000	0.223	0	0.773	0
24-Jun	0.000	4.041	0	0.000	0	0	0	0.000	0.223	0	12.630	0
25-Jun	0.000	0.571	0	0.000	2.662	0	0	0.000	0.195	0	0.386	0
26-Jun	0.000	0.293	0	0.000	0.962	0	0	0.000	0.098	0	0.254	0
27-Jun	0.000	0.195	0	0.000	31.452	0	0	0.000	0.000	0	0.242	0
28-Jun	0.000	0.111	0	0.000	1.310	0	0	0.000	0.000	0	0.231	0
29-Jun	0.000	9.476	0	0.000	1.073	0	0	0.000	0.000	0	0.212	0

Year	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Day												
30-Jun	0.000	0.962	0	0.000	0.571	0	0	0.000	0.000	0	0.198	0
01-Jul	0.000	0.474	0	0.000	0.488	0	0	0.000	0.641	0	0.166	0
02-Jul	0.000	0.725	0	0.000	0.279	0	0	0.000	0.223	0	0.245	0
03-Jul	0.000	0.460	0	0.000	0.251	0	0	0.000	0.167	0	0.452	0
04-Jul	0.000	0.279	0	0.000	0.223	0	0	0.167	0.223	0	0.516	0
05-Jul	0.000	23.869	0	0.000	0.223	0	0	0.028	0.195	0	0.410	0
06-Jul	0.000	1.003	0	0.000	0.223	22.650	0	0.000	0.167	0	0.516	0
07-Jul	0.000	0.641	0	0.000	0.223	7.428	0	0.000	0.167	0	0.493	0
08-Jul	3.275	0.502	0	0.000	0.223	0.321	0	0.000	0.167	3.265	0.447	0
09-Jul	3.122	0.669	0	0.000	0.223	0.111	0	0.000	0.167	3.122	0.415	0
10-Jul	32.386	1.073	0	0.000	0.279	7.804	0	0.000	0.599	6.006	0.401	0
11-Jul	8.319	0.989	0	0.000	0.223	0.683	0	0.000	0.516	8.319	0.429	0
12-Jul	3.163	0.669	0	0.000	0.223	0.334	0	0.000	0.474	3.163	0.435	0
13-Jul	2.341	0.797	0	0.000	0.223	0.167	0	0.000	0.362	2.341	0.376	0
14-Jul	2.536	1.784	0	0.000	0.000	0.167	0	0.962	0.334	2.536	0.351	0
15-Jul	4.961	2.302	0	0.000	0.000	1.491	0	1.129	0.279	4.961	0.276	0
16-Jul	64.034	2.564	0	0.000	0.000	1.212	0	0.850	0.279	4.001	2.684	0
17-Jul	68.381	1.226	0	0.000	0.000	0.711	0	0.989	0.251	8.351	0.560	0.585
18-Jul	7.651	4.863	0	0.000	0.000	0.418	0	0.920	0.321	7.651	0.449	0.307
19-Jul	17.127	1.185	0	0.000	0.460	0.390	0	1.003	0.195	17.027	0.432	0.224
20-Jul	5.518	1.003	0	0.000	0.334	0.334	0.084	0.808	0.139	5.518	0.457	0.153
21-Jul	5.128	3.484	0	0.000	1.282	0.334	0.167	0.864	0.056	5.128	0.988	0.000
22-Jul	3.567	1.714	0	0.000	0.418	0.334	0.153	0.697	0.070	3.567	5.923	0.000
23-Jul	2.926	1.421	0.362	0.000	0.279	0.279	0.111	0.613	0.056	2.926	5.197	0.000
24-Jul	2.494	1.756	0.265	0.000	0.223	0.293	0.111	0.557	0.084	2.494	13.462	0.000
25-Jul	1.895	3.902	56.745	0.000	0.223	0.334	0.111	0.502	0.223	1.895	11.502	0.000
26-Jul	1.798	4.947	3.999	0.000	74.931	0.279	0.111	0.530	0.139	1.798	2.051	0.000
27-Jul	1.672	2.188	2.481	21.112	20.973	0.279	0.111	0.502	0.056	1.672	14.926	0.000
28-Jul	1.533	1.686	2.829	18.381	15.413	0.279	0.111	0.446	0.000	1.533	59.464	0.000
29-Jul	1.435	1.352	2.522	2.926	2.801	0.279	0.098	0.446	0.000	1.335	17.794	0.248
30-Jul	1.310	1.561	2.690	2.021	5.853	0.334	0.000	0.390	0.000	1.31	6.369	0.697

Year Day	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
31-Jul	1.324	1.171	2.564	1.742	17.238	0.334	0.000	0.390	0.000	1.324	2.189	28.862
01-Aug	1.421	1.421	2.007	1.672	239.049	0.279	0.000	0.334	0.000	1.421	1.672	24.054
02-Aug	1.254	56.815	1.909	1.895	32.498	0.279	0.000	0.307	0.000	1.154	2.723	13.483
05-Sep	0.000	5.658	2.592	1.394	0.948	0.209	0.000	0.334	0.000	0	11.564	1.477
06-Sep	0.000	31.174	1.937	5.128	0.878	0.167	0.000	0.334	0.000	0	3.156	1.403
07-Sep	0.000	149.583	1.714	130.283	0.822	0.181	0.000	0.334	0.000	0	2.635	1.328
08-Sep	0.000	23.091	1.505	48.161	0.766	1.421	0.000	0.334	0.000	0	2.072	1.211
09-Sep	0.000	11.023	1.380	15.368	0.766	10.647	0.000	0.307	0.000	0	1.976	1.047
10-Sep	0.000	6.550	1.226	8.473	0.794	11.915	0.000	0.279	0.000	0	1.717	0.973
11-Sep	0.000	5.588	0.892	117.532	0.920	1.394	0.000	0.323	0.000	0	1.558	0.964
12-Sep	0.000	4.543	0.836	7.832	0.878	1.198	0.000	0.279	0.000	0	1.421	1.037
13-Sep	0.000	3.080	0.780	8.459	0.836	0.934	0.000	0.279	0.000	0	1.357	0.982
14-Sep	0.000	3.456	0.725	6.675	0.780	25.195	0.000	0.265	0.000	0	1.228	0.932
15-Sep	1.031	2.885	0.725	2.578	0.725	39.660	0.000	0.223	0.000	1.031	1.242	0.875
16-Sep	0.488	39.925	0.641	2.327	0.669	45.416	0.000	0.223	0.000	0.488	1.077	0.794
17-Sep	0.432	3.331	0.474	1.812	0.627	67.880	0.000	0.223	0.000	0.432	0.984	0.790
18-Sep	0.376	2.787	0.390	1.575	0.585	25.641	0.000	0.209	0.000	0.376	1.026	0.783
19-Sep	0.334	2.244	0.390	1.589	0.641	5.867	0.000	0.000	0.000	0.334	1.045	1.087
20-Sep	0.321	2.132	0.334	1.449	0.613	2.076	0.000	0.000	0.000	0.321	2.465	0.896
21-Sep	0.390	1.672	0.251	1.421	0.557	1.547	0.000	0.000	0.000	0.39	5.261	0.840
22-Sep	0.265	1.491	0.223	1.672	8.473	1.477	0.000	0.000	0.000	0.265	2.147	0.812
23-Sep	0.195	1.449	0.223	1.798	0.794	1.435	0.000	0.000	0.000	0.195	2.209	0.761
24-Sep	0.251	1.407	0.223	1.784	0.920	1.212	0.000	0.000	0.000	0.251	3.389	0.754
25-Sep	0.279	1.296	0.223	1.728	0.641	1.143	0.223	0.000	0.000	0.279	2.762	0.829
26-Sep	0.209	1.240	0.223	1.575	0.557	9.072	0.780	0.000	0.000	0.209	3.775	1.055
27-Sep	0.223	1.059	0.223	1.575	0.502	1.644	0.906	0.000	0.000	0.223	3.073	0.833
28-Sep	0.195	1.017	0.167	1.547	0.502	1.463	0.000	0.000	0.000	0.195	4.167	0.757
29-Sep	0.167	0.948	0.167	1.505	0.502	1.254	0.000	0.000	0.000	0.167	4.307	1.246
30-Sep	0.167	0.948	0.167	1.505	0.502	1.115	0.000	0.000	0.000	0.167	3.251	1.212
01-Oct	0.167	0.878	0.446	1.449	0.488	1.045	0.000	0.000	0.000	0.167	2.814	0.977
02-Oct	0.125	0.822	0.223	1.394	0.474	1.073	0.000	0.000	0.000	0.125	2.397	1.028

