

Table 4.4

## Water Quality in the Study Area

Sl. No.	Characteristics	Unit	Ground Water									Surface Water	Drinking Water Specification (ISO 10500)	
			Chuta Hapjan Gaon	Chand-mari Bongali Gaon	Nagaajan Gaon	Naoholia No. 3	Baghjan Gaon	Tenga-pani TE 316 Nlr Gt.	Dighal-tarang Gaon	Jaygu-khowa Gaon	Dibru River	Desirable Limit	Permissible Limit in the Absence of Alternate Source	
			Handpump						Tubewell	Borewell	River			
			W1	W2	W3	W4	W5	W6	W7	W8	W9			
<b>Essential Characteristics in Drinking Water</b>														
1.	Colour	--	-----Colorless-----									5 Hazen Unit	25 Hazen Unit	
2.	Odour	--	-----Unobjectionable-----									Unobjectionable	--	
3.	Taste	--	-----Agreeable-----									Agreeable	--	
4.	pH	--	7.0	7.6	6.5	7.4	7.2	7.6	7.3	7.5	7.3	6.5 to 8.5	No Relaxation	
5.	Total Hardness (as CaCO <sub>3</sub> )	mg/l	58	50	74	76	88	54	68	58	90	300	600	
6.	Iron	mg/l	0.10	0.09	0.10	0.10	0.14	0.14	0.10	0.14	0.10	0.3	1.0	
7.	Chlorides as Cl	mg/l	12.8	18.5	15.6	9.9	27.0	11.4	21.3	19.9	12.8	250	1000	
<b>Desirable Characteristics in Drinking Water</b>														
8.	Total Dissolved Solids (TDS)	mg/l	100	104	100	110	152	125	122	130	156	500	2000	
9.	Calcium as Ca	mg/l	10.4	5.6	12.8	15.2	23.2	12.8	12.8	9.6	16.8	75	200	
10.	Magnesium as Mg	mg/l	7.8	3.9	10.2	9.3	7.3	5.3	8.8	8.3	11.7	30	100	
11.	Total Alkalinity as CaCO <sub>3</sub>	mg/l	70	60	60	80	95	80	70	70	120	200	600	
12.	Sulphate as SO <sub>4</sub>	mg/l	9.8	10.3	8.3	7.3	9.3	10.3	9.8	10.5	9.7	200	400+	
13.	Nitrate as NO <sub>3</sub>	mg/l	0.15	ND	0.22	ND	0.18	0.19	ND	0.60	ND	45	100	
14.	Fluoride as F	mg/l	0.03	ND	0.02	ND	0.04	ND	ND	ND	ND	1.0	1.5	
15.	Sodium as Na	mg/l	15	28	13	17	25	28	20	26	30	NS	NS	
16.	Total Suspended Solids (TSS)	mg/l	16	20	20	34	33	33	32	16	26	NS	NS	
17.	Phosphate as PO <sub>4</sub>	mg/l	0.29	0.06	0.25	0.25	0.30	0.30	0.66	0.56	0.30	NS	NS	
18.	Silica as SiO <sub>2</sub>	mg/l	1.40	1.63	1.70	2.58	1.89	1.90	2.42	1.58	1.91	NS	NS	
19.	BOD	mg/l	NA	NA	NA	NA	NA	NA	NA	NA	8.0	NS	NS	
20.	COD	mg/l	NA	NA	NA	NA	NA	NA	NA	NA	38.0	NS	NS	

- Note:**
1. Water samples were collected at 12/02/2009.
  2. **Abbreviations Used:** NS = Not Specified, ND = Not Detected and NA = Not Analyzed.
  3. \* To be applicable only when water is chlorinated.
  4. + Provided magnesium (as Mg) does not exceed 30 mg/l.