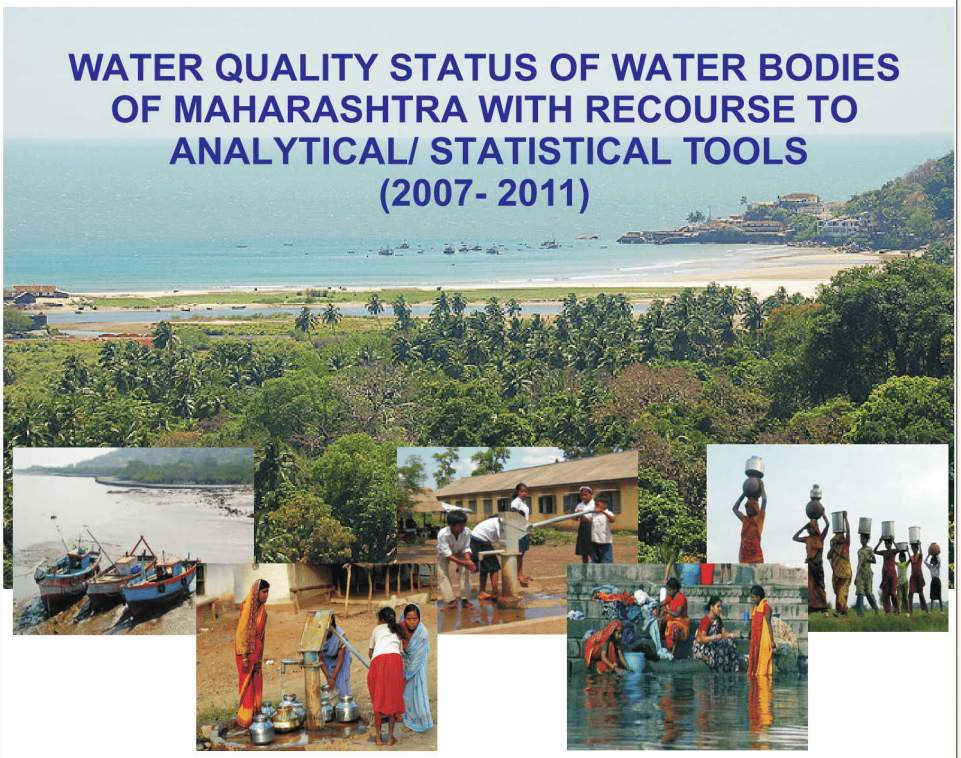
Final Report

WATER QUALITY STATUS OF WATER BODIES OF MAHARASHTRA WITH RECOURSE TO ANALYTICAL/ STATISTICAL TOOLS (2007- 2011)



Maharashtra Pollution Control Board

Prepared By

Council of Scientific and Industrial Research
National Environmental Engineering
Research Institute

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FINAL REPORT

Water Quality Status of Water Bodies of Maharashtra with Recourse to Analytical/Statistical Tools (2007-2011)

MPCB

Maharashtra Pollution Control Board (MPCB)

CSIR NEERI

CSIR- National Environmental Engineering Research Institute (NEERI)

April, 2014

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Preface

Water Quality Monitoring is one of important function of State Pollution Control Board. It helps in evaluating the nature & extent of water contamination, assess the water quality trends, evaluate the success of pollution control measures taken & prioritization of efforts to be initiated. Maharashtra Pollution Control Board is monitoring water quality under National Water Monitoring Programme (NWMP) and State Water Monitoring Programme (SWMP) at various locations as per the Uniform Monitoring Protocol of Central Pollution Control Board / MoEF, New Delhi.

The water quality review committee members in Maharashtra namely Central Ground Water Board (CGWB), Ground Water Surveys and Development Agency(GSDA), Hydrology department(HP), who have similar objectives in monitoring of water quality are also regularly monitoring water quality in the state of Maharashtra. Maharashtra Pollution Control Board (MPCB) is preparing status of Water Quality Report based on the data generated by all the monitoring agencies as per decision of meeting of Cabinet Ministers, GoM dated 27/05/2009.

This document contains compilation & statistical analysis of Water Quality Monitoring data collected through the various agencies namely CGWB, GSDA and Hydrology department during the period 2007 to 2011.

The various statistical tools have been used for useful interpretation of data. This analysis will help various departments to prioritize the areas of concerns to facilitate mitigation measures & development of preventive action plans. Also National Sanitation Foundation, USA's formula has been used to calculate Water Quality Index (WQI). It is observed that there are multiple principles & practices for analysis of water quality data and therefore attempts have been made to apply most videly used practices to compare the findings & arrive at proper conclusion. I trust findings of this report will help concerned departments to prepare suitable action plans for improvement of water quality.

This study was conducted through NEERI, Mumbai, Zonal Laboratory and I appreciate the efforts of Dr. Rakesh Kumar, Chief Scientist and Head and Ms. Indrani Gupta, Senior Principal Scientist & their team in preparing this report. Also acknowledge the efforts taken by CGWB, GSDA, HP for providing water quality data for this report. Contribution of Shri. Bharat Nimbarte, Joint Director-WPC, Shri.S.C.Kollur, Scientific Officer and Ms.Yamini Chachad, Junior Scientific Officer are appreciated for their inputs in the report.

Date: APRIL 30, 2014

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FOREWORD

"Water" is a prime natural resource and is considered as a precious national asset. Water is used for various purposes ranging from domestic, agricultural, industrial & allied purposes. The deterioration of water quality in the State has taken place due to untreated disposal of sewage and industrial effluents. Though efforts are being made all over the country to improve the situation, an intensive effort to monitor and understand water quality across the Maharashtra state has been initiated by MPCB.

In order to assess the quality of water, Maharashtra Pollution Control Board (MPCB) has been conducting assessment of the water quality through programs such as State Water Quality Monitoring Program (SWMP), National Water Quality Monitoring Program (NWMP) and Hydrology project. Under these programs, regular monitoring is carried out at 251 locations on 59 Rivers, and 34 locations on Seafronts and Creeks of Maharashtra. Similarly, ground water survey is carried out in coordination with Groundwater Survey and Development Agency (GSDA), Central Ground Water Board (CGWB) for 3694 villages located in 369 talukas covering all 34 districts in Maharashtra. MPCB also monitors ground water quality annually at 50 locations under SWMP and NWMP programs.

MPCB was keen to undertake comprehensive analysis of this huge data to study the spatial and temporal variability in water quality in the state of Maharashtra through reliable statistical analysis. That is to visualize the level of pollution, identify the hotspots and suggest corrective measures.

With a view to address the above issues, CSIR-NEERI was assigned to carry out statistical analysis of water quality data for five years viz. 2007-2011 in Maharashtra. Outlier identification was carried out using Dixon's formula. Descriptive statistics including mean, minimum, maximum, standard deviation and percent exceedances were carried out. For surface water quality, modified National Sanitation Foundation (NSF, USA) formula has been used to calculate WQI. For groundwater, organic and inorganic parameters were considered to compute WQI. The formula adopted is as per literature review.

The cooperation and assistance rendered by officials of MPCB especially Mr. Bharat B. Nimbarte, Mr. S.C. Kollur and Ms. Yamini R. Chachad are gratefully acknowledged. The direction given and interest shown by Shree Rajeev Kumar Mital, Member Secretary, MPCB, have been useful in preparing this report.

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EXTENDED EXECUTIVE SUMMARY

Disposal of untreated domestic sewage from cities, towns and villages is the major source of pollution of surface water bodies leading to the outbreak of water borne diseases. According to World Health Organization (WHO) estimates, about 80% of water pollution in developing countries like India is caused by domestic wastes *(Durmishi et al., 2012)*. The growth of urban megalopolises increased industrial activities and dependence of the agricultural sector on chemicals and fertilizers which has led to overloading of the carrying capacity of water bodies to assimilate and decompose waste load. The objective of any water quality management is to balance the interests of users with the development of the resource, while at the same time improving and preserving environmental quality and ecosystem services.

Maharashtra is the second most populous state and third largest state by area in India. The state covers an area of 307,731 km^2 or 9.84% of the total geographical area of India. There are 35 districts, Mumbai, being the capital city of the state. The state of Maharashtra has major rivers such as Godavari, Krishna, Tapi- Purna, Bhima and Wardha- Wainganga river besides many other rivers.

The mandate on environmental monitoring of Maharashtra Pollution Control Board (MPCB) necessitates collection of data on the status of water quality in Maharashtra State. Under State Water Quality Monitoring Program (SWMP), National Water Quality Monitoring Program (NWMP) and Hydrology project, River Water quality data is being monitored at 251 locations on 59 Rivers. Water Quality data for these locations for the period 2007-2011 has been analyzed. Sea Water quality data monitored under SWMP, NWMP at 34 locations has been analyzed. Groundwater Survey and Development Agency (GSDA), Central Ground Water Board (CGWB) and MPCB have conducted groundwater quality monitoring program in

various districts of Maharashtra state. Ground water quality data for 3694 villages from 369 talukas of 34 districts of Maharashtra have been analyzed.

Water Quality Index for Surface Water

Multiple parameter assessment requires application of Index which can easily communicate to all for understanding of water quality. The major purpose of combined assessment of these data sets was to bring out the facts related to identification of hotspots, region of high exceedances of standards, and thus development of action plan to remediate the situation. It would also help policy makers to understand the overall water quality status in the state and prioritize action plan.

In India the NSF WQI is being used by CPCB, with a slight modification in weights *(Abbasi, 2002, CPCB, 2001)*. The NSF WQI is expressed mathematically as:

$$\text{NSF WQI} = \sum_{i=1}^{p} W_i I_i,$$

Where, I_i = sub index for ith water quality parameter
Wi = weight (in terms of importance) associated with water quality parameter
p = number of water quality parameters.

The modified weights (W_i) and the equation for the sub-indices (I_i) as per CPCB are given in **Tables E1 and E2** respectively.

Table E1: Original and Modified Weights for the Computation of NSF WQI Based on DO, Fecal Coliforms, pH and BOD*

Water Quality Parameters	Original Weights from NSF WQI	Modified Weights by CPCB
DO	0.17	0.31
FC	0.15	0.28
pH	0.12	0.22
BOD	0.1	0.19
Total	0.54	1.00

** CPCB 2001*

Table E2: Sub –Index Equations for Water Quality Parameters (NSF WQI)*

Water Quality Parameters	Range Applicable	Equation
DO (Percent saturation)	0-40% saturation	IDO = 0.18+0.66 x (% Saturation DO)
	40-100% saturation	IDO = -13.55+1.17 x (% Saturation DO)
	100-140% saturation	IDO = 163.34-0.62 x (% Saturation DO)
BOD.(mg/l)	0-10	IBOD = 96.67-7 (BOD)
	10-30	IBOD = 38.9-1.23 (BOD)
	> 30	IBOD = 2
pH	2-5	IpH = 16.1+7.35 x (pH)
	5-7.3	IpH = -142.67+33.5 x (pH)
	7.3-10	IpH = 316.96-29.85 x (pH)
	10-12	IpH = 96.17-8.0 x(pH)
	<2 , >12	IpH=0
Fecal Coliform (counts/100ml)	$1\text{-}10^3$	IFC = 97.2-26.6 x log(FC)
	$10^3\text{-}10^5$	IFC = 42.33 -7.75 x log(FC)
	$>10^5$	IFC = 2

***** *Abbasi, 2002*

The range of the NSF WQI corresponding to various designated best use classification is given in **Table E3**.

Table E3: NSF WQI for Various Designated Best Use*

Sr.	NSF WQI	Description of Quality (1978)	Class by CPCB	Remarks
1	63-100	Good to Excellent	A	Non polluted
2	50-63	Medium to Good	B	Non polluted
3	38-50	Bad	C	Polluted
4	38 & less	Bad to Very Bad	D, E	Heavily polluted

** CPCB, 2001*

Water Quality Index for Ground Water

Each of the groundwater samples analysis data are based on assessment of various parameters such as pH, total hardness, calcium, magnesium, bicarbonate, chloride, TDS, fluoride, nitrate, iron, sulphate, manganese, turbidity, total alkalinity, sodium, potassium, electrical conductivity and carbonate. For computing WQI of Groundwater, three steps are followed *(Ramakrishnaiah et al., 2009)*.

In the first step, each of the selected parameters has been assigned a weight (w_i) according to its relative importance in the overall quality of water for drinking purposes. The modified relative weight of selected parameters is given in **Table E4.**

In the second step, the relative weight (W_i) is computed from the following equation:

$$W_i = \frac{w_i}{\sum_{i=1}^{n} w_i}$$

Where, W_i is the relative weight,

w_i is the weight of each parameter and n is the number of parameters

In the third step, a quality rating scale (q_i) for each parameter is assigned by dividing its concentration in each water sample by its respective standard according to the guidelines laid down in the BIS and the result is multiplied by 100:

$$q_i = (C_i / S_i) \times 100$$

Where, q_i is the quality rating,

C_i is the concentration of each chemical parameter in each water sample in mg/L, and

S_i is the Indian drinking water standard for each chemical parameter in mg/L

According to the guidelines of the BIS 10500, (2004-2005). *[BIS (Bureau of Indian Standards) 10500, Indian standard drinking water specification, 2004-2005, pp 1-8]*.

Table E4 : Relative Weight of Chemical Parameters with and without Iron

Chemical Parameters	Indian Standards	Desirable Limit	Permissible Limit	Weight (w_i)	Relative Weight (W_i) Without Iron	Relative Weight (W_i) With Iron
pH	6.5-8.5	6.5-8.5	No relaxation	4	0.12121	0.10811
TH	300-600	300	600	2	0.06061	0.05405
Calcium	75-200	75	200	2	0.06061	0.05405
Magnesium	30-100	30	100	2	0.06061	0.05405
Bicarbonate	244-732	244	732	3	0.09091	0.08108
Chloride	250-1,000	250	1,000	3	0.09091	0.08108
TDS	500-2,000	500	2,000	4	0.12121	0.10811
Fluoride	1-1.5	1	1.5	4	0.12121	0.10811
Nitrate	45-100	45	No relaxation	5	0.15152	0.13514
Iron	0.3-1.0			4		0.10811
Sulphate	200-400	200	400	4	0.12121	0.10811

The maximum weight of 5 has been assigned to the parameter nitrate due to its major importance in water quality assessment. Magnesium is given the minimum weight of 1 as magnesium by itself may not be harmful.

For computing the WQI, the SI is first determined for each chemical parameter, which is then used to determine the WQI as per the following equation:

$$SI_i = W_i . q_i$$

$$WQI = \sum_{i=1}^{n} SI_i$$

Where, SI_i is the subindex of i^{th} parameter;
q_i is the rating based on concentration of i^{th} parameter, and
n is the number of parameters.

The computed WQI values are classified into five types, "excellent water" to "water, unsuitable for drinking" *(Ramakrishnaiah et al., 2009)* is given in **Table E5.**

Table E5: Water Quality Classification based on WQI Value

WQI Value	Water Quality
<50	Excellent
50-100	Good water
100-200	Poor water
200-300	Very poor water
>300	Water unsuitable for drinking

The methodology described above has been used in the report for evaluation of WQI. Water quality data analyses have been carried out to arrive at the overall status of rivers, sea beaches, creeks and ground water quality of Maharashtra state along with the trend for last three years. An attempt has been made to bring out the significant places/locations of concern and suggest possible action plan. These action plans though generic may need detailed planning for further step of implementation.

A) RIVER WATER

Monthly water quality data for selected physico-chemical parameters viz. pH, DO BOD, Ammonical Nitrogen and Nitrate for the years 2007-11 were compared with the Maharashtra Pollution Control Board (MPCB) water quality standards of class A-II (**Table E6**) for best designated usage. The water quality indexes for all sites were evaluated using four parameters viz. pH, DO, BOD FC.

Table E6 : Water Quality Standards for Best Designated Usage (MPCB)

Category of Fresh Water	A – I	A – II	A – III	A - IV
Best Usage	**Unfiltered Public water supply after approved disinfection**	**Public water supply with approved treatment equal to coagulation, sedimentation and disinfection**	**Not fit for human consumption, Fish & Wildlife Propagation**	**Fit for Agriculture, Industrial cooling & process water**
Nitrates (NO_3)	45 mg/l	45 mg/l	-	-
pH	6.5 to 8.5	6.0 to 8.5	6.5 to 9.0	6.5 to 9.0
Total Ammonical Nitrogen	1.5 mg/l	1.5 mg/l	-	50 mg/l
BOD (5 days 20^0C)	2.0 mg/l (monthly average of at least 10 samples)	5.0 (monthly average of at least 10 samples)	10 mg/l	30 mg/l
DO	Not less than 5 mg/l (monthly average of 100 samples)	4.0 mg/l	Not less than 3 mg/l	Not less than 2 mg/l
Bacteriological Standards: MPN/100 ml	Coliform Bacteria 250	Not greater than 5000		

The overall picture of the water quality of the Rivers of Maharashtra is summarized as follows:

- Water Quality Index showed that out of 251 monitoring locations, 67 locations had water quality index good to excellent during the period 2007-2011 (**Table E7).**
- 35 locations had water quality very bad at least in one of the months during the period 2007-2011(**Table E8).**
- At 25 locations out of 251 locations, all parameters are within the standards throughout the period 2007-2011 (**Table E9).**
- At 32 locations out of 251 monitoring sites, percent exceedance of significant parameters is 100% (**Table E10).** At 82 locations, the parameters exceed the stipulated standard, 75% of the time. At 133 locations, the parameters exceed the stipulated standard, 50% of the time.
- DO is exceeding the standard 100% of the time in Mula Mutha River in Sangam bridge near Ganapathy Ghat, Village- Shivaji Nagar, Pune district.
- BOD concentrations are exceeding the standard 100% of the time at 26 locations. These rivers are Pawana, Mula Mutha, Bhima, Ulhas, Godavari, Tapi and Vaitarna. At most of the sampling locations in the rivers, BOD values have exceeded the MPCB Class AII

standard of 5 mg/l. At 164 locations BOD values have exceeded the standard at least once during the period 2007-2011.

- TC is exceeding the standard 100% of the time at 2 sites in Krishna River at Daund and Khamgaon
- Ammonical nitrogen exceeded the standard 100% of the time at 2 locations in Godavari River at Kesrali village and at Latur water intake near pump house. Village- Dhamegaon, Taluka- Kalumb, District- Osmanabad.; Tapi River at Hingona.

Table E7: Monitoring Locations with WQI "Good to Excellent" during 2007-2011

Sr.	River	St. Code	Location
1	Bhatasa	1461	D/s of Pise Dam, Tal:Bhiwandi, Thane
2		2654	U/S of Liberty Oil Mill, Dist:Thane
3		2653	D/S of Liberty Oil Mill, Dist:Thane
4	Darna	2661	Aswali (Darna Dam), Igatpuri, Nashik
5	Godavari	HP_GD_2	Dhalegaon
6		HP_GD_6	Killari
7		HP_GD_14	Pishor
8		HP_GD_15	Purnabridge
9		HP_GD_20	Takli
10		HP_GD_21	Taklidhangar
11		HP_GD_22	Toka
12		HP_GD_23	Wadvali
13		HP_GD_24	Yelli
14		HP_GD_25	Zari
15		HP_GD_27	Damrencha
16		HP_GD_28	Deori
17		HP_GD_30	Grugwada
18		HP_GD_31	Kamtheekhairi
19		HP_GD_32	Kardha
20		HP_GD_34	Mahagaon
21		HP_GD_35	Mathani
22		HP_GD_36	Petta
23		HP_GD_40	Wadsa (Chincholi)
24		HP_GD_41	Wagholi-Butti
25		12	Dhalegaon
26		1095	Gangapur Dam
27		1210	Vishnupuri
28		1312	Jaikwadi Dam,Paithan
29		2158	Paithan intake, Jayakwadi
30		2159	Pathegaon bridge
31		2183	Nandur Madhmeshwar Dam, Nandur

Table E7 (Contd..): Monitoring Locations with WQI "Good to Excellent" during 2007-2011

Sr.	River	St. Code	Location
32	Krishna	37	Miraj
33		1153	Rajapur
34		1310	At Kurundwad
35		1906	At Walwa
36	Kundalika	1152	At Roha bridge
37		2672	At Dhatav at Jackwell
38	Muchkundi	HP_MU_1	Pawarwadi
39		2676	At Waked
40	Mula-Mutha	2680	Khadakvasla Dam, Pune
41	Panchaganga	1311	Ichalkaranji near MIDC intake well
42		1904	U/S of Kolhapur town near Balinga P.S.
43		2163	Shirol Intake well
44	Patalganga	2686	Vyal Pump house
45		2687	Khalapur pumping station
46		2689	Gagangiri Temple,Khopoli
47	Pehlar River	2696	Pehlar dam water works
48	Savitri	2199	Ovale Village
49		2701	Upsa kendre, Mangalwadi
50		2702	Shedav Doh
51		2703	Dadli Bridge
52		2704	Muthavali village
53	Surya	2706	U/s. Surya Dam, Dhammi, Vikramgad, Thane.
54		2707	MIDC PS, Garvshet, Palghar, Thane
55		2708	Intake of Vasai-Virar w/s, Palghar, Thane
56	Tapi	HP_TP_2	Bhusawal
57		HP_TP_5	Hingona
58		HP_TP_11	Padalse
59		HP_TP_13	Sawkheda
60		HP_TP_6	Kawtha
61		HP_TP_7	Khariya
62		HP_TP_8	Lakhpuri
63	Ulhas	1094	U/s of BadalapurWW, Kulgaon village
64		2162	Jambhul water work, Ambernath
65	Vashishti	2164	U/s 3M Paper Mill Kherdi
66		2713	D/s 3M Paper Mill Kherdi
67		2714	U/s Konphansawane

Table E8 : Monitoring Stations with WQI "Very Bad" at least One Month

Sr. No	River	St. Code	Location
1	Bhima	1189	U/s of Vithalwadi near Sankar Mandir, Dist. Pune
2		1190	D/s of Bundgarden, District-Pune
3		1191	After confluence with Mula-Mutha at Pargaon
4		2655	At Koregaon near Koregaon bridge, District- Pune
5	Daman Ganga	HP_DG_3	Shindayacha Pada
6	Ghod	2665	Shirur
7	Godavari	HP_GD_7	Kopargaon

Table E8 (Contd..): Monitoring Stations with WQI "Very Bad" at least One Month

Sr. No	River	St. Code	Location
8	Indrayani	2197	D/s of Alandigaon
9		2668	D/s of Moshi village
10		2669	U/s of Moshigaon
11	Kanhan	1909	D/s of Nagpur
12	Krishna	HP_KR_10	Dattawadi
13		HP_KR_24	PimpleGurav
14	Mithi	2168	Mahim Village
15	Morna	2675	D/s Railway Bridge, Akola
16	Mula-Mutha	2191	Mutha river at Sangam bridge near Ganapathy ghat
17		2192	Mundhawa bridge
18		2193	Aundh bridge
19		2194	Harrison bridge near Mula- Pawana sangam
20		2677	D/s of Theur
21		2678	Mutha river near Veer Savarkar Bhavan
22		2679	Mutha river at Deccan bridge
23	Nira	2195	D/s of Jubilant Organosis, Nimbut
24		2681	Sangavi
25	Pawana	2196	Sangavigaon
26		2690	Kasarwadi
27		100	Sangavigaon
28		2691	Dapodi at Pawana-Mula sangam
29		2693	Chinchwadgaon
30		2694	Pimprigaon
31	Pedhi	2695	Pedhi river brudge near Padhi village
32	Purna	2155	D/s of confluence of Morna and Purna, at Andura
33	Tapi	HP_TP_1	Akkalpada
34		HP_TP_12	Sarangkheda
35	Ulhas	HP_UH_3	Manda

Table E9: Monitoring Sites with 0% Percent Exceedance of all the Parameters during the Period 2007-2011

Sr. No	River	St. Code	Location
1	Godavari	HP_GD_2	Dhalegaon, Regional Lab Aurangabad
2		HP_GD_6	Killari, Regional Lab Aurangabad
3		HP_GD_14	Pishor, Regional Lab Aurangabad
4		HP_GD_20	Takli, Regional Lab Aurangabad
5		HP_GD_24	Yelli, Regional Lab Aurangabad
6		HP_GD_25	Zari, Regional Lab Aurangabad
7		HP_GD_27	Dhamrencha, Regional Lab-Nagpur
8		HP_GD_30	Drugwada, Regional Lab-Nagpur
9		HP_GD_31	Kamtheekhairi, Regional Lab-Nagpur
10		HP_GD_32	Godavari
11		HP_GD_33	Kolgaon, Regional Lab-Nagpur
12		HP_GD_34	Mahagaon, Regional Lab-Nagpur
13		HP_GD_35	Mathani, Regional Lab-Nagpur
14		HP_GD_36	Petta, Regional Lab-Nagpur
15		HP_GD_37	Saiphal, Regional Lab-Nagpur

Table E9 (Contd..): Monitoring Sites with 0% Percent Exceedance of all the Parameters during the Period 2007-2011

Sr. No	River	St. Code	Location
16	Godavari	HP_GD_39	Wadsa (Chincholi), Regional Lab-Nagpur
17		HP_GD_40	Tembhurdoh, Regional Lab-Nagpur
18	Krishna	HP_KR_25	Shirur
19		HP_KR_25	Rakshewadi
20	Patalganga	2689	Gagangiri Maharaj Temple, Khopoli, Raigad.
21	Pehler	2696	Pehlar Dam inlet of water works, Vasai, Thane.
22	Tapi	HP_TP_11	Padalse
23		HP_TP_13	Sawkheda
24		HP_TP_7	Khariya
25	Ulhas	1094	U/s of Badlapur water works, Kulgaon, Taluka- Ambernath, District- Thane

Table E10: Monitoring Sites with 100% Percent Exceedance of Significant Parameters

Sr.	St. Code	River	Location	pH	DO	BOD	TC	Ammo-nical-N
1	1189	Bhima	U/s of Vithalwadi near Sankar Mandir.Village-Vithalwadi, Taluka-Haweli, District- Pune.	0	64	100	0	44
2	1190		Pune, D/s of Bundgarden. Village- Yerwada, Taluka-Haweli, District- Pune.	4	77	100	0	71
3	HP_GD_5	Godavari	Kesrali, Regional Lab Aurangabad	67	0	0	50	100
4	HP_GD_1		Bhandardara, Regional Lab Nasik	0	0	100	0	0
5	HP_GD_3		Gangapur Dam, Regional Lab Nasik	33	33	100	0	0
6	2157		Latur water intake near Pump house. Village-Dhamegaon, Taluka-Kalumb,District Osmanabad.	0	33	0	0	100
7	HP_KR_8	Krishna	Bundgarden Bridge	0		100	0	100
8	HP_KR_11		Daund	0	0	56	100	0
9	HP_KR_15		Khamgaon	0	0	67	100	0
10	2191	Mula Mutha	Sangam bridge near Ganapathy ghat. Village-Shivaji Nagar, District-Pune.	0	100	98	0	87
11	2192		Mundhawa bridge. Village- Mundhawa, Taluka- Haweli, District-Pune.	2	87	100	0	90

Table E10(Contd..): Monitoring Sites with 100% Percent Exceedance of Significant Parameters

Sr.	St. Code	River	Location	pH	DO	BOD	TC	Ammo-nical-N
12	2193	Mula Mutha	Aundh bridge,Aundgaon.Village-Aundgaon, Taluka-Haweli, District- Pune.	2	60	100	0	82
13	2194		Harrison bridge near Mula- Pawana sangam. Village- Bopodi,Taluka-Haweli, District- Pune.	2	77	100	0	85
14	2678		Near Veer Savarkar Bhavan, Pune.	0	82	100	0	76
15	2679		Deccan bridge, Pune.	2	84	100	0	73
16	2196	Pawana	Sangavigaon, Pune. Village- Sangavigaon, Taluka- Haweli, District-Pune.	0	83	100	0	71
17	2690		Kasarwadi, Haweli, Pune.	9	71	100	0	76
18	100		Sangvigaon, Pune	0	86	100	0	89
19	2691		Dapodi bridge, at Pawana-Mulla Sangam,Pune.	4	88	100	0	71
20	2694		Pawna Pimprigaon, Pune.	0	76	100	0	66
16	2196		Sangavigaon, Pune. Village- Sangavigaon, Taluka- Haweli, District-Pune.	0	83	100	0	71
17	2690		Kasarwadi, Haweli, Pune.	9	71	100	0	76
18	100		Sangvigaon, Pune	0	86	100	0	89
21	HP_TP_5	Tapi	Hingona	0	0	0	0	100
22	HP_TP_1		Akkalpada	29	0	100	0	0
23	HP_TP_14		Dhule	0	13	100	89	0
24	HP_TP_9		Malegaon Mosam	9	0	100	27	0
25	HP_TP_12		Sarangkheda	0	7	100	8	0
26	HP_TP_15		Suple	13	0	100	43	0
27	HP_TP_14		Sukwad	7	7	100	7	0
28	HP_UH_2	Ulhas	Khapari	7	0	100	15	0
29	HP_UH_3		Manda	0	77	100	80	0
30	HP_VN_1	Vaitarna	Alman	0	0	100	0	0
31	HP_VN_2		Vaitarna	0	0	100	0	0
32	HP_VN_3		Kasa (Thane)	0	0	100	8	0

Godavari Basin

With a length of 1465 km, the Godavari River is a major water body in central India, originating in the Western Ghats of Trimbakeshwar, in the Nashik District. It flows for 692 kms before entering Andhra Pradesh and finally reaches the Bay of Bengal. **Table E11** gives the number of sites out of 51 sites of Godavari with percent exceedances in different ranges for BOD, DO, TC and pH.

Table E11: Number of Sites of Godavari with Percent Exceedances for BOD, DO, TC and pH

Percent Exceedance	BOD	DO	TC	pH
0%	29	35	49	22
1-20%	7	11	0	25
20-40%	4	4	0	2
40-60%	1	1	0	1
60-80%	2	0	2	1
80-100%	6	0	0	0

Figures E1 shows the pie chart for percent exceedances for BOD, DO, TC and pH for 51 locations in Godavari River. 59% of the sites have no exceedance of BOD from the standard. 15% of the sites have percent exceedance of BOD between 1-20% and so on.

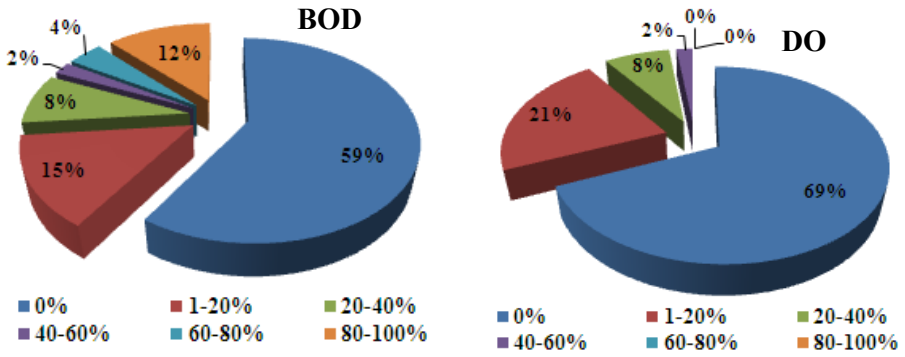

Figure E1: Percent Exceedances at 51 Monitoring Locations of Godavari River

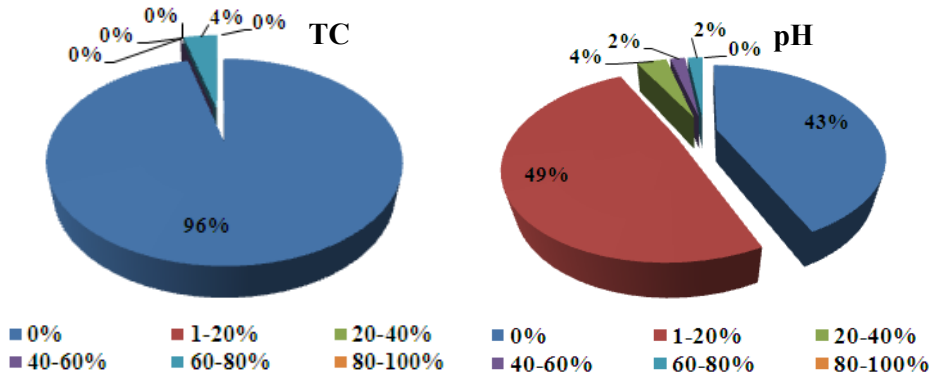

Figure E1(Contd..) : Percent Exceedances at 51 Monitoring Locations of Godavari

The average water quality index for five years evaluated at 51 sites showed that 84% of the locations had water quality "Good to Excellent", 14% of the locations had water quality "Medium to Good" and 2% of the locations (1 location) that is at Kopargaon water quality was bad **(Figure E2)**.

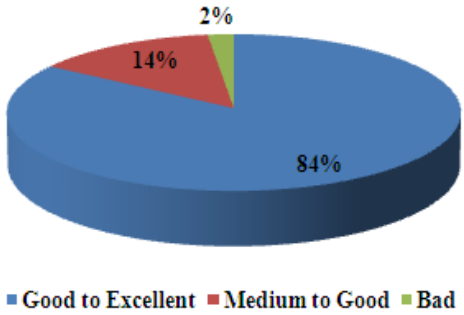

Figure E2: Water Quality Index of 51 Monitoring locations of Godavari River

Krishna Basin

Krishna River rises at Mahabaleswar in Maharashtra in the west and meets the Bay of Bengal at Hamasala deevi in Andhra Pradesh, on the east coast. It goes through Satara, Sangli, Kohapur, Solapur which have many sugar plants. The use of large quantities of fertilizers and pesticides in these plots ultimately finds its way in the river.

Table E12 gives the number of sites out of 28 sites of Krishna with percent exceedances in different ranges for BOD, DO, TC and pH

Table E12: Number of Sites of Krishna with percent exceedances for BOD, DO, TC and pH

Percent Exceedance	BOD	DO	TC	pH
0%	13	21	11	8
1-20%	5	4	1	18
20-40%	0	0	1	0
40-60%	2	0	3	0
60-80%	5	0	4	1
80-100%	2	2	5	0

Figures E3 shows the pie chart for percent exceedances for BOD, DO, TC and pH for 28 locations in Krishna River. 48% of the sites have no exceedance of BOD from the standard.