Year	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Day												
03-Oct	0	0.780	0.223	1.282	0.446	0.934	1.547	0.000	0.822	0	2.120	0.924
04-Oct	0	0.739	0.223	1.226	0.446	0.864	0.195	0.000	0.557	0	2.003	1.219
05-Oct	0	0.725	0.223	1.031	0.432	0.878	0.502	0.000	0.418	0	1.879	0.960
06-Oct	0	0.669	0.195	1.003	0.390	0.864	0.460	0.000	0.376	0	1.668	0.885
07-Oct	0	0.669	0.167	0.989	0.418	0.836	0.167	0.000	0.279	0	1.610	1.083
08-Oct	0	0.627	0.167	0.962	0.390	0.822	0.167	0.000	0.209	0	1.534	0.890
09-Oct	0	0.613	0.167	0.920	0.390	0.780	0.167	0.000	0.167	0	1.458	0.796
10-Oct	0	0.557	0.167	0.836	0.376	0.711	0.167	0.000	0.098	0	1.423	0.790
11-Oct	0	0.557	0.167	0.878	0.334	0.669	0.167	0.000	0.655	0	1.366	0.750
12-Oct	0	0.502	0.000	1.394	0.334	0.599	0.167	0.000	1.045	0	1.040	0.716
13-Oct	0	0.460	0.000	0.000	0.334	0.557	0.223	0.000	0.641	0	0.950	0.684
14-Oct	0	0.474	0.000	0.530	0.334	0.766	0.167	0.000	0.530	0	0.923	0.654
15-Oct	0	0.446	0.000	1.282	0.362	0.934	0.167	0.000	0.418	0	0.875	0.704
16-Oct	0	0.432	0.251	1.157	0.390	0.975	0.167	0.000	0.334	0	0.709	0.630
17-Oct	0	0.334	0.446	1.045	0.000	0.836	0.167	0.000	0.265	0	0.553	0.658
18-Oct	0	0.432	0.334	0.794	0.000	0.808	0.167	0.000	0.167	0	0.676	0.658
19-Oct	0	0.362	0.279	0.000	0.000	0.725	0.167	0.000	0.153	0	0.626	0.641
20-Oct	0	0.362	0.223	0.000	0.000	0.725	0.139	0.000	0.162	0	0.583	0.599
21-Oct	0	0.348	0.223	0.000	0.000	0.655	0.111	0.000	0.000	0	0.581	0.573
22-Oct	0	0.390	0.223	0.000	0.000	0.599	0.111	0.000	0.000	0	0.574	0.556
23-Oct	0	0.334	0.223	0.000	0.000	0.613	0.000	0.000	0.000	0	0.000	0.517
24-Oct	0	0.321	0.167	0.000	0.000	0.557	0.111	0.000	0.000	0	0.000	0.510
25-Oct	0	0.293	0.167	0.000	0.000	0.502	0.111	0.000	0.000	0	0.000	0.499
26-Oct	0	0.251	0.167	0.000	0.000	0.418	0.111	0.000	0.000	0	0.000	0.491
27-Oct	0	0.223	0.167	0.000	0.000	0.390	0.111	0.000	0.000	0	0.000	0.464
28-Oct	0	0.223	0.000	0.000	0.000	0.376	0.111	0.000	0.000	0	0.000	0.438
29-Oct	0	0.223	0.000	0.000	0.000	0.390	0.000	0.000	0.000	0	0.000	0.439
30-Oct	0	0.167	0.000	0.000	0.000	0.446	0.000	0.000	0.000	0	0.000	0.000
31-Oct	0	0.167	0.000	0.000	0.000	0.446	0.000	0.000	0.000	0	0.000	0.000