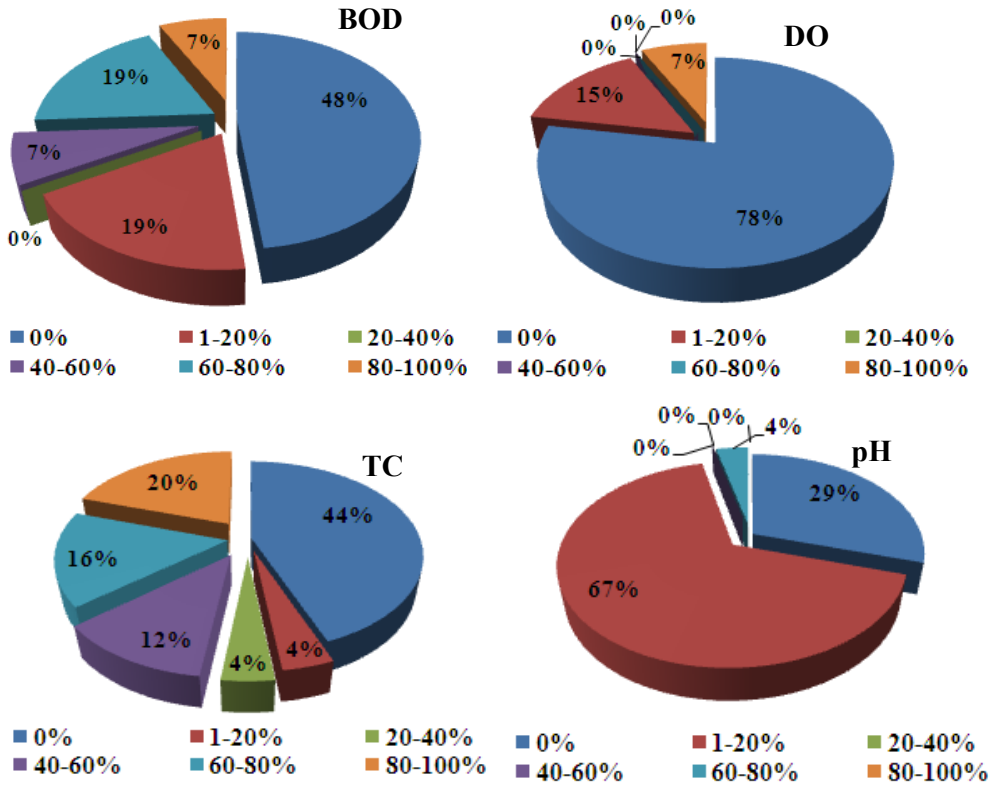

Figure E3 : Percent Exceedances at 28 Monitoring Locations of Krishna River

The average water quality index for five years evaluated at 28 sites is presented in **Figure E4**. It shows that 26% of the locations had water quality "Good to Excellent", 67% had water quality "Medium to Good" and at 7% locations (2 locations iz. Paud and Ambeghar in Karanje) water quality was bad.

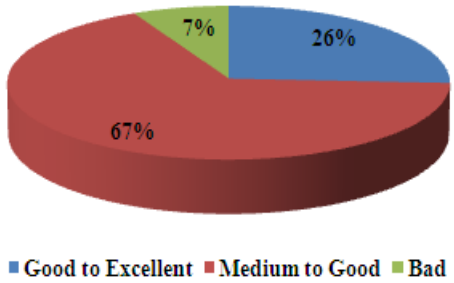

Figure E4 : Water Quality Index of 28 Monitoring Locations of Krishna River

Tapi Basin

The Tapi River is one of the major rivers with a length of around 724 km. The river rises in the eastern Satpura Range of Madhya Pradesh, and flows westward, though, Maharashtra's Kandeshand, East Vidarbha regions in the northwest corner of the Deccan Plateau and south Gujarat, before emptying into the Arabian Sea. MPCB has 21 monitoring locations of Tapi River under NWMP, SWMP and Hydel Project. **Table E13** gives the number of sites out of 21 sites of Tapi with percent exceedances in different ranges for BOD, DO, TC and pH.

Table E13: Number of Sites of Tapi with Percent Exceedances for BOD, DO, TC and pH

Percent Exceedance	BOD	DO	TC	pH
0%	11	14	16	6
1-20%	1	6	2	14
20-40%	0	1	1	1
40-60%	1	0	1	0
60-80%	2	0	0	0
80-100%	6	0	1	0

Figures E5 show the pie chart for percent exceedances for BOD, DO, pH and TC for 21 locations in Tapi River.

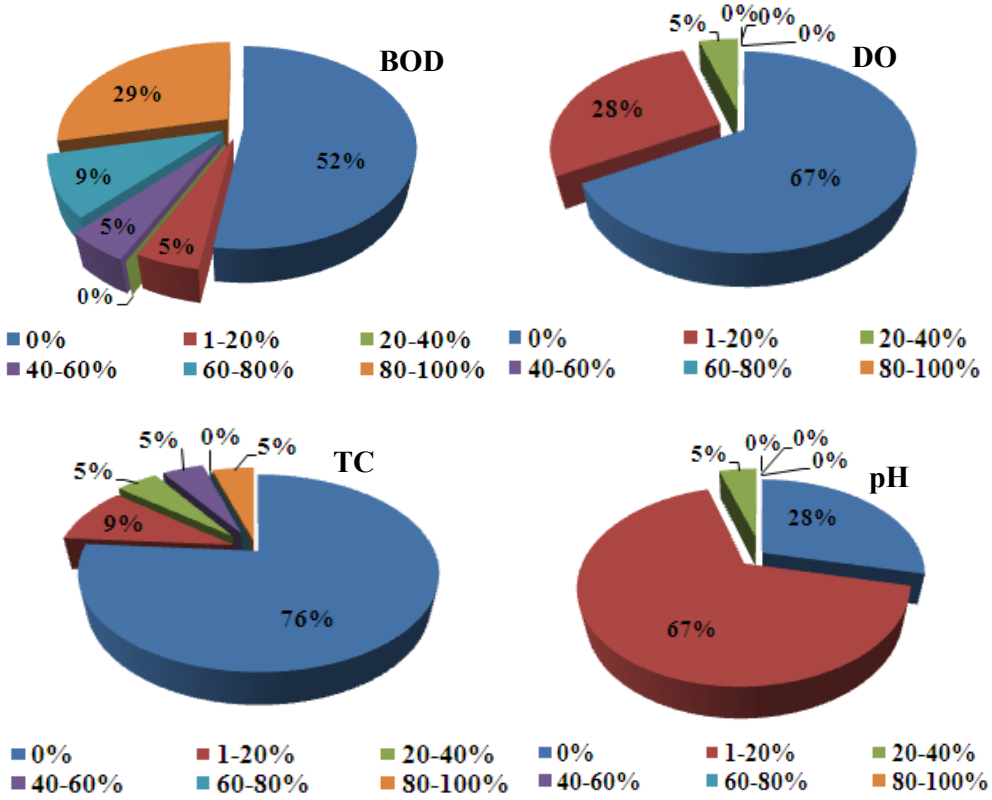

Figure E5 : Percent Exceedances at 21 Monitoring Locations of Tapi River

The average water quality index for five years evaluated at 21 sites is presented in **Figure E6**. It shows that 67% of the locations had water quality "Good to Excellent", 24% had water quality "Medium to Good" and at 9% locations (2 locations viz. Akkalpada and Dhule) water quality was bad.

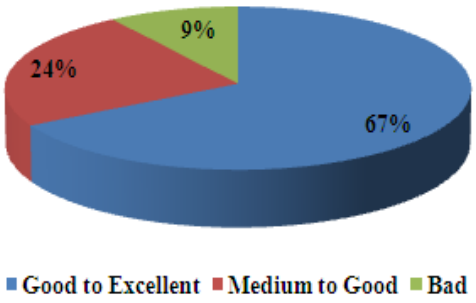

Figure E6 : Water Quality Index of 21 Monitoring Locations of Tapi River

Bhima Basin

The Bhima River originates in Bhimashankar hills near Karjat on Sahyadri, in Maharashtra. Bhima flows southeast for 725 km through Maharashtra, Karnataka and Andhra Pradesh. Bhima is the most important tributary of Krishna River. Its banks are densely populated. Monitoring is carried out at 9 locations of Bhima River. Number of sites of Bhima with percent exceedances in different ranges for BOD, DO, TC and pH are given **Table E14**.

Table E14: Number of Sites of Bhima with Percent Exceedances for BOD, DO, TC and pH

Percent Exceedance	BOD	DO	TC	pH
0%	0	2	8	4
1-20%	0	3	0	5
20-40%	0	2	1	0
40-60%	2	0	0	0
60-80%	2	2	0	0
80-100%	5	0	0	0

Percent exceedances for BOD, DO, pH and TC for 9 locations in Bhima River are shown in **Figures E7.**

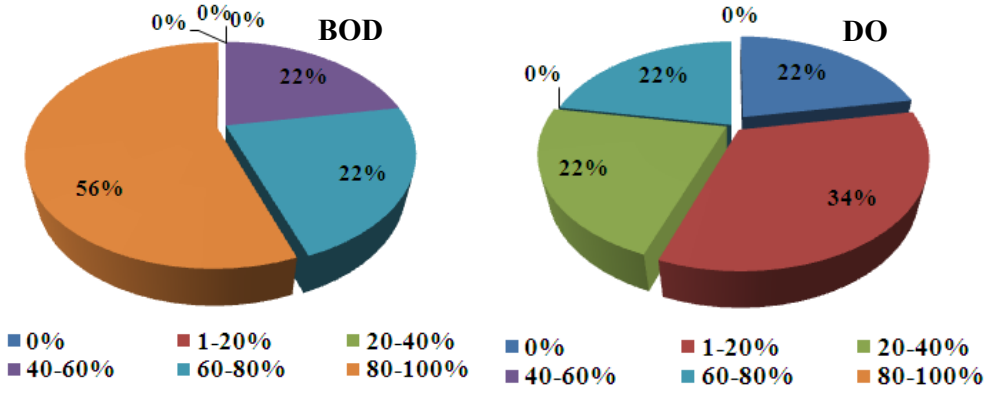

Figure E7 : Percent Exceedances at 9 Monitoring Locations of Bhima River

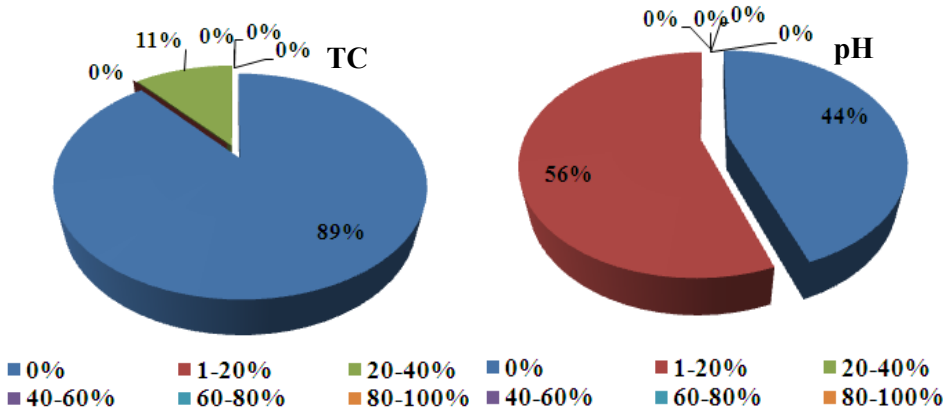

Figure E7 (Contd..) : Percent Exceedances at 21 Monitoring Locations of Bhima River

The WQI indicates that out of 9 monitoring locations, river water quality was "Good to Excellent" at 1 site. At six sites water quality was "Medium to Good" and at 2 sites (viz. Upstream of Vithalwadi near Sankar Mandir and D/s of Bundgarden, both in Taluka Haweli, district Pune) it was bad **(Figure E8)**.

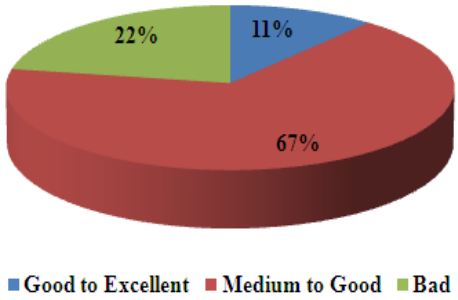

Figure E8 : Water Quality Index of 9 Monitoring Locations of Bhima River

Wardha Wainganga Basin

Both Wardha and Wainganga Rivers originate at Satpura Range in Madhya Pradesh and enters into Maharastra. A huge dam (Upper Wardha Dam) is built on Wardha River near Morshi and considered as lifeline for Amravati city. After both the rivers join the united stream, known as Pranahita, ultimately falls into the River Godavari. The total number of monitoring sites of Wardha and Wainganga rivers is 13. Percent exceedances in different ranges for BOD, DO, TC and pH are given in **Table E15** and **Figures E9**. TC concentrations are within the standard at all the sites. Percent exceedances of pH at all the sites range between 5-14%.

Table E15: Number of Sites of Wardha Wainganga with Percent Exceedances for BOD, DO, TC and pH

Percent Exceedance	BOD	DO	TC	pH
0%	0	8	13	0
1-20%	0	5	0	13
20-40%	0	0	0	0
40-60%	1	0	0	0
60-80%	7	0	0	0
80-100%	5	0	0	0

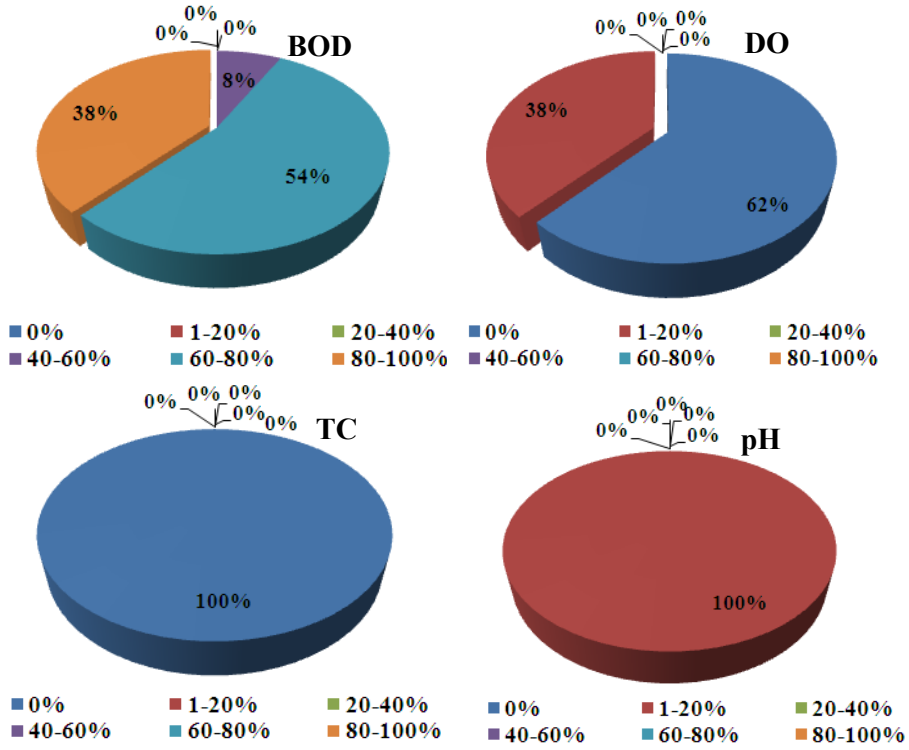

Figure E9 : Percent Exceedances at 13 Monitoring Locations of Wardha Wainganga River

The water quality of Wardha Wainganga Rivers were "Medium to Good" at 9 sites and "Good to Excellent at 4 sites." None of the sites had "Bad" water quality (**Figure E10**).

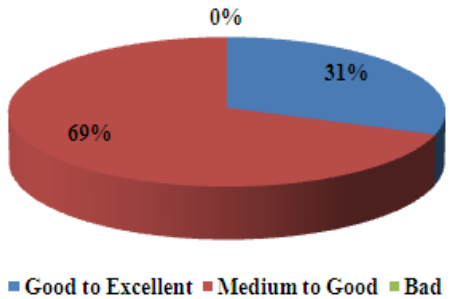

Figure E10: Water Quality Index of 13 Monitoring locations of Wardha and Wainganga Rivers

B) WATER QUALITY OF SEAFRONTS AND CREEKS OF MAHARASHTRA

Water quality index evaluated for each month for the period 2007-2011 show that at Ganapatiphule, Bhagwati Bunder, Karambhane creek and Mandavi Bunder water quality index lie between good to excellent.

At these four sites FC is within CPCB water quality standards of class SW-II throughout the year for the period 2007 to 2011. At Bhagawati Bundar, Mandavi Bander, Ganapatiphule the percent exceedances for BOD is 7% at all three sites. At Karambhane creek, the percent exceedance for BOD is 15%.

At Karambhane creek and Mandavi Bander the percent exceedance for DO is 5 and 7% respectively.

WQI evaluated for all other Seafronts and Creeks of Maharashtra for each month for the period 2007-2011 is "Bad to Moderately Good". Percent exceedances of BOD with respect to SWII standards (Table E16) in all these 29 beaches and seafronts are 100%. Percent exceedance of pH, DO, BOD and TC for the sea water for the period 2007-11 are given in **Table E17**.

Table E16: Receiving Sea Water Standards for Different Categories, Applicable Parameters and Pertinent Issues

Categories	Major parameters	Rationale/Remarks	Issues
Commercial fishing, contact recreation, bathing water (SW II)	pH- 6.5-8.5	Range does not cause skin or eye irritation and is also conducive for propagation of aquatic lives.	Commercial fishing generally not undertaken near shore where bathing, recreational activities are common. Length (seaward) upto which bathing is undertaken should be also taken into consideration. Sampling schedule suggested (average 200/ 100ml not to exceed in 20 % of the sample and 3 consecutive samples in monsoon) may give varied results depending upon tide timings and location of sampling
	DO- 4.0 mg/l	Not less than 3.5 mg/l at any time for protection of aquatic lives.	
	No noticeable colour, odour and floating matters	Specially caused by chemical compounds like creosols, phenols, naphtha, benzene, pyridine, toluene etc. causing visible colouration of water and tainting of and odour in fish flesh.	
	Turbidity	30 NTU (Nephelo Tur- bidity Unit) Measured at 0.9 depth	
	BOD_5 - 3 mg/l	Restricted for bathing (aesthetic quality of water). Also prescribed by IS:2296-1974.	
	Fecal Coliform - 100/100 ml	The average value not exceeding 200/100 ml in 20 percent of samples in the year and in 3 consecutive samples in monsoon months.	

Table E17: Percent Exceedance of pH, DO, BOD and FC for the Sea Water

Sr.	Location	Station Code	pH	DO	BOD	FC
1	Arnala Sea	2805	0	25	100	70
2	Bassein creek	1316	0	16	100	78
3	Bhagawati Bunder	2814	19	0	7	0
4	Bhyander Creek, Jesal Park	2797	0	26	100	80
5	Charni road choupathy, Mumbai.	2166	0	27	100	87
6	Shivaji Park, Dadar	2811	4	35	100	96
7	Dahanu Creek at Dahanu Fort	2802	0	26	100	94
8	Dandi Creek	2799	0	29	100	29
9	Ganapatiphule, Ratnagiri	2813	35	0	7	0
10	Gateway of India	2165	0	38	100	83
11	Haji Ali	2810	4	44	100	87
12	Juhu Beach	2812	0	13	100	78
13	Kalwa Creek	2793	0	38	100	79
14	Karambhane creek at Chiplun village	2804	5	5	15	0
15	Mahim creek	1318	6	31	100	72
16	Malbar Hill	2809	4	36	100	92
17	Mandavi Bunder	2815	29	7	7	0

Table E17 (Contd..): Percent Exceedance of pH, DO, BOD and FC for the Sea Water

Sr.	Location	Station Code	pH	DO	BOD	FC
18	Kharekuran Murbe creek	2798	0	7	100	100
19	Nariman point	2808	4	46	100	96
20	Navapur Sea	2807	0	13	100	100
21	Panvel Creek , Kopra	2803	0	43	100	100
22	Sarwali creek	2800	0	27	100	88
23	Sawta Creek	2801	4	16	100	59
24	Thane creek at Elephanta Island.	1317	0	14	100	63
25	Ulhas creek at Retibunder, D/S of Kalyan Bhiwandi Bridge	2791	0	36	100	100
26	Ulhas creek at Versova bridge.	2796	0	26	100	86
27	Ulhas creek at Gaimukh at Nagla bunder	2795	0	26	100	91
28	Ulhas creek at Mumbra Reti bunder	2792	0	28	100	87
29	Ulhas creek at Kolshet Reti bunder	2794	0	24	100	83
30	Uttan Sea	2806	0	30	100	84
31	Vashi creek at Airoli bridge,Thane.	2184	0	35	100	85
32	Vashi creek at Vashi bridge, Mumbai	2185	0	39	100	73
33	Versova. Mumbai.	2169	0	28	100	56
34	Worli seaface, Mumbai.	2167	0	19	100	81

C) GROUND WATER QUALITY OF MAHARASHTRA

Groundwater Survey and Development Agency (GSDA) and Central Ground Water Board (CGWB) have conducted groundwater quality monitoring program in various districts of Maharashtra state. It is to be noted that in many Talukas only one set of data is available for the period 2007-2009 and the conclusion is drawn based on the limited data.

It is observed that out of 369 Talukas, there are 36 Talukas in Maharashtra where water quality is within permissible limits i.e. pH, Total Dissolved solids, Total hardness, Flouride and Nitrate does not exceed the standards throughout the study period i.e. 2007 to 2011. These 36 Talukas with good ground water given in **Table E18** include 9 Talukas in Raigad, 5 Talukas in Mumbai, 4 Talukas in Kolhapur, 3 Talukas each in Chandrapur and Ratnagiri.

Table E18: Talukas in Maharashtra with No Exceedance for Selected Parameters

Sr.	District	Taluka
1	Ahmednagar	Pathardi
2	Beed	Ambejogai
3	Chandrapur	Jiwati, Pombhurna, Korpna
4	Gondia	Goregaon

Table E18 (Contd..): Talukas in Maharashtra with No Exceedance for Selected Parameters

Sr.	District	Taluka
5	Gadchiroli	Bhamragarh
6	Kolhapur	Gaganbawada, Panhala, Radhanagari, Shahuwadi
7	Raigad	Khalapur, Panvel, Poladpur, Raigad, Roha, Sudhagad, Shrivardhan, Tala, Uran
10	Mumbai	Kurla, Churchgate, Deulwadi, Mahim, Chembur
11	Nagpur	Umred
12	Nanded	Biloli
13	Ratnagiri	Chiplun, Mandangarh, Lanja
14	Sangli	Walwa
15	Satara	Mahabaleshwar, Medha
16	Sindhudurg	Devagad
17	Thane	Wada, Talasari
18	Thane	Talasari

It is further observed that out of 369 Talukas, in 76 Talukas in Maharashtra, Total Hardness and Nitrate exceed BIS permissible limits 100% of the time during 2007 to 2011 (Table E19). It is observed that NO_3 in ground water exceed the permissible limit of 45 mg/l in 3 Talukas in Maharashtra 100% of the time. Total Hardness in ground water exceeds the permissible limit of 600 mg/l 100% of the time in 74 Talukas in Maharashtra. TDS, pH and F do not exceed 100% of the time in any Taluka.

Table E19: Talukas in Maharashtra with 100% Exceedance for Selected Parameters

Sr.	District	Taluka	pH	TDS	TH	F	NO_3
1	Ahmednagar	Hahata	0	0	100	0	100
2	Jalgaon	Dharangaon	0	0	20	0	100
3		Bodwad	0	0	0	0	100
4	Nandurbar	Dhadgaon	35	0	100	0	0
5		Shahada	25	25	100	0	0
6		Akkalkuva	25	17	100	0	0
7		Nandurbar	14	39	100	0	10
8		Navapur	13	9	100	0	7
9		Taloda	12	6	100	0	0
10	Nashik	Yeola	53	35	100	6	12
11		Surgana	50	0	100	0	0
12		Kalwan	46	21	100	0	0
13		Nandgaon	38	62	100	3	10
14		Deola	33	83	100	17	17
15		Sinnar	30	63	100	3	8
16		Peinth	29	0	100	0	0
17		Baglan	27	46	100	2	2
18		Chandwad	27	13	100	0	0
19		Igatpuri	26	5	100	0	0
20		Niphad	22	59	100	7	20

Table E19 (Contd..): Talukas in Maharashtra with 100% Exceedance for Selected Parameters

Sr.	District	Taluka	pH	TDS	TH	F	NO_3
21	Nashik	Malegaon	16	63	100	3	3
22		Dindori	16	9	100	6	3
23		Nashik	14	32	100	0	9
24		Satana	0	83	100	0	33
25		Trimbakeshwar	0	0	100	0	0
26	Osmanabad	Paranda	40	30	100	10	20
27		Tuljapur	32	35	100	6	0
28		Kallam	28	24	100	0	7
29		Omerga	26	16	100	6	5
30		Bhoom	25	17	100	0	8
31		Osmanabad	13	45	100	5	18
32		Lohara	0	0	100	0	33
33	Parbhani	Palam	14	71	100	14	7
34		Pathri	6	33	100	17	6
35		Gangakhed	4	29	100	17	0
36		Jintur	0	57	100	22	4
37		Manwat	0	50	100	33	33
38		Sonpeth	0	50	100	25	0
39		Parbhani	0	46	100	20	14
40		Selu	0	44	100	28	0
41		Purna	0	25	100	0	0
42	Pune	Indapur	36	48	100	0	31
43		Baramati	19	51	100	0	54
44		Ambegaon	16	37	100	0	47
45		Shirur	10	51	100	0	49
46		Daund	8	59	100	0	32
47		Pune (Haveli)	6	42	100	2	38
48		Junnar	5	18	100	0	20
49		Purandar	0	29	100	0	39
50		Khed	0	13	100	0	50
51		Bhor	0	0	100	0	33
52		Mawal	0	0	100	0	0
53		Mulshi	0	0	100	0	0
54		Wadgaon (Maval)	0	0	100	0	0
55		Wehle	0	0	100	0	0
56	Washim	Karanja	18	32	100	3	39
57		Manora	15	37	100	0	44
58		Malegaon	14	49	100	0	49
59		Mangarulpir	10	33	100	0	43
60		Risod	8	89	100	1	62
61	Yavatmal	Digras	9	55	100	0	42
62		Pusad	8	25	100	0	25
63		Zari Jamni	7	14	100	21	14

Table E19 (Contd..): Talukas in Maharashtra with 100% Exceedance for Selected Parameters

Sr.	District	Taluka	pH	TDS	TH	F	NO_3
64	Yavatmal	Wani	7	86	100	31	38
65		Ner	7	50	100	0	57
66		Umarkhed	4	48	100	0	39
67		Darwha	3	36	100	0	33
68		Arni	0	52	100	0	48
69		Ralegaon	0	42	100	0	48
70		Kalamb	0	40	100	0	50
71		Bhabhulgaon	0	37	100	0	53
72		Yavatmal	0	33	100	0	39
73		Ghatanji	0	29	100	6	44
74		Pandharkawada (Kelapur)	0	26	100	3	32
75		Maregaon	0	25	100	0	25
76		Mahagaon	0	25	100	0	6

The frequency distribution of selected parameters and contour maps of average concentrations of pH, TDS, TH, Fluoride and Nitrate are given in **Figure E11 through E16**.

i) Nitrate Pollution

The studies carried-out by GSDA and CGWB during the period 2007-2011 revealed that 3 Talukas in Ahmednagar and Jalgaon districts have shown nitrate levels above desirable limits, 100% of the time. The districts with high concentrations of Nitrate are **Aurangabad, Ahmednagar, Amravati, Buldhana, Beed, Chandrapur, Dhule, Gadchiroli, Jalna, Jalgaon, Solapur, Washim and Wardha**.

Human health consequences of exposure to high nitrate levels are of great concern. Greater NO_3^- intake reduces the oxygen carrying capacity in the blood by binding to hemoglobin, causing a condition referred to as methemoglobinemia or blue baby syndrome which may cause mortality by asphyxiation especially in new born infants. In developing countries like India, NO_3^- enrichment in groundwater has been appearing as a major threat in few intensively cultivable States: Punjab, Haryana, Maharashtra, Andhra Pradesh, Uttar Pradesh, West Bengal, Rajasthan and Delhi.

ii) Total Hardness

Groundwater in 74 Talukas in 17 Districts shows Total Hardness exceeding the permissible limits (600mg/l) 100% of the time. **In Talukas of Amhednagar, Aurangabad, Dhule and Nagpur, and in certain part of Nashik and Pune; Washim and Yavatmal where total hardness in ground water exceeded 100% of the time.**

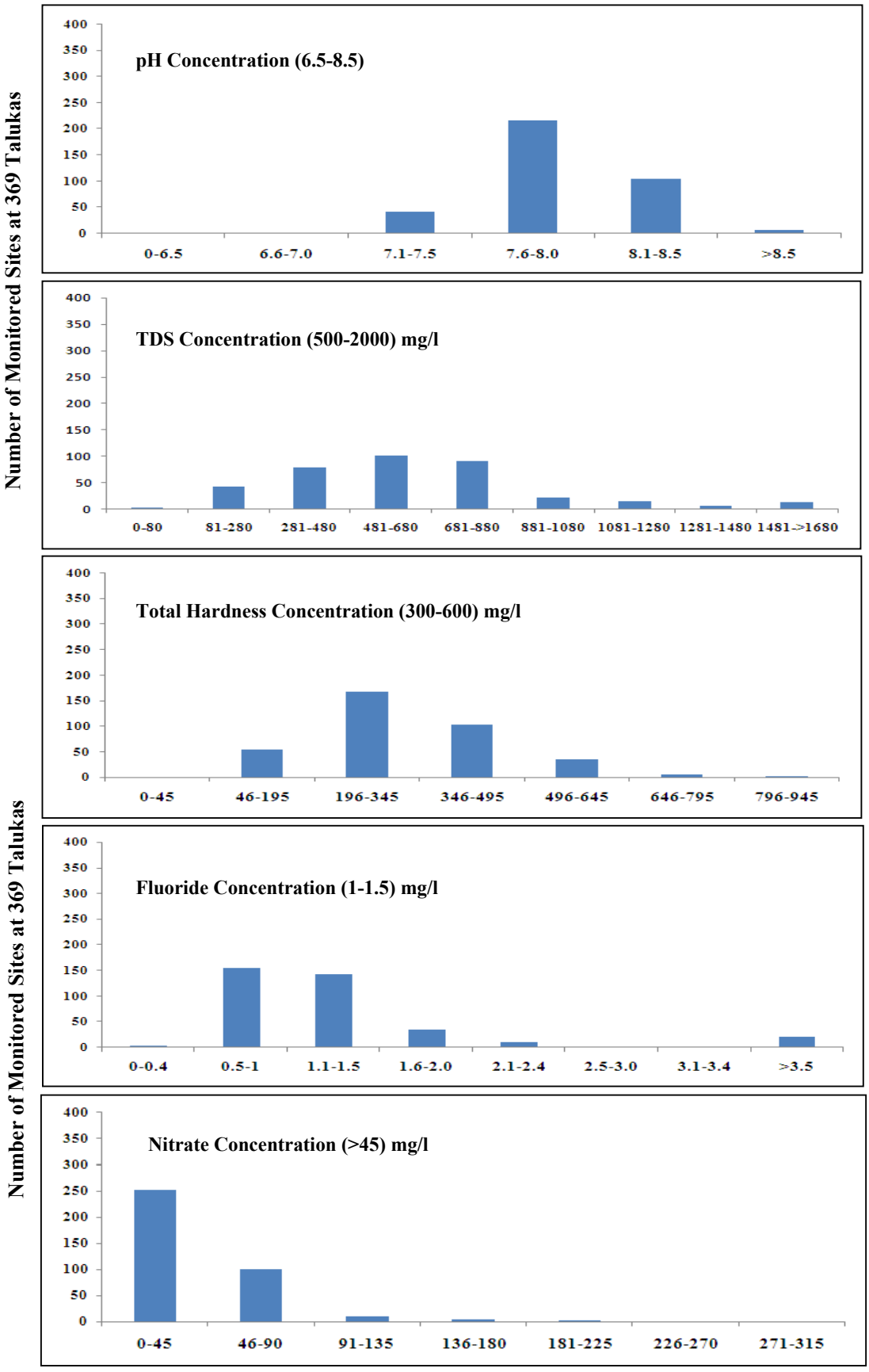

Figure E11: Frequency Distribution of Average Concentration of Selected Parameters in Ground Water of Maharashtra

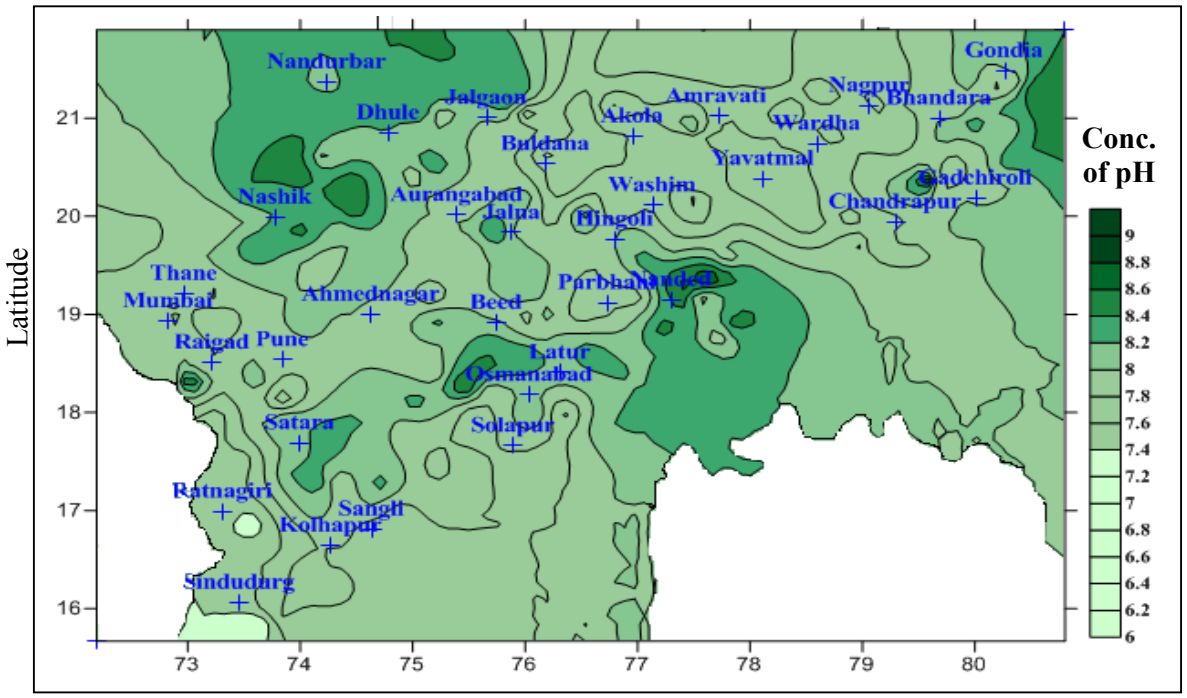

Figure E12 : Contour Map of Average Concentration of pH

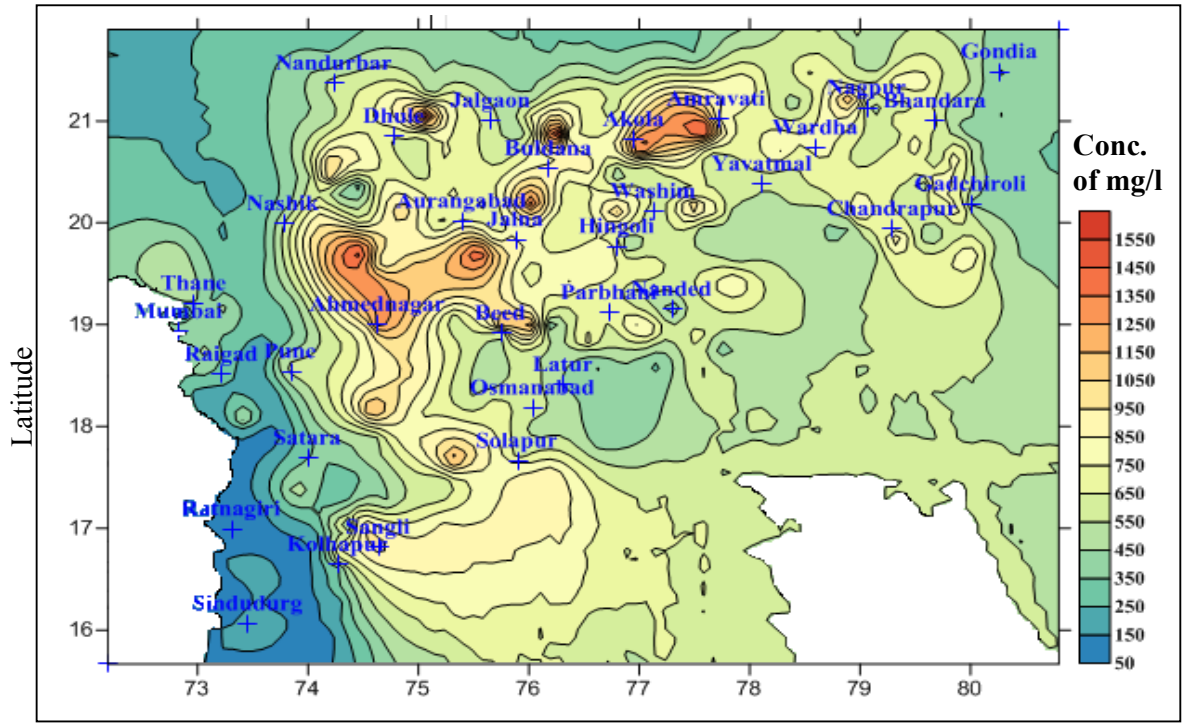

Figure E13 : Contour Map of Average Concentration of Total Dissolved Solids

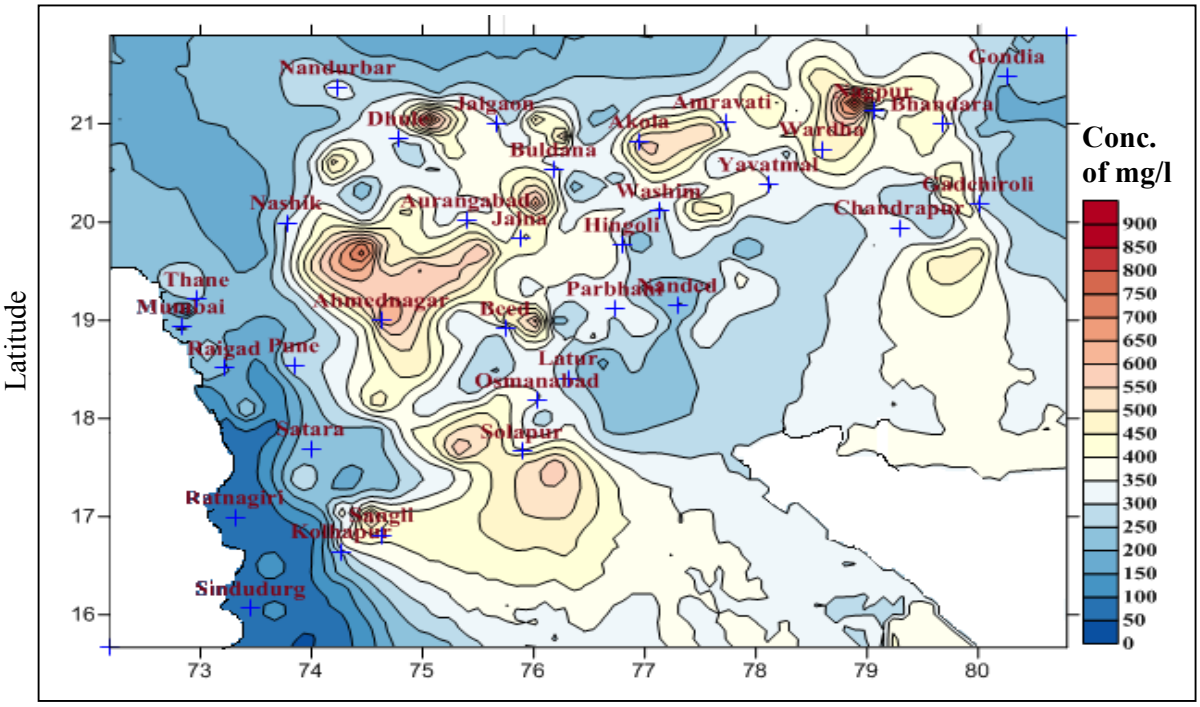

Figure E14 : Contour Map of Average Concentration of Total Hardness

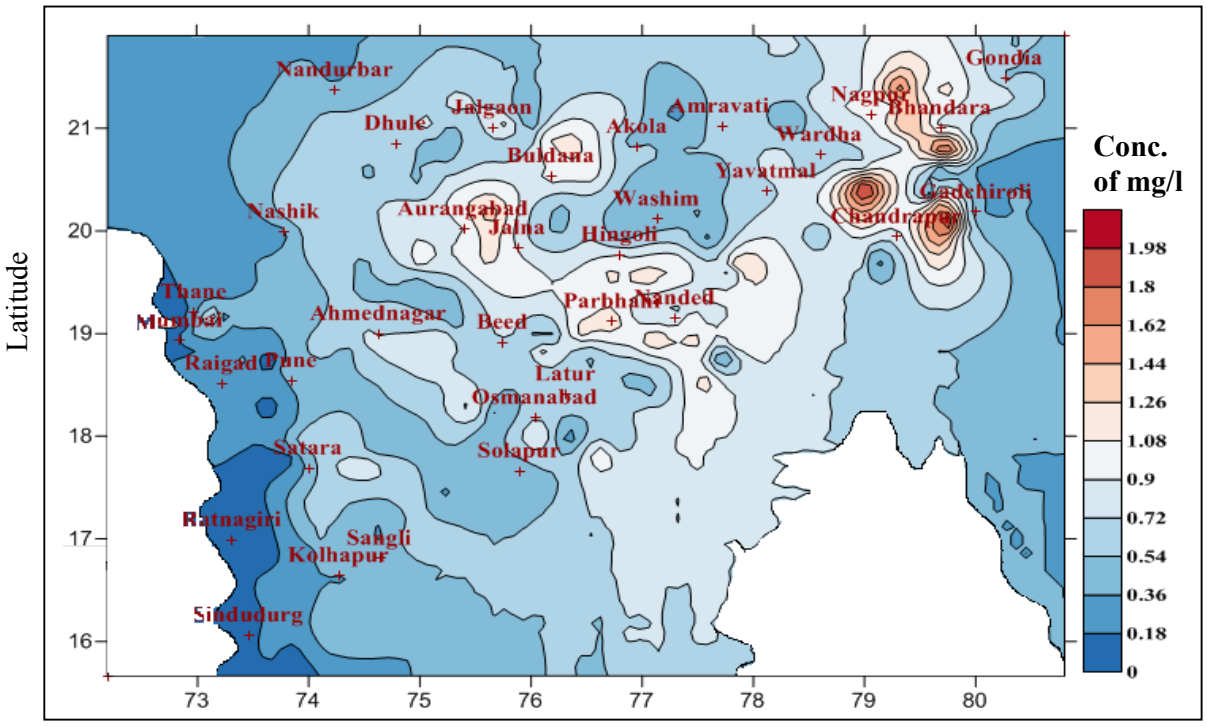

Figure E15 : Contour Map of Average Concentration of Fluoride

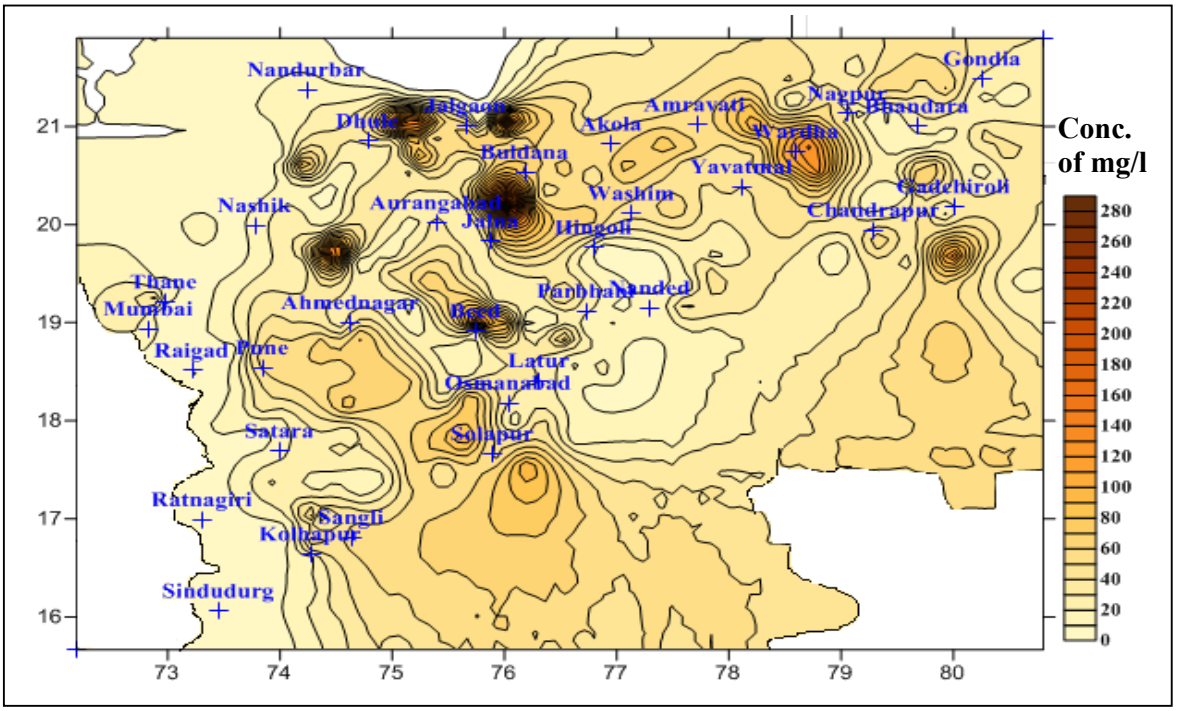

Figure E16 : Contour Map of Average Concentration of Nitrate

Hard water is not a health hazard. Hard water is a nuisance because of mineral buildup on fixtures and poor soap and/or detergent performance. Hard water interferes with almost every cleaning task from laundering and dishwashing to bathing and personal grooming. Water flow may also be reduced by deposits in pipes.

iii) Fluoride Pollution

The groundwater quality monitored by GSDA and CGWB during the period 2007-2011 showed that **137 Talukas in 27 districts have Fluoride levels above permissible limits of 1.5 mg/l. Chandrapur, Nanded, Nagpur, Parbhani, Jalna and Yavatmal have high Fluoride levels.**

The major health problems caused by fluoride are dental fluorosis, teeth mottling, skeletal fluorosis and deformation of bones in children as well as in adults. The major sources of fluoride in groundwater are fluoride-bearing rocks such as fluorspar, cryolite, fluorapatite and hydroxylapatite. The fluoride content in the groundwater is a function of many factors such as availability and solubility of fluoride minerals, velocity of flowing water, temperature, pH, concentration of calcium and bicarbonate ions in water, etc.

iv) Total Dissolved Solids

TDS is an indicator of aesthetics. The analysis shows that **124 Talukas** of Maharashtra show exceedance of permissible limit. **Total dissolved solids in ground water exceeded the BIS standard of 2000 mg/l in most of the Talukas of Amravati, Ahmednagar, Akola, Buldhana, Dhule, Nadurbar, Nashik, Parbhani and Washim having high concentrations of TDS in ground water.**

An elevated level of TDS, by itself, does not indicate that the water presents a health risk. However, elevated levels of specific ions included in the TDS measurement, such as nitrate, arsenic, aluminum, copper, or lead, could present health risks. The concentration of the dissolved ions may cause the water to be corrosive, salty or brackish taste, result in scale formation, and interfere and decrease efficiency of hot water heaters; For aesthetic reasons, a limit of 2000 mg/l as permissible limit has been established as part of the BIS – 10500 (2004-2005).

v) pH Concentration

216 Talukas from Ahmednagar, Akola, Amravati, Aurangabad, Beed, Bhandara, Buldhana, Chandrapur, Dhule, Gadchiroli, Gondia, Hingoli, Jalgaon, Jalna, Kolhapur, Latur, Nagpur, Nanded, Nandurbar, Nashik, Osmanabad Parbhani, Pune, Raigad, Ratnagiri, Sangli, Satara, Sindhudurg, Thane and Wardha, Washim and Yavatmal districts have pH concentrations not complying with the BIS standard of 6.5-8.5 mg/l.

vi) BOD

MPCB also monitors groundwater at 50 locations. The analysis of MPCB data reveal that at most of the locations BOD did not comply with the MPCB Class AI standard. TC and Ammonical Nitrogen did not comply at few places.

vii) Discharge Locations

MPCB also monitored water quality of some of the discharge locations such as nallahs at various domestic and industrial locations. Water Quality of Nallas monitored by MPCB was compared with the MPCB's General Standards for Discharge of Environmental Pollutants – Part A, Effluents (Public Sewers) **[Annexure IIa]**. Most of the results complied with the standards, except pH not meeting at 2 nallas viz. Tarapur, MIDC Nalla (Near Sump 1 and 3) and Ammonical Nitrogen at Tarapur, MIDC Nalla (near Sump 3) during 2010.

❖ Correlation Matrix for Different Ground Water Parameters

Table E20 presents the correlation coefficient matrix between major parameters of ground water.

Table E20: District Wise Correlation Matrix for Different Ground Water Parameters

1. Ahmednagar (n-14)		**SO_4^{-2}**	**F^-**	**NO_3^-**	**2. Akola (n-7)**		**SO_4^{-2}**	**F^-**	**NO_3^-**
	Cl^-	-0.068	-0.116	.662**		**Cl^-**	.905(**)	0.417	0.261
	SO_4^{-2}	1	-.602*	0.126		**SO_4^{-2}**	1	0.454	0.442
	F^-		1	-0.168		**F^-**		1	-0.262
3. Amravati (n-14)		**SO_4^{-2}**	**F^-**	**NO_3^-**	**4. Aurangabad (n=9)**		**SO_4^{-2}**	**F^-**	**NO_3^-**
	Cl^-	.844**	-0.399	.671**		**Cl^-**	.740*	-0.267	.846**
	SO_4^{-2}		-0.116	.654*		**SO_4^{-2}**		-0.351	0.608
	F^-			-0.013		**F^-**			-0.166
5. Beed (n=11)		**SO_4^{-2}**	**F^-**	**NO_3^-**	**6. Bhandara (n=7)**		**SO_4^{-2}**	**F^-**	**NO_3^-**
	Cl^-	.787**	.768**	-0.02		**Cl^-**	.923**	-0.281	0.564
	SO_4^{-2}	1	.972**	0.14		**SO_4^{-2}**	1	-0.174	0.638
	F^-		1	0.133		**F^-**		1	-0.454
7. Buldhana (n=13)		**SO_4^{-2}**	**F^-**	**NO_3^-**	**8. Chandrapur (n=15)**		**SO_4^{-2}**	**F^-**	**NO_3^-**
	Cl^-	0.336	0.446	0.194		**Cl^-**	0.475	-0.231	0.422
	SO_4^{-2}	1	-0.198	0.511		**SO_4^{-2}**	1	-0.261	0.494
	F^-		1	-0.318		**F^-**		1	0.117
9. Dhule (n=4)		**SO_4^{-2}**	**F^-**	**NO_3^-**	**10. Gadchiroli (n=12)**		**SO_4^{-2}**	**F^-**	**NO_3^-**
	Cl^-	.959*	0.103	0.811		**Cl^-**	.730**	0.498	.635*
	SO_4^{-2}	1	0.38	0.943		**SO_4^{-2}**	1	.720**	.927**
	F^-		1	0.666		**F^-**		1	.672*
11. Gondia (n=8)		**SO_4^{-2}**	**F^-**	**NO_3^-**	**12. Hingoli (n=5)**		**SO_4^{-2}**	**F^-**	**NO_3^-**
	Cl^-	.877**	0.546	.743*		**Cl^-**	0.873	0.736	-0.155
	SO_4^{-2}	1	0.634	.880**		**SO_4^{-2}**	1	0.392	0.323
	F^-		1	0.248		**F^-**		1	-0.47
13. Jalgaon (n=15)		**SO_4^{-2}**	**F^-**	**NO_3^-**	**14. Jalana (n=8)**		**SO_4^{-2}**	**F^-**	**NO_3^-**
	Cl^-	.875**	0.171	.661**		**Cl^-**	0.386	-.820*	.931**
	SO_4^{-2}	1	0.286	0.48		**SO_4^{-2}**	1	-0.17	0.239
	F^-		1	-0.246		**F^-**		1	-.741*
15. Kolhapur (n=12)		**SO_4^{-2}**	**F^-**	**NO_3^-**	**16. Latur (n=10)**		**SO_4^{-2}**	**F^-**	**NO_3^-**
	Cl^-	.953**	0.51	.955**		**Cl^-**	.787**	-0.565	.726*
	SO_4^{-2}	1	0.433	.947**		**SO_4^{-2}**	1	-0.304	.856**
	F^-		1	0.559		**F^-**		1	-0.371
17. Mumbai (n=8)		**SO_4^{-2}**	**F^-**	**NO_3^-**	**18. Nagpur (n=14)**		**SO_4^{-2}**	**F^-**	**NO_3^-**
	Cl^-	.692**	0.45	0.577		**Cl^-**	0.195	0.118	0.342
	SO_4^{-2}	1	0.139	.765*		**SO_4^{-2}**	1	0.031	0.339
	F^-		1	-0.225		**F^-**		1	-0.165

Note : ** Correlation is significant at 0.01 level (2 tailed)
* Correlation is significant at 0.05 level (2 tailed)

Table E20: District Wise Correlation Matrix for Different Ground Water Parameters

19. Nanded (n=16)		SO_4^{-2}	F^-	NO_3^-	20. Nandurbar (n=6)		SO_4^{-2}	F^-	NO_3^-
	Cl^-	.836**	.586*	0.075		Cl^-	.965**	0.685	0.68
	SO_4^{-2}	1	0.233	0.426		SO_4^{-2}	1	0.768	0.664
	F^-		1	-0.43		F^-		1	0.333
21. Nashik (n=16)		SO_4^{-2}	F^-	NO_3^-	**22. Osmanabad (n=7)**		SO_4^{-2}	F^-	NO_3^-
	Cl^-	.954**	0.412	.768**		Cl^-	.798*	-0.365	0.598
	SO_4^{-2}	1	0.378	.646**		SO_4^{-2}	1	-0.625	0.624
	F^-		1	0.289		F^-		1	-0.56
23. Parbhani (n=9)		SO_4^{-2}	F^-	NO_3^-	**24. Pune (n=14)**		SO_4^{-2}	F^-	NO_3^-
	Cl^-	0.44	0.164	-0.016		Cl^-	.961**	.611*	.856**
	SO_4^{-2}	1	0.247	0.147		SO_4^{-2}	1	.545*	.826**
	F^-		1	-0.123		F^-		1	.726**
25. Raigad (n=15)		SO_4^{-2}	F^-	NO_3^-	**26. Ratnagiri (n=9)**		SO_4^{-2}	F^-	NO_3^-
	Cl^-	.778**	0.092	0.06		Cl^-	-0.151	0.408	0.121
	SO_4^{-2}	1	0.092	0.36		SO_4^{-2}	1	-0.337	-0.066
	F^-		1	-0.073		F^-		1	0.189
27. Sangali (n=12)		SO_4^{-2}	F^-	NO_3^-	**28. Satara (n=12)**		SO_4^{-2}	F^-	NO_3^-
	Cl^-	0.322	-0.185	0.525		Cl^-	.860**	0.554	.913**
	SO_4^{-2}	1	0.108	0.224		SO_4^{-2}	1	.592*	.927**
	F^-		1	-0.292		F^-		1	.712**
29. Sindhudurg (n=8)		SO_4^{-2}	F^-	NO_3^-	**30. Solapur (n=12)**		SO_4^{-2}	F^-	NO_3^-
	Cl^-	0.196	0.341	0.331		Cl^-	.856**	0.333	0.177
	SO_4^{-2}	1	.859**	-0.37		SO_4^{-2}	1	0.299	-0.013
	F^-		1	-0.578		F^-		1	-0.089
31. Thane (n=15)		SO_4^{-2}	F^-	NO_3^-	**32. Wardha (n=8)**		SO_4^{-2}	F^-	NO_3^-
	Cl^-	.851**	-0.214	-0.069		Cl^-	.783*	0.223	0.632
	SO_4^{-2}	1	0.073	0.167		SO_4^{-2}	1	0.689	.870**
	F^-		1	0.028		F^-		1	0.601
33. Washim (n=6)		SO_4^{-2}	F^-	NO_3^-	**34. Yavatmal (n=16)**		SO_4^{-2}	F^-	NO_3^-
	Cl^-	0.629	0.364	0.565		Cl^-	0.373	-0.051	.572*
	SO_4^{-2}	1	0.417	0.7		SO_4^{-2}	1	0.443	0.011
	F^-		1	-0.105		F^-		1	0.152

Note : ** Correlation is significant at 0.01 level (2 tailed) * Correlation is significant at 0.05 level (2 tailed)

Significant correlation between NO_3^- and SO_4^{2-} concentration at 5% (*) level of significance was observed in ground water samples collected from districts namely, Amravati (*r*=0.654), Aurangabad (*r*=0.608), Bhandara (*r*=0.638), Buldhana (*r*=0.511), Chandrapur (*r*=0.494), Dhule (*r*=0.943), and Washim (*r*=0.7). Similarly 1% (**) level of significance were observed at, Gadchiroli (*r*=0.927), Gondia (*r*=0.880), Kolhapur (*r*=0.947), Latur (*r*=0.856), Nandurbar (*r*=0.664), Nashik (*r*=0.646), Osmanabad (*r*=0.624), Pune (*r*=0.826), Satara (*r*=0.927), and Wardha (*r*=0.870). Such high correlation indicates contamination of groundwater with nitrate and sulphate from point sources, i.e. fertilizers, sewage and animal wastes. While studying

nitrate concentrations in ground water of some rural areas of Rajasthan, *Suthar et al., 2009* also reported a significant relationship between NO_3^- and SO_4^{2-}.

NO_3^- showed good correlation with Cl^- at the significance level of 5% (*) at Bhandara (r=0.564), Dhule (r=0.811), Gondia (r=0.743), Gadchiroli (r=0.635), Mumbai (r=0.577), Nadurbar (r=0.68), Sangli (r=0.525), Wardha (r=0.632) and Washim (r=0.565); whereas, significance level of 1% (**) where observed at Ahmednagar (r=0.662), Amravati (r=0.671), Aurangabad (r=0.846), Jalgaon (r=0.661), Jalana (r=0.931), Kolhapur (r=0.955), Latur (r= 0.726), Nashik (r=0.768), Osmanabad (r=0.598), Pune (r=0.856) and Satara (r=0.913).

Similarly SO_4^{2-} also exhibited good relationship with Cl^- for groundwater samples found to be at significance level of 5% (*) at Aurangabad (r=0.740), Dhule (r=0.959), Hingoli (r=0.873), Osmanabad (r=0.798), Wardha (r=0.783). Whereas, 1% (**) significance level was observed at Akola (r=0.905), Amravati (r=0.844), Beed (r=0.787), Bhandara (r=0.923), Gadchiroli (r=0.730), Gondia (r=0.877), Kolhapur (r=0.953), Latur (r=0.787), Mumbai (r=0.692), Nanded (r=0.836), Nandurbar (r=0.965), Nashik (r=0.954), Pune (r=0.961), Raigad (r=0.778), Satara (r=0.860) and Thane (r=0.851). The correlation matrix between important parameters of water **(Table E20)** suggested that major source of NO_3^- and SO_4^{2-}, in ground water of this region were nitrogenous fertilizers, sewage, animal waste, organic manure and other non-point sources.

Based on water quality index calculated as per the methodology given in ***Chapter 3***, the list of Talukas having the ground water quality Excellent, Good, Poor, Very Poor and Unsuitable for drinking based on the monitored data is given in **Table E21.**

Table E21: Classification of Ground Water Quality of Talukas as Excellent, Good, Poor, Very Poor and Unsuitable for Drinking

Sr.	District	Taluka Name	Excellent NS/ (%)		Good Water NS / (%)		Poor Water NS / (%)		Very Poor NS / (%)		Unsuitable NS / (%)		No.of Samples (5 Yrs.)
1.	**Ahmadnagar 167 villages**	Ahmednagar	4	**7**	25	**44**	20	**35**	2	**4**	6	**11**	57
		Akole	4	**25**	6	**38**	4	**25**	2	**13**			16
		Jamkhed			8	**80**	2	**20**					10
		Karjat			11	**50**	9	**41**	1	**5**	1	**5**	22
		Kopargaon	4	**12**	12	**36**	14	**42**	2	**6**	1	**3**	33
		Newasa			26	**55**	12	**26**	6	**13**	3	**6**	47
		Parner	2	**9**	11	**48**	9	**39**	1	**4**			23
		Pathardi			1	**50**	1	**50**					2
		Rahata					2	**67**	1	**33**			3
		Rahuri	9	**19**	13	**28**	16	**34**	8	**17**	1	**2**	47
		Sangamner	3	**7**	25	**58**	6	**14**	7	**16**	2	**5**	43
		Shevgaon	4	**14**	8	**28**	14	**48**	2	**7**	1	**3**	29
		Shrigonda			18	**49**	15	**41**	3	**8**	1	**3**	37
		Srirampur	11	**22**	26	**53**	9	**18**	2	**4**	1	**2**	49
2.	**Akola 104 villages**	Akola	3	**3**	45	**48**	36	**38**	7	**7**	3	**3**	94
		Akot	7	**8**	34	**39**	31	**36**	10	**11**	5	**6**	87
		Balapur			34	**83**	5	**12**	1	**2**	1	**2**	41
		Barshi-takli	2	**6**	27	**77**	3	**9**	2	**6**	1	**3**	35
		Murtizapur	3	**6**	24	**44**	21	**39**	3	**6**	3	**6**	54
		Patur	8	**17**	34	**74**	4	**9**					46
		Telhara	8	**22**	15	**42**	10	**28**	2	**6**	1	**3**	36

** NS= Number of Samples*

Table E21 (Contd..) : Classification of Ground Water Quality of Talukas as Excellent, Good, Poor, Very Poor and Unsuitable for Drinking

Sr.	District	Taluka Name	Excellent NS/ (%)		Good Water NS / (%)		Poor Water NS / (%)		Very Poor NS / (%)		Unsuitable NS / (%)		No.of Samples (5 Yrs.)
3.	**Amravati 183 villages**	Achalpur			2	**40**	3	**60**					5
		Amravati			21	**72**	8	**28**					29
		Anjangaon	1	**11**	4	**44**	4	**44**					9
		Bhatkuli			17	**35**	28	**57**	3	**6**	1	**2**	49
		Chandur Bazar	1	**5**	18	**82**	3	**14**					22
		Chandur Rly.	3	**11**	18	**67**	6	**22**					27
		Chikhaldara	12	**25**	34	**71**	2	**4**					48
		Daryapur	1	**3**	16	**52**	11	**35**	3	**10**			31
		Dhamangaon Rly.	3	**19**	8	**50**	5	**31**					16
		Dharni	21	**29**	48	**67**	3	**4**					72
		Morshi	7	**10**	34	**49**	28	**41**					69
		Nandgaon Kh.	3	**5**	33	**60**	18	**33**	1	**2**			55
		Tiwasa			13	**68**	6	**32**					19
		Warud	4	**5**	64	**84**	8	**11**					76
4.	**Aurangabad 96 villages**	Aurangabad	1	**2**	26	**52**	23	**46**					50
		Gangapur	1	**2**	35	**73**	8	**17**	3	**6**	1	**2**	48
		Kannad			33	**75**	10	**23**	1	**2**			44
		Khultabad			20	**91**	2	**9**					22
		Paithan	2	**3**	26	**38**	30	**43**	6	**9**	5	**7**	69
		Phulambri	1	**3**	20	**67**	9	**30**					30
		Sillod	4	**9**	32	**73**	7	**16**			1	**2**	44
		Soygaon	1	**3**	22	**76**	6	**21**					29
		Vaijapur	1	**2**	21	**50**	15	**36**	3	**7**	2	**5**	42

** NS= Number of Samples*

Table E21 (Contd..) : Classification of Ground Water Quality of Talukas as Excellent, Good, Poor, Very Poor and Unsuitable for Drinking

Sr.	District	Taluka Name	Excellent NS/ (%)		Good Water NS / (%)		Poor Water NS / (%)		Very Poor NS / (%)		Unsuitable NS / (%)		No.of Samples (5 Yrs.)
5.	**Beed 67 villages**	Ambejogai	6	**30**	12	**60**	2	**10**					20
		Ashti	1	**4**	17	**71**	6	**25**					24
		Beed			13	**81**	3	**19**					16
		Dharur			5	**71**	2	**29**					7
		Gewrai	1	**4**	13	**57**	9	**39**					23
		Kej	0	**0**	3	**75**	1	**25**					4
		Majalgaon	4	**44**	5	**56**							9
		Patoda	1	**8**	10	**77**	2	**15**					13
		Shiruru Kasar			2	**40**	1	**20**	2	**40**			5
		Wadwani			2	**40**	2	**40**	1	**20**			5
6.	**Bhandara 68 villages**	Bhandara	3	**11**	15	**56**	9	**33**					27
		Lakhandur			6	**46**	7	**54**					13
		Lakhani			5	**100**							5
		Mohadi	2	**8**	13	**52**	10	**40**					25
		Pauni	1	**4**	16	**67**	5	**21**	2	**8**			24
		Sakoli	6	**22**	17	**63**	4	**15**					27
		Tumsar			24	**73**	8	**24**	1	**3**			33
7.	**Buldhana 139 villages**	Buldhana	1	**3**	13	**42**	17						31
		Chikhali	3	**16**	13	**68**	3	**16**					19
		Deolgaon Raja	1	**8**	4	**33**	7	**58**					12
		Jalgaon jamod	1	**6**	11	**69**	4	**25**					16
		Khamgaon			17	**45**	21	**55**					38
		Lonar			10	**56**	8	**44**					18
		Malkapur			5	**36**	6	**43**	2	**14**	1	**7**	14

** NS= Number of Samples*

Table E21 (Contd..) : Classification of Ground Water Quality of Talukas as Excellent, Good, Poor, Very Poor and Unsuitable for Drinking

Sr.	District	Taluka Name	Excellent NS/ (%)		Good Water NS / (%)		Poor Water NS / (%)		Very Poor NS / (%)		Unsuitable NS / (%)		No.of Samples (5 Yrs.)
7.	**Buldhana Contd.. 139 villages**	Mehkar			13	**59**	9	**41**					22
		Motala	1	**4**	14	**54**	11	**42**					26
		Nandura	1	**3**	23	**64**	12	**33**					36
		Sangrampur	2	**10**	16	**76**	3	**14**					21
		Shegaon			12	**46**	13	**50**	1	**4**			26
		Sindkhed Raja	3	**20**	9	**60**			3	**20**			15
8.	**Chandrapur 113 villages**	Ballarpur			5	**83**			1	**17**			6
		Bhadrawati	1	**13**	5	**63**	2	**25**					8
		Brahmapuri			9	**56**	7	**44**					16
		Chandrapur	4	**11**	18	**50**	14	**39**					36
		Chimur	1	**4**	18	**69**	6	**23**	1	**4**			26
		Gondipipri			5	**71**	2	**29**					7
		Jiwati			2	**100**							2
		Korapna			2	**100**							2
		Mul			4	**29**	10	**71**					14
		Nagbhid			3	**21**	11	**79**					14
		Pombhurna			2	**100**							2
		Rajura			13	**65**	7	**35**					20
		Sawali			1	**33**	2	**67**					3
		Sindewahi	3	**16**	6	**32**	10	**53**					19
		Waroda			6	**55**	5	**45**					11

** NS= Number of Samples*

Table E21 (Contd..) : Classification of Ground Water Quality of Talukas as Excellent, Good, Poor, Very Poor and Unsuitable for Drinking