Table - 5.13 Observed Evaporation at Machhan Dam Site

Day	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Evaporation mm / day												
01-Jun	13	0	12	12.6	12	8	0	12	10	12.6	8.8	11.3
02-Jun	13	4	12	12.7	12	8	4	12	12	12.7	5.5	11.3
03-Jun	14	3	7	12.9	7	8	3	7	11.5	12.9	5.5	10.7
04-Jun	13	6.7	0	12.7	0	8	6.7	0	11.5	12.7	8.4	10.8
05-Jun	13	0	8	12.6	8	8	0	8	14	12.6	8.1	10.5
06-Jun	13	4	0	12.4	0	8	4	0	14	12.4	8.3	10.2
07-Jun	13	6	0	12.4	0	8	6	0	14	12.4	8.1	10
08-Jun	13	8	0	12.3	0	8	8	0	11	12.3	8.2	9.4
09-Jun	13	10	0	12.3	0	8	10	0	12	12.3	7.7	10.1
10-Jun	13	8	5.8	12	5.8	8	8	5.8	12	12	7.4	9.9
11-Jun	13	8	10	12.1	10	8	8	10	12	12.1	7.2	9.9
12-Jun	13.5	8	11	12.2	11	7	8	11	12	12.2	7.3	10
13-Jun	13.5	8	6	12.1	6	7	8	6	12	12.1	7.1	9.9
14-Jun	13.5	8	0	12.3	0	7	8	0	13	12.3	7.3	10.2
15-Jun	14	9	0	11.4	0	7	9	0	13	11.4	5.9	10.4
16-Jun	0	9	0	9.6	0	7	9	0	10	9.6	4.8	10.3
17-Jun	0	8	8	10	8	6	8	8	11.6	10	4	10.5
18-Jun	0	8.4	8	9.1	8	3	8.4	8	8.7	9.1	5.2	10.5
19-Jun	0	9	10	8.5	10	2	9	10	8.8	8.5	9.1	10.9
20-Jun	0	9.5	10	6.1	10	0	9.5	10	9	6.1	9.9	10.7
21-Jun	0	8.5	10	5.9	10	0	8.5	10	9	5.9	10.2	10.6
22-Jun	0	8.5	8	5.6	8	0	8.5	8	0	5.6	10.2	9.9
23-Jun	0	8.5	8.5	5.4	8.5	1	8.5	8.5	0	5.4	10.1	9.3
24-Jun	0	9	9	5.3	9	3	9	9	0	5.3	10	8.7
25-Jun	0	9	9	5.8	9	3	9	9	0	5.8	8.4	8.7
26-Jun	6	9.5	8.5	6.4	8.5	3	9.5	8.5	0	6.4	7.8	8.4
27-Jun	6	0	8.5	6.5	8.5	3	0	8.5	0	6.5	8.7	7.8
28-Jun	6	4	0	6.6	0	3	4	0	0	6.6	9.8	7.3

Day	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Evaporation mm / day												
29-Jun	6	6	0	6.3	0	3	6	0	3	6.3	7	7.1
30-Jun	7	6	0	7	0	3	6	0	6	7	6.1	6.7
01-Jul	7	0	0	7	0	3	0	0	6	7	6.2	6.5
02-Jul	0	4.5	0	6.6	0	3	4.5	0	6	6.6	6.9	5.3
03-Jul	3	4.4	0	6.6	0	3	4.4	0	7	6.6	9.6	4.1
04-Jul	4	5	6	6.8	6	3	5	6	7	6.8	6.3	4.2
05-Jul	0	5	3	6.4	3	3	5	3	8.6	6.4	3.7	4
06-Jul	6.8	4.5	3.5	6.6	3.5	4	4.5	3.5	8.7	6.6	3.9	4.2
07-Jul	0	4.8	0	5.9	0	1	4.8	0	8.7	5.9	4	4.1
08-Jul	0	5	0	5.9	0	1	5	0	5.9	5.9	4.9	4.1
09-Jul	0	0	4	5.7	4	3	0	4	9	5.7	7	4.1
10-Jul	3	0	4	5.7	4	3	0	4	10	5.7	8.1	4.3
11-Jul	4	0	0	5.3	0	3	0	0	10	5.3	8.4	4.3
12-Jul	0	0	0	5.4	0	3	0	0	10	5.4	8.2	3.8
13-Jul	6.8	0	0	5.8	0	3	0	0	0	5.8	7.8	3.8
14-Jul	0	0	0	5.7	0	3	0	0	0	5.7	8.3	3.7
15-Jul	0	0	2.5	5.5	2.5	3	0	2.5	4	5.5	7.7	3.7
16-Jul	0	0	1.5	5.3	1.5	2	0	1.5	4	5.3	7.4	4
17-Jul	0	0	1.5	5.6	1.5	0	0	1.5	0	5.6	3.6	4.1
18-Jul	0	0	0	5.7	0	0	0	0	0	5.7	3.2	4.6
19-Jul	0	0	0	5.8	0	1	0	0	0	5.8	5	6.5
20-Jul	0	4	0	6	0	0	4	0	5	6	4.5	6.6
21-Jul	0	4	3	5.6	3	0	4	3	5	5.6	5.2	6.5
22-Jul	0	6	3	5.3	3	0	6	3	5	5.3	6.3	6.2
23-Jul	0	5.5	4	4.9	4	0	5.5	4	4	4.9	6.7	6.3
24-Jul	0	5.7	3	4.4	3	3	5.7	3	4	4.4	6.5	6.1
25-Jul	0	8	3	3.8	3	3	8	3	4	3.8	5.1	5
26-Jul	0	5.4	2	3.7	2	3	5.4	2	4	3.7	3.9	4.8
27-Jul	0	5.4	2	3.5	2	3	5.4	2	4	3.5	3.7	3.8

Day	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Evaporation mm / day												
28-Jul	0	5.6	2	3.4	2	3	5.6	2	4	3.4	3.7	2.8
29-Jul	0	6	2	3.7	2	2	6	2	4.5	3.7	3.2	3.3
30-Jul	5	6	2	4	2	3	6	2	4.5	4	3	3.5
31-Jul	5	5	2	4.1	2	3	5	2	4.5	4.1	2.7	3.6
01-Aug	5	5	2	3.7	2	3	5	2	0	3.7	2.9	2.7
02-Aug	0	5	0	3.7	0	3	5	0	0	3.7	3.4	2.7
03-Aug	0	6	3	3.9	3	3	6	3	0	3.9	3.8	2.5
04-Aug	0	5.5	3	3.4	3	3	5.5	3	0	3.4	3.6	2.6
05-Aug	2	5.5	0	4	0	3	5.5	0	0	4	2.8	2.6
06-Aug	0	5.4	0	4.4	0	2	5.4	0	0	4.4	2.5	3
07-Aug	3	7	0	4.6	0	1	7	0	0	4.6	2.7	3.3
08-Aug	3.5	0	0	4.6	0	2	0	0	0	4.6	2.5	3.6
09-Aug	3.5	0	0	4.5	0	3	0	0	4	4.5	2.3	3.8
10-Aug	0	1	0	4.2	0	1	1	0	4	4.2	2	4
11-Aug	0	1	0	4.2	0	2	1	0	4	4.2	1.9	4
12-Aug	0	31.1	0	4.3	0	2	31.1	0	4	4.3	1.6	3.9
13-Aug	0	0	0	4.4	0	3	0	0	0	4.4	1.4	4
14-Aug	2.5	0	0	4.5	0	3	0	0	3	4.5	1.5	3.9
15-Aug	2.5	4	2	4.6	2	3	4	2	3.5	4.6	1.6	4.1
16-Aug	4.5	4	4	4.6	4	3	4	4	3.5	4.6	1.7	3.7
17-Aug	4.5	4	4	4.4	4	3	4	4	3.5	4.4	2.6	3.7
18-Aug	6.4	4	4	4.3	4	3	4	4	4	4.3	3.5	3.5
19-Aug	5.3	3	4	4.3	4	3	3	4	3	4.3	3.2	3.4
20-Aug	5.3	0	4	4.2	4	3	0	4	3	4.2	3.3	3.5
21-Aug	5.3	7	4	4.3	4	3	7	4	0	4.3	3.4	3.4
22-Aug	5.5	7	0	4.7	0	3	7	0	0	4.7	3.4	3.5
23-Aug	5.5	7	4.5	4.7	4.5	3	7	4.5	0	4.7	2.1	3.7
24-Aug	0	7	4.5	3.4	4.5	3	7	4.5	0	3.4	2.6	4.2
25-Aug	0	4.4	5	3.6	5	3	4.4	5	0	3.6	3.1	4.2
26-Aug	0	5	5	3.7	5	3	5	5	3	3.7	3.3	4.3
27-Aug	0	5.2	5	3.6	5	3	5.2	5	3	3.6	3.4	4.5