Sr.	District	Taluka Name	Excellent NS/ (%)		Good Water NS / (%)		Poor Water NS / (%)		Very Poor NS / (%)		Unsuitable NS / (%)		No.of Samples (5 Yrs.)
9.	**Dhule 100 villages**	Dhule	14	**19**	48	**64**	10	**13**	3	**4**			75
		Sakri	16	**33**	30	**63**	2	**4**					48
		Shirpur	7	**12**	47	**81**	4	**7**					58
		Sindkheda	3	**4**	49	**68**	19	**26**	1	**1**			72
10.	**Gadchiroli 117 villages**	Aheri	3	**9**	18	**56**	11	**34**					32
		Armori	2	**14**	11	**79**	1	**7**					14
		Bhamragarh			8	**100**							8
		Chamorshi			9	**64**	5	**36**					14
		Desaiganj-Wadsa	3	**27**	6	**55**	2	**18**					11
		Dhanora	7	**41**	9	**53**	1	**6**					17
		Etapalli	1	**6**	14	**88**	1	**6**					16
		Gadchiroli	11	**39**	14	**50**	3	**11**					28
		Korchi	4	**44**	4	**44**			1	**11**			9
		Kurkheda	7	**44**	9	**56**							16
		Mulchera	1	**10**	3	**30**	4	**40**	2	**20**			10
		Sironcha	1	**14**	3	**43**	3	**43**					7
11.	**Gondia 68 villages**	Amgaon	6	**35**	8	**47**	3	**18**					17
		Arjuni Moregaon	8	**40**	7	**35**	5	**25**					20
		Deori	4	**25**	12	**75**							16
		Gondia	15	**52**	11	**38**	3	**10**					29
		Goregaon			3	**100**							3
		Sadal Arjuni	2	**25**	6	**75**							8
		Salekasa	3	**38**	4	**50**	1	**13**					8
		Tiroda			14	**70**	5	**25**	1	**5**			20

** NS= Number of Samples*

Table E21 (Contd..) : Classification of Ground Water Quality of Talukas as Excellent, Good, Poor, Very Poor and Unsuitable for Drinking

Sr.	District	Taluka Name	Excellent NS/ (%)		Good Water NS / (%)		Poor Water NS / (%)		Very Poor NS / (%)		Unsuitable NS / (%)		No.of Samples (5 Yrs.)
12.	**Hingoli 31 villages**	Aundha (Nag)			7	**70**	3	**30**					10
		Basmatnagar	2	**11**	15	**79**	2	**11**					19
		Hingoli	1	**4**	17	**71**	6	**25**					24
		Kalmnuri			6	**86**	1	**14**					7
		Sengaon	1	**17**	5	**83**							6
13.	**Jalgaon 120 villages**	Amalner			6	**38**	6	**38**	1	**6**	3	**19**	16
		Bhadgaon			8	**80**			2	**20**			10
		Bhusawal			7	**100**							7
		Bodwad			2	**100**							2
		Chalisgaon			15	**94**	1	**6**					16
		Chopda	2	**6**	17	**55**	12	**39**					31
		Dharangaon			2	**40**	2	**40**	1	**20**			5
		Erandol	2	**8**	19	**73**	4	**15**	1	**4**			26
		Jalgaon			21	**78**	4	**15**	2	**7**			27
		Jamner	1	**9**	6	**55**	4	**36**					11
		Mukainagar					1	**100**					1
		Pachora			5	**71**	2	**29**					7
		Parola			14	**74**	5	**26**					19
		Raver	2	**9**	20	**87**	1	**4**					23
		Yaval	5	**23**	16	**73**	1	**5**					22

** NS= Number of Samples*

Table E21 (Contd..) : Classification of Ground Water Quality of Talukas as Excellent, Good, Poor, Very Poor and Unsuitable for Drinking

Sr.	District	Taluka Name	Excellent NS/ (%)		Good Water NS / (%)		Poor Water NS / (%)		Very Poor NS / (%)		Unsuitable NS / (%)		No.of Samples (5 Yrs.)
14.	**Jalna 116 villages**	Ambad			12	**32**	25	**68**					37
		Badnapur	1	**5**	12	**60**	7	**35**					20
		Bhokardan			39	**72**	12	**22**	3	**6**			54
		Ghansawangi	2	**7**	21	**72**	6	**21**					29
		Jafrabad	2	**8**	13	**54**	5	**21**	1	**4**	3	**13**	24
		Jalna			17	**55**	12	**39**	1	**3**	1	**3**	31
		Mantha	2	**12**	6	**35**	8	**47**			1	**6**	17
		Parthur	1	**4**	12	**52**	10	**43**					23
15.	**Kolhapur 138 villages**	Ajra	9	**43**	12	**57**							21
		Bhudargad	11	**41**	16	**59**							27
		Chandgad	26	**74**	9	**26**							35
		Gadinglaj	7	**25**	18	**64**	3	**11**					28
		Gaganbawada	12	**100**									12
		Hatkanangale			24	**69**	11	**31**					35
		Kagal	4	**16**	19	**76**	2	**8**					25
		Kolhapur	18	**39**	26	**57**	2	**4**					46
		Panhala	11	**61**	7	**39**							18
		Radhanagari	19	**90**	2	**10**							21
		Shahuwadi	10	**53**	9	**47**							19
		Shirol	1	**4**	6	**25**	17	**71**					24

** NS= Number of Samples*

Table E21 (Contd..) : Classification of Ground Water Quality of Talukas as Excellent, Good, Poor, Very Poor and Unsuitable for Drinking

Sr.	District	Taluka Name	Excellent NS/ (%)		Good Water NS / (%)		Poor Water NS / (%)		Very Poor NS / (%)		Unsuitable NS / (%)		No.of Samples (5 Yrs.)
16.	**Latur 95 villages**	Ahmadpur	11	**35**	16	**52**	4	**13**					31
		Ausa	7	**23**	20	**65**	4	**13**					31
		Chakur	5	**21**	16	**67**	3	**13**					24
		Deoni	2	**33**	3	**50**	1	**17**					6
		Jalkot	1	**25**	3	**75**							4
		Latur	12	**32**	22	**58**	4	**11**					38
		Nilanga	9	**26**	24	**69**	2	**6**					35
		Renapur	4	**27**	10	**67**	1	**7**					15
		Shirur Anantpal	2	**33**	4	**67**							6
		Udgir	4	**21**	13	**68**	2	**11**					19
17.	**Mumbai 8 villages**	Bombay (Church Gate)			1	**100**							1
		Borivali	1	**50**	1	**50**							2
		Colaba (Dandi)			3	**100**							3
		Deulwadi			1	**100**							1
		Goregaon East	2	**67**	1	**33**							3
		Kurla	1	**100**									1
		Mahim	3	**100**									3
		Mahroli(Chembur)			1	**100**							1

** NS= Number of Samples*

Table E21 (Contd..) : Classification of Ground Water Quality of Talukas as Excellent, Good, Poor, Very Poor and Unsuitable for Drinking

Sr.	District	Taluka Name	Excellent NS/ (%)		Good Water NS / (%)		Poor Water NS / (%)		Very Poor NS / (%)		Unsuitable NS / (%)		No.of Samples (5 Yrs.)
18.	**Nagpur 124 villages**	Bhivapur	1	**9**	4	**36**	6	**55**					11
		Hingna	2	**11**	6	**32**	11	**58**					19
		Kalmeshwar			5	**29**	8	**47**	2	**12**	2	**12**	17
		Kamptee			11	**65**	6	**35**					17
		Katol			8	**73**	3	**27**					11
		Kuhi	2	**22**	2	**22**	5	**56**					9
		Mouda			11	**79**	3	**21**					14
		Nagpur	5	**10**	36	**69**	10	**19**	1	**2**			52
		Nagpur (Rural)			3	**100**							3
		Narkhed			18	**58**	13	**42**					31
		Parseoni	2	**8**	22	**85**	2	**8**					26
		Ramtek			5	**45**	6	**55**					11
		Saoner	2	**6**	21	**60**	11	**31**	1	**3**			35
		Umred	1	**13**	6	**75**	1	**13**					8
19.	**Nanded 106 villages**	Ardhapur			3	**100**							3
		Bhokar			6	**67**	3	**33**					9
		Biloli	1	**50**	1	**50**							2
		Deglur			12	**86**	2	**14**					14
		Dharmabad			5	**100**							5
		Hadgaon			16	**94**	1	**6**					17
		Himayat Nagar			4	**80**	1	**20**					5
		Kandhar	1	**8**	10	**83**	1	**8**					12
		Kinwat	2	**13**	14	**88**							16
		Loha			5	**71**	2	**29**					7
		Mahur	1	**33**	2	**67**							3

Table E21 (Contd..) : Classification of Ground Water Quality of Talukas as Excellent, Good, Poor, Very Poor and Unsuitable for Drinking

Sr.	District	Taluka Name	Excellent NS/ (%)		Good Water NS / (%)		Poor Water NS / (%)		Very Poor NS / (%)		Unsuitable NS / (%)		No.of Samples (5 Yrs.)
19.	**Nanded Contd.. 106 villages**	Mudkhed			4	**100**							4
		Mukhed	2	**10**	16	**76**	3	**14**					21
		Naigaon			5	**71**	2	**29**					7
		Nanded			13	**72**	5	**28**					18
		Umri	2	**20**	7	**70**	1	**10**					10
		Mudkhed			4	**100**							4
20.	**Nandurbar 63 villages**	Akkalkuva	10	**42**	13	**54**	1	**4**					24
		Dhadgaon	13	**76**	4	**24**							17
		Nandurbar	11	**22**	34	**67**	5	**10**	1	**2**			51
		Navapur	15	**33**	30	**67**							45
		Shahada	15	**47**	14	**44**	3	**9**					32
		Taloda	7	**41**	10	**59**							17
21.	**Nashik 174 villages**	Baglan	10	**21**	31	**65**	7	**15**					48
		Chandvad	3	**20**	12	**80**							15
		Deola			2	**33**	4	**67**					6
		Dindori	12	**38**	18	**56**	2	**6**					32
		Igatpuri	21	**54**	18	**46**							39
		Kalwan	4	**14**	21	**75**	3	**11**					28
		Malegaon	4	**11**	20	**53**	14	**37**					38
		Nandgaon	4	**14**	16	**55**	8	**28**	1	**3**			29
		Nashik	21	**30**	42	**61**	6	**9**					69
		Niphad	4	**10**	23	**56**	12	**29**	2	**5**			41
		Peinth	10	**71**	4	**29**							14

** NS= Number of Samples*

Table E21 (Contd..) : Classification of Ground Water Quality of Talukas as Excellent, Good, Poor, Very Poor and Unsuitable for Drinking

Sr.	District	Taluka Name	Excellent NS/ (%)		Good Water NS / (%)		Poor Water NS / (%)		Very Poor NS / (%)		Unsuitable NS / (%)		No.of Samples (5 Yrs.)
21.	**Nashik Contd.. 174 villages**	Satana	1	**17**	3	**50**			2	**33**			6
		Sinnar	3	**8**	25	**63**	10	**25**	2	**5**			40
		Surgana	3	**50**	3	**50**							6
		Trimbakeshwar	5	**83**	1	**17**							6
		Yeola	6	**35**	7	**41**	4	**24**					17
22.	**Osmanabad 76 villages**	Bhum	2	**17**	10	**83**							12
		Kalambh	7	**24**	18	**62**	2	**7**	2	**7**			29
		Lohara			3	**100**							3
		Omerga	2	**11**	15	**79**	1	**5**			1	**5**	19
		Osmanabad##	2	**5**	27	**71**	9	**24**					38
		Paranda			9	**90**	1	**10**					10
		Tuljapur	8	**26**	20	**65**	3	**10**					31
23.	**Parbhani 68 villages**	Gangakhed	1	**4**	22	**92**	1	**4**					24
		Jintur	2	**9**	12	**52**	9	**39**					23
		Manwat			4	**67**	2	**33**					6
		Palam			12	**86**	2	**14**					14
		Parbhani			27	**77**	8	**23**					35
		Pathari	1	**6**	12	**67**	5	**28**					18
		Purna			8	**100**							8
		Selu	1	**6**	14	**78**	3	**17**					18
		Sonpeth	1	**25**	2	**50**	1	**25**					4

** NS= Number of Samples*

Table E21 (Contd..) : Classification of Ground Water Quality of Talukas as Excellent, Good, Poor, Very Poor and Unsuitable for Drinking

Sr.	District	Taluka Name	Excellent NS/ (%)		Good Water NS / (%)		Poor Water NS / (%)		Very Poor NS / (%)		Unsuitable NS / (%)		No.of Samples (5 Yrs.)
24.	**Pune 148 villages**	Ambegaon	3	**16**	10	**53**	6	**32**					19
		Baramati	1	**3**	18	**49**	13	**35**			5	**14**	37
		Bhor			3	**100**							3
		Daund	2	**5**	21	**57**	8	**22**	6	**16**			37
		Indapur			25	**60**	15	**36**	1	**2**	1	**2**	42
		Junnar	7	**18**	28	**70**	5	**13**					40
		Mawal	10	**77**	3	**23**							13
		Mulshi	15	**94**	1	**6**							16
		Pune (Haveli)	11	**21**	28	**54**	12	**23**	1	**2**			52
		Purandar	8	**20**	22	**54**	11	**27**					41
		RajgurNgr(Khed)	7	**29**	12	**50**	5	**21**					24
		Shirur	4	**10**	22	**54**	13	**32**	2	**5**			41
		Wadgaon(Maval)	2	**100**									2
		Wehle	4	**100**									4
25.	**Raigad 113 villages**	Alibag	13	**46**	15	**54**							28
		Karjat	18	**69**	7	**27**	1	**4**					26
		Khalapur	11	**79**	3	**21**							14
		Mahad	19	**83**	2	**9**			1	**4**	1	**4**	23
		Mangaon	13	**93**	1	**7**							14
		Mhasala	18	**90**	2	**10**							20
		Murud	9	**69**	4	**31**							13
		Panvel	12	**55**	9	**41**	1	**5**					22
		Pen	18	**67**	7	**26**	1	**4**	1	**4**			27

** NS= Number of Samples*

Table E21 (Contd..) : Classification of Ground Water Quality of Talukas as Excellent, Good, Poor, Very Poor and Unsuitable for Drinking

Sr.	District	Taluka Name	Excellent NS/ (%)		Good Water NS / (%)		Poor Water NS / (%)		Very Poor NS / (%)		Unsuitable NS / (%)		No.of Samples (5 Yrs.)
25.	**Raigad Contd.. 113 villages**	Poladpur	5	**100**									5
		Raigad	4	**57**	3	**43**							7
		Roha	22	**100**									22
		Shrivardhan	5	**56**	4	**44**							9
		Sudhagad	4	**80**	1	**20**							5
		Tala	2	**50**	2	**50**							4
		Uran	5	**100**									5
26.	**Ratnagiri 133 villages**	Chipalun	47	**98**	1	**2**							48
		Dapoli	40	**95**	2	**5**							42
		Guhagar	42	**100**									42
		Kehd	64	**97**	1	**2**			1	**2**			66
		Lanja	7	**100**									7
		Mandangarh	18	**100**									18
		Rajapur	46	**96**			2	**4**					48
		Ratnagiri	60	**95**	2	**3**	1	**2**					63
		Sangameshwar	34	**100**									34
27.	**Sangli 148 villages**	Atpadi	1	**3**	25	**78**	6	**19**					32
		Islampur			1	**50**	1	**50**					2
		Jath			30	**57**	21	**40**			2	**4**	53
		Kadegaon	4	**44**	5	**56**							9
		Kavathemahankal	2	**6**	19	**59**	9	**28**			2	**6**	32
		Khanapur	5	**17**	21	**72**	3	**10**					29
		Miraj	3	**11**	10	**37**	13	**48**	1	**4**			27
		Palus			4	**67**	2	**33**					6

** NS= Number of Samples*

Table E21 (Contd..) : Classification of Ground Water Quality of Talukas as Excellent, Good, Poor, Very Poor and Unsuitable for Drinking

Sr.	District	Taluka Name	Excellent NS/ (%)		Good Water NS / (%)		Poor Water NS / (%)		Very Poor NS / (%)		Unsuitable NS / (%)		No.of Samples (5 Yrs.)
27.	**Sangli Cond.. 148 villages**	Shirala	3	**27**	7	**64**	1	**9**					11
		South Solapur			1	**33**	2	**67**					3
		Tasgaon	2	**17**	4	**33**	5	**42**	1	**8**			12
		Walwa	11	**44**	12	**48**	2	**8**					25
28.	**Satara 146 villages**	Javali	2	**50**	2	**50**							4
		Karad	4	**17**	18	**75**	2	**8**					24
		Khandala	12	**46**	14	**54**							26
		Khatav	10	**40**	13	**52**	2	**8**					25
		Koregaon	2	**8**	18	**69**	6	**23**					26
		Mahabaleswar	8	**89**	1	**11**							9
		Man(dahivadi)	2	**8**	17	**65**	7	**27**					26
		Medha	5	**100**									5
		Patan	9	**32**	13	**46**	3	**11**	3	**11**			28
		Phaltan	2	**9**	12	**52**	9	**39**					23
		Satara	18	**47**	17	**45**	3	**8**					38
		Wai	1	**8**	9	**75**	2	**17**					12
29.	**Sindhudurg 105 villages**	Devgad	26	**100**									26
		Dodamarg	20	**100**									20
		Kankavli	34	**89**	4	**11**							38
		Kudal	35	**81**	6	**14**	2	**5**					43
		Malvan	35	**88**	5	**13**							40
		Sawantwadi	29	**100**									29
		Vaibhavwadi	13	**72**	4	**22**	1	**6**					18
		Vengurla	22	**79**	5	**18**	1	**4**					28

** NS= Number of Samples*

Table E21 (Contd..) : Classification of Ground Water Quality of Talukas as Excellent, Good, Poor, Very Poor and Unsuitable for Drinking

Sr.	District	Taluka Name	Excellent NS/ (%)		Good Water NS / (%)		Poor Water NS / (%)		Very Poor NS / (%)		Unsuitable NS / (%)		No.of Samples (5 Yrs.)
30.	**Solapur 48 villages**	Akkalkot			5	**71**	1	**14**	1	**14**			7
		Barshi	2	**17**	4	**33**	6	**50**					12
		Karmala			3	**60**	2	**40**					5
		Madha			2	**33**	4	**67**					6
		Malshiras			3	**38**	5	**63**					8
		Mangalwedha			3	**60**	2	**40**					5
		Mohol			5	**56**	4	**44**					9
		N.Solapur			4	**50**	4	**50**					8
31.	**Thane 137 villages**	Ambernath	6	**50**	5	**42**	1	**8**					12
		Bhivandi	24	**59**	16	**39**	1	**2**					41
		Dahanu	27	**79**	4	**12**	3	**9**					34
		Jawhar	12	**71**	5	**29**							17
		Kalyan	11	**73**	4	**27**							15
		Mokhada	16	**80**	4	**20**							20
		Murbad	21	**64**	10	**30**	2	**6**					33
		Murud	6	**100**									6
		Palghar	28	**54**	23	`			1	**2**			52
		Shahapur	24	**75**	8	**25**							32
		Talasari	22	**88**	3	**12**							25
		Thane	24	**48**	24	**48**	2	**4**					50
		Ulhasnagar	3	**27**	6	**55**	2	**18**					11
		Vasai	22	**47**	19	**40**	6	**13**					47
		Wada	29	**66**	15	**34**							44

** NS= Number of Samples*

Table E21 (Contd..) : Classification of Ground Water Quality of Talukas as Excellent, Good, Poor, Very Poor and Unsuitable for Drinking

Sr.	District	Taluka Name	Excellent NS/ (%)		Good Water NS / (%)		Poor Water NS / (%)		Very Poor NS / (%)		Unsuitable NS / (%)		No.of Samples (5 Yrs.)
32.	**Wardha 128 villages**	Arvi			17	**74**	4	**17**	1	**4**	1	**4**	23
		Ashti			11	**55**	8	**40**	1	**5**			20
		Deoli			25	**64**	11	**28**	2	**5**	1	**3**	39
		Hinganghat	1	**2**	18	**41**	19	**43**	6	**14**			44
		Karanja	2	**14**	7	**50**	5	**36**					14
		Samudrapur	2	**4**	26	**47**	26	**47**	1	**2**			55
		Seloo			27	**46**	26	**44**	2	**3**	4	**7**	59
		Wardha	2	**5**	22	**56**	11	**28**			4	**10**	39
33.	**Washim 67 villages**	Karanja	2	**5**	31	**82**	5	**13**					38
		Mangarulpir			20	**95**	1	**5**					21
		Malegaon			23	**66**	12	**34**					35
		Manora	1	**4**	23	**85**	3	**11**					27
		Risod	3	**4**	53	**70**	20	**26**					76
		Washim	6	**10**	54	**86**	3	**5**					63
34.	**Yavatmal 180 villages**	Arni	1	**4**	20	**74**	6	**22**					27
		Babhulgaon			24	**80**	6	**20**					30
		Darwha			29	**81**	7	**19**					36
		Digras	1	**3**	18	**55**	14	**42**					33
		Ghatanji	1	**3**	27	**79**	6	**18**					34
		Kalamb			24	**80**	6	**20**					30
		Kelapur	1	**3**	27	**87**	3	**10**					31

** NS= Number of Samples*

Table E21 (Contd..) : Classification of Ground Water Quality of Talukas as Excellent, Good, Poor, Very Poor and Unsuitable for Drinking

Sr.	District	Taluka Name	Excellent NS/ (%)		Good Water NS / (%)		Poor Water NS / (%)		Very Poor NS / (%)		Unsuitable NS / (%)		No.of Samples (5 Yrs.)
34.	**Yavatmal Contd.. 180 villages**	Mahagaon	1	**6**	15	**94**							16
		Maregaon	1	**13**	6	**75**	1	**13**					8
		Ner	2	**7**	22	**73**	6	**20**					30
		Pusad	2	**17**	10	**83**							12
		Ralegaon			22	**71**	9	**29**					31
		Umarkhed	1	**4**	18	**78**	4	**17**					23
		Wani			16	**55**	13	**45**					29
		Yavatmal	2	**6**	29	**88**	2	**6**					33
		Zari Jamni	1	**7**	10	**71**	3	**21**					14

** NS= Number of Samples*

PROBABLE REASONS OF POLLUTED STRETCHES

There are multitudes of reasons for river water pollution, many of which are due to anthropogenic activities and some places, it could be also due to absence of minimum flow available. Some of these are given hereunder:

- It is observed that most of the rivers are encroached by the residential growth from all sides, experiencing pollution due to addition of domestic sewage. Further, their natural water streams are also obstructed due to human activities resulting in drying of these rivers.
- Sewage ingress from small taluka places and villages have not yet been addressed which are situated on the banks.
- The accidental discharges of effluents directly or indirectly from the industries (in some of the stretches) further pollute the rivers.
- Unauthorized disposal of solid waste and debris at the bank of river finds its way into the river in rainy season also makes river water unfit for consumption.
- In some places, religious activities like immersion idols or mass bathing activities also lead to contamination in major rivers in the state.
- Indiscriminate use of pesticides and fertilizers in irrigation may lead to river or groundwater pollution.
- Improper treatment facilities and poor maintenance at Effluent Treatment Plants and Sewage Treatment Plants add contaminated wastewater in to river and creeks.
- Due to excessive organic load from food, agro based, sugar and distillery industries in the river algal growth have been observed at certain places, indicating eutrophication.
- Pollution load increases due to decline in river water flow during certain seasons and time.

CONTROL MEASURES AND RECOMMENDATIONS

The overall analysis of data and WQI indicates many areas of improvement, especially data collection and analysis. Some of these areas of improvement are:

- The process of collection of samples and analysis of water samples across the state shows the intent to understand the water bodies behavior based on quality attributes
- The quality, however suffers from a possible poor QA/QC process or human error, which is leading to many values with high variation.
- The outlier's analysis does lead to elimination of some very high values; however the same has been mentioned in the report. This can be made as a regular practice wherein local variation in the Water Quality could be easily recorded.

- Regular training and awareness program for all stakeholders, especially personnel responsible for water sample collection as well as analyses.
- The overall analysis seeks improvement in following areas:
  - Capacity building of personnel carrying out sampling and analysis
  - Awareness and communication with the locals and municipal bodies for sharing of data and suggestions of improvement
  - Creating linkages with the data for decision making for better river water quality.
  - Demand driven sewage management through decentralized treatment system
  - Seeking alternate use of treated waste water before it gets discharged in the river, thus reducing loads.
  - Strict compliance and regular monitoring for industrial discharges.
- Water quality analysis should be frequently audited by third party with assessment and communication with the development of recent methodologies
- GIS based water quality database should be prepared for easy assessment of accurate river data information and data retrieval.
- Village level sanitation with improved design of septic tank of IIT Bombay and also decentralized nalla treatment using phytorid technology of NEERI can be made.

Technologies for water quality improvement are given in **Appendices I toVI.**

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References

1. Abbasi, S.A., 2002, Water Quality Indices State–of–the– Art, Pondicherry: Pondicherry University, Centre for Pollution Control & Energy Technology.
2. CPCB, 2001, Environmental Atlas of India, New Delhi: Central Pollution Control Board.
3. Ramakrishnaiah C R, Dadashivaiah C., Ranganna, G., 2009, Assessment of Water Quality Index for the Groundwater in Tumkur Taluka, Karnataka State, India, E-Journal of Chemistry, http://www.e-journals.net 2009, 6(2), 523-530
4. Durmishi, B.H., M. Ismaili, A. Shabani, Sh. Abduli, Drinking Water Quality Assessment in Tetova Region, American Journal of Environmental Sciences 8 (2): 162-169, 2012

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Chapter 1
Introduction

1.1 Preamble

The problem of water quality deterioration has mainly resulted from two general categories of contaminant sources viz. direct and indirect. Direct sources include effluent outfalls from factories, refineries, waste water treatment plants, etc., which directly leak into urban water supplies; while the later includes contaminants that enter the river from soils/ groundwater and from the atmosphere through rain. Soils and groundwater contain the residue of domestic wastes, agricultural wastes (fertilizers, pesticides, etc.) and improperly disposed off industrial wastes. Construction of major and minor dams and abstraction of river water has reduced the flows of many perennial rivers resulting in dry riverbeds in non-monsoon months. The growth of urban megalopolises increased industrial activities and dependence of the agricultural sector on chemicals and fertilizers have led to overloading of the carrying capacity of water bodies to assimilate & decompose waste load. Ground water is the only drinking water source in many parts of the country.

The National organizations like CPCB and MPCB have various water quality monitoring programmes to collect time series data on site-specific quality issues of major rivers. Such data set help to analyze the extent of pollution and suggest remedial measures. This could be achieved by carrying out analytical and statistical analysis using the available water quality data from National Water Quality Monitoring Program, State Water Quality Monitoring Program, Hydrology project, Directorate of Groundwater Surveys and Development Agency, Irrigation Department, Central Ground Water Board and others. Data is available monthly from around 251 stations for rivers and 34 stations for creeks .Ground water data is available on yearly or six monthly bases from 3694 stations. Thus the proposed work includes consolidation of huge data set.

1.2 Data Analysis Methodology

The statistical analyses to be carried out for River, sea water and ground water are as follows:

a. Identification of outliers

To measure the experimental errors and disturbances caused due to unexpected events such as accidental spill or abrupt changes in the river flow or errors in collection and analysis for the analytical data under consideration, “Outlier” is calculated by using “Dixon’s test”. “4σ Test” is a screening test. The “4σ Test” performed to find out outlier, is a liberal test and do not identify any extreme values, therefore Dixon’s test, which is a

stringent test, can be used in the present analysis. For ground water data since the data set is limited identification of outliers was not carried out.

b. Identify the parameters and values exceeding the permissible limits

Permissible limit analysis will be based on assessment of current norms and their applicability at the data point and locations.

c. Carry out descriptive statistics.

The descriptive statistics will involve computation for each data for the parameters pH, DO, BOD, TC and FC the mean and Standard deviation. The percent of the samples exceeding the MPCB standards are also calculated.

d. Estimate National Sanitation Foundation Water Quality Index (NSF, WQI)

Parameters for surface and ground water quality indices are generally different due to the nature of contamination (geogenic vis-à-vis anthropogenic), contaminant propagation characteristics and designated use. Surface water quality data will be analyzed for river, estuary and creeks where as the ground water quality data correspond to dug well, tubewell and deep tubewells.

Monthly surface WQ data is available from around 251 stations. The data will be analyzed based on four parameters viz. DO, FC, pH and BOD for identification of the parameters and values exceeding the permissible limits. The analysis will further include assessment of WQI and its graphical representation.

The statistical analyses for groundwater quality data will involve over approx. 3694 sites for which data is available on yearly or six monthly basis. Since the temporal distribution of the data is meager and the spatial distribution of different types of wells to be made available from CGWB and GSDA is not clear at this stage, the huge data will first be subjected to initial screening and preprocessing to establish appropriate water quality parameters including their test for outliers. The data is proposed to be grouped under different districts or talukas depending on their spatial distribution for achieving statistically relevant significant number of stations. Statistical analysis leading to trends and WQI will then be carried out to arrive at meaningful interpretation and graphical presentation of the data.

1.3 Outputs

Under State Water Quality Monitoring Program (SWMP), National Water Quality Monitoring Program (NWMP) and Hydrology project, River Water quality data is being monitored at 251 locations on 59 Rivers. Whereas, 34 water quality monitoring stations along the Seafronts and Creeks of Maharashtra is also monitored regularly. These are also covered in the report. Approximately 3694 villages from 369 talukas of 34 districts considered for ground water analysis under Groundwater Survey and Development Agency (GSDA), Central Ground Water Board (CGWB) programme with MPCB's 50 monitoring locations in different districts under SWMP and NWMP programs.

Chapter 2

Integrated Approach for Water Quality Assessment

2.1 Water Quality Monitoring

The preamble of Water (prevention and control of pollution) Act, 1974 stated that pollution control board both at States and Central level to restore and maintain the wholesomeness of water bodies in India. Water quality monitoring is therefore an imperative prerequisite in order to assess the extent of pollution levels. Since there are a number of agencies involved in water quality monitoring, in order to optimize and rationalize the monitoring programme, it is important that all these agencies follow the same monitoring protocol. Water Quality Assessment Authority (WQAA) created under Environment (Protection) Act, 1986 has notified a "Protocol for Water Quality Monitoring". Therefore CPCB has come out with a document "Guidelines for Water Quality Monitoring'.The Document brings out major considerations to design water quality monitoring, network, procedures for sampling, laboratory analysis, data storage, data analysis, presentation, and interpretation, reporting and quality assurance. The water quality monitoring is performed with following main objectives in mind.

- Rational planning of pollution control strategies and their prioritization;
- To assess nature and extent of pollution control needed in different water bodies or their part;
- To evaluate effectiveness of pollution control measures already in existence;
- To evaluate water quality trend over a period of time;
- To assess assimilative capacity of a water body thereby reducing cost on pollution control;
- To understand the environmental fate of different pollutants.
- To assess the fitness of water for different use

2.2 Water Quality Standards

The assessment of water quality is an issue dependent on best-designated use for the specific water body. Moreover, in India there are multiple agencies, which stipulate water quality standards viz. BIS has brought drinking water standards. CPCB has classified surface water into 5 categories based on the utility of source. MPCB also categorizes the river stretch in to 4 categories and provides standards for maximum allowable concentrations for health related parameters. There are Sea Water standards for creek and coastal waters. CPHEEO has brought out drinking water standards applicable for water treatment plants. Pollution Control Boards of different states also bring out guidelines for quality of surface waters, which can be

more stringent. Worldwide also the drinking water standards are laid down by various agencies and are being reviewed from time to time. **Annexure I**, **II, III** and **IV** give related water quality standards stipulated by different agencies in India and receiving Sea Water Standards for Different Categories, Applicable Parameters and Pertinent Issues

2.3 Methods for Water Quality Assessment - A Review

Many factors affect water quality of a river system. The conditions of a river can fluctuate periodically, seasonally and also over the period of time. Hence it is essential to measure water quality at defined intervals to look for trends. Water that is acceptable to be safe for one use may be unacceptable for another purpose. In fact, many water quality experts refer to their measurement in terms of a specific use. The categories used for making recommendations on water quality are: Water supply for domestic and industrial use; recreation for total body contact like swimming, water skiing etc, protection of aquatic organisms; agricultural uses, irrigation, commercial uses such as navigation, hydroelectric and steam generated electric power and so on.

In an attempt to device a system to compare rivers in various parts of country, Water Quality Indices (WQIs) have been developed to assess the suitability of water for a variety of uses. These indices reflect the status of water quality in lakes, streams, rivers, and reservoirs. The concept of WQIs is based on a comparison of the concentration of contaminants with the respective environmental standards. The number, frequency, and magnitude by which the environmental standards for specific variables are not met in a given time period are reflected in WQIs. Further, the water quality trend analysis predicts the behavior of the water quality in the specified time domain.

The National Sanitation Foundation (NSF) designed a standard index called the Water Quality Index (WQI) in 1970 to measure water quality changes in particular river stretch/reach over a time, compare water quality from different reaches of the same river and even compare water quality of different rivers. The WQI is one of the most widely used indice, which can also be used to determine if a particular stretch of the river is healthy or not.To summarize it can be stated that water quality index synthesizes complex scientific data into an easily understood format.

- A water quality index can provide a way to summarize overall water quality conditions in a manner that can be communicated to a general audience.
- An index can tell us whether the overall quality of water bodies poses a potential threat to various uses of water.
- Used as a broad tool, an index can indicate success in protection and remediation efforts.

2.4 Limitations of a Water Quality Index

- Water quality indices by design contain less information than the raw data that they summarize.
- An index is not a complex predictive model for technical and scientific application.
- Distortion can occur from combining various environmental variables into one single value or index score.
- There can be loss of information on a single variable.

While calculating Water Quality Index for surface water, significant parameters indicating organic pollution and nutrient concentration were considered in NSF methodology. Over the years based on the locations specific situation the limited parameters are chosen for deciding WQI. CPCB has modified the weightage when the number of parameters is reduced.

2.5 Past Studies

Based on the long-term water quality data generated over the years, the Central Pollution Control Board had identified river stretches where the existing water quality is below the water quality required by their designated best use criteria. These stretches are referred as polluted river stretches. While identifying these stretches, dissolved oxygen, biochemical oxygen demand and Total Coliform have been taken as the critical pollutants. So far, 13 heavily polluted and 26 medium polluted river stretches have been identified. On behalf of the Ganga Project Directorate, the Central Board conducted detailed surveys of the polluted stretches. The action plans for most of the stretches are complete. CPCB draws up a list of polluted river stretches in the country. It has identified 26 such rivers in Maharashtra with 28 polluted stretches.

Chapter 4

Evaluation of River Water Quality

4.1 Surface Water Monitoring Network

Monitoring of water quality of Rivers of Maharashtra is being carried out under various programmes namely NWMP, SWMP and Hydrology project. The present chapter covers all the major and minor rivers of Maharashtra considered for water quality monitoring. **Table 4.1** gives the list of the rivers and their number of monitoring stations.

Table 4.1: Major and Minor Rivers Covering River Water Monitoring Network

Sr.No.	River Name	No. of Stations		Sr. No.	River Name	No. of Stations
1	Amba	2		31	Muchkundi	2
2	Amravati	1		32	Mula-Mutha	8
3	Bhatsa	3		33	Nira	5
4	Bhima	11		34	Penganga	2
5	Bindusara	1		35	Panchganga	5
6	Bori	1		36	Panzara	1
7	Burai	1		37	Patalganga	8
8	Chandrabhaga	2		38	Pawana	7
9	Daman Ganga	3		39	Pedhi	1
10	Darna	5		40	Pelhar	1
11	Deoghar	1		41	Purna	3
12	Ghod	1		42	Rangavali	1
13	Girna	2		43	Savitri	7
14	Godavari	51		44	Sina	1
15	Gomai	1		45	Shastri	1
16	Hiwara	1		46	Surya	3
17	Indrayani	3		47	Tansa	1
18	Kajvi	2		48	Tapi	21
19	Kalu	1		49	Titur	1
20	Kan	1		50	Ulhas	6
21	Kanhan	3		51	Urmodi	1
22	Kodavali	1		52	Vaitarna	5
23	Kolar	1		53	Vashishti	4
24	Koyna	1		54	Vel	1
25	Krishna	28		55	Venna	3
26	Kundalika	5		56	Waghur	1
27	Manjra	1		57	Wardha	7
28	Mithi	1		58	Wena	1
29	Mor	1		59	Wainganga	6
30	Morna	1		**Total**		**251**

4.2 River Water Quality Evaluation

The monthly water quality data of 59 rivers for five years 2007-11was evaluated and interpreted for selected physico-chemical parameters viz. pH, DO BOD, FC, TC Ammonical Nitrogen and Nitrate. They were first checked for possible outliers. After removing the outliers the values were compared with the state pollution control board (MPCB) water quality standards of class A-II for best designated usage. Monthly and yearly average WQI was evaluated and the categories at different locations are given in **Annexure V.** The pictorial view of five years WQI for the locations located on the stream of the 59 rivers is given in **Annexure VI.** The water supply and water discharge in some of the municipal councils/ corporation with respect to discharge in different river streams is as given in **Annexure Via** *(Source : Environment Dept. GoM & MPCB).*

4.3 Summary Observations

The overall picture of the water quality of the Rivers of Maharashtra is summarized as follows:

- Water Quality Index evaluated using four parameters viz. pH, DO, BOD FC showed that out of 251monitoring locations, 67 locations had water quality index good to excellent during the period 2007-2011. **Table 4.2** gives a list of these monitoring sites.
- 35 locations had water quality very bad at least in one of the months during the period 2007-2011. **Table 4.3** gives a list of these monitoring sites.
- At 25 locations out of 251 locations, all parameters are within the standards throughout the period 2007-2011. **Table 4.4** gives a list of these monitoring sites.
- At 32 locations out of 251 monitoring sites percent exceedance of significant parameters is 100%**. Table 4.5** gives a list of these sites.
- DO is exceeding the standard 100% time in Mula Mutha River in Sangam bridge near Ganapathy ghat. Village- Shivaji Nagar, Taluka from District Pune.
- BOD concentrations are exceeding the standard 100% time at 26 locations These Rivers are Pawana, Mula Mutha, Bhima, Ulhas, Godavari, Tapi and Vaitarna.
- TC is exceeding the standard 100% of the time at 2 sites in Krishna River at Daund and Khamgaon.
- Ammonical nitrogen exceeded the standard 100% times at 2 locations in Godavari River at Kesrali village and at Latur water intake near pump house. Village- Dhamegaon, Taluka- Kalumb, District- Osmanabad.;Tapi River at Hingona.

The 75% and 50% exceedance of monitoring locations of River Water is given in **Annexure VII**.

Table 4.2 : Monitoring Locations with WQI "Good to Excellent" during 2007-2011

Sr. No.	River	St.Code	Location
1	Bhatasa	1461	D/s of Pise Dam, Tal:Bhiwandi, Thane
2		2654	U/S of Liberty Oil Mill, Dist:Thane
3		2653	D/S of Liberty Oil Mill, Dist:Thane
4	Darna	2661	Aswali (Darna Dam), Igatpuri, Nashik
5	Godavari	HP_GD_2	Dhalegaon
6		HP_GD_6	Killari
7		HP_GD_14	Pishor
8		HP_GD_15	Purna Bridge
9		HP_GD_20	Takli
10		HP_GD_21	Taklidhangar
11		HP_GD_22	Toka
12		HP_GD_23	Wadvali
13		HP_GD_24	Yelli
14		HP_GD_25	Zari
15		HP_GD_27	Damrencha
16		HP_GD_28	Deori
17		HP_GD_30	Grugwada
18		HP_GD_31	Kamtheekhairi
19		HP_GD_32	Kardha
20		HP_GD_34	Mahagaon
21		HP_GD_35	Mathani
22		HP_GD_36	Petta
23		HP_GD_40	Wadsa (Chincholi)
24		HP_GD_41	Wagholi-Butti
25		12	Dhalegaon
26		1095	Gangapur Dam
27		1210	Vishnupuri
28		1312	Jaikwadi Dam,Paithan
29		2158	Paithan intake, Jayakwadi
30		2159	Pathegaon bridge
31		2183	Nandur Madhmeshwar Dam, Nandur

Table 4.2 (Contd.) : Monitoring Locations with WQI "Good to Excellent" during 2007-2011

Sr. No.	River	St. Code	Location
32	Krishna	37	Miraj
33		1153	Rajapur
34		1310	At Kurundwad
35		1906	At Walwa
36	Kundalika	1152	At Roha bridge
37		2672	At Dhatav at Jackwell
38	Muchkundi	HP_MU_1	Pawarwadi
39		2676	At Waked
40	Mula-Mutha	2680	Khadakvasla Dam, Pune
41	Panchaganga	1311	Ichalkaranji near MIDC intake well
42		1904	U/S of Kolhapur town near Balinga P.S.
43		2163	Shirol Intake well
44	Patalganga	2686	Vyal Pump house
45		2687	Khalapur pumping station
46		2689	Gagangiri Temple, Khopoli
47	Pehlar River	2696	Pehlar dam water works
48	Savitri	2199	Ovale Village
49		2701	Upsa kendre, Mangalwadi
50		2702	Shedav Doh
51		2703	Dadli Bridge
52		2704	Muthavali village
53	Surya	2706	U/s. Surya Dam, Dhammi, Vikramgad, Thane.
54		2707	MIDC PS, Garvshet, Palghar, Thane
55		2708	Intake of Vasai-Virar w/s, Palghar, Thane
56	Tapi	HP_TP_2	Bhusawal
57		HP_TP_5	Hingona
58		HP_TP_11	Padalse
59		HP_TP_13	Sawkheda
60		HP_TP_6	Kawtha
61		HP_TP_7	Khariya
62		HP_TP_8	Lakhpuri
63	Ulhas	1094	U/s of BadalapurWW, Kulgaon village
64		2162	Jambhul water work, Ambernath
65	Vashishti	2164	U/s 3M Paper Mill Kherdi
66		2713	D/s 3M Paper Mill Kherdi
67		2714	U/s Konphansawane

Table 4.3: Monitoring Stations with WQI "Very Bad" at least One Month

Sr. No.	River	St. Code	Location
1	Bhima	1189	U/s of Vithalwadi near Sankar Mandir, Dist. Pune
2		1190	D/s of Bundgarden, District-Pune
3		1191	After confluence with Mula-Mutha at Pargaon
4		2655	At Koregaon near Koregaon bridge, District- Pune
5	Daman Ganga	HP_DG_3	Shindayacha Pada
6	Ghod	2665	Shirur
7	Godavari	HP_GD_7	Kopargaon
8	Indrayani	2197	D/s of Alandigaon
9		2668	D/s of Moshi village
10		2669	U/s of Moshigaon
11	Kanhan	1909	D/s of Nagpur
12	Krishna	HP_KR_10	Dattawadi
13		HP_KR_24	Pimple Gurav
14	Mithi	2168	Mahim Village
15	Morna	2675	D/s Railway Bridge, Akola
16	Mula-Mutha	2191	Mutha river at Sangam bridge near Ganapathy ghat
17		2192	Mundhawa bridge
18		2193	Aundh bridge
19		2194	Harrison bridge near Mula- Pawana sangam
20		2677	D/s of Theur
21		2678	Mutha river near Veer Savarkar Bhavan
22		2679	Mutha river at Deccan bridge
23	Nira	2195	D/s of Jubilant Organosis, Nimbut
24		2681	Sangavi
25	Pawana	2196	Sangavigaon
26		2690	Kasarwadi
27		100	Sangavigaon
28		2691	Dapodi at Pawana-Mula sangam
29		2693	Chinchwadgaon
30		2694	Pimprigaon
31	Pedhi	2695	Pedhi river brudge near Padhi village
32	Purna	2155	D/s of confluence of Morna and Purna, at Andura
33	Tapi	HP_TP_1	Akkalpada
34		HP_TP_12	Sarangkheda
35	Ulhas	HP_UH_3	Manda

Table 4.4: Monitoring Sites with 0% Exceedance of all the Parameters during the Period 2007-2011

Sr. No.	St. Code	River	Location
1	HP_GD_2	Godavari	Dhalegaon, Regional Lab Aurangabad
2	HP_GD_6		Killari, Regional Lab Aurangabad
3	HP_GD_14		Pishor, Regional Lab Aurangabad
4	HP_GD_20		Takli, Regional Lab Aurangaba
5	HP_GD_24		Yelli, Regional Lab Aurangabad
6	HP_GD_25		Zari, Regional Lab Aurangabad
7	HP_GD_27		Dhamrencha, Regional Lab-Nagpur
8	HP_GD_30		Drugwada, Regional Lab-Nagpur
9	HP_GD_31		Kamtheekhairi, Regional Lab-Nagpur
10	HP_GD_32		Godavari
11	HP_GD_33		Kolgaon, Regional Lab-Nagpur
12	HP_GD_34		Mahagaon, Regional Lab-Nagpur
13	HP_GD_35		Mathani, Regional Lab-Nagpur
14	HP_GD_36		Petta, Regional Lab-Nagpur
15	HP_GD_37		Saiphal, Regional Lab-Nagpur
16	HP_GD_39		Wadsa (Chincholi), Regional Lab-Nagpur
17	HP_GD_40		Tembhurdoh, Regional Lab-Nagpur
18	HP_KR_25	Krishna	Shirur
19	HP_KR_25		Rakshewadi
20	2689	Patalganga	Gagangiri Maharaj Temple, Khopoli, Raigad.
21	2696	Pehler	Pehlar Dam inlet of water works, Vasai, Thane.
22	HP_TP_11	Tapi	Padalse
23	HP_TP_13		Sawkheda
24	HP_TP_7		Khariya
25	1094	Ulhas	U/s of Badlapur water works, Kulgaon, Taluka-Ambernath, District- Thane

Table 4.5: Monitoring Sites with 100% Exceedance of Significant Parameters

Sr.No.	St.Code	River	Location	pH	DO	BOD	TC	Ammonical-N
1	1189	Bhima	U/s of Vithalwadi near Sankar Mandir.Village-Vithalwadi, Taluka-Haweli, District- Pune.	0	64	100	0	44
2	1190		Pune, D/s of Bundgarden.Village-Yerwada, Taluka-Haweli, District- Pune.	4	77	100	0	71
3	HP_GD_5	Godavari	Kesrali, Regional Lab Aurangabad	67	0	0	50	100
4	HP_GD_1		Bhandardara, Regional Lab Nasik	0	0	100	0	0
5	HP_GD_3		Gangapur Dam, Regional Lab Nasik	33	33	100	0	0
6	2157		Latur water intake near Pump house. Village-Dhamegaon, Taluka-Kalumb, District-Osmanabad.	0	33	0	0	100
7	HP_KR_8	Krishna	Bundgarden Bridge	0		100		100
8	HP_KR_11		Daund	0	0	56	100	0
9	HP_KR_15		Khamgaon	0	0	67	100	0
10	2191	Mula Mutha	Sangam bridge near Ganapathy ghat. Village- Shivaji Nagar,Taluka- Pune, District- Pune.	0	100	98	0	87
11	2192		Mundhawa bridge. Village- Mundhawa, Taluka- Haweli, District- Pune.	2	87	100	0	90
12	2193		Aundh bridge, Aundgaon.Village-Aundgaon, Taluka-Haweli, District- Pune.	2	60	100	0	82
13	2194		Harrison bridge near Mula- Pawana sangam. Village- Bopodi, Taluka- Haweli, District- Pune.	2	77	100	0	85
14	2678		Near Veer Savarkar Bhavan, Pune.	0	82	100	0	76
15	2679		Deccan bridge, Pune.	2	84	100	0	73

Table 4.5 (Contd..) : Monitoring Sites with 100% Exceedance of Significant Parameters

Sr.No.	St.Code	River	Location	pH	DO	BOD	TC	Ammonical-N
16	2196	Pawana	Sangavigaon, Pune. Village- Sangavigaon, Taluka- Haweli, District- Pune.	0	83	100	0	71
17	2690		Kasarwadi, Haweli, Pune.	9	71	100	0	76
18	100		Sangvigaon, Pune	0	86	100	0	89
19	2691		Dapodi bridge, at Pawana- Mulla Sangam,Pune.	4	88	100	0	71
20	2694		Pawna Pimprigaon, Pune.	0	76	100	0	66
21	HP_TP_5	Tapi	Hingona	0	0	0	0	100
22	HP_TP_1		Akkalpada	29	0	100	0	0
23	HP_TP_14		Dhule	0	13	100	89	0
24	HP_TP_9		Malegaon Mosam	9	0	100	27	0
25	HP_TP_12		Sarangkheda	0	7	100	8	0
26	HP_TP_15		Suple	13	0	100	43	0
27	HP_TP_14		Sukwad	7	7	100	7	0
28	HP_UH_2	Ulhas	Khapari	7	0	100	15	0
29	HP_UH_3		Manda	0	77	100	80	0
30	HP_VN_1	Vaitarna	Alman	0	0	100	0	0
31	HP_VN_2		Vaitarna	0	0	100	0	0
32	HP_VN_3		Kasa (Thane)	0	0	100	8	0

Technologies for water quality improvement are given in **Appendices I toVI.**

4.4 Details of Analysis

The details of the monitoring locations, outliers observed in the data file, the mean and standard deviation of the parameters after removing the outliers, percent exceedance with respect to the MPCB standards and the water quality indices calculated are given below.

1. Amba River

Amba River originates from Navghar located in the Raigad district and flows through Pali village where it meets Dharamtar Creek in the Arabian Sea. Along the bank of the river, many small villages and industrial zones such as Raigad MIDC is located. Maximum stream of the river covers the major portion of the Pali tehsil (also known as Sudhagad). MPCB has two sampling locations on Amba River under GEMS/MINARS programme. The descriptive statistics and Water Quality Index is given in **Table 4.6**.

1. **Amba river at D/s of Waken bridge (2651 SWMP)**
   - **Station details:** Village-Waken Phata, Taluka-Roha, Distinct-Raigad.
   - **Pollution sources**: U/s of the jackwells of M/s Supreme petrochemicals and MIDC. No effluent discharge point. Water is used for drinking by MIDC and nearby villages.
2. **Amba river at Pali (HP_AM_1)**
   - **Station details:** Village-Pali, Taluka-Pali (Sudhagad), District-Raigad.
   - **Pollution sources**: Water is used for drinking by MIDC and nearby villages.

Table 4.6(a): Two Years Descriptive Statistics for Amba River (2008-2009)

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2651	Mean	7.5	6.8	4.0	68	142	0.3	0.1
	Std.dev	0.5	0.4	1.1	39.1	70.1	0.4	0.1
	No of Samples	15	15	14	11	10	15	13
	% Exceedance	**7**	**0**	**14**	**-**	**0**	**7**	**0**

Five Years Descriptive Statistics for Amba River (2007-2011)

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
HP_AM_1	Mean	7.8	6.8	1.7	6575.7	7649.3	0.1	--
	Std.dev	0.56	0.59	0.61	5894.76	6238.61	0.04	--
	No of Samples	41	41	40	41	41	40	--
	% Exceedance	**4.9**	**0**	**0**	**-**	**63.4**	**0**	--

As per the MPCB standards, it was observed that percent exceedance of pH was 7% and 4.9 at D/s of Waken Bridge, Raigad, MIDC and Pali village respectively. Similarly 14% values of BOD and 7% values of Ammonical nitrogen were exceeding at D/s of Waken Bridge, Raigad, MIDC whereas Nitrate nitrogen and DO values were within permissible levels. In bacteriological analysis, TC values were found to be exceeding by63.4 % at Pali location.

Table 4.6(b): Water Quality Index for Amba River

Station Code	2007	2008	2009	2010	2011
HP_AM_1	GE	MG	MG	GE	--
2651	--	GE	GE	--	--

Water quality index for Pali station varied between good to excellent and moderate to good during2008-2011. For Amba River at D/s of Waken Bridge (2651) WQI could not be calculated for the year 2007, 2010 and 2011 due to data gaps, whereas for the year 2008-09, WQI indicated that water quality for the available data was between good to excellent.

2. Amravati River

Amravati River is a minor river and there is only one monitoring location on this river. The descriptive statistics and Water Quality Index is given in **Table 4.7**.

1. **Amravati River, D/s of Dhondaicha, Dhule (2652 SWMP)**
   - **Station details** : Village : Dhondaicha, Taluka : Dhondaicha, District : Dhule

Table 4.7(a): Two Years Descriptive Statistics for Amravati River (2007-2008)

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2652	Mean	8.3	5.9	8.9	14	29	2.5	1.0
	Std.dev	0.23	0.93	3.66	7.8	16.4	1.00	0.79
	No of Samples	10	9	12	9	10	11	12
	% Exceedance	**20**	**0**	**67**	**-**	**0**	**82**	**0**

It was observed that DO, TC and Nitrate were complying with the standards, whereas values for pH, BOD and Ammonical nitrogen exceeded in 20, 67 and 82% samples respectively.

Table 4.7(b): Water Quality Index for Amravati River

Station Code	2007	2008	2009	2010	2011
2652	MG	MG	--	--	--

The WQI at this station for the year 2007-08 indicated that the water quality was moderately good during 2007 and 2008. Data was unavailable for the remaining years.

3. Bhatsa River

Bhatsa River originates near Kasara and gets extended to Shahapur in the Thane district. River basin covers the major area from Shahapur to Titwala. Along the river stream many villages such as Bathsai, Shera, Vaveghar, Nadgaon and Rang are located. At Titwala Bhatsa River confluences with Kalu River, this flows through the Murbad district. From Kalyan onwards, the river flows towards Diva and Mumbra and finally it empties into the Thane creek. MPCB has following three monitoring locations of Bhatsa River. The descriptive statistics and Water Quality Index is given in **Table 4.8**.

1. **Bhatsa River at D/s of Pise Dam (1461/NWMP)**
   - **Station details:** Village- Pise, Taluka- Bhiwandi, District-Thane.
   - **Pollution sources**: No development zone up to 3 km. Source of drinking water supply to Mumbai and surrounding areas. No effluent discharge point.
2. **Bhatsa River at D/s of Liberty Oil Mills, Satnel, Shahapur, Thane (2653/SWMP)**
   - **Station details:** Village-Satne, Taluka-Shahapur, District-Thane.
   - **Pollution sources**: Effluent is reused after treatment. So no discharge into river. Accidental discharge possible.
3. **Bhatsa River at U/s of Liberty Oil Mills, Satnel, Shahapur, Thane (2654/SWMP)**
   - **Station details:** Village-Satne, Taluka-Shahapur, District-Thane.
   - **Pollution sources**: Only non-polluting industries are allowed around 3 km. No effluent discharge into river.

Table 4.8(a): Three Years Descriptive Statistics for Bhatsa River (2007-2009)

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
1461	Mean	7.7	6.9	3.8	26.0	139.9	0.1	0.3
	Std.dev	0.36	0.42	1.69	19.52	108.38	0.19	0.26
	No of Samples	22	16	22	11	11	21	22
	% Exceedance	**0**	**0**	**9.1**	**-**	**0**	**0**	**0**

Table 4.8(a) (Contd..) : One Year Descriptive Statistics for Bhatsa River (2011)

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2653	Mean	7.9	7.1	3.3	37.6	96.1	0.1	0.4
	Std.dev	0.51	0.18	0.38	6.65	23.42	0.18	0.30
	No of Samples	19	17	18	9	9	17	19
	% Exceedance	**10.5**	**0**	**0**	**-**	**0**	**0**	**0**
2654	Mean	7.9	7.0	3.3	35.1	94.0	0.1	0.3
	Std.dev	0.57	0.38	0.38	4.95	13.90	0.08	0.22
	No of Samples	19	19	19	10	10	17	18
	% Exceedance	**15.8**	**0**	**0**	**-**	**0**	**0**	**0**

At Bhatsa River, D/s of Pise Dam, values for all the parameters were within the permissible standards of MPCB except BOD which exceeded the standard of 5 mg/l. For the stations at D/s and U/s of Liberty oil Mill, the percentage exceedance for pH values were 10.5 and 15.8% respectively whereas DO, BOD, TC, Ammonical and Nitrate nitrogen values were complying with MPCB standards for the available data sets. The percent exceedance of pH may be due to accidental discharge of effluent from Liberty Oil Mill.

Table 4.8(b): Water Quality Index for Bhatsa River

Station Code	2007	2008	2009	2010	2011
1461	GE	GE	GE	--	--
2653	--	--	--	--	GE
2654	--	--	--	--	GE

The Water Quality Index of Bhatsa River at D/s of Pise dam was good to excellent for the available data sets. However, for the stations at U/s and D/s of Liberty Oil Mill, WQI was good to excellent for 2011 but could not be calculated for 2007-2010 due to unavailability of data.

4. Bhima River

The Bhima River originates in Bhimashankar hills near Karjat on the western side of Western Ghats, known as Sahyadri, in Maharashtra state in India. Bhima flows southeast for 725 km through Maharashtra, Karnataka, Andhra Pradesh states. Bhima is the most important tributary of the Krishna River. Its banks are densely populated and form a fertile agricultural area. The river is prone to flooding due to heavy rainfall during the monsoon season.

During the long journey of Bhima towards southeast many smaller rivers confluence in it. Kundali River, Kumandala River, Ghod river, Bhama, Indrayani, Mula River, Mutha River and Pavna River are the major tributaries of this river around Pune. The total basin area is 48,631 km². Seventy-five percent of the basin lies in the state of Maharashtra. MPCB has

following nine monitoring stations of Bhima River. The descriptive statistics and Water Quality Index is given in **Table 4.9**.

1. **Bhima river at Takli Village near Karnataka Border (28/NWMP)**
   - **Station details:** Village- Takali, Taluka- South Solapur, District- Solapur.
   - **Pollution sources**: Domestic pollution and pollution due to human activities
2. **Bhima River at Narsingpur near Sangam bridge after confluence with Nira(1188/NWMP)**
   - **Station details:**Village- Narsingpur, Taluka- Malshiros, District- Solapur
   - **Pollution sources**: Industrial effluents are not discharged. Domestic pollution present
3. **Bhima river at Pune (Mutha River) at U/s of Vithalwadi near Sankar Mandir. (1189/NWMP)**
   - **Station details:** Village- Vithalwadi, Taluka- Haweli, District- Pune.
   - **Pollution sources**: Receive domestic wastes. Main pollution is due to human activities such as washing, bathing etc.
4. **Bhima river at Pune, D/s of Bundgarden. (1190/NWMP)**
   - **Station details:** Village- Yerwada, Taluka- Haweli, District- Pune.
   - **Pollution sources**: Pollution due to domestic effluent from Pune city and human activities.
5. **Bhima River after confluence with Mula-Mutha at Pargaon near Vasant Bandara. (1191/NWMP)**
   - **Station details:** Village- Pargaon, Taluka- Daund, District- Pune.
   - **Pollution sources**: Receive industrial wastes as well as domestic wastes.
6. **Bhima River at Daund near Mahadev temple(1192/NWMP)**
   - **Station details:** Village- Daund, Taluka- Daund, District- Pune
   - **Pollution sources**: Pollution due to human activities as well as domestic wastes
7. **Bhima River at Koregaon near Koregaon bridge, Pune (2655/SWMP)**
   - **Station details:**Village- Koregaon, Taluka- Shirur, District- Pune
   - **Pollution sources**: Pollution due to domestic waste, agricultural runoff and human activities.
8. **Bhima River- Backwater of Ujani Dam near raw water pump house (2656/SWMP)**
   - **Station details:** Village- Kumbargaon,Taluka- Indapur, District- Pune.
   - **Pollution sources**: Pollution due to human activities such as boating, washing, bathing
9. **Bhima River at Narshinpur, Pune**
   - **Station details:** Village- Indapur Pune
   - **Pollution sources**: Pollution due to human activities as well as domestic wastes
10. **Bhima River at Sarati**
    - **Station details:** Sarati, District –Solapur, Near Pandharpur
    - **Pollution sources**: Pollution due to human activities such as boating, washing, bathing

Table 4.9(a): Five Years Descriptive Statistics for Bhima River (for 2007-2011)

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
Narshinpur Station (2010-2011)	Mean	8.0	6.7	4.8	2732.2	4033.3	0.7	0.6
	Std.dev	0.33	0.40	1.09	1608.5	2669.7	0.64	0.17
	No of Samples	9	9	9	9	9	9	0
	% **Exceedance**	**0**	**0**	**44.4**	**-**	**22.2**	**0**	**0**
Sarati (2010-2011)	Mean	8.3	6.8	4.6	2920.0	4732.2	0.1	0.8
	St deviation	0.12	0.28	0.88	1825.0	3072.8	0.04	0.16
	No of samples	9	9	9	9	9	9	0
	% Exceedance	**0**	**0**	**22.2**	**-**	**55.6**	**0**	**0**
28 (2007-2009)	Mean	8.1	5.7	7.8	135	962	0.8	0.5
	Std.dev	0.32	0.79	1.99	100.9	703.8	0.70	0.63
	No of Samples	35	33	33	35	35	33	35
	% Exceedance	**6**	**3**	**94**	**-**	**0**	**15.0**	**0**
1188	Mean	8.1	5.7	7.2	149.5	1067.4	0.8	0.4
	Std.dev	0.37	0.78	3.00	109.29	663.74	1.28	0.31
	No of Samples	56	54	55	56	56	55	55
	% Exceedance	**14.3**	**1.9**	**74.5**	**-**	**0**	**9.1**	**0**
1189	Mean	7.6	3.5	13.7	196.0	1362.0	2.3	0.7
	Std.dev	0.32	1.22	6.56	117.81	514.33	3.07	0.97
	No of Samples	24	22	24	24	23	23	23
	% Exceedance	**0**	**63.6**	**100.0**	**-**	**0**	**43.5**	**0**
1190	Mean	7.6	2.7	18.9	270.6	1492.3	3.5	0.8
	Std.dev	0.43	1.52	8.59	109.47	499.40	3.32	0.87
	No of Samples	24	22	24	24	24	24	24
	% Exceedance	**4.2**	**77.3**	**100.0**	**-**	**0**	**70.8**	**0**
1191	Mean	7.7	4.5	8.7	179.1	1070.2	1.8	0.5
	Std.dev	0.36	1.44	3.73	111.19	614.89	2.13	0.45
	No of Samples	23	24	24	24	24	24	24
	% Exceedance	**0**	**29.2**	**87.5**	**-**	**0**	**50.0**	**0**
1192	Mean	7.8	5.1	6.8	150.0	1092.7	2.0	0.7
	Std.dev	0.34	1.23	2.16	75.54	597.75	1.82	0.55
	No of Samples	23	24	23	23	24	23	24
	% Exceedance	**0**	**25.0**	**82.6**	**-**	**0**	**60.9**	**0**
2655	Mean	8.1	5.6	7.1	118.6	851.7	0.7	0.3
	Std.dev	0.47	1.14	3.07	86.42	543.52	0.64	0.30
	No of Samples	45	45	44	38	45	45	44
	% Exceedance	**15.6**	**6.7**	**68.2**	**-**	**0**	**11.1**	**0**
2656	Mean	8.0	6.0	6.2	104.0	750.4	0.6	0.4
	Std.dev	0.52	0.58	3.38	84.14	501.66	0.70	0.28
	No of Samples	42	42	42	42	42	41	41
	% Exceedance	**16.7**	**0.0**	**57.1**	**-**	**0.0**	**4.9**	**0.0**

Tables 4.9 show that the percent exceedance for pH was observed at Takli village, Narsingpur near Sangam Bridge, D/s of Bundgarden, Koregaon Bridge and Backwater of Ujani Dam ranging from 6 to 16.7 %. At other stations of Bhima River, pH was as per the standards. DO values at all stations exceed the standard except at Kumbargaon, Taluka- Indapur, and District- Pune. The range of percent exceedances were ranging from 1.9 to 77.3%. Also the

higher percent exceedance was observed in BOD values ranging from 57.1-100%. The exceeding values of BOD at all stations may be due to domestic waste released into the rivers at these stations. However, the values of TC and Nitrate nitrogen at all the stations of Bhima River were complying with the MPCB standards except at Narshinpur Station it exceeded by 22.2%.Ammonical Nitrogen exceeded the standards at all the stations.

Table 4.9(b): Water Quality Index for Bhima River

Station Code	2007	2008	2009	2010	2011
28	MG	MG	MG	--	--
1188	GE	MG	MG	MG	MG
1189	MG	Bad	Bad	Bad	Bad
1190	Bad	Bad	Bad	VB	Bad
1191	GE	MG	MG	MG	Bad
1192	GE	GE	MG	MG	MG
2655	MG	MG	MG	MG	MG
2656	MG	MG	MG	GE	GE
Narshinpur	--	--	--	Bad	MG
Sarati	--	--	--	MG	MG

- The water quality for the available data sets at three stations on Bhima River namely (1) Narsingpur near Sangam bridge after confluence with Nira (2) Bhima River at Daund near Mahadev temple(3)Bhima river- Backwater of Ujani Dam near raw water pump house (were moderately good to excellent.
- The water quality at three stations namely (1) Takli Village near Karnataka Border (2) Koregaon near Koregaon bridge, Pune and (3) Sarati was moderately good.
- Bhima river at (1) Pune (Mutha river) at U/s of Vithalwadi near Sankar Mandir, (2) D/s. of Bundgarden, (3) after confluence with Mula-Mutha at Pargaon near Vasant Bandar and at (4) Narshinpur, Pune were bad.

Number of sites of Bhima river with percent exceedances in different ranges for BOD, DO, TC and pH are given **Table 4.9(c)**.

Table 4.9(c): Number of Sites of Bhima with Percent Exceedances for BOD, DO, TC and pH

Percent Exceedance	BOD	DO	TC	pH
0%	0	2	8	4
1-20%	0	3	0	5
20-40%	0	2	1	0
40-60%	2	0	0	0
60-80%	2	2	0	0
80-100%	5	0	0	0

Percent exceedances for BOD, DO, pH and TC for 9 locations in Bhima River are shown in **Figures 4.1.**

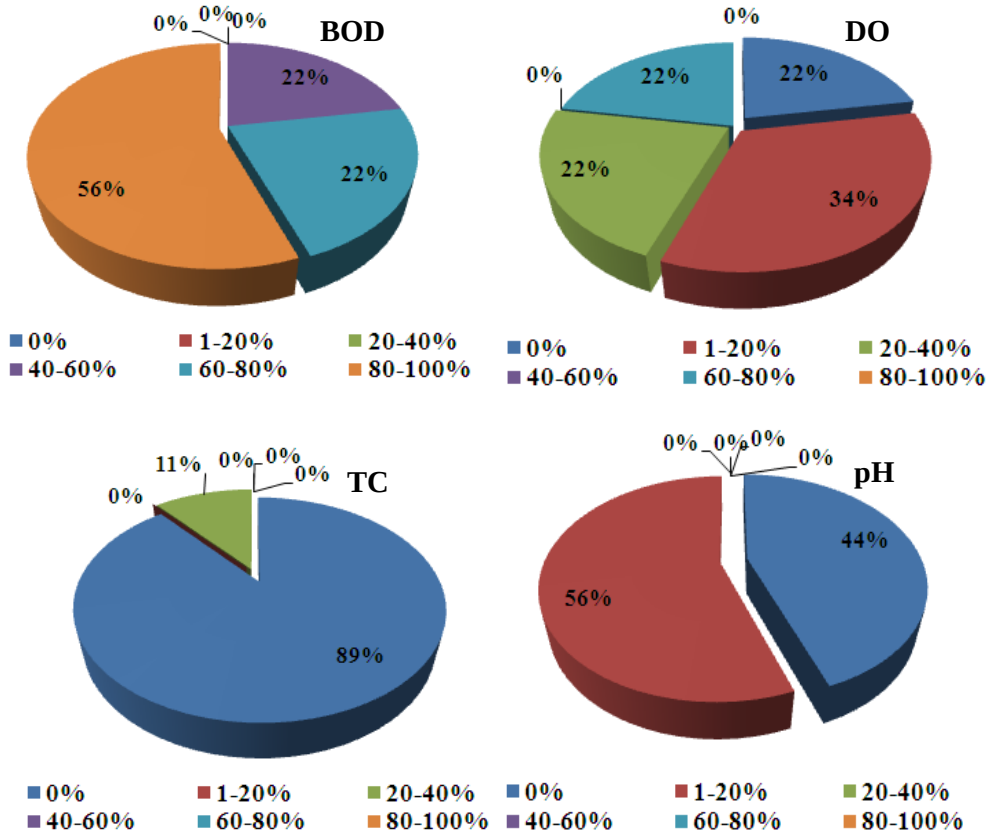

Figure 4.1 : Percent Exceedances at 9 Monitoring Locations of Bhima River

The WQI indicates that out of 9 monitoring locations, river water quality was "Good to Excellent" at 1 site. At six sites water quality was "Medium to Good" and at 2 sites (viz. Upstream of Vithalwadi near Sankar Mandir and D/s of Bundgarden, both in Taluka Haweli, district Pune) it was bad **(Figure 4.2)**.