Day	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Evaporation mm / day												
28-Aug	0	2	8	3.9	8	3	2	8	0	3.9	3.6	3.1
29-Aug	0	2	8	3.8	8	3	2	8	2.5	3.8	3.4	3.9
30-Aug	0	6	8	3.9	8	3	6	8	2.5	3.9	3.6	4.4
31-Aug	3.4	4	8	4.1	8	3	4	8	0	4.1	3.6	4.5
01-Sep	0	10.5	5.5	3.7	5.5	4	10.5	5.5	0	3.7	3.7	4.7
02-Sep	0	0	5.5	3.9	5.5	4	0	5.5	0	3.9	3.8	4.9
03-Sep	0	0	8	3.8	8	4	0	8	0	3.8	3.9	5
04-Sep	0	4.7	6	4	6	4	4.7	6	0	4	3.9	4.4
05-Sep	0	5.5	5	4	5	3	5.5	5	2	4	4.1	4.4
06-Sep	3.4	6	5	4	5	3	6	5	2.5	4	3.6	3.8
07-Sep	3.4	6	5	4.2	5	3	6	5	2.5	4.2	3.7	4.1
08-Sep	3.7	6	5	4.2	5	3	6	5	2	4.2	4.5	4
09-Sep	3.7	6	5	4.2	5	3	6	5	2	4.2	4.4	3.9
10-Sep	3.8	4.5	5	4.1	5	0	4.5	5	4	4.1	4.2	3.8
11-Sep	4	4.5	5	3.8	5	2	4.5	5	5	3.8	4.2	4.2
12-Sep	4	4.5	5	3.7	5	2	4.5	5	4	3.7	4.3	4.3
13-Sep	3	5	5.5	4.1	5.5	3	5	5.5	5	4.1	4.2	3.5
14-Sep	3	6	9.5	4.3	9.5	3	6	9.5	5	4.3	4.7	3.5
15-Sep	4	6	7	3.7	7	3	6	7	6	3.7	5	3.5
16-Sep	4.5	5.5	7	3.8	7	3	5.5	7	5	3.8	5.2	3.5
17-Sep	4.5	5	7	3.4	7	3	5	7	4	3.4	5.3	3.2
18-Sep	4	0	8	3.5	8	3	0	8	4	3.5	5.1	2.9
19-Sep	4.5	6	9	3.3	9	3	6	9	6	3.3	4.8	3.4
20-Sep	0	6	9	2.8	9	3	6	9	6	2.8	5.1	3.9
21-Sep	0	11	2.8	2.8	2.9	3	11	9.5	4.5	2.8	4.3	4.1
22-Sep	0	11	3	3	3.4	3	11	10	4.5	3	5.1	4
23-Sep	0	11	3	3	3.9	3	11	10.5	4.5	3	5.1	3.7

Day	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Evaporation mm / day												
24-Sep	0	10	3.1	3.1	4.1	3	10	9.5	5	3.1	4.5	3.5
25-Sep	0	11	3.5	3.5	4	1	11	10.5	6	3.5	4.1	3.5
26-Sep	0	10	2.7	2.7	3.7	2	10	11.5	6	2.7	4.6	3.9
27-Sep	0	9.5	2.6	2.6	3.5	3	9.5	11.5	5.5	2.6	5	4.1
28-Sep	0	10	2.3	2.3	3.5	0	10	12	5	2.3	5	4.1
29-Sep	0	9.5	2.4	2.4	3.9	2	9.5	11	0	2.4	5	4.1
30-Sep	0	10	2.8	2.8	4.1	3	10	11	6	2.8	4.8	4.1
01-Oct	5	10.5	3.5	3.5	4.1	3	10.5	10	6	3.5	4.8	4.4
02-Oct	5	9.5	4	4	4.1	1	9.5	10.5	11	4	4.5	4.3
03-Oct	5	10.5	5.4	5.4	4.1	0	10.5	10.5	11	5.4	4.7	4.5
04-Oct	5.5	11.5	5.8	5.8	4.4	0	11.5	9	11	5.8	5.1	4.6
05-Oct	5.5	11.5	5	5	4.3	2	11.5	9	10	5	5.1	4.7
06-Oct	5.5	12	5.1	5.1	4.5	3	12	10	11	5.1	5.4	4.7
07-Oct	5.5	11	5.2	5.2	4.6	3	11	10.5	10	5.2	5.3	4.8
08-Oct	6	11	5.7	5.7	4.7	3	11	9	9.5	5.7	5.1	5
09-Oct	6	10	5.9	5.9	4.7	3	10	9.5	10	5.9	5.1	4.9
10-Oct	6	10.5	5.7	5.7	4.8	3	10.5	9	9.5	5.7	5.3	4.8
11-Oct	6	10.5	5.6	5.6	5	3	10.5	8.5	4.5	5.6	5.3	4.8
12-Oct	6	9	5.6	5.6	4.9	3	9	9	4.5	5.6	5.3	5.1
13-Oct	6	9	5.8	5.8	4.8	3	9	9	4.5	5.8	5	5.1
14-Oct	6	10	5.8	5.8	4.8	3	10	8.5	5	5.8	5.2	5
15-Oct	6	10.5	5.8	5.8	5.1	3	10.5	9.5	6	5.8	5.4	5.3
16-Oct	6	9	5.8	5.8	5.1	3	9	8.5	6	5.8	5.2	5.2
17-Oct	6	9.5	5.6	5.6	5	3	9.5	9	5.5	5.6	5	5.3
18-Oct	6	9	5.8	5.8	5.3	3	9	9	5	5.8	5.1	5.3
19-Oct	6	8.5	5.7	5.7	5.2	3	8.5	10	0	5.7	5	5.3
20-Oct	3.5	9	5.6	5.6	5.3	3	9	10.5	6	5.6	5.1	5.2
21-Oct	3.5	9	5.6	5.6	5.3	3	9	9	6	5.6	5.2	4.9