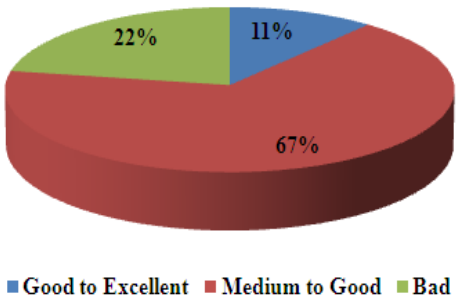

Figure 4.2 : Water Quality Index of 9 Monitoring Locations of Bhima River

5. Bindusara River

Bindusara (also called Bendsura) is a small river situated in the district of Beed. It is a tributary river of Sindphana and a sub-tributary of Godavari River. It originates in the hills of Balaghat near the village Waghira, in south of district Beed in Patoda taluka. Total length of the river is about 40 km. Bendsura is a rapid and seasonal river. A reservoir; Bendsura Project, was constructed on the river in 1955 near the village Pāli, about 10 km south of Beed. The city of Beed is situated on the banks of Bindusara River. MPCB has one monitoring station at Bindusara River. The descriptive statistics and Water Quality Index is given in **Table 4.10**.

1. **Bindusara river at Beed, near intake water pump house at Dam (2657/SWMP)**
   - **Station details:** Village- Kumbargaon, Taluka- Indapur, District- Pune
   - **Pollution sources**: Pollution due to human activities such as boating, washing, bathing

Table 4.10(a): Three Years Descriptive Statistics for Bindusara River (2008-2009)

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2657	Mean	7.8	6.1	7.7	7	300	0.6	1.4
	Std.dev	0.50	1.15	4.68	1.16	23.20	1.12	0.88
	No of Samples	14	14	14	14	14	11	10
	% Exceedance	**7**	**14**	**64**	**-**	**0**	**18**	**0**

The concentrations for TC and Nitrate nitrogen were in compliance with the MPCB standards whereas there was some percentage exceedance for pH, DO, BOD and Ammonical nitrogen. 64% of the BOD samples showed non-compliance with the MPCB standards. Higher percentage exceedance of BOD may be due to the human activities as the city is situated on the banks of the Bindusara River.

Table 4.10(b) : Water Quality Index for Bindusara River

Station Code	2007	2008	2009	2010	2011
2657	--	GE	MG	--	--

For the Bindusara River near intake water pump house, WQI could not be calculated for the year 2007, 2010 and 2011 due to data unavailability.

6. Bori River

Bori River is one of the tributary of Tapi River in Jalgoan district. The river starts the journey from the border of Dhule and Jalgaon district. The river gets broadened at the Amalner which is one of the major taluka places in Jalgaon district. Finally it meets the main stream of the Tapi River at Bohra village, where other two tributaries of the Tapi namely Panjara and Aner also meet the main flow of Tapi River. There is one monitoring location on this river. The descriptive statistics and Water Quality Index is given in **Table 4.11**.

1. **Bori river at D/s of Amalner (2658/SWMP)**
   - **Station details:** Village- Amalner, Taluka-Jalgaon, District- Jalgaon
   - **Pollution sources**: Sewage from Amalner city

Table 4.11(a): Five Years Descriptive Statistics for Bori River (2007-2011)

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2658	Mean	8.1	5.8	8.5	14.1	43.3	1.0	1.5
	Std.dev	0.47	0.96	5.00	7.11	33.71	1.21	1.19
	No of Samples	28	28	29	24	24	24	29
	% Exceedance	**14.3**	**3.6**	**62.1**	**-**	**0**	**29.2**	**0**

TC and Nitrate nitrogen concentrations complied with the MPCB standards whereas pH, DO, BOD, and Ammonical nitrogen did not. It was observed that 62% of BOD values were exceeding the limit whereas for pH, DO and Ammonical nitrogen the exceedances were14.3, 3.6 and 29.2% respectively. The critical values of BOD could be due to the domestic sewage released from Amalner city into this river.

Table 4.11(b): Water Quality Index for Bori River

Station Code	2007	2008	2009	2010	2011
2658	MG	GE	MG	GE	GE

The WQI values for the available data sets of Bori River, D/S of Amalner indicate that the water quality varied between moderately good and good to excellent except for September, 07 when it was of bad quality.

7. Burai River

Burai River is one of the minor tributary of Tapi situated in the Dhule district. The main river flow is formed by many small streams of fresh water which meet at Arave and Amrale villages. From this point onward it gives a solitary stream which gets enlarged at the Shindkheda town and finally meets Tapi River at the Mukudas village. Since many small villages and towns are established on the bank of the river the water is used for domestic purpose. There is one monitoring location on this river, descriptive statistics of which is given in **Table 4.12**.

1. **Burai river before confluence to Tapi river at Mukudas village (2659/SWMP)**
   - **Station details:** Village- Mukudas, Taluka- Dhule, District- Dhule
   - **Pollution sources**: Sewage from Chimthana & Shindkheda area

Table 4.12(a) : Five Years Descriptive Statistics for Burai River (2007-2011)

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2659	Mean	8.0	5.9	6.9	14.9	40.0	1.1	1.8
	Std.dev	0.45	1.11	4.02	9.21	25.38	1.18	1.73
	No of Samples	30	27	29	22	23	27	30
	% Exceedance	**10.0**	**3.7**	**51.7**	**-**	**0**	**37.0**	**0**

On comparison of the dataset of Burai river with the MPCB standards, it was observed that TC and Nitrate nitrogen values were found to be complying with the standards whereas pH, DO, BOD and Ammonical nitrogen were exceeding by 10, 3.7, 51.7% and 37% respectively. High percent exceedance of BOD could be due to human activities and domestic sewage released from Chimthana & Shindkheda villages into this river.

Table 4.12(b): Water Quality Index for Burai River

Station Code	2007	2008	2009	2010	2011
2659	GE	GE	GE	GE	GE

The water quality at Burai River, before Confluence to Tapi River at Mukudas village, was found to be good to excellent throughout the study period.

8. Chandrabagha River

Chandrabhaga River is a small tributary of Bhima and most populous place in Solapur due to devotees frequently visiting the old Vitthal temple located on the bank of the river. Due to religious importance water of the river is used for religious, domestic and sanitation purpose which is the major cause of river water pollution. There are two monitoring locations on this river. Descriptive statistics of monitored data is given in **Table 4.13.**

1. **Chandrabhaga River at U/s of Pandharpur town (1911/NWMP)**
   - **Station Details**: Village- Gursale, Taluka- Pandarpur, District- Solapur.
   - **Pollution sources**: Religious place. Pollution through agricultural runoffs, human activities and domestic waste.
2. **Chandrabhaga River at D/s of Pandharpur town near Vishnupant Mandir (1912/NWMP)**
   - **Station Details:** Village- Gopalpur, Taluka- Pandarpur, District- Solapur.
   - **Pollution sources**: Religious place. Pollution through agricultural runoffs, human activities and domestic waste.

Table 4.13(a) : Five Years Descriptive Statistics for Chandrabagha River

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
1911	Mean	8.1	5.8	5.6	112.1	603.0	0.8	0.3
	Std.dev	0.37	0.50	2.17	72.18	288.96	0.70	0.29
	No of Samples	24	24	24	24	22	23	23
	% Exceedance	**12.5**	**0**	**58.3**	**-**	**0**	**13.0**	**0**
1912	Mean	8.1	5.6	6.6	173.0	1218.5	1.1	0.5
	Std.dev	0.45	0.64	2.66	88.84	559.15	0.89	0.42
	No of Samples	24	24	24	24	23	23	23
	% Exceedance	**25.0**	**0**	**75.0**	**-**	**0**	**30.4**	**0**

DO, TC, Nitrate Nitrogen were complying with the MPCB standards at both the locations of Chandrabagha River. But pH was exceeding at both the U/s and D/s of Pandharpur ranging between 12.5-25%. The percentage exceedance for BOD was high i.e. 58 and 75% at U/s and

D/s of Pandharpur respectively. It could be due to the agricultural run-offs, human activities and domestic waste. Also since it is a religious place, the waste could be of biological origin. This all might account for increased BOD at these locations.

Table 4.13(b): Water Quality Index for Chandrabagha River

Station Code	2007	2008	2009	2010	2011
1911	GE	MG	MG	GE	MG
1912	GE	MG	MG	MG	MG

The monthly WQI evaluated for Chandrabagha River, showed that the water quality varied from moderately good to good to excellent at U/s of Pandharpur. However, the water quality was bad for few months at D/s of Pandharpur near Vishnupant Mandir. This could be due to the human activities and waste discharged from religious places.

9. Daman Ganga River

The river's headwaters are on the western slope of the Western Ghats range, and it flows west into the Arabian Sea. The river flows through Maharashtra and Gujarat states, as well as the Union territories of Daman and Diu and Dadra and Nagar Haveli. The industrial towns of Vapi, Dadra and Silvassa lie on the north bank of the river, and the town of Daman occupies both banks of the river's estuary. Daman Ganga is also the most polluted of Indian rivers according to participants of the Machhimar Adhikar Rahstriya Abhiyan or the national campaign to save the coast and fish workers rights in India (June 2008) from Kutchch to Kanyakumari. MPCB has monitored three locations of Daman Ganga River under Hydel Project. Detailed analysis of monitored data is given in **Table 4.14**.

1. **Daman Ganga River at Khadadi (HP_DG_1)**
   - **Station Details:** Taluka- Jawahar, District- Thane.
   - **Pollution sources**: Industrial discharges as well as domestic pollution city
2. **Daman Ganga River at Khadkhad (HP_DG_2)**
   - **Station Details:** Taluka- Jawahar, District- Thane.
   - **Pollution sources**: Industrial discharges as well as domestic pollution city
3. **Daman Ganga River at Shindyacha Pada (HP_DG_3)**
   - **Station Details:** Taluka-Mokhada, District- Thane.
   - **Pollution sources**: Industrial discharges as well as domestic pollution city

Table 4.14 (a): Five Years Descriptive Statistics for Daman Ganga River

Stn. Code		pH	DO	BOD	FC	TC	Ammonia
HP_DG_1	Mean	7.5	6.7	7.7	1192.7	2299.9	0.1
	Std.dev	0.57	0.77	4.16	1101.51	1983.0	0.01
	No of Samples	16	16	15	15	15	--
	% Exceedance	**6.3**	**0.0**	**73.3**	**--**	**0.0**	--

Table 4.14(a) (Contd.) : Five Years Descriptive Statistics for Daman Ganga River

Stn. Code		pH	DO	BOD	FC	TC	Ammonia
HP_DG_2	Mean	7.6	7.0	5.7	527.8	1085.5	0.1
	Std.dev	0.50	1.07	3.66	582.25	986.37	0.01
	No of Samples	25	25	24	25	25	24
	% Exceedance	**0.0**	**0.0**	**54.2**	**--**	**0.0**	**0.0**
HP_DG_3	Mean	7.7	6.3	8.1	557.2	885.6	0.1
	Std.dev	0.43	1.23	4.24	510.0	760. 9	0.01
	No of Samples	18	18	18	18	16	18
	% Exceedance	**5.6**	**5.6**	**77.8**	**--**	**0.0**	**0.0**

Water quality data of Daman Ganga River showed that Ammonical nitrogen complied with the standards at all three stations i.e. Khadadi, Khadkhad and Shindayacha Pada but BOD exceedance was from 54% to 78% at all three stations. It could be due to the domestic sewage released into these river locations. DO and TC exceeded only at Shindayacha Pada station.

Table 4.14(b) : Water Quality Index for Daman Ganga River

Station Code	2007	2008	2009	2010	2011
HP_DG_1	GE	MG	Bad	GE	--
HP_DG_2	MG	MG	MG	GE	GE
HP_DG_3	MG	MG	MG	GE	--

On evaluation of the yearly water quality indices of the available data, it was found that the water quality at Daman-Ganga River varied from moderately good to bad at all its locations. However the monthly WQI evaluated shoed that during few months at all the locations WQI was bad.

10. Darna River

Darna River is located in Nasik district and it is known for the Darna dam constructed on main stream of river. Sampling stations on Darna are located at the Darna dam and Pandurli, Chehedi, Aswali M.E.S water pumping stations. Major source of water pollution is disposal of domestic sewage generated by the nearby villages located on banks of the river and other human activities. Detailed analysis of monitored data is given in **Table 4.15**.

1. **Darna river at Chehedi water works- pumping station (2660/SWMP)**
   - **Station Details:** Village- Chehedi, Taluka- Nasik, District- Nasik.
   - **Pollution source**s: No source of pollution
2. **Darna river at Aswali (Darna Dam) (2661/SWMP)**
   - **Station Details:** Village- Aswali, Taluka- Igatpuri, District- Nasik.
   - **Pollution source**s: No source of pollution
3. **Darna river at M.E.S. site Pumping station (2662/SWMP)**
   - **Station Details:** Village- Bhagur, Taluka- Nasik, District- Nasik.
   - **Pollution source**s: Pollution due to human activities

4. **Darna river at Bhagur pumping station near Pandhurli bridge (2663/SWMP)**
   - **Station Details:** Village- Bhagur, Taluka- Nasik, District- Nasik.
   - **Pollution sources**: Domestic sewage from nearby village.
5. **Darna river at Sansari (2664/SWMP)**
   - **Station Details:** Village- Sansari, Taluka- Nasik, District- Nasik
   - **Pollution sources**: Pollution due to human activities

Table 4.15(a): Five Years Descriptive Statistics for Darna River

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2660	Mean	7.9	5.8	6.5	10.3	30.7	1.1	0.8
	Std.dev	0.36	1.01	3.99	5.34	16.07	1.37	0.64
	No of Samples	36	35	29	34	35	30	34
	% Exceedance	**0.0**	**8.6**	**51.7**	**-**	**0.0**	**30.0**	**0.0**
2661	Mean	7.9	6.3	4.6	7.7	25.8	0.8	0.9
	Std.dev	0.36	0.73	1.10	3.56	17.37	1.35	0.84
	No of Samples	37	35	29	35	36	27	36
	% Exceedance	**2.7**	**0.0**	**24.1**	**-**	**0.0**	**33.3**	**0.0**
2662	Mean	7.9	6.3	5.2	12.8	33.2	1.0	1.2
	Std.dev	0.34	0.67	2.63	12.80	26.06	1.40	1.28
	No of Samples	38	36	37	37	38	31	37
	% Exceedance	**5.3**	**0.0**	**32.4**	**-**	**0.0**	**29.0**	**0.0**
2663	Mean	7.9	6.2	5.6	9.9	29.5	0.9	1.2
	Std.dev	0.45	0.65	3.16	4.32	12.89	1.24	1.11
	No of Samples	39	36	39	37	38	35	38
	% Exceedance	**7.7**	**0.0**	**38.5**	**-**	**0.0**	**25.7**	**0.0**
2664	Mean	7.8	6.1	6.2	12.1	33.8	0.9	1.4
	Std.dev	0.35	0.96	3.43	5.86	19.55	1.26	1.13
	No of Samples	39	37	39	37	38	34	37
	% Exceedance	**2.6**	**2.7**	**41.0**	**-**	**0.0**	**26.5**	**0.0**

TC and Nitrate nitrogen values in Darna River for all five stations were complying with the MPCB standards. Percentage exceedance for BOD and Ammonical nitrogen ranged from 24 to 51% and 26% to 33% respectively. The reason for this could be the waste released due to human activities or the domestic sewage discharged from nearby villages including Bhagur and Sansari. Percentage exceedance for pH was found at all stations except Chehedi water works- pumping station. It could mainly be due to the detergents used for washing clothes and utensils by villagers.

Table 4.15(b): Water Quality Index for Darna River

Station Code	2007	2008	2009	2010	2011
2660	MG	GE	--	GE	GE
2661	GE	GE	GE	GE	GE
2662	MG	GE	GE	GE	GE
2663	MG	GE	GE	GE	GE
2664	GE	GE	GE	GE	GE

On evaluation of the yearly water quality indices for the available data sets of the Darna river stations it was observed that the water quality was good to excellent at Aswali (Darna Dam), Igatpuri, Nasik and at Sansari, Talulka and district Nasik. The water quality was varying from moderately good to excellent at the other three sites viz.,Chehadi Pumping Station, Nasik; MES Pumping Station, Bhagur, Nasik; near Pandhurli Bridge, Bhagur, Nasik.

11. Deoghar (Ghonsari) River

Deoghar River located at Kankawali Taluka, in Sindhudurg station is a minor river. There is one monitoring location on this river. Detailed analysis of monitored data is given in **Table 4.16**.

1. **Deoghar River at Ghonsari Village (HP_DH_2)**
   - **Station Details:** Village-Ghonsari, Taluka-Kankawali, District-Sindhudurg
   - **Pollution sources**: Pollution due to human activities

Table 4.16 (a):Five years Descriptive Statistics for Ghonsari River

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
HP_DH_2	Mean	7.0	7.1	1.2	755.4	840.0	0.1	0.1
	Std.dev	0.37	0.62	0.37	305.32	348.81	0.0	0.06
	No of Samples	40	40	39	39	39	39	11
	% Exceedance	**0.0**	**0.0**	**0.0**	**-**	**0.0**	**0.0**	**0.0**

The water quality of Deoghar River at Ghonsari Village showed that pH, DO, BOD, TC and Ammonical nitrogen complied well with MPCB standards. However, Nitrate nitrogen data was not available for analysis.

Table 4.16(b) : Water Quality Index for Ghonsari River

Station Code	2007	2008	2009	2010	2011
HP_DH_2	MG	GE	GE	GE	GE

The monthly water quality indices from the available data set indicated that the water quality at Deoghar River in Ghosari Village was found to be good to excellent during most of the time except in 2007 when it was moderately good most of the time. The yearly WQI indicate that the water quality was good to except in 2007 when it was moderately good.

12. Ghod River

Ghod River is one of the tributaries of Bhima River. Kukri River which is also a tributary of Bhima meets Ghod River at Shirur. From Shirur a single stream of Ghod River moves towards Daund along Pune- Ahmednagar district border where it confluences with Bhima River. The Major source for water pollution is domestic sewage and local human activities. There is one monitoring location on Ghod River. Detailed analysis of monitored data is given in **Table 4.17**.

1. **Ghod river at Shirur, Pune (2665)**
   - **Station Details:** Village- Shirur, Taluka- Shirur, District- Pune
   - **Pollution sources**: Pollution due to domestic sewage and human activities

Table 4.17(a): Five years Descriptive Statistics for Ghod River

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2665	Mean	8.1	5.2	8.5	165.3	1022.1	0.6	0.3
	Std.dev	0.33	1.12	3.76	109.59	559.37	0.65	0.43
	No of Samples	43	42	42	38	43	43	42
	% Exceedance	**14.0**	**14.3**	**78.6**	**--**	**0.0**	**11.6**	**0.0**

TC and Nitrate nitrogen in Ghod complied with the MPCB standards. However, pH, DO, BOD and Ammonical Nitrogen did not comply with the standards in 14, 14.3, 78.6 and 11.6 % of the samples. The highest percent exceedance, 78.6 %, was for BOD samples. It could be due to the human activities and domestic sewage released into the river.

Table 4.17(b) : Water Quality Index for Ghod River

Station Code	2007	2008	2009	2010	2011
2665	MG	Bad	MG	MG	MG

The water quality indices evaluated for Ghod River indicated that water quality was bad to moderately good throughout the year.

13. Girna River

The Girna River originates in the Western Ghat range of Nasik District, and flows east across Nasik and Jalgaon districts, swinging north in Jalgaon District to join the Tapi River. The basin of Girna lies on the Deccan Plateau and its valley has fertile soil which is intensively farmed. MPCB has following two monitoring locations of Girna River. Detailed analysis of monitored data is given in **Table 4.18**.

1. **Girna river at Jalgaon at intake of Girna pump house (1252/NWMP)**
   - **Station Details:** Village- Girna pump house area, Taluka- Jalgaon, District- Jalgaon
   - **Pollution sources**: Industries are not allowed to discharge even treated effluents into river. Domestic pollution present.
2. **Girna river at Malegaon at Malegaon road bridge (1253/NWMP)**
   - **Station Details:** Village- Malegaon, Taluka- Malegaon, District- Nasik
   - **Pollution sources**: Industries are not allowed to discharge even treated effluents into river. Pollution due to domestic waste and human activities.

Table 4.18(a): Five years Descriptive Statistics for Girna River

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
1252	Mean	8.0	5.9	6.3	12.7	33.8	0.2	1.6
	Std.dev	0.50	0.64	2.63	6.48	20.23	0.14	1.48
	No of Samples	24	23	23	19	19	19	23
	% Exceedance	**16.7**	**0.0**	**56.5**	**-**	**0.0**	**0.0**	**0.0**
1253	Mean	7.9	5.8	5.9	10.8	28.8	0.4	1.6
	Std.dev	0.47	0.78	2.23	4.30	15.07	0.53	1.13
	No of Samples	18	18	17	16	16	14	18
	% Exceedance	**11.1**	**0.0**	**58.8**	**-**	**0.0**	**7.1**	**0.0**

For Girna River at intake of Girna Pump House and at Malegaon, DO, TC and Nitrate nitrogen complied with the MPCB standards whereas 57 and 59% exceedance was observed for BOD at both stations. The reason for this could be the domestic waste released into these rivers Also pH do not comply with MPCB standards at both the sites.

Table 4.18(b) : Water Quality Index for Girna River

Station Code	2007	2008	2009	2010	2011
1252	MG	GE	GE	MG	GE
1253	GE	GE	GE	MG	GE

The WQI evaluation of the available data set of Girna River stations shows that the water quality of Girna River varied from moderately good to excellent. This could be because industries are not allowed to discharge even the treated effluent into the river.

14. Godavari River

Godavari River runs from western to southern India and is considered to be one of the big river basins in India. With a length of 1465 km, it is the second longest river in India (only after the Ganges), that runs within the country. The Godavari River is a major waterway in central India, originating in the Western Ghats Trimbakeshwar, in the Nasik Subdivision or District of Maharashtra and flowing eastwardly across the Deccan Plateau through the state of Maharashtra. It is known as *dakshin ganga* (Southern Ganges). It enters Andhra Pradesh in Nizamabad district, crosses the Deccan Plateau and then turns to flow in a southeast direction until it empties into the Bay of Bengal. At present there are 51 monitoring locations on Godavari River. Monitoring is carried out under various programmes namely NWMP, SWMP and Hydrology project. The details of monitoring locations are given below. Detailed analysis of monitored data is given in **Table 4.19**.

Sr.	Station Name /Code	Station Details
1	Dhalegaon (HP_GD_2)	Taluka- Majalgaon; District- Beed
2	Hirapur (HP_GD_4)	Taluka- Georai; District- Beed
3	Kesrali (HP_GD_5)	Taluka- Biloli; District- Nanded

Sr.	Station Name /Code	Station Details
4	Killari (HP_GD_6)	Taluka- Georai; District- Beed
5	Pishor (HP_GD_14)	Taluka- Kannad; District- Aurangabad
6	Prnabridge (HP_GD_15)	Taluka- Nanded; District- Nanded
7	Takli (HP_GD_20)	Taluka- Devni; District- Latur
8	Taklidhangar (HP_GD_21)	Taluka- Nanded; District- Nanded
9	Toka (HP_GD_22)	Taluka- Newasa; District- Ahmednagar
10	Wadvali (HP_GD_23)	Taluka- Paithan; District- Aurangabad
11	Yelli (HP_GD_24)	Taluka- Nanded; District- Nanded
12	Zari (HP_GD_25)	Taluka- Parbhani; District- Parbhani
13	Bhandardara (HP_GD_1)	Taluka- Nanded; District- Nanded
14	Gangapur Dam (HP_GD_3)	Taluka- Nasik; District- Nasik
15	Kopargaon (HP_GD_7)	Taluka- Kopargaon; District- Ahmednagar
16	Anantwadi (HP_GD_26)	Taluka- Mahagaon; District- Yavatmal
17	Damrencha (HP_GD_27)	Taluka- Aheri; District- Gadchiroli
18	Deori (HP_GD_28)	Taluka- Gondia; District- Gondia
19	Dhaba (HP_GD_29)	Taluka- Gondpipri; District- Chandrapur
20	Drugwada (HP_GD_30)	Taluka- Ashti; District- Wardha
21	Kamtheekhairi(HP_GD_31)	Taluka- Parseoni; District- Nagpur
22	Kardha (HP_GD_32)	Taluka- Bhandara; District- Bhandara
23	Kolgaon (HP_GD_33)	Taluka- Wani; District- Yavathmal
24	Mahagaon (HP_GD_34)	Taluka- Aheri; District- Gadchiroli
25	Mathani (HP_GD_35)	Taluka- Mouda; District- Nagpur
26	Petta (HP_GD_36)	Taluka- Ettapalli; District- Gadchiroli
27	Saiphal (HP_GD_37)	Taluka- Ghatanji; District- Yavatmal
28	Dindora (Soit) (HP_GD_38)	Taluka- Warora; District- Chandrapur
29	Temburdoh (HP_GD_39)	Taluka- Saoner; District- Nagpur
30	Chincholi (HP_GD_40)	Taluka- Brahmapuri; District- Chandrapur
31	Wagholi Butti (HP_GD_41)	Taluka- Saoli; District- Chandrapur
32	Warud Bagaji (HP_GD_42)	Taluka- Tiwasa; District- Amravati
33	Dhalegaon (12)	Taluka-- Pathari; District-- Parbhani
34	U/S of Gangapur Dam (1095)	Taluka- Nasik; District- Nasik
35	Panchavati at Ramkund (1096)	Taluka- Nasik; District- Nasik
36	Raher (1209)	Taluka- Nayagaon; District- Nanded
37	Intake of pump house (1210)	Taluka- Vishnupuri; District- Nanded
38	Nasik D/s near Amardham (1211)	Taluka- Nasik; District- Nasik
39	Jaikwadi Dam (1312)	Taluka- Paithan; District- Aurangabad
40	Latur water intake (2157)	Taluka- Kalumb; District- Osmanabad
41	Paithan intake pump house. Village- Jayakwadi (2158)	Taluka- Paithan; District- Aurangabad
42	D/s of Paithan at Pathegaon bridge. Pathegaon, (2159)	Taluka- Paithan; District- Aurangabad
43	U/s of Aurangabad Reservoir, Kaigaon Deori (2160)	Taluka- Gangapur; District- Aurangabad
44	Jalana Intake water pump house, Shahabad Deori (2161)	Taluka- Ambad; District- Jalna

Sr.	Station Name /Code	Station Details
45	Near Someshwar Temple (2177)	Taluka- Nasik; District- Nasik
46	Chikhali nallah meets Godavari river, (2178)	Taluka- Nasik; District- Nasik
47	Hanuman Ghat, Nasik City (2179)	Taluka- Nasik; District- Nasik
48	Near Tapovan.Village (2180)	Taluka- Nasik; District- Nasik
49	Kapila-Godavari confluence point (2181)	Taluka- Nasik; District- Nasik
50	Saikheda.Village- Saikheda, (2182)	Taluka- Niphad; District- Gondia
51	Nandur-Madhmeshwar Dam. Village-Nandur (2183)	Taluka- Niphad; District- Gondia

Table 4.19(a)I : Two years Descriptive Statistics for Godavari River

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2178	Mean	7.2	4.4	23.8	15.5	34.8	9.8	1.9
	Std.dev	1.41	2.10	12.83	11.32	19.16	11.75	1.87
(2008-2009)	No of Samples	22	22	22	21	22	20	21
	% Exceedance	**18.2**	**40.9**	**90.9**	**--**	**0.0**	**65.0**	**0**
2179	Mean	7.8	5.2	10.3	14.4	33.0	1.2	1.2
	Std.dev	0.61	1.58	5.89	7.49	13.74	1.88	1.30
(2008-2009)	No of Samples	18	19	19	19	19	17	19
	% Exceedance	**5.6**	**15.8**	**84.2**	**--**	**0.0**	**17.6**	**0**
HP_GD_1	Mean	7.7	6.7	8.3	306.7	490.0	0.3	0.0
	Std.dev	0.57	0.66	0.85	126.62	111.36	0.36	0.0
(2007-2008)	No of Samples	3	3	3	3	3	3	0.0
	% Exceedance	**0.0**	**0.0**	**100.0**	**-**	**0.0**	**0.0**	**0.0**
HP_GD_3	Mean	8.1	7.7	13.1	253	1573	0.1	0.0
	Std.dev	0.75	3.69	3.58	170.9	640.4	0.01	0.0
(2007-2008)	No of Samples	3	3	3	3	3	3	0.0
	% Exceedance	**33.3**	**33.3**	**100.0**	**--**	**0**	**0**	**0.0**
HP_GD_7	Mean	7.9	6.3	10.5	11326.3	19075.0	0.1	1.1
	Std.dev	0.63	1.04	2.09	7755.1	13286.7	0.01	0.29
(2007 & 2008)	No of Samples	10	10	8	8	8	10	3
	% Exceedance	**0.0**	**0.0**	**62.5**	**--**	**50.0**	**0.0**	**0**
HP_GD_5	Mean	7.0	2.8	0.8	7.0	8.7	26.7	1.1
	St deviation	1.97	1.62	0.53	2.86	12.79	0.88	0.42
(2010)	No of samples	6	9	3	8	4	7	2
	% Exceedance	**66.7**	**0.0**	**0.0**	**--**	**50.0**	**100.0**	**0.0**

Table 4.19(a)II : Three years Descriptive Statistics for Godavari River

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
HP_GD_2	Mean	8.1	6.0	2.5	6	104	--	--
	Std.dev	0.18	0.81	0.49	7.96	158.05	--	--
(2007-2009)	No of Samples	10	11	11	8	11	--	--
	% Exceedance	**0**	**0**	**0**	**--**	**0**	**--**	**--**
HP_GD_14	Mean	8.0	5.9	2.1	2.9	10.9	0.1	0.0
	Std.dev	0.25	0.42	0.42	3.29	7.17	0.0	0.0
(2007-2009)	No of Samples	7	7	7	7	7	1	0.0
	% Exceedance	**0.0**	**0.0**	**0.0**	**--**	**0.0**	**0.0**	**0.0**

Table 4.19(a)III (Contd..) :
Three years Descriptive Statistics for Godavari River

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
HP_GD_25	Mean	7.9	6.1	2.0	3	13	--	--
	Std.dev	0.28	0.45	0.63	1.91	7.42	--	--
(2007-2009)	No of Samples	8	8	8	7	8	--	--
	% Exceedance	**0**	**0**	**0**	**--**	**0**	**--**	**--**
2157	Mean	8.0	4.3	4.9	7.0	333.3	3.0	0.8
	Std.dev	0.20	0.44	0.12	0.00	28.87	0.65	0.63
(2009-2011)	No of Samples	3	3	3	3	3	3	3
	% Exceedance	**0.0**	**33.3**	**0.0**	**--**	**0.0**	**100.0**	**0**
HP_GD_34	Mean	8.3	6.6	2.6	18.3	141.2	0.1	1.0
	Std.dev	0.13	0.61	0.34	22.74	210.63	0.01	0.33
(2007-2009)	No of Samples	13	14	12	9	11	2	4
	% Exceedance	**0.0**	**0.0**	**0.0**	**--**	**0.0**	**0.0**	**0**
HP_GD_35	Mean	8.3	6.4	2.9	61.2	159.4	0.1	0.9
	Std.dev	0.07	0.51	0.41	78.61	211.74	0.01	0.17
(2007-2009)	No of Samples	13	14	13	13	13	4	3
	% Exceedance	**0.0**	**0.0**	**0.0**	**--**	**0.0**	**0.0**	**0**
HP_GD_36	Mean	8.1	6.5	2.4	21.4	51.5	0.3	0.5
	Std.dev	0.27	0.84	0.51	28.50	61.35	0.35	0.12
(2007-2009)	No of Samples	13	13	12	10	11	2	3
	% Exceedance	**0.0**	**0.0**	**0.0**	**--**	**0.0**	**0.0**	**0**

Table 4.19(a)IV: Four years Descriptive Statistics for Godavari River

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
HP_GD_6	Mean	8.1	6.4	2.0	8.2	18.4	--	0.4
	St deviation	0.29	0.67	0.65	6.59	11.89	--	0.17
(2007-2010)	No of samples	14	14	14	14	14	--	4
	% Exceedance	**0.0**	**0.0**	**0.0**	**--**	**0.0**	**--**	**0.0**
HP_GD_15	Mean	8.2	6.4	2.2	5.1	22.9	--	1.3
	Std.dev	0.32	1.36	0.75	4.45	15.79	--	0.40
(2007-2010)	No of Samples	15	15	15	15	15	--	3
	% Exceedance	**13.3**	**0.0**	**0.0**	**--**	**0.0**	**--**	**0**
HP_GD_20	Mean	8.0	6.5	2.0	8.7	18.0	0	1.4
	Std.dev	0.22	0.65	0.63	6.98	12.91	0	0.51
(2007-2010)	No of Samples	10	10	10	10	10	0	5
	% Exceedance	**0.0**	**0.0**	**0.0**	**--**	**0.0**	**0**	**0**
HP_GD_21	Mean	8.0	6.2	2.1	27.1	89.8	0.3	1.3
	Std.dev	0.52	0.55	0.86	54.59	140.52	0.31	0.47
(2007-2010)	No of Samples	13	12	13	8	13	2	3
	% Exceedance	**7.7**	**0.0**	**0.0**	**--**	**0.0**	**0.0**	**0**
HP_GD_24	Mean	8.1	6.2	2.0	5.2	16.5	0.7	1.8
	Std.dev	0.24	0.68	0.60	5.89	14.01	0	1.18
(2007-2010)	No of Samples	15	15	16	11	16	1	4
	% Exceedance	**0.0**	**0.0**	**0.0**	**--**	**0.0**	**0.0**	**0**