Day	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Evaporation mm / day												
22-Oct	3.5	8.5	5.4	5.4	5.3	3	8.5	9.5	11	5.4	5.3	4.6
23-Oct	3.5	9.5	5.1	5.1	5.2	3	9.5	9	11	5.1	5.1	4.6
24-Oct	3.5	8.5	4.9	4.9	4.9	3	8.5	8.5	11	4.9	5.2	4.5
25-Oct	3.5	9	4.8	4.8	4.6	3	9	9	10	4.8	5.1	4.4
26-Oct	3.5	8.5	4.7	4.7	4.6	3	8.5	9	11	4.7	5	4.4
27-Oct	3.5	9	4.9	4.9	4.5	3	9	8.5	10	4.9	5	4.2
28-Oct	3.5	7.5	4.7	4.7	4.4	3	7.5	9.5	9.5	4.7	4.7	4.1
29-Oct	3.5	8	4.4	4.4	4.4	3	8	8.5	10	4.4	5	4.2
30-Oct	3.5	8	4.8	4.8	4.2	3	8	NA	9.5	4.8	4.7	4
31-Oct	5	8.5	4.9	4.9	4.1	3	8.5	NA	NA	4.9	4.6	3.8

Table - 5.14 Pre and Post-monsoon Water Levels in Dungri Falia, Rupakheda and Limbadi

Period	Dungri Falia Well 3	Rupakheda Well 4	Limbadi Well 5
	W.L. in m. (B.G.L.)		
Pre-monsoon 1992	3.4	7.85	11.9
Post-monsoon 1992	2.8	4.02	4.02
Pre-monsoon 1993	3.8	7.6	12.5
Post-monsoon 1993	2.15	3.75	3.75
Pre-monsoon 1994	3.65	5.95	11.7
Post-monsoon 1994	1.85	2.2	2.2
Pre-monsoon 1995	2.7	3.8	9.6
Post-monsoon 1995	2	3.42	3.42
Pre-monsoon 1996	3.7	7.2	12.6
Post-monsoon 1996	2.2	3	3
Pre-monsoon 1997	3	6.45	11.8
Post-monsoon 1997	2.2	2.7	2.7
Pre-monsoon 1998	3.25	4.25	12.8
Post-monsoon 1998	1	2.65	2.65
Pre-monsoon 1999	3.15	6.1	12.4
Post-monsoon 1999	2.75	3.75	3.75
Pre-monsoon 2000	4.2	7.35	15.8
Post-monsoon 2000	4.2	6.6	6.6

Table 5.15 Pre and Post-monsoon Water Levels in Therka (well 8-11)

Period	WELL No.				
	8	9	10	11	
	W.L. in m. (B.G.L.)				
Pre-monsoon 1992	2.4	5.05	6.1		2.35
Post-monsoon 1992	2.85	6.1	7.1		3.25
Pre-monsoon 1993	3.05	8	7.6		3.5
Post-monsoon 1993	1.75	4.5	4.2		0.8
Pre-monsoon 1994	3.4	6.3	7.1		3.25
Post-monsoon 1994	1.9	4.15	4.4		1.45
Pre-monsoon 1995	2.1	5.05	5.6		1.9
Post-monsoon 1995	1.15	4.05	4.2		1.1
Pre-monsoon 1996	3.5	6.1	6.9		3.35
Post-monsoon 1996	2.4	4.2	3.5		1.6
Pre-monsoon 1997	1.95	4.9	5.45		3.75
Post-monsoon 1997	1	4.2	4.6		1.8
Pre-monsoon 1998	2.4	5.2	6		2.5
Post-monsoon 1998	1.1	2.1	3		0.65
Pre-monsoon 1999	2.6	5.2	6.1		2.4
Post-monsoon 1999	3.55	6.1	7.4		4.4
Pre-monsoon 2000	4.8	dry	dry		dry
Post-monsoon 2000	5.4	6.1	7.4		4.5
Pre-monsoon 2001	7.8	6.1	7.4		5.5
Post-monsoon 2001	5.3	6.1	7.4		4.5
Pre-monsoon 2002	5.5	6.1	7.4		4.5
Post-monsoon 2002	4.1	6.1	7.4		4.5
Pre-monsoon 2003	3.7	6.1	7.4		4.5
Post-monsoon 2003	1.5	4.2	7.4		4.5

Period	Well No.				
	8	9	10	11	
	W.L. in m. (B.G.L.)				
Pre-monsoon 2004	1.19	4.5	5.4	1.55	
Post-monsoon 2004	0.9	4	4.5	1.2	
Pre-monsoon 2005	1.3	4.1	4	0.9	
Post-monsoon 2005	1.1	3.5	4.7	2.2	
Pre-monsoon 2006	2.5	4.4	4.8	1.5	
Post-monsoon 2006	2.3	3.5	3.7	1	
Pre-monsoon 2007	2	4.1	4.5	1.5	
Post-monsoon 2007	1.3	3.5	3.6	0.9	
Pre-monsoon 2008	1.9	4.1	4.8	1.5	

Source : Soil Survey Department, Soil Survey Sub Division, Godhra.

Table 5.16 Post-monsoon Water Levels in Therka (well 12-19)

Period	Well No. 12	Well No. 13	Well No. 14	Well No. 15	Well No. 16	Well No. 17	Well No. 18	Well No. 19
	W.L. in m. (B.G.L.)							
	W.L. in m. (B.G.L.)							
Post-monsoon 1997	7.30	10.50	5.90	5.00	5.40	6.00	5.00	8.00
Post-monsoon 1998	7.10	8.80	6.00	4.80	5.00	5.50	1.50	5.40
Post-monsoon 1999	6.40	9.00	4.10	4.00	3.10	5.00	1.00	5.30
Post-monsoon 2000	3.70	5.00	3.00	3.50	3.70	4.00	2.80	6.00
Post-monsoon 2001	4.00	4.80	4.00	3.00	4.00	4.10	3.20	5.80
Post-monsoon 2002	3.50	5.50	3.80	3.80	3.90	4.80	3.90	5.00
Post-monsoon 2003	8.00	8.50	4.70	5.10	5.00	6.50	3.50	7.70
Post-monsoon 2004	7.50	9.00	5.30	5.10	5.40	6.80	3.80	9.00
Post-monsoon 2005	7.00	8.50	5.10	5.00	5.40	6.00	4.10	8.00
Post-monsoon 2006	6.50	8.30	4.70	4.00	4.20	5.20	4.50	7.50
Post-monsoon 2007	7.00	9.00	4.50	3.70	4.00	5.00	4.00	8.50
Post-monsoon 2008	7.40	9.30	5.00	4.00	4.10	5.10	3.50	9.00

Table 5.17 Post-monsoon Water Levels in Therka (well 20-26)

Period	20	21	22	W.L. in m. (B.G.L.)			24	25	26
Post-monsoon 1997	6.00	5.50	10.00	11.30		5.10		---	---
Post-monsoon 1998	5.80	3.90	9.80	10.00		3.90		---	---
Post-monsoon 1999	5.40	4.00	3.30	6.50		3.70		7.00	2.50
Post-monsoon 2000	4.80	4.00	4.80	5.50		3.00		5.10	2.00
Post-monsoon 2001	4.00	3.80	5.00	6.00		3.20		5.70	3.00
Post-monsoon 2002	3.20	4.10	4.50	5.80		2.80		5.50	2.90
Post-monsoon 2003	5.00	5.00	8.10	7.50		3.50		7.50	4.00
Post-monsoon 2004	4.70	6.00	9.00	8.00		4.10		9.30	5.70
Post-monsoon 2005	4.00	5.10	8.50	7.00		4.30		6.50	5.50
Post-monsoon 2006	3.00	5.00	7.30	5.00		4.00		7.50	7.00
Post-monsoon 2007	1.50	4.30	8.00	8.00		3.50		8.50	6.50
Post-monsoon 2008	1.00	4.00	9.00	4.50		4.00		9.00	4.30

Table 5.18 Pre and Post-monsoon Water Levels in Chitrodia and Kalia Talav

Period	Wells at Chitrodia					Well at Kalia Talav
	Well No.					Well No.
	27	28	29	30	31	34
	W.L. in m. (B.G.L.)					W.L. in m. (B.G.L.)
Pre-monsoon 1992	3.4	2.2	6.4	4.3	3.7	5
Post-monsoon 1992	4.25	1.9	7.2	4	3.3	3.1
Pre-monsoon 1993	4.25	2.7	7.2	5	4.1	5.45
Post-monsoon 1993	3.25	1.8	6.25	3.1	1.75	3.2
Pre-monsoon 1994	3.65	2.65	6.85	5	4.15	5.3
Post-monsoon 1994	1.35	1.4	3.25	3	2.5	2.15
Pre-monsoon 1995	1.9	1.9	6.5	3.5	3.15	3.65
Post-monsoon 1995	3.35	2.1	6.5	4	1.65	3.9
Pre-monsoon 1996	4.1	2.8	8.5	4.6	4.1	5
Post-monsoon 1996	1.8	3.4	3.9	3.5	2.8	2.6
Pre-monsoon 1997	2.25	2.1	4.3	3.5	3.1	3.6
Post-monsoon 1997	1.7	1.45	4.4	3.2	2.6	2.3
Pre-monsoon 1998	3.4	2.4	5.1	3.8	3.4	4.3
Post-monsoon 1998	0.9	1.35	2.4	2.1	1.95	1.2
Pre-monsoon 1999	2.7	2.5	5.25	4	3.3	3.1
Post-monsoon 1999	4.5	3	8.55	5.1	3.8	3.6
Pre-monsoon 2000	6.75	4.6	10.15	dry	4.95	dry
Post-monsoon 2000	7.85	5.3	10.5	5.6	6	5.2
Pre-monsoon 2001	7.85	7.1	10.5	5.6	7.7	5.2
Post-monsoon 2001	7.85	6.6	10.5	5.6	6.5	5.2
Pre-monsoon 2002	9.8	7.1	10.5	5.6	6.5	5.2
Post-monsoon 2002	9.6	7.2	10.5	5.6	5.8	5.2

Period	Wells at Chitrodia					Well at Kalia Talav
	Well No.					Well No.
	27	28	29	30	31	34
	W.L. in m. (B.G.L.)					W.L. in m. (B.G.L.)
Pre-monsoon 2003	9.73	3.5	10.5	5.6	6.5	5.2
Post-monsoon 2003	7.7	5.5	10.5	5.6	3.2	3.8
Pre-monsoon 2004	5	2.9	5.5	3.2	3.2	3.5
Post-monsoon 2004	2.2	1.7	3.9	2.4	2.6	1.8
Pre-monsoon 2005	4.2	2	6.8	2.2	2.5	2.3
Post-monsoon 2005	4.1	1.6	4	1.8	2.4	2.2
Pre-monsoon 2006	5.3	2.5	9.8	3.2	2.8	2.7
Post-monsoon 2006	1.1	1.6	2.7	2	2.3	1.5
Pre-monsoon 2007	3.8	2.2	4.6	3	2.5	2.4
Post-monsoon 2007	1	1.4	2.6	1.6	2	1.5
Pre-monsoon 2008	3.5	2.2	7	2.5	2.3	3.2

Source : Soil Survey Department, Soil Survey Sub Division, Godhra

Table 5.19 Pre and Post-monsoon Water Levels in Kharsana

Period	Wells at Kharsana							
	Well No.							
	35	36	37	38	39	40	41	42
	W.L. in m. (B.G.L.)							
Pre-monsoon 1992	8.6	4.5	6.3	3	3.1	6.8	3	5.6
Post-monsoon 1992	7.15	2.8	5.1	2.8	3	5.7	2.1	4.8
Pre-monsoon 1993	9.3	6	8	3.65	3.6	7.45	3.35	6.3
Post-monsoon 1993	5.8	1.55	5.1	2.8	3.1	6.85	2.2	4.9
Pre-monsoon 1994	8.75	5.7		3.85	4	7.65	3.5	6.6
Post-monsoon 1994	6.7	2.1	2.9	2.25	2.1	3.35	1.25	3.4
Pre-monsoon 1995	8	3.95	5.2	2.55	2.75	5.45	2.7	5.4
Post-monsoon 1995	7.15	1.95	4.75	2.45	2.7	4.8	1.8	4.25
Pre-monsoon 1996	8.9	5.8	8	4.1	3.95	7.5	4.5	6.7
Post-monsoon 1996	6.9	2.1	3.6	2.5	2.5	4.5	1.7	4.4
Pre-monsoon 1997	8	3.7	4.1	3	2.6	4.5	3	4.85
Post-monsoon 1997	6.6	1.95	3.3	2.2	2.2	3.5	1.4	3.4
Pre-monsoon 1998	7.8	4	7.3	3.6	3.2	6.6	3.3	5.6
Post-monsoon 1998	5.6	1	1.5	1.55	1.35	1.55	1.05	1.7
Pre-monsoon 1999	8.7	4.2	6.4	3.6	3.25	6.4	3.1	5.75
Post-monsoon 1999	8.3	2.7	5.6	3.4	3.2	6.2	2.4	4.6
Pre-monsoon 2000	11.6	6.85	dry	6.85	dry	9.5	5.3	dry
Post-monsoon 2000	11.3	5.2	6.7	7.1	4	9.6	6.9	7.3
Pre-monsoon 2001	12.5	6.65	6.7	8.1	4	10.1	7.15	7.3
Post-monsoon 2001	12.3	5.1	6.7	6	4	9.3	4.5	7.3
Pre-monsoon 2002	12.5	6.65	6.7	8.1	4	10.1	7.6	7.3
Post-monsoon 2002	11.5	5	6.7	8.2	4	9.8	4.8	7.3

Period	Wells at Kharsana							
	Well No. (B.G.L.)							
	35	36	37	38	39	40	41	42
	W.L. in m.							
Pre-monsoon 2003	12.5	9.6	6.7	8.4	4	10.1	8	7.3
Post-monsoon 2003	11.3	2.2	6.2	6	4	6.5	1.3	7
Pre-monsoon 2004	7.9	3.65	4.1	4	3.4	4.85	2.45	6.1
Post-monsoon 2004	7.3	1.9	3.2	1.7	2.1	3.7	1.2	3.5
Pre-monsoon 2005	7.8	3.1	5	2.6	2.6	6.1	3.1	6.3
Post-monsoon 2005	6.7	1.7	2.7	1.4	1.95	3.2	1	2.75
Pre-monsoon 2006	7.8	4.1	7.5	4.1	4	7.6	3.8	7.4
Post-monsoon 2006	6	1.2	2.5	1.4	1.6	2.5	1	2.4
Pre-monsoon 2007	7.3	4.1	5.8	3.8	3.8	7.6	3.1	7
Post-monsoon 2007	5	1	1.6	1.3	1.5	1.9	0.9	2
Pre-monsoon 2008	6.8	3.2	6.3	3.6	3.6	6.1	3.1	7.5

Source : Soil Survey Department, Soil Survey Sub Division, Godhra

Table 5.20 Pre and Post-monsoon Water Levels in Mandli Khunta, Melania, Munkhosla and Muvada

Period	Well at Mandli Khunta	Well at Melania	Wells at Munkhosla			Well at Muvada
	Well No.	Well No.	Well No.			Well No.
	43	44	45	46	47	48
	W.L. in m. (B.G.L.)	W.L. in m. (B.G.L.)	W.L. in m. (B.G.L.)			W.L. in m. (B.G.L.)
Pre-monsoon 1992	3.3	4.9	2.7	3.2	5	6.9
Post-monsoon 1992	3.3	3.95	1.8	1.85	5.1	5.75
Pre-monsoon 1993	3.75	5.15	3	4.4	6.6	7.1
Post-monsoon 1993	3.4	4	1.85	1.85	5	5
Pre-monsoon 1994	3.7	4.3	2.75	5.1	6.2	7.1
Post-monsoon 1994	2.55	2.7	1.45	1.45	3.35	4.9
Pre-monsoon 1995	2.75	3.3	1.7	2.25	4.15	5.75
Post-monsoon 1995	3.05	2.3	1.8	2.35	4.75	5.7
Pre-monsoon 1996	3.7	5.1	2.85	2.35	6.15	7.1
Post-monsoon 1996	2.7	3.4	1.65	2.1	4.3	5.5
Pre-monsoon 1997	2.9	3.1	1.95	2	4.2	5.6
Post-monsoon 1997	2.5	2.8	1.5	1.6	4	5.3
Pre-monsoon 1998	2.9	4.1	2.25	3	4.9	6.3
Post-monsoon 1998	2.15	1.25	0.95	1.15	1.3	2.95
Pre-monsoon 1999	3	4.2	2.05	2.65	5.1	6.3
Post-monsoon 1999	3.35	4.55	2.05	2.9	6.2	6.2
Pre-monsoon 2000	5.4	dry	4.15	4.6	8.5	8.4
Post-monsoon 2000	5.7	6.45	4.9	4.9	9.2	8.5
Pre-monsoon 2001	6.85	6.45	6.35	6.35	9.9	8.5
Post-monsoon 2001	6.6	6.45	5.25	5.1	9.5	8.5

Period	Well at Mandli Khunta	Well at Melania	Wells at Munkhosla			Well at Muvada
	Well No.	Well No.	Well No.			Well No.
	43	44	45	46	47	48
	W.L. in m. (B.G.L.)	W.L. in m. (B.G.L.)	W.L. in m. (B.G.L.)			W.L. in m. (B.G.L.)
Pre-monsoon 2002	7	6.45	6.35	6.35	9.9	8.5
Post-monsoon 2002	5.7	6.15	4.55	4.2	11.3	8.5
Pre-monsoon 2003	7	6.05	6.25	7.2	12.2	8.5
Post-monsoon 2003	3.7	2.35	2.45	1.95	9	6.4
Pre-monsoon 2004	3.6	3.45	3.05	3.5	5.8	6.8
Post-monsoon 2004	2.6	2.15	1.55	1.6	2.3	4.9
Pre-monsoon 2005	2.9	3.05	3.45	4.6	3.8	8.2
Post-monsoon 2005	2.7	2.05	1.65	2	2.2	4
Pre-monsoon 2006	3.3	4.25	3.75	4.8	4.8	8.5
Post-monsoon 2006	2.4	2.05	1.25	1.6	2.2	3.9
Pre-monsoon 2007	3.1	3.75	3	4	4.6	7.8
Post-monsoon 2007	2.5	1.75	1.25	1.6	1.9	3.7
Pre-monsoon 2008	2.9	3.35	3.25	3	4.2	8.2

Source : Soil Survey Department, Soil Survey Sub Division, Godhra.

**Table 5.21 Pre and Post-monsoon Water Levels in
Anwarpura and Bhanpur**

Period	Wells at Anwarpura		Wells at Bhanpur	
	Well No.		Well No.	
	50	51	52	53
	W.L. in m. (B.G.L.)		W.L. in m. (B.G.L.)	
Pre-monsoon 1992	5.1	3.3	4.4	3.5
Post-monsoon 1992	4.4	2.25	2.9	8.1
Pre-monsoon 1993	5.35	4.4	4.7	8.9
Post-monsoon 1993	4.4	2.2	2.7	7.95
Pre-monsoon 1994	5.15	4.25	4.55	9.1
Post-monsoon 1994	3.8	1.35	2.5	3.85
Pre-monsoon 1995	4.35	2.45	3.8	7.55
Post-monsoon 1995	4.1	2.15	3.85	7.1
Pre-monsoon 1996	5.2	4.9	4.5	9.35
Post-monsoon 1996	4.1	1.9	2.8	5
Pre-monsoon 1997	5	2.7	3.8	7.85
Post-monsoon 1997	3.8	1.9	2.6	5.25
Pre-monsoon 1998	5.2	2.9	4.1	9
Post-monsoon 1998	3	0.75	1.65	2.5
Pre-monsoon 1999	4.75	2.6	3.4	7.95
Post-monsoon 1999	4	2.3	3.6	8.95
Pre-monsoon 2000	7.4	5	4.9	dry
Post-monsoon 2000	7.6	6	5.2	10.45
Pre-monsoon 2001	9	8.3	5.2	10.45
Post-monsoon 2001	6.9	5.5	5.2	10.45
Pre-monsoon 2002	9.5	9.5	5.2	10.45
Post-monsoon 2002	6.5	5.4	5.2	10.45

Period	Wells at Anwarpura		Wells at Bhanpur	
	Well No.		Well No.	
	50	51	52	53
	W.L. in m. (B.G.L.)		W.L. in m. (B.G.L.)	
Pre-monsoon 2003	9.9	8.5	5.2	10.45
Post-monsoon 2003	4.5	3.4	5.6	10.45
Pre-monsoon 2004	5.1	2.75	4.7	9.45
Post-monsoon 2004	3.9	1.7	3.2	5.25
Pre-monsoon 2005	5.1	2.5	4.2	7.85
Post-monsoon 2005	3.8	2	3.8	8.55
Pre-monsoon 2006	5.2	3.2	5.4	9
Post-monsoon 2006	3.6	1.3	2.7	3.05
Pre-monsoon 2007	5	3	5	7.85
Post-monsoon 2007	3.5	1.2	2.7	2.85
Pre-monsoon 2008	5.5	3.5	5	7.85

Source : Soil Survey Department, Soil Survey Sub Division, Godhra.