Table 4.19(a)V : Four years Descriptive Statistics for Godavari River

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2158	Mean	7.7	6.0	4.6	6.5	287.5	1.4	0.5
	Std.dev	0.44	1.30	1.15	1.29	23.14	1.44	0.24
(2008-2011)	No of Samples	21	21	21	21	20	16	18
	% Exceedance	**4.8**	**14.3**	**33.3**	**--**	**0.0**	**50.0**	**0**
2159	Mean	7.9	6.1	4.5	6.4	283.0	1.7	4.1
	Std.dev	0.59	1.35	1.19	1.50	32.46	1.91	4.35
(2008-2011)	No of Samples	21	21	21	21	20	15	19
	% Exceedance	**14.3**	**14.3**	**23.8**	**--**	**0.0**	**46.7**	**0**
2160	Mean	7.7	6.2	4.0	6.6	291.0	1.7	1.0
	Std.dev	0.46	1.12	1.10	1.61	37.67	1.57	0.61
(2008-2011)	No of Samples	21	21	21	21	21	17	19
	% Exceedance	**0.0**	**4.8**	**9.5**	**--**	**0.0**	**52.9**	**0**
2161	Mean	7.7	5.9	4.0	6.6	280.0	1.1	2.3
	Std.dev	0.43	1.28	0.92	1.04	21.21	1.27	3.85
(2008-2011)	No of Samples	18	18	18	18	17	15	16
	% Exceedance	**0.0**	**16.7**	**11.1**	**--**	**0.0**	**40.0**	**0**
2180	Mean	7.7	4.6	12.9	25.7	75.7	1.7	1.9
	Std.dev	0.59	1.36	6.47	20.71	65.84	2.94	1.77
(2008-2011)	No of Samples	43	43	43	43	42	39	42
	% Exceedance	**9.3**	**23.3**	**93.0**	**--**	**0.0**	**28.2**	**0**
2181	Mean	7.7	4.7	12.2	20.3	57.1	1.0	2.0
	Std.dev	0.54	1.63	8.02	12.78	56.11	1.42	1.71
(2008-2011)	No of Samples	43	43	43	42	41	35	42
	% Exceedance	**9.3**	**25.6**	**90.7**	**--**	**0.0**	**22.9**	**0**
2182	Mean	7.8	6.0	5.8	11.5	34.1	0.5	1.4
	Std.dev	0.43	0.59	1.62	8.81	42.69	0.79	1.25
(2008-2011)	No of Samples	43	40	40	43	43	40	41
	% Exceedance	**4.7**	**2.5**	**60.0**	**-**	**0.0**	**7.5**	**0**
2183	Mean	7.8	6.3	4.5	7.5	20.8	0.3	1.2
	Std.dev	0.31	0.54	1.30	4.77	15.34	0.24	1.19
(2008-2011)	No of Samples	43	43	40	40	35	40	40
	% Exceedance	**2.3**	**0.0**	**22.5**	**-**	**0.0**	**0.0**	**0**
HP_GD_4	Mean	8.1	5.5	1.7	8.9	22.9	--	--
	Std.dev	0.91	0.58	0.47	4.38	15.01	--	--
(2008-2011)	No of Samples	11	9	11	10	11	--	--
	% Exceedance	**45.5**	**0.0**	**0.0**	--	**0.0**	--	--
HP_GD_22	Mean	8.1	6.1	2.6	6.1	19.6	0.1	1.5
	Std.dev	0.26	0.67	1.65	7.22	13.73		0.21
(2007-2010)	No of Samples	21	22	22	12	20	1	7
	% Exceedance	**4.8**	**0.0**	**13.6**	--	**0.0**	**0.0**	**0**
HP_GD_23	Mean	8.2	6.3	1.6	5.8	19.5	0.4	1.1
	Std.dev	0.50	1.24	0.58	5.28	12.26	0.40	0.501
(2007-2010)	No of Samples	22	22	21	14	20	2	7
	% Exceedance	**27.3**	**0.0**	**0.0**	--	**0.0**	**0.0**	**0**

Table 4.19(a)V : Four years Descriptive Statistics for Godavari River

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
HP_GD_28	Mean	8.3	6.6	2.5	31.6	52.4	0.1	0.9
	Std.dev	0.26	0.58	0.47	46.09	39.72	0.0	0.42
(2007-2010)	No of Samples	13	13	12	12	9	1	3
	% Exceedance	**7.7**	**0.0**	**0.0**	--	**0.0**	**0.0**	**0**
HP_GD_30	Mean	8.4	6.4	2.6	12.3	45.9	0.1	1.1
	Std.dev	0.07	0.58	0.40	7.32	34.69	0.00	0.36
(2008-2011)	No of Samples	10	9	8	7	7	2	4
	% Exceedance	**0.0**	**0.0**	**0.0**	--	**0.0**	**0.0**	**0**
HP_GD_40	Mean	8.3	6.4	2.9	24.8	81.7	0.1	1.0
	Std.dev	0.10	0.60	0.55	27.19	79.05	0.02	0.47
(2008-2011)	No of Samples	12	14	12	10	12	5	4
	% Exceedance	**0.0**	**0.0**	**0.0**	--	**0.0**	**0.0**	**0**

Table 4.19(a)VI: Five years Descriptive Statistics for Godavari River (2007-11)

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2177	Mean	7.9	5.8	6.1	7.7	20.8	0.9	1.1
	Std.dev	0.43	0.70	1.95	4.22	10.83	1.15	1.27
	No of Samples	23	21	23	22	22	21	23
	% Exceedance	**4.3**	**0.0**	**56.5**	**--**	**0.0**	**19.0**	**0**
HP_GD_26	Mean	8.4	6.4	2.8	62.6	280.6	0.1	0.9
	Std.dev	0.13	0.60	0.55	75.97	372.12	0.02	0.27
	No of Samples	42	42	39	33	40	22	10
	% Exceedance	**4.8**	**0.0**	**0.0**	--	**0.0**	**0.0**	**0**
HP_GD_27	Mean	8.2	6.6	2.3	31.3	108.1	0.2	0.6
	Std.dev	0.24	0.53	0.48	72.73	276.47	0.28	0.22
	No of Samples	14	13	13	10	10	2	4
	% Exceedance	**0.0**	**0.0**	**0.0**	--	**0.0**	**0.0**	**0**
HP_GD_29	Mean	8.3	5.6	3.7	100.3	332.0	0.1	1.4
	Std.dev	0.19	0.89	0.60	102.26	341.15	0.03	0.48
	No of Samples	44	45	41	43	42	28	12
	% Exceedance	**9.1**	**2.2**	**0.0**	--	**0.0**	**0.0**	**0**
HP_GD_31	Mean	8.3	6.4	2.6	36.9	237.8	0.1	1.4
	Std.dev	0.15	0.45	0.33	46.82	347.01	0.00	0.06
	No of Samples	12	14	13	12	13	3	3
	% Exceedance	**0.0**	**0.0**	**0.0**	--	**0.0**	**0.0**	**0**
HP_GD_32	Mean	8.3	6.5	2.6	59.7	68.3	0.6	0
	Std.dev	0.17	0.58	0.45	81.48	50.59	0.06	0
	No of Samples	13	13	12	13	10	3	0
	% Exceedance	**0.0**	**0.0**	**0.0**	--	**0.0**	**0.0**	**0**
HP_GD_33	Mean	8.4	6.3	2.9	78.0	317.2	0.1	1.1
	Std.dev	0.08	0.58	0.57	90.47	388.44	0.02	0.32
	No of Samples	43	44	40	43	44	27	11
	% Exceedance	**0.0**	**0.0**	**0.0**	--	**0.0**	**0.0**	**0**
HP_GD_37	Mean	8.4	6.4	2.8	40.6	97.6	0.1	1.1
	Std.dev	0.07	0.58	0.36	44.18	75.36	0.00	0.00
	No of Samples	11	13	12	12	11	3	3
	% Exceedance	**0.0**	**0.0**	**0.0**	**-**	**0.0**	**0.0**	**0**

Table 4.19(a)VI: Five years Descriptive Statistics for Godavari River (2007-11)

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
HP_GD_38	Mean	8.4	6.3	2.9	76.1	258.1	0.1	1.1
	Std.dev	0.15	0.54	0.48	94.06	304.31	0.03	0.35
	No of Samples	44	44	40	42	43	27	12
	% Exceedance	**9.1**	**0.0**	**0.0**	--	**0.0**	**0.0**	0
HP_GD_39	Mean	8.3	6.3	2.7	51.2	231.3	0.0	1.2
	Std.dev	0.20	0.59	0.36	94.92	393.36	0.02	0.31
	No of Samples	14	14	13	12	11	3	4
	% Exceedance	**0.0**	**0.0**	**0.0**	--	**0.0**	**0.0**	**0**
HP_GD_41	Mean	8.4	6.6	2.7	23.8	105.9	0.1	1.2
	Std.dev	0.14	0.61	0.50	23.30	103.92	0.01	0.40
	No of Samples	14	14	13	10	12	3	4
	% Exceedance	**7.1**	**0.0**	**0.0**	--	**0.0**	**0.0**	**0**
HP_GD_42	Mean	8.3	6.3	2.7	51.3	183.0	0.0	0.8
	Std.dev	0.22	0.54	0.46	87.74	288.82	0.05	0.28
	No of Samples	44	44	40	38	40	10	10
	% Exceedance	**6.8**	**0.0**	**0.0**	--	**0.0**	**0.0**	**0**
12	Mean	7.8	6.4	4.2	5.4	208.1	0.9	1.4
	Std.dev	1.19	0.97	0.80	2.62	91.68	1.44	2.01
	No of Samples	42	41	40	41	42	39	41
	% Exceedance	**4.8**	**2.4**	**10.0**	--	**0.0**	**23.1**	**0**
1095	Mean	7.8	6.5	4.7	6.1	19.5	0.2	0.8
	Std.dev	0.42	0.54	1.57	3.82	9.86	0.26	0.86
	No of Samples	54	54	54	49	54	50	53
	% Exceedance	**7.4**	**0.0**	**20.4**	--	**0.0**	**0.0**	0
1096	Mean	7.7	5.5	9.2	23.5	143.5	0.4	1.5
	Std.dev	0.42	0.81	4.08	17.76	258.73	0.36	1.36
	No of Samples	55	55	56	55	55	52	56
	% Exceedance	3.6	0.0	85.7	--	0.0	1.9	0
1209	Mean	8.0	6.3	4.2	5.4	214.4	0.6	1.1
	Std.dev	0.49	0.95	1.02	2.31	81.43	0.93	1.06
	No of Samples	54	51	55	53	55	47	54
	% Exceedance	**9.3**	**5.9**	**10.9**	--	**0.0**	**17.0**	**0**
1210	Mean	8.1	6.8	4.4	5.5	199.7	0.1	1.0
	Std.dev	0.32	0.51	1.06	2.82	86.94	0.09	1.04
	No of Samples	36	36	37	36	37	31	36
	% Exceedance	**8.3**	**0.0**	**16.2**	--	**0.0**	**0.0**	0
1211	Mean	7.8	5.2	10.1	23.2	183.4	0.4	1.1
	Std.dev	0.47	0.88	4.32	19.98	338.55	0.54	1.26
	No of Samples	34	34	33	33	34	32	34
	% Exceedance	**2.9**	**5.9**	**90.9**	--	**0.0**	**3.1**	**0**
1312	Mean	7.8	6.3	4.1	6.7	264.1	1.0	0.6
	Std.dev	0.46	1.06	0.91	1.28	46.26	1.37	0.43
	No of Samples	34	34	34	32	34	31	33
	% Exceedance	**5.9**	**5.9**	**5.9**	--	**0.0**	**25.8**	**0**

The WQI was found to be good to excellent at the following 24 sites in Godavari River which are listed below.

Table 4.19(b) : Water Quality Index for Godavari River

Sr.	Station Code	07	08	09	10	11	Sr.	Station Code	07	08	09	10	11
1	**HP_GD_2**	GE	GE	GE	--	--	27	**HP_GD_37**	GE	GE	GE	GE	GE
2	**HP_GD_4**	--	GE	GE	GE	GE	28	**HP_GD_38**	GE	GE	GE	GE	GE
3	**HP_GD_5**	--	--	--	GE	--	29	**HP_GD_39**	GE	GE	GE	GE	GE
4	**HP_GD_6**	GE	GE	GE	GE	--	30	**HP_GD_40**	--	GE	GE	GE	GE
5	**HP_GD_14**	GE	GE	GE	--	--	31	**HP_GD_41**	GE	GE	GE	GE	GE
6	**HP_GD_15**	GE	GE	GE	GE	--	32	**HP_GD_42**	GE	GE	GE	GE	GE
7	**HP_GD_20**	GE	GE	GE	GE	--	33	**12**	GE	GE	GE	GE	GE
8	**HP_GD_21**	GE	GE	GE	GE	--	34	**1095**	GE	GE	GE	GE	GE
9	**HP_GD_22**	GE	GE	GE	GE	--	35	**1096**	GE	GE	MG	MG	GE
10	**HP_GD_23**	GE	GE	GE	GE	--	36	**1209**	GE	GE	GE	GE	GE
11	**HP_GD_24**	GE	GE	GE	GE	--	37	**1210**	GE	GE	GE	GE	GE
12	**HP_GD_25**	GE	GE	GE	--	--	38	**1211**	MG	GE	MG	MG	MG
13	**HP_GD_1**	MG	MG	--	--	--	39	**1312**	GE	GE	GE	GE	GE
14	**HP_GD_3**	MG	Bad	--	--	--	40	**2157**	--	--	GE	GE	GE
15	**HP_GD_7**	--	Bad	--	Bad	--	41	**2158**	--	GE	GE	GE	GE
16	**HP_GD_26**	GE	GE	GE	GE	GE	42	**2159**	--	GE	GE	GE	GE
17	**HP_GD_27**	GE	GE	GE	GE	GE	43	**2160**	--	GE	GE	GE	GE
18	**HP_GD_28**	GE	GE	GE	GE	--	44	**2161**	--	GE	GE	GE	GE
19	**HP_GD_29**	GE	GE	MG	GE	GE	45	**2177**	MG	GE	GE	GE	GE
20	**HP_GD_30**	--	GE	GE	GE	GE	46	**2178**	--	Bad	MG	--	--
21	**HP_GD_31**	GE	GE	GE	GE	GE	47	**2179**	--	MG	MG	--	--
22	**HP_GD_32**	GE	GE	GE	GE	GE	48	**2180**	--	MG	MG	MG	MG
23	**HP_GD_33**	GE	GE	GE	GE	GE	49	**2181**	--	MG	MG	GE	MG
24	**HP_GD_34**	GE	GE	GE	--	--	50	**2182**	--	GE	GE	GE	GE
25	**HP_GD_35**	GE	GE	GE	--	--	51	**2183**	--	GE	GE	GE	GE
26	**HP_GD_36**	GE	GE	GE	--	--							

Table 4.19(c) gives the number of sites out of 51 sites of Godavari with percent exceedances in different ranges for BOD, DO, TC and pH

Table 4.19(c) : Number of Sites with Percent Exceedances for BOD, DO, TC and pH

Percent Exceedance	BOD	DO	TC	pH
0%	29	35	49	22
1-20%	7	11	0	25
20-40%	4	4	0	2
40-60%	1	1	0	1
60-80%	2	0	2	1
80-100%	6	0	0	0

Figures 4.3 show the pie chart for percent exceedances for BOD, DO, pH and TC for 51 locations in Godavari River. 59% of the sites have no exceedance of BOD from the standard. 15% of the sites have percent exceedance of BOD between 1-20% and so on.

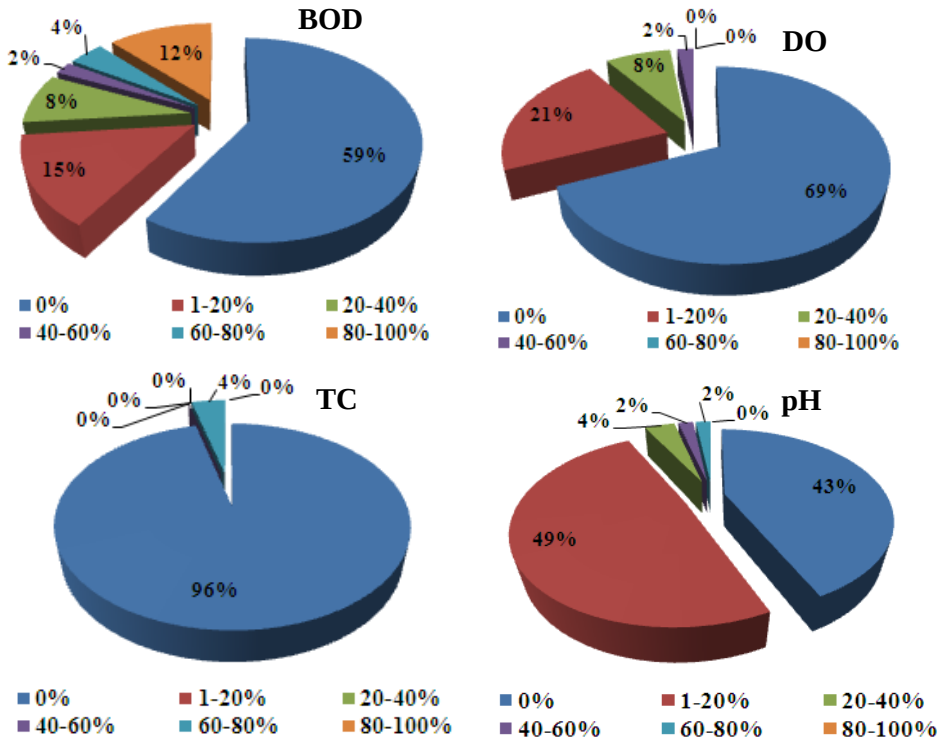

Figure 4.3 : Percent Exceedances at 51 Monitoring Locations of Godavari River

The average water quality index for five years evaluated at 51 sites showed that 84% of the locations had water quality "Good to Excellent", at seven locations water quality was "Medium to Good" and at 2% of the locations (1 location) that is at Kopargaon water quality was bad **(Figure 4.4)**.

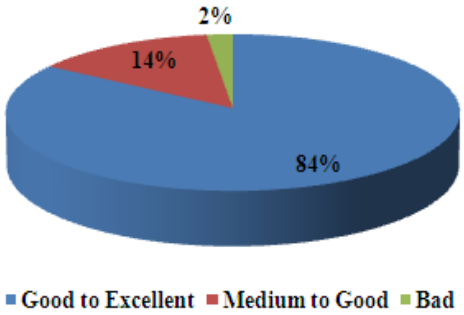

Figure 4.4: Water Quality Index of 51 Monitoring locations of Godavari River

15. Gomai River

Gomai River is a tributary of Tapi River. It originates in Satpura Mountain Range and merges in Tapi River around 2 km east of Prakasha. Gomai River itself has many small tributary rivers like Susri River (passing by Sultanpur), Tipria River (passing by Mandane), Umri River, Sukhi River. MPCB has monitored following location of Girna River. Detailed analysis of monitored data is given in **Table 4.20**.

1. **Gomai river at D/s of Shahada (2666/SWMP)**
   - **Station Details:** Village- Shahada, Taluka- Dhule, District- Dhule
   - **Pollution sources**: Sewage from Shahada town

Table 4.20(a): Five years Descriptive Statistics for Gomai River (2007-11)

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2666	Mean	8.0	5.9	7.4	14.1	45.5	1.2	1.9
	Std.dev	0.47	0.79	3.26	10.18	44.94	1.39	1.54
	No of Samples	29	26	29	22	23	28	29
	% Exceedance	**10.3**	**0.0**	**62.1**	**--**	**0.0**	**32.1**	**0.0**

The descriptive statistics of Gomai River showed that DO, TC and Nitrate nitrogen values complied with the MPCB standards. However, pH, BOD and Ammonical nitrogen exceeded the permissible limits. The higher percent exceedance was for BOD and Ammonical nitrogen, the exceedance being 62% and 32% respectively. It could be due to the sewage released from Shahada town into the river. 10% of pH samples exceeded the standards the probable reason may be releases of wastewater from the town.

Table 4.20(b) : Water Quality Index for Gomai River

Station Code	2007	2008	2009	2010	2011
2666	MG	GE	MG	GE	GE

The water quality indices of the available data set of Gomai River, D/S. of Shahada, showed that the water quality varied from moderately good to good to excellent for all five years 2007-2011.

16. Hiwara River

Hiwara River is a small tributary located at the Pachora village in Jalgaon district. It flows independently for short distance and later gets merged with Girna River at Pachora. Mostly domestic sewage generated at Pachora and nearby villages gets discharged in the river stream. MPCB has monitored following location of Hiwara River. Detailed analysis of monitored data is given in **Table 4.21**.

1. **Hiwara river at D/s of Pachora (2667/SWMP)**
   - **Station Details:** Village- Pachora, Taluka- Jalgaon, District- Jalgaon
   - **Pollution sources**: Sewage from Pachora City

Table 4.21(a) : Five years Descriptive Statistics for Hiwara River

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2667	Mean	8.1	6.0	8.2	18.3	53.7	1.2	1.4
	Std.dev	0.54	0.80	5.28	15.19	60.03	1.55	1.11
	No of Samples	30	25	29	26	26	25	30
	% Exceedance	**23.3**	**0.0**	**65.5**	**--**	**0.0**	**32.0**	**0.0**

It was observed that DO, TC and Nitrate nitrogen were complying with MPCB standards whereas pH, BOD and Ammonical nitrogen exceeded the standards. Highest percent exceedance i.e. 65% was for BOD and then 32% for Ammonical nitrogen. The reason for this could be the sewage released from Pachora city into the river.

Table 4.21(b): Water Quality Index for Hiwara River

Station Code	2007	2008	2009	2010	2011
2667	MG	MG	--	MG	GE

17. Indrayani River

Indrayani River is located in Pune district. One of the main streams of the river originated from the Andhra Lake and other one from the lake located near the Karla village. Both the streams confluence at Ambi village and from this point onward it flows as main Indrayani River. This is one of the major tributary of Bhima River which covers major area around the Pune city. Sampling location is located at the villages like Moshigaon and Alandi. Being the religious place, Alandi is found to be populous. Many villages utilize river water for domestic and irrigation purpose, especially for the Sugarcane and other valuable crops. Major disposal of domestic sewage generated from nearby villages and Pune city get discharged in the river stream. MPCB has monitored following three locations of Indrayani River. Detailed analysis of monitored data is given in **Table 4.22**.

1. **Indrayani river at D/s of Alandigaon, Pune (2197/SWMP)**
   - **Station Details:** Village- Alandigaon, Taluka- Haweli, District- Pune
   - **Pollution sources**: Pollution due to human activities and domestic waste.
2. **Indrayani river at D/s of Moshi village (2668/SWMP)**
   - **Station Details:** Village- Moshi, Taluka- Haveli, District- Pune.
   - **Pollution sources**: Agricultural runoff, domestic waste and other human activities.
3. **Indrayani river at U/s of Moshigaon, Pune (2669/SWMP)**
   - **Station Details:** Village- Moshigaon, Taluka- Haweli, District- Pune
   - **Pollution sources**: Pollution due to domestic waste, agricultural runoff and human activities

Table 4.22(a): Five years Descriptive Statistics for Indrayani River

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2197	Mean	7.9	4.9	10.3	172.6	1190.1	1.6	0.3
	Std.dev	0.42	1.26	5.40	96.42	547.77	3.05	0.26
	No of Samples	53	52	52	52	53	52	52
	% Exceedance	**1.9**	**19.2**	**86.5**	**--**	**0.0**	**19.2**	**0.0**
2668	Mean	7.9	4.8	10.9	199.0	1298.8	0.6	0.3
	Std.dev	0.47	1.29	5.84	86.66	579.51	0.52	0.31
	No of Samples	45	44	44	45	43	44	44
	% Exceedance	**8.9**	**25.0**	**93.2**	**--**	**0.0**	**6.8**	**0.0**
2669	Mean	7.9	5.2	9.2	136.8	940.3	0.6	0.2
	Std.dev	0.44	1.12	4.98	85.80	552.21	0.55	0.14
	No of Samples	42	43	43	43	43	42	42
	% Exceedance	**4.8**	**11.6**	**83.7**	**--**	**0.0**	**7.1**	**0.0**

It was observed that at all the three stations of Indrayani River i.e. D/s of Alandigaon, D/s of Moshi Village, U/s of Moshi Village, TC and Nitrate nitrogen complied with the MPCB standards. However DO, BOD and Ammonical nitrogen exceed the MPCB standards at all three stations. pH is also not complying with MPCB standards at D/s and U/s of Moshi village.

Table 4.22(b) : Water Quality Index for Indrayani River

Station Code	2007	2008	2009	2010	2011
2197	MG	Bad	MG	MG	MG
2668	MG	MG	Bad	MG	Bad
2669	MG	MG	MG	MG	MG

The water quality of Indrayani River at D/s of Alandigaon, Pune and D/s of Moshi village were bad during some months. The monthly water quality of Indrayani River at U/s of Moshigaon, Pune varied between bad to good to excellent which resulted in the water quality being moderately good on average.

18. Kajvi River

Kajvi River originates in Ratnagiri district and flows through the Rajapur taluka and finally meets Arabian Sea. Main watercourse of the river is formed by small water stream flow from Kolhapur district border. River basin expands from Rajapur. Small villages utilize the water for domestic purpose. MPCB has monitored following two locations of Kajvi River under Hydrology Project. Detailed analysis of monitored data is given in **Table 4.23**.

1. **Kajvi River at Anjanari (HP_KJ_1)**
   - **Station Details:** Village- Anjanari, Taluka- Lanja, District- Ratnagiri
   - **Pollution sources**: Domestic waste, agricultural runoff and human activities
2. **Kajvi River at Pastewadi (HP_KJ_2)**
   - **Station Details:** Village- Pastewadi, Taluka-Sangmeshwar, District- Ratnagiri
   - **Pollution sources**: Domestic waste, agricultural runoff and human activities

Table 4.23(a): Five years Descriptive Statistics for Kajvi River

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
HP_KJ_1	Mean	7.7	7.1	1.3	1184.5	1840.2	0.1	0.1
	Std.dev	0.39	0.54	0.49	1408.08	3021.44	0.00	0.10
	No of Samples	47	46	46	46	46	--	--
	% Exceedance	**4.3**	**0.0**	**0.0**	--	**13.0**	--	--
HP_KJ_2	Mean	7.8	7.7	1.2	1200.8	1565.4	0.1	0.1
	Std.dev	0.44	0.81	0.46	1285.22	1807.02	0.00	0.08
	No of Samples	34	33	33	33	33	--	--
	% Exceedance	**5.9**	**0.0**	**0.0**	--	**3.0**	--	--

The descriptive statistics of Anjanari and Pastewadi stations of Kajvi River showed that DO, BOD and Ammonical nitrogen complied with the MPCB standards. However pH exceeded the standards at both the stations and TC exceeded at Anjanari station by 13% and 3% at Pastewadi station.

Table 4.23(b) : Water Quality Index for Kajvi River

Station Code	2007	2008	2009	2010	2011
HP_KJ_1	GE	GE	GE	GE	GE
HP_KJ_2	GE	GE	GE	GE	GE

The monthly water quality at Anjanari station was good to excellent most of the time except in few months when it was moderately good. It could be due to some unusual human activities in those months. At Pastewadi station the monthly water quality index varied from moderately good to excellent for the available data set. The annual WQI were good to excellent at both the stations.

19. Kalu River

Kalu River is located in Murbad taluka of Thane district. It covers major area of Murbad and nearby villages like Atale Village; many small polluting industries are located on the bank of the Kalu River which discharges their effluent in the river. Also, the local human activities and domestic wastewater disposal is the major cause of water pollution. During its journey, Kalu River meets Bhatsa River and finally meets Arabian Sea at Thane creek. MPCB has monitored following location of Kalu River. Detailed analysis of monitored data is given in **Table 4.24**.

1. **Kalu River at Atale (1092/SWMP)**
   - **Station Details:** Village-Atale, Taluka- Kalyan, District- Thane
   - **Pollution sources**: Polluting industries located on the banks discharging effluents into the river at Ambivli. Domestic pollution from Atale village.

Table 4.24(a): Five years Descriptive Statistics for Kalu River

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
1092	Mean	7.4	5.4	6.9	163.8	687.5	0.4	1.2
	Std.dev	0.37	1.69	4.60	186.50	656.14	0.47	1.12
	No of Samples	27	27	26	20	22	24	26
	% Exceedance	**0.0**	**33.3**	**50.0**	**--**	**0.0**	**4.2**	**0.0**

It was observed that pH, TC, Ammonical and Nitrate nitrogen were as per the MPCB standards. However, DO and BOD showed 33% and 50% exceedance to MPCB standards. The reason for this could be the discharge of domestic sewage from the Atale village and the industrial waste discharge into Ambivali River.

Table 4.24(b) : Water Quality Index for Kalu River

Station Code	2007	2008	2009	2010	2011
1092	GE	MG	MG	--	GE

The monthly water quality of Kalu River at Atale village varied from moderately good to good to excellent for all five years 2007-11 except for Apr-08 where it was bad for the available data set. It could be due to the discharge from polluting industries located nearby.

20. Kan River

Kan River flows through the Dhule district and its confluence with Panjhara River is near the Sakri Taluka. Source of pollution for Kan River is the discharge of domestic waste from Dalwell village. Water monitoring is carried out at the Sakri water work. MPCB has monitored following location of Kan River. Detailed analysis of monitored data is given in **Table 4.25**.

1. **Kan river at Sakri water works (2670/SWMP)**
   - **Station Details:** Village- Sakri, Taluka- Dhule, District- Dhule
   - **Pollution sources**: Sewage from Dalwell village

Table 4.25(a): Five years Descriptive Statistics for Kan River

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2670	Mean	8.1	5.9	6.7	12.6	35.0	1.8	0.6
	Std.dev	0.43	0.95	3.33	7.88	26.36	1.25	0.47
	No of Samples	31	26	30	25	26	27	30
	% Exceedance	**16.1**	**0.0**	**53.3**	**--**	**0.0**	**63.0**	**0.0**

The descriptive statistics of Kan River showed percentage exceedance for pH, BOD and Ammonical nitrogen 16%, 53% and 63% respectively. It could be due to the release of sewage from Dalwell village in Sakri. However, DO and TC complied with the MPCB standards.

Table 4.25(b) : Water Quality Index for Kan River

Station Code	2007	2008	2009	2010	2011
2670	GE	GE	GE	GE	GE

The water quality at Kan River near Sakri water works was good to excellent for the available data set except for October-November-2007 and also December 2010 and 2011when it was moderately good.

21. Kanhan River

Kanhan River is one of the tributary of Wainganga River. Kanhan mainly originates in Madhya Pradesh from where it flows to Nagpur and finally confluences in Wainganga. Along with Pench River, it covers the maximum distance of Nagpur district. Kanhan River mostly carries the domestic sewage generated from nearby villages. MPCB has monitored following three locations of Kanhan River. Detailed analysis of monitored data is given in **Table 4.26**.

1. **Kanhan river D/s of Nagpur (1909/ NWMP)**
   - **Station Details:** Village- Agargaon, Taluka- Kuhi, District- Nagpur
   - **Pollution sources**: Pollution due to domestic waste and human activities
2. **Kanhan river at U/s of M/s Vidarbha Paper Mills (2170/SWMP)**
   - **Station Details:** Village-Sinora, Taluka-Parseoni, Distict-Nagpur
   - **Pollution sources**: Domestic &industrial pollution from Kamptee & Kanhan towns
3. **Kanhan river at D/s of M/s Vidarbha Paper Mills (2171/SWMP)**
   - **Station Details:** Village-Sinora, Taluka-Parseoni, Distict-Nagpur
   - **Pollution sources**: Effluents from M/s Vidarbha Mills & M/s Jaykwadi Mills

Table 4.26(a): Five years Descriptive Statistics for Kanhan River (2007-2011)

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
1909	Mean	7.8	5.4	7.5	95.2	205.2	1.2	1.7
	Std.dev	0.41	0.96	2.63	109.91	120.57	1.05	1.21
	No of Samples	23	23	23	22	21	22	23
	% Exceedance	**0.0**	**4.3**	**87.0**	**--**	**0.0**	**31.8**	**0.0**
2170	Mean	7.9	5.9	5.7	41.8	114.7	0.7	1.3
	Std.dev	0.51	0.62	1.22	28.98	90.01	0.63	0.84
	No of Samples	39	39	38	38	39	39	38
	% Exceedance	**17.9**	**0.0**	**63.2**	**--**	**0.0**	**7.7**	**0.0**
2171	Mean	8.0	5.0	7.6	63.1	185.2	0.7	1.9
	Std.dev	0.56	0.73	2.06	39.32	141.76	0.62	2.01
	No of Samples	39	39	38	38	38	39	39
	% Exceedance	**12.8**	**5.1**	**92.1**	**--**	**0.0**	**12.8**	**0.0**

The descriptive statistics showed that BOD did not comply with MPCB standards at all three stations. The percent exceedance ranged from 63% to 92%. It could be due to the release of organic waste from Paper mills situated there. Also DO and Ammonical nitrogen exceeded

the MPCB standards at D/s of M/s Vidarbha Paper Mills and D/s of Nagpur respectively. pH exceeded the standards at U/s and D/s of M/s Vidarbha Paper Mills.

Table 4.26(b) : Water Quality Index for Kanhan River

Station Code	2007	2008	2009	2010	2011
1909	MG	MG	GE	MG	MG
2170	--	GE	GE	GE	GE
2171	--	MG	MG	MG	MG

At D/s of Nagpur, the monthly water quality varied from moderately good to excellent most of the time except for May-2011 when it was bad. The monthly water quality index of Kanhan River- at U/s of M/s Vidarbha Paper Mill was good to excellent most of the time except few months when it was moderately good. However, the water quality was moderately good most of the time at D/S of M/s Vidarbha Paper Mill for the period 2007-2011.

22. Kodavali River

Kodavali River is situated in Ratnagiri district under Rajapur tehsil. It is one of the minor rivers found in this district flow from west to east direction i.e. from Kolhapur-Ratnagiri border to Arabian Sea. From Rajapur onward it meets with Kajvi River. From starting point, it covers many small villages such as Talwade, Raipatan and Angale. MPCB has following monitoring location of Kodavali River under Hydrology Project. Detailed analysis of monitored data is given in **Table 4.27**.

1. **Kodavali river at Rajpatan (HP_KV_1)**
   - **Station Details:** Village- Rajpatan, Taluka-Rajapur, District- Ratnagiri
   - **Pollution sources**: Domestic waste and human activities

Table 4.27(a): Five years Descriptive Statistics for Kodavali River (For 2007-11)

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
HP_KV_1	Mean	7.6	7.0	1.3	4128.9	5045.3	0.1	0.1
	Std.dev	0.33	0.70	0.59	5152.36	5582.8	0.00	0.15
	No of Samples	46	46	45	46	46	46	12
	% Exceedance	**0.0**	**0.0**	**0.0**	**--**	**32.6**	**0.0**	**0.0**

It was observed for Kodavali River that 32% of TC samples did not comply with MPCB standards while pH, DO, BOD and Ammonical nitrogen were as per the MPCB standards.

Table 4.27(b): Water Quality Index for Kodavali River

Station Code	2007	2008	2009	2010	2011
HP_KV_1	GE	GE	GE	GE	GE

The monthly WQI evaluated for Rajpatan station of Kodavali River indicated that the water quality varied from moderately good to good to excellent for the available data set.

23. Kolar River

Kolar River flows in the Nagpur district under Kamthi taluka. River covers a very short distance in comparison to other rivers flowing through the district. There is a confluence of Kolar River with Kanhan River at Waregaon village. MPCB has the following monitoring location of Kodavali River. Detailed analysis of monitored data is given in **Table 4.28**.

1. **Kolar river before confluence with Kanhan river at Waregaon Bridge (1908/NWMP)**
   - **Station Details:** Village- Waregaon, Taluka-Kamptee, District-Nagpur
   - **Pollution sources :** Pollution through agricultural run-offs and domestic waste

Table 4.28(a): Five years Descriptive Statistics for Kolar River (For 2007-11)

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
1908	Mean	8.0	5.5	7.1	66.3	163.9	0.9	1.6
	Std.dev	0.46	0.49	2.59	54.48	115.59	0.74	1.71
	No of Samples	24	24	23	23	23	24	23
	% Exceedance	**4.2**	**0.0**	**82.6**	**--**	**0.0**	**16.7**	**0.0**

For Kolar River, it was observed that pH, BOD and Ammonia showed 4%, 82%, and 16% exceedance to MPCB standards respectively whereas DO, TC and Nitrate nitrogen were as per the standards of MPCB. The exceedance of BOD could be due to the domestic sewage and the agricultural run-offs.

Table 4.28(b): Water Quality Index for Kolar River

Station Code	2007	2008	2009	2010	2011
1908	MG	GE	MG	MG	MG

The water quality of Kolar River for the available data set for all the five years was moderately good except for Jan-09 and some months of 2011 it was good to excellent.

24. Koyna River

The Koyna River rises in Mahabaleshwar and is a tributary of the Krishna River in western Maharashtra, India. Unlike most of the other rivers in Maharashtra which flow East-West direction, the Koyna River flows in North-South direction. The river meets the Krishna River, which is one of the three largest rivers in southern India by Karad. The river is just about 100 meters in width and is slow-flowing. It is an olive shade of green during the dry months and a bluish-brown in the monsoon months attributed to much algae and aquatic plant life. MPCB has the following monitoring location of Koyna River. Detailed analysis of monitored data is given in **Table 4.29**.

1. **Koyna river at Karad.(2189/SWMP)**
   - **Station Details:** Village- Karad, Taluka- Karad, District- Satara
   - **Pollution sources :** Domestic Pollution

Table 4.29(a): Five years Descriptive Statistics for Koyna River (For 2007-11)

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2189	Mean	8.1	6.0	6.7	161.8	1117.3	0.5	0.3
	Std.dev	0.32	0.85	2.31	80.9	576.6	0.89	0.35
	No of Samples	53	52	52	50	52	52	51
	% Exceedance	**9.4**	**1.9**	**76.9**	**-**	**0.0**	**5.8**	**0.0**

For Koyana River, the descriptive statistics showed that TC and Nitrate nitrogen complied with the MPCB standards whereas 91% of pH samples, 98% of DO and 96% of Ammonical nitrogen samples complied with MPCB standards. However, the highest percent exceedance was for BOD i.e. 77%. It could be due to the domestic waste released from Karad village into this river.

Table 4.29(b): Water Quality Index for Koyna River

Station Code	2007	2008	2009	2010	2011
2189	MG	MG	MG	MG	MG

The water quality indices of the available data of Koyana River indicated that the water quality varied from moderately good to good to excellent for the available data set except for Nov-08 and Nov -11 when it was bad.

25. Krishna River

It rises at Mahabaleswar in Maharashtra in the west and meets the Bay of Bengal at Hamasaladeevi in Andhra Pradesh, on the east coast. It also flows through the state of Karnataka. Ecologically, this is one of the disastrous rivers in the world, in that it causes heavy soil erosion during the monsoon season. Its flow is fast and furious, often reaching depths of over 75 feet (23 m). In reality, Krishna causes a high degree of erosion between June and August. During this time, Krishna takes fertile soil from Maharashtra, Karnataka and western Pradesh towards the delta region. Its most important tributary is the Tungabhadra River, which is formed by the Tunga River and Bhadra River that originate in the Western Ghats. Other tributaries include the Koyna River, Bhima River, etc. MPCB has the following monitoring locations of Krishna River under NWMP, SWMP and Hydrology Project. Detailed analysis of monitored data is given in **Table 4.30**.

Monitoring Locations on Krishna River

Sr.	Station Name /Code	Station Details
1	Ambeghar-Karanje (HP-KR_3)	Village Ambeghar, Taluka-Bhor, District - Pune
2	Bandalgi (HP_KR_4 /HP)	Village-Bandalgi, Taluka-Solapur, Distict-Solapur
3	Barur-Takli (HP_KR_5)	Village- Barur (Takli), Taluka- Solapur, District Solapur

(Contd..) Monitoring Locations on Krishna River

Sr.	Station Name /Code	Station Details
4	Bubnal (HP_KR_7/HP)	Village-Bubnal, Taluka-Shirol, District- Kolhapur
5	Krishna river Bundgarden Bridge (HP_KR_8)	Village- Bundgarden Bridge, Taluka- Haweli, District Pune
6	Chaskman (HP_KR_9/HP)	Village-Chaskman, Taluka-Khed, Distict- Pune
7	Dattawadi (HP_KR_10/HP)	Village-Dattawadi, Taluka- Haweli, District:- Pune
8	Daund(HP_KR_11 /HP)	Village-Daund, Taluka-Daund, Distict-Pune
9	Kale Colony (HP_KR_13)	Village- Kale Colony, Taluka-Maval, District:- Pune
10	Khamgaon (HP_KR_15)	Village- Khamgaon, Taluka-Daund, Distict-Pune
11	Kurundwad-Wadi (HP_KR_16/HP)	Village-Kurundwad, Taluka-Shirol, Distict-Kolhapur
12	Mhaisal (HP_KR_17)	Village-Mhaisal, Taluka- Miraj, District:- Sangli
13	Nighoje (HP_KR_19)	Village-Nighoje, Taluka- Khed, District:- Pune
14	Paud (HP_KR_23/HP)	Village- Paud, Taluka- Mulshi, District:- Pune
15	Pimpale Gurav (HP_KR_24)	Village-Pimpale Gurav, Taluka-Haweli, District-Pune
16	Rakshewadi (HP_KR_25/HP)	Village-Rakshewadi, Taluka-Shirur, District-Pune
17	Krishna bridge, Karad (NH-4 bridge, Karad.) (36/ NWMP)	Village- Karad,Taluka- Karad, District:- Satara
18	Maighat, Sangli (37/NWMP)	Village- Gawali gally, Taluka- Miraj, District-Sangli
19	Krishna river Rajapur Weir (1153/NWMP)	Village- Rajapur, Taluka- Shirol, District- Kolhapur
20	Dhom Dam (1194/NWMP)	Village- Wai, Taluka- Mahabaleshwar, District-Satara
21	Kurundwad near Santaji Ghorpade Ghat (1310/ WMP)	Village-Narshingwadi, Kurundwad, Taluka-Shirol, District- Kolhapur
22	Walwa, D/s of Islampur near Vithal Temple (1906/NWMP)	Village- Walwa, Taluka- Walwa, District- Sangli.
23	Kshetra Mahuli, Satara (2187/ SWMP)	Village- Kshetra Mahuli, Taluka- Mahuli, District- Satara.
24	Krishna- Venna sangam, Mahuli (2188/SWMP)	Village- Mahuli, Taluka- Mahuli, District- Satara
25	Wai, Satara (2190/SWMP)	Village- Wai, Taluka- Wai, District- Satara

Pollution Sources at few locations:

- **36& 37/ NWMP:** Industrial wastes are not discharged into the river. Domestic wastes from Karad city are discharged
- **1153/NWMP** : Pollution due to agricultural activities and human activities.
- **1194/NWMP** : Pollution mainly due to agricultural activities and possible occasional discharge from a paper mill.
- **1310/ NWMP**: Pollution through agricultural activities and human activities like washing, bathing etc.
- **1906/NWMP**: Pollution due to disposal of Industrial and domestic effluents and other human activities.
- **2187& 2190 / SWMP**: Domesticpollution
- **2188/SWMP**: Domestic and Industrial pollution

Table 4.30(a)I: One years Descriptive Statistics for Krishna River

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
HP_KR_8	Mean	7.4		22.6	160000.0	160000.0	0.6	--
	Std.dev	0.15		2.30	0.00	0.00	0.84	--
(2007)	No of Samples	5	0	5	5	5	5	--
	% Exceedance	**0**		**100**	--	**100**	**20**	--
HP_KR_21	Mean	8.6	6.9	2.1	911.1	1590.0	0.1	--
	Std.dev	0.26	1.06	0.89	706.21	1126.83	0.00	--
(2007)	No of Samples	5	5	5	5	4	4	--
	% Exceedance	**60.0**	**0.0**	**0.0**		**0.0**	**0.0**	--
HP_KR_25	Mean	8.1	6.8	3.2	6201.1	9505.6	0.3	1.8
	Std.dev	0.29	0.91	1.51	7840.27	10883.44	0.45	0.10
(2010)	No of Samples	8	8	8	7	8	4	2
	% Exceedance	**0.0**	**0.0**	**0.0**	**0.0**	**50.0**	**0.0**	**0.0**

Table 4.30(a)I: Two /Three years Descriptive Statistics for Krishna River

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
HP_KR_11	Mean	7.8	6.6	5.1	8487.5	16025.0	1.1	2.8
	Std.dev	0.48	0.39	1.22	2861.29	3448.2	0.14	0.33
(2010-2011)	No of Samples	9	9	9	8	8	9	7
	% Exceedance	**0.0**	**0.0**	**55.6**	--	**100.0**	**0.0**	**0.0**
HP_KR_15	Mean	7.8	6.7	5.5	34466.7	42250.0	1.1	2.4
	Std.dev	0.51	0.25	1.03	25298.42	24598.20	0.18	0.44
(2010-2011)	No of Samples	9	8	9	9	8	8	9
	% Exceedance	**0.0**	**0.0**	**66.7**	--	**100.0**	**0.0**	**0.0**
HP_KR_14	Mean	8.2	7.0	2.9	10020.0	11540.0	0.1	--
	Std.dev	0.37	0.45	1.49	5275.06	4008.93	0.00	--
(2007-2009)	No of Samples	12	11	12	10	10	8	--
	% Exceedance	**17**	**0**	**8**	--	**100**	**0**	--
HP_KR_3	Mean	7.4	0.2	22.6	160000.0	160000.0	0.6	--
	St deviation	5.5	0.45	2.30	0.00	0.00	0.84	--
(2007 & 2010-2011)	No of samples	5	5	5	5	5	5	--
	% Exceedance	**0.0**	**100.0**	**100.0**	--	**100.0**	**20.0**	--

Table 4.30(a)I: Four years Descriptive Statistics for Krishna River

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
HP_KR_7	Mean	8.1	7.6	2.2	2683.1	2966.9	0.05	1.30
	Std.dev	0.35	1.67	1.05	4644. 6	4611.28	0.00	0.41
(2007-2010)	No of Samples	39	39	38	39	39	39	5
	% Exceedance	**15.4**	**0.0**	**0.0**	--	**12.8**	**0.0**	**0.0**
HP_KR_10	Mean	7.4	2.8	17.2	123497.7	138372.7	0.83	2.42
	Std.dev	0.28	2.15	13.67	57841.7	55483.7	1.58	0.85
(2007-2009)	No of Samples	45	26	45	44	44	44	9
	% Exceedance	**0.0**	**76.9**	**71.1**	--	**97.7**	**18.2**	**0.0**
HP_KR_16	Mean	7.8	7.0	2.1	2224.5	2683.2	0.1	1.3
	Std.dev	0.48	1.62	1.02	2072.78	2301.20	0.00	0.62
(2007-2010)	No of Samples	39	39	39	37	37	39	5
	% Exceedance	**2.6**	**2.6**	**0.0**	--	**21.6**	**0.0**	**0.0**
HP_KR_17	Mean	8.3	7.6	2.0	1011.1	1108.2	0.1	1.4
	Std.dev	0.37	1.15	0.95	903.82	973.69	0.00	0.54
(2007-2010)	No of Samples	39	39	39	39	39	39	5
	% Exceedance	**15.4**	**0.0**	**0.0**	--	**0.0**	**0.0**	**0.0**

Table 4.30(a)II: Five years Descriptive Statistics for Krishna River (For 2007-11)

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
HP_KR_4	Mean	8.1	6.4	3.3	4206.9	8971.7	0.4	0.9
	Std.dev	0.32	0.94	1.23	5432.2	17671.9	0.47	0.58
	No of Samples	30	30	30	29	29	30	5
	% Exceedance	**10.0**	**0.0**	**10.0**	**--**	**44.8**	**0.0**	**0.0**
HP_KR_5	Mean	8.2	6.5	2.9	5124.6	6446.8	0.12	1.72
	Std.dev	0.34	0.75	1.00	4832.7	5497.5	0.14	0.18
	No of Samples	34	34	34	34	34	34	3
	% Exceedance	**11.8**	**0.0**	**2.9**	**--**	**50.0**	**0.0**	**0.0**
HP_KR_9	Mean	8.4	7.0	2.3	3684.5	6190.5	0.05	1.38
	Std.dev	0.16	0.68	0.96	3041.9	5799.30	0.01	0.15
	No of Samples	42	42	42	40	42	41	6
	% Exceedance	**16.7**	**0.0**	**0.0**	**--**	**40.5**	**0.0**	**0.0**
HP_KR_13	Mean	7.9	6.9	1.5	8002.0	9398.1	0.05	0.24
	Std.dev	0.36	0.58	0.42	6294.76	6538.72	0.00	0.07
	No of Samples	45	45	44	45	43	44	9
	% Exceedance	**2.2**	**0.0**	**0.0**	**--**	**60.5**	**0.0**	**0.0**
HP_KR_19	Mean	8.2	6.9	1.6	5128.8	7356.6	0.1	0.2
	Std.dev	0.31	0.59	0.49	3758.99	4549.94	0.03	0.08
	No of Samples	**46**	**46**	**46**	**46**	**46**	**46**	**11**
	% Exceedance	8.7	0.0	0.0	0.0	71.7	0.0	0.0
HP_KR_23	Mean	7.8	6.6	1.6	6761.4	9400.8	0.1	0.2
	Std.dev	0.36	0.55	0.46	4966.73	5730.75	0.00	0.01
	No of Samples	38	38	37	37	37	36	3
	% Exceedance	**0.0**	**0.0**	**0.0**	**--**	**78.4**	**0.0**	**0.0**
HP_KR_24	Mean	7.5	2.3	12.6	90696.3	97209.3	0.9	3.1
	Std.dev	0.28	2.25	7.43	70838.91	73177.66	1.07	0.52
	No of Samples	43	27	43	43	43	43	7
	% Exceedance	**0.0**	**92.6**	**76.7**	**--**	**90.7**	**20.9**	**0.0**
36	Mean	7.9	5.8	6.6	149.0	1026.5	0.4	0.4
	Std.dev	0.37	0.66	2.03	108.26	588.27	0.39	0.40
	No of Samples	56	56	56	55	51	56	54
	% Exceedance	**3.6**	**0.0**	**80.4**	**--**	**0.0**	**0.0**	**0.0**
37	Mean	7.3	6.6	2.6	5.9	113.8	0.4	1.3
	Std.dev	0.70	0.73	0.84	2.81	40.31	0.25	0.80
	No of Samples	56	54	55	54	55	55	55
	% Exceedance	**7.1**	**0.0**	**0.0**	**--**	**0.0**	**0.0**	**0.0**
1153	Mean	7.4	6.2	2.8	6.8	123.7	0.4	1.3
	Std.dev	0.55	1.06	1.00	4.29	49.54	0.20	0.77
	No of Samples	54	52	53	54	54	52	52
	% Exceedance	**3.7**	**7.7**	**7.5**	**--**	**0.0**	**0.0**	**0.0**
1194	Mean	7.9	6.3	4.9	50.9	459.6	0.3	0.2
	Std.dev	0.35	0.45	2.01	68.68	499.55	0.29	0.29
	No of Samples	56	56	55	55	56	55	56
	% Exceedance	**5.4**	**0.0**	**50.9**	**--**	**0.0**	**0.0**	**0.0**
1310	Mean	7.4	6.2	2.6	6.1	113.0	0.4	1.5
	Std.dev	0.56	1.10	0.87	3.27	34.67	0.20	0.92
	No of Samples	55	53	53	55	55	54	53
	% Exceedance	**5.5**	**5.7**	**1.9**	**--**	**0.0**	**0.0**	**0.0**

Table 4.30(a)II: Five years Descriptive Statistics for Krishna River (For 2007-11)

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
1906	Mean	7.4	6.6	2.4	7.8	127.7	0.4	1.3
	Std.dev	0.77	0.75	0.63	3.61	56.50	0.27	0.85
	No of Samples	55	55	54	54	55	54	51
	% Exceedance	**7.3**	**0.0**	**0.0**	**--**	**0.0**	**0.0**	**0.0**
2187	Mean	8.1	5.9	6.9	135.7	1057.0	0.4	0.6
	Std.dev	0.25	0.57	2.55	78.52	556.22	0.34	0.72
	No of Samples	52	53	53	53	53	50	53
	% Exceedance	**1.9**	**0.0**	**77.4**	**-**	**0.0**	**2.0**	**0.0**
2188	**Mean**	8.0	5.9	7.2	166.3	1130.4	0.4	0.6
	Std.dev	0.38	0.68	2.63	84.57	506.21	0.39	0.72
	No of Samples	53	53	52	53	53	51	52
	% Exceedance	**-**	**0.0**	**80.8**	**-**	**0.0**	**2.0**	**0.0**
2190	Mean	8.0	5.7	7.2	157.4	1118.4	0.5	0.3
	Std.dev	0.37	0.76	2.47	82.86	577.39	0.36	0.33
	No of Samples	53	53	52	52	52	52	52
	% Exceedance	**5.7**	**1.9**	**75.0**	**-**	**0.0**	**1.9**	**0.0**

For stations HP_KR_11 and HP_KR_15 data is given only for the years 2010 and 11. For the available data set, it was observed that Ammonical and Nitrate nitrogen complied with the MPCB standards on almost all stations of Krishna river except at Bundgarden bridge, Dattawadi, Pimpale Gurav and Kshetra Mahuli. However, percent exceedance of pH, DO, BOD and TC ranged from 2 to 60%, 2 to 96%, 2 to 100% and 13 to 100% respectively at the monitored stations.

Table 4.30(b): Water Quality Index for Krishna River

Sr.	Station	07	08	09	10	11	Sr.	Station	07	08	09	10	11
1	**HP_KR_3**	MG	--	--	MG	MG	14	**HP_KR_21**	MG	--	--	--	--
2	**HP_KR_4**	MG	MG	MG	MG	MG	15	**HP_KR_23**	GE	MG	MG	MG	MG
3	**HP_KR_5**	MG	MG	MG	MG	MG	16	**HP_KR_24**	Bad	Bad	VB	VB	VB
4	**HP_KR_7**	GE	MG	MG	MG	--	17	**HP_KR_25**	--	--	--	MG	--
5	**HP_KR_8**	VB	--	--	--	--	18	**36**	GE	MG	MG	MG	MG
6	**HP_KR_9**	MG	MG	MG	MG	MG	19	**37**	GE	GE	GE	GE	GE
7	**HP_KR_10**	Bad	Bad	VB	--	--	20	**1153**	GE	GE	GE	GE	GE
8	**HP_KR_11**	--	--	--	MG	MG	21	**1194**	GE	GE	GE	GE	GE
9	**HP_KR_13**	GE	MG	MG	MG	MG	22	**1310**	GE	GE	GE	GE	GE
10	**HP_KR_14**	MG	MG	MG			23	**1906**	GE	GE	GE	GE	GE
10	**HP_KR_15**	--	--	--	MG	MG	24	**2187**	GE	MG	MG	MG	MG
11	**HP_KR_16**	GE	MG	MG	MG	--	25	**2188**	MG	MG	MG	MG	MG
12	**HP_KR_17**	GE	GE	MG	MG	--	26	**2190**	MG	MG	MG	MG	MG
13	**HP_KR_19**	GE	MG	MG	MG	MG							

Water quality indices varied between moderately good to excellent at all monitoring stations except 2 stations viz.(1) Dattawadi, Tal.:- Haweli, Dist.:- Pune and (2) Village.:-Pimpale Gurav, Tal.:-Haweli, District-Pune.

Table 4.30(c) gives the number of sites out of 28 sites of Krishna with percent exceedances in different ranges for BOD, DO, TC and pH.

Table 4.30(c): Number of Sites with Percent Exceedances for BOD, DO, TC and pH

Percent Exceedance	BOD	DO	TC	pH
0%	13	21	11	8
1-20%	**5**	4	1	18
20-40%	**0**	0	1	0
40-60%	2	0	3	0
60-80%	5	0	4	1
80-100%	**2**	2	5	0

Figures 4.5 show the pie chart for percent exceedances for BOD, DO, pH and TC for 28 locations in Krishna River. 48% of the sites have no exceedance of BOD from the standard.

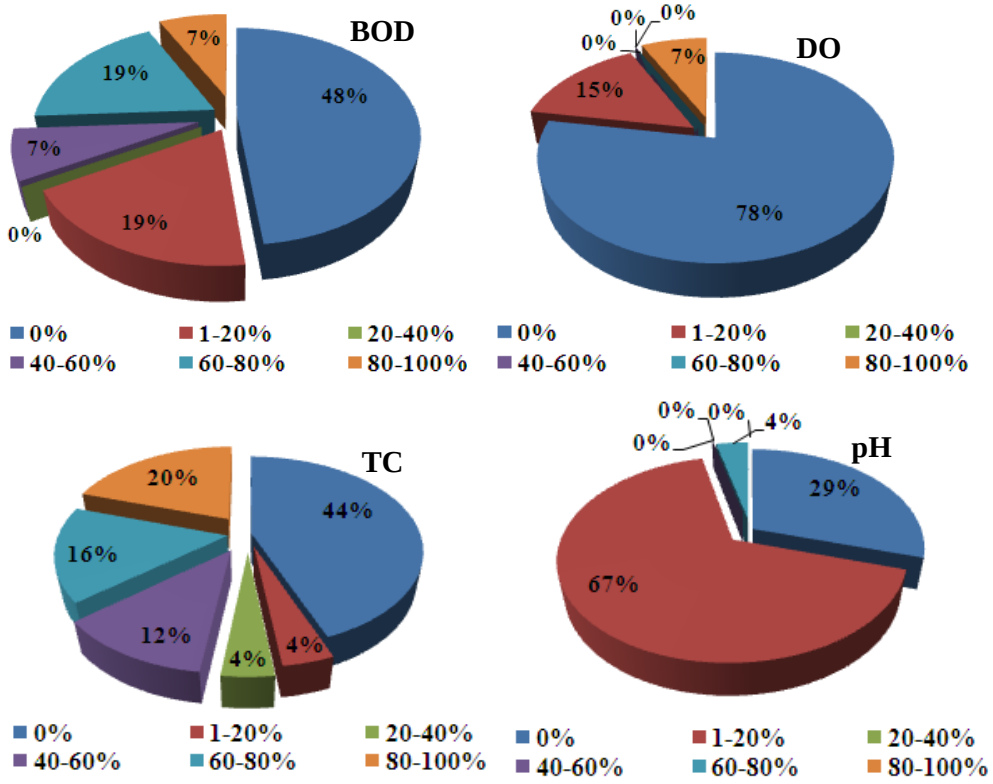

Figure 4.5 : Percent Exceedances at 28 Monitoring Locations of Krishna River

The average water quality index for five years evaluated at 27 sites is presented in **Figure 4.6**. It shows that 26% of the locations had water quality "Good to Excellent", 67% had water quality "Medium to Good" and at 7% locations (2 locations ie. Paud and Ambeghar in Karanje) water quality was bad.

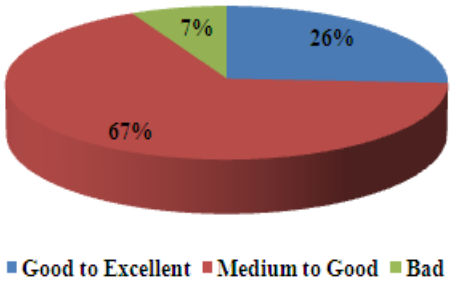

Figure 4.6 : Water Quality Index of 28 Monitoring Locations of Krishna River

26. Kundalika River

Kundalika is a small river flowing from the Hills of Sahyadri to the Arabian Sea. This river originates at a small town called Bhira in the Indian State of Maharashtra, 150 km south east of Mumbai. The important towns located on the banks of Kundalika are Kolad, Roha and Salav. River Kundalika is fed by the excess water from Tata Power's Mulshi Dam Project on to a series of hydroelectric projects and dams, including Ravalje followed by Bhira and then Dholvan, where the water is released. Over 90% of Kundalika's water is consumed by industries, including RCF's THAL Project and many MIDC all across. MPCB has the following five monitoring locations of Kundalika River. Detailed analysis of monitored data is given in **Table 4.31**.

1. **Kundalika river at Varasgaon (HP_KD_1/ HP)**
    - **Station Details:** Village- Varasgaon, Taluka-Roha, District- Raigad
    - **Pollution sources**: Domestic discharges
2. **Kundalika river at Roha Bridge (1152/ NWMP)**
    - **Station Details:** Village-Roha, Taluka- Roha, District- Raigad
    - **Pollution sources**: Kundalika river's sweet zone. After filtration water is used for drinking by MIDC Roha and nearby villages. No discharge point for pollutants.
3. **Kundalika river at Are Khurd (saline zone) (2198/ SWMP)**
    - **Station Details:** Village-Are Khurd, Taluka-Roha, District-Raigad.
    - **Pollution sources**: D/s of CETP discharge point. Reti Bunder.
4. **Kundalika river near Salav bridge (saline zone)(2671/SWMP)**
    - **Station Details:** Village-Salav, Taluka-Roha, District-Raigad.
    - **Pollution sources**: D/s of Vikram Ispat disposal point. Fishing activity.

5. **Kundalika river at at Dhatav Jackwell (2672/SWMP)**
    - **Station Details:** Village-Dhatav, Taluka-Roha, Distict-Raigad.
    - **Pollution sources**: U/s of CETP discharge point. No industries nearby. Water is used for drinking by MIDC, Roha and nearby villages after filtration.

Table 4.31(a): Five years Descriptive Statistics for Kundalika River (2007-11)

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
HP_KD_1	Mean	7.9	7.3	1.5	3535	4312	0.1	--
	Std.dev	0.32	0.42	0.46	4237.87	4666.03	0.00	--
(2007-2009)	No of Samples	35	36	36	36	36	31	--
	% Exceedance	**0**	**0**	**0**	**0**	**33**	0	--
1152	Mean	7.6	6.8	3.7	128.7	400.2	0.2	0.4
	Std.dev	0.48	0.59	0.81	76.74	339.07	0.25	0.22
	No of Samples	22	22	21	20	21	21	21
	% Exceedance	**0.0**	**0.0**	**4.8**	**--**	**0.0**	0.0	0.0
2198	Mean	7.3	5.5	9.5	234.3	616.9	1.7	0.7
	Std.dev	0.42	1.44	8.67	206.91	508.62	2.75	0.66
(2008-2011)	No of Samples	40	39	39	37	40	37	38
	% Exceedance	**0.0**	**20.5**	**53.8**	**--**	**0.0**	**29.7**	**0.0**
2671	Mean	7.9	5.7	7.2	83.8	233.0	0.2	1.0
	Std.dev	0.33	0.98	3.17	103.03	258.84	0.20	0.55
	No of Samples	32	33	33	29	30	29	32
	% Exceedance	**0.0**	**6.1**	**60.6**	**--**	**0.0**	**0.0**	**0.0**
2672	Mean	7.6	6.9	3.7	180.3	319.3	0.1	0.2
	Std.dev	0.38	0.61	1.15	296.75	326.64	0.09	0.22
Exp. 2009	No of Samples	32	32	31	29	29	30	30
	% Exceedance	**0.0**	**0.0**	**6.5**	**--**	**0.0**	**0.0**	**0.0**

It was observed that pH and Nitrate nitrogen were as per the MPCB standards at all the stations of Kundalika River. However, DO, BOD and Ammonical nitrogen exceeded by 20%, 60% and 30% respectively at Are Khurd and near Salav Bridge. The non-compliance with MPCB standards at Are Khurd and Near Salav Bridge could be due to the CETP discharge and fishing activity at these stations. For TC, percent exceedance was observed only at Varasgaon station and it was 33%.

Table 4.31(b) : Water Quality Index for Kundalika River

Station Code	2007	2008	2009	2010	2011
HP_KD_1	GE	GE	MG	GE	--
1152	GE	GE	GE	GE	GE
2198	--	MG	MG	GE	GE
2671	MG	GE	MG	GE	MG
2672	GE	GE	--	GE	GE

Water quality of Kundalika River at Dhatav at Jackwell was good to excellent whereas it varied from moderately good to excellent at Kundalika, and Roha. Also, the water quality varied from bad to moderately good at the stations near Roha and at Arekhurd the reason probably is the CETP discharge and fishing activity.

27. Manjra River

Manjara River is one of the longest river nearly covering two districts of Maharashtra and flows towards the Karnataka state. River originates near Patoda tehsil of Beed district. It moves along the district border between Beed and Latur and enters into the Latur district in confluence with Tawarja and then with Terna river. MPCB has the following monitoring location of Manjra River. Detailed analysis of monitored data is given in **Table 4.32**.

1. **Manjra river at D/s of Latur, near Latur- Nanded Bridge (2673/SWMP)**
    - **Station Details:** Village- Bhatkheda, Taluka- Latur, District- Latur
    - **Pollution sources**: Pollution due to domestic sewage and human activities like washing, bathing etc

Table 4.32(a): Three years Descriptive Statistics for Manjra River (2009-11)

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2673	Mean	8.0	5.9	4.8	3.5	100.9	0.6	1.8
	Std.dev	0.55	1.33	1.50	1.98	23.00	0.89	1.57
	No of Samples	18	16	16	13	11	17	16
	% Exceedance	**11.1**	**12.5**	**31.3**	**--**	**0.0**	**11.8**	**0.0**

For Manjra River it was observed that TC and Nitrate nitrogen complied with the MPCB standards whereas pH, DO and BOD exceeded the MPCB standards. 11% and 12% exceedance was for pH and DO, 31% for BOD 11% for Ammonical nitrogen. The reason for DO and BOD exceedance could be the domestic sewage and human activities at this river.

Table 4.32(b) : Water Quality Index for Manjra River

Station Code	2007	2008	2009	2010	2011
2673	--	--	GE	GE	GE

Water quality of Manjra River could not be found during 2007 and 2008 due to unavailability of FC data. However in the year 2009 to 2011 the annual water quality index was good to excellent.

28. Mithi River

River Mithi is a river in, the island of the city of Mumbai. It is a confluence of tail water discharges of Powai and Vihar lakes. The river is seasonal. The river originates from the overflow of Vihar Lake and also receives the overflows from Powai Lake about 2 km later. It flows for a total of 15 km before it meets the Arabian Sea at Mahim Creek flowing through residential and industrial complexes of Powai, Saki Naka, Kurla, Kalina, Vakola, Bandra-Kurla complex, Dharavi and Mahim. The river has an average width of 5 m in the upper reaches, has been widened to 25 m in the middle reaches and up to 70 m in the lower reaches. The river is also a natural drainage channel which carries the excess water during the

monsoon. However, it is filthy mainly due to the presence of slums and the discharge of industrial effluents. MPCB has the following monitoring location of Mithi River. Detailed analysis of monitored data is given in **Table 4.33**.

1. **Mithi River near Road bridge (2168/SWMP)**
   - **Station Details:** Village-Mahim, Taluka-Bandra, District-Mumbai.
   - **Pollution sources**: Industrial and domestic effluents are discharged

Table 4.33(a): Four years Descriptive Statistics for Mithi River (2008-11)

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2168	Mean	7.5	3.3	54.0	1054.9	1443.9	4.1	1.7
	Std.dev	0.35	1.52	66.90	699.49	496.20	5.85	1.07
	No of Samples	38	24	38	34	33	34	37
	% Exceedance	**0.0**	**75.0**	**94.7**	**--**	**0.0**	**44.1**	**0.0**

For Mithi River, it was observed that pH, TC and Nitrate nitrogen were as per the MPCB standards. However, DO, BOD and Ammonical nitrogen did not comply with the standards as they showed 75, 95 and 44% exceedance respectively. The most probable reason could be the effluents released from the industries and the domestic waste.

Table 4.33(b): Water Quality Index for Mithi River

Station Code	2007	2008	2009	2010	2011
2168	--	Bad	Bad	Bad	Bad

The water quality of Mithi River was found to vary from very bad to bad for the available data set of the year 2008 to 2011. It could be due to untreated waste from small scale industries and since it is a slum area, human activities also account for such water quality. Monthly WQI was found medium to good in the months of September and November 2011.

29. Mor River

Mor River is located at Yaval taluka of Jalgaon district. The confluence of Mor River with the Tapi River is at Dhargavan village. MPCB has the following monitoring location of Mor River near Padalshe village. Detailed analysis of monitored data is given in **Table 4.34**.

1. **Mor river at Padalashe village (2674/SWMP)**
   - **Station Details:** Village- Padalashe, Taluka- Jalgaon, District- Jalgaon.
   - **Pollution sources**: Sewage from nearby village

Table 4.34(a): Four years Descriptive Statistics for Mor River (2007-09 &11)

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2674	Mean	8.0	6.0	5.6	15.8	40.9	0.6	2.0
	Std.dev	0.51	1.32	3.57	8.33	29.15	1.03	1.51
	No of Samples	9	8	8	6	6	5	8
	% Exceedance	**11.1**	**12.5**	**37.5**	**--**	**0.0**	**20.0**	**0.0**

It was observed that TC and Nitrate nitrogen were as per the MPCB standards for the available data set. However, pH, DO, BOD and Ammonical nitrogen did not comply with the standards. The percent exceedances were 11, 13, 37 and 20% for pH, DO, BOD and Ammonical nitrogen respectively. The reason for high exceedances of BOD and Ammonical