Table 5.22 Pre and Post-monsoon Water Levels in Dhavadia

Period	Wells at Dhavadia			
	Well No.			
	54	55	56	57
	W.L. in m. (B.G.L.)			
Pre-monsoon 1992	5.5	4	1.9	4.9
Post-monsoon 1992	4.3	3.6	1.65	2.45
Pre-monsoon 1993	5.2	4.5	1.85	7
Post-monsoon 1993	4.7	3.9	1.9	4.05
Pre-monsoon 1994	6.05	4.6	1.9	6.05
Post-monsoon 1994	1.85	2.8	1.65	2.3
Pre-monsoon 1995	3.55	3.1	1.9	4.8
Post-monsoon 1995	3.3	3.2	1.7	3
Pre-monsoon 1996	6.2	4.35	2	6.9
Post-monsoon 1996	1.8	3.1	1.7	4.3
Pre-monsoon 1997	3.4	3.35	1.9	5.2
Post-monsoon 1997	2.2	2.95	1.7	2.45
Pre-monsoon 1998	4.6	3.7	2	6
Post-monsoon 1998	0.85	1.45	1.35	1.45
Pre-monsoon 1999	4.1	3.5	2	5
Post-monsoon 1999	4.6	3.4	2	3.3
Pre-monsoon 2000	8	6.1	2.8	6.85
Post-monsoon 2000	8.7	7.2	2.8	7.3
Pre-monsoon 2001	11.45	7.9	5.75	8.35
Post-monsoon 2001	8.5	7.1	3	6.6
Pre-monsoon 2002	10.2	7.9	6.6	8.35
Post-monsoon 2002	6.9	6.4	3.2	7.2

Period	Wells at Dhavadia			
	Well No.			
	54	55	56	57
	W.L. in m. (B.G.L.)			
Pre-monsoon 2003	11.3	9.7	7	8.35
Post-monsoon 2003	4.1	3.6	1.6	4.2
Pre-monsoon 2004	7.2	3.6	2.7	7.4
Post-monsoon 2004	2.7	2.4	1.1	2.1
Pre-monsoon 2005	8.1	5.1	2.7	5.9
Post-monsoon 2005	3.6	2.6	1.25	2.8
Pre-monsoon 2006	9	6.9	3.9	6.7
Post-monsoon 2006	1.6	1.9	1.1	1.7
Pre-monsoon 2007	6.6	4.4	1.6	5.2
Post-monsoon 2007	1.5	1.8	1	1.4
Pre-monsoon 2008	6.8	5	1.6	5.2

Source : Soil Survey Department, Soil Survey Sub Division, Godhra.

Table - 5.23 Pre and Post-monsoon Water Levels in Mahudi

Period	Wells at Mahudi		
	Well No. 58	Well No. 59	Well No. 60
	W.L. in m. (B.G.L.)		
Pre-monsoon 1992	7.9	3.3	3
Post-monsoon 1992	3.75	2.4	1.6
Pre-monsoon 1993	8.5	4.2	3.25
Post-monsoon 1993	4.15	2.9	3
Pre-monsoon 1994	11.5	5.4	4.7
Post-monsoon 1994	1.8	1.05	0.4
Pre-monsoon 1995	7.5	3.1	2.85
Post-monsoon 1995	3.5	1.5	0.8
Pre-monsoon 1996	11.1	4.8	4.5
Post-monsoon 1996	1.9	1.2	0.8
Pre-monsoon 1997	7.5	2.9	2.1
Post-monsoon 1997	1.5	0.7	0.4
Pre-monsoon 1998	7.6	3.2	2.8
Post-monsoon 1998	1.3	0.55	0.15
Pre-monsoon 1999	7.5	3	2.4
Post-monsoon 1999	4.3	2.3	1.85
Pre-monsoon 2000	9.55	dry	6.8
Post-monsoon 2000	9.2	5.55	5.4
Pre-monsoon 2001	10.4	5.55	7.25
Post-monsoon 2001	6.1	4.9	4.3
Pre-monsoon 2002	10.4	5.55	7.25
Post-monsoon 2002	6.1	4.2	5.2

Source : Soil Survey Department, Soil Survey Sub Division, Godhra.

Period	Wells at Mahudi		
	Well No. 58	Well No. 59	Well No. 60
	W.L. in m. (B.G.L.)		
Pre-monsoon 2003	10.4	5.55	7.15
Post-monsoon 2003	2.7	1.7	1.3
Pre-monsoon 2004	8.3	2.8	3.4
Post-monsoon 2004	1.8	1.3	1
Pre-monsoon 2005	7.7	3.5	5.1
Post-monsoon 2005	1.55	1.1	0.3
Pre-monsoon 2006	8.2	4	4.1
Post-monsoon 2006	1.4	1.1	0.3
Pre-monsoon 2007	7.6	3.3	3
Post-monsoon 2007	1.3	1	0.3
Pre-monsoon 2008	7.4	3.2	3

Source : Soil Survey Department, Soil Survey Sub Division, Godhra.

**Table - 5.24 Pre and Post-monsoon Water Levels in
Dhadhela and Dahod**

Pre-monsoon	Dahod (Well 61)	Dhadhela (Well 62)	Post-monsoon	Dahod (Well 61)	Dhadhela (Well 62)
Period	W.L. in m. (B.G.L.)		Period	W.L. in m. (B.G.L.)	
1984	----	7.71	1984	----	3.69
1985	----	7.6	1985	----	8.25
1986	----	13.13	1986	----	7.56
1987	----	10.26	1987	----	7.32
1988	3.5	13.62	1988	4.03	2.92
1989	4.31	7.15	1989	4.13	3.68
1990	4.14	11.25	1990	3.55	1.85
1991	----	5.76	1991	----	4.42
1992	10.55	4	1994	4.04	1.59
1994	8.66	8.55	1995	3.73	4.6
1995	3.57	6.7	1996	5.44	3.77
1996	3.65	8.05	1997	----	3.26
1997	5.15	7.25	1998	----	4.19
1998	3.76	4.48	----	----	----
1999	----	8.4	----	----	----

Source: NMSWDF, Chosala, Dahod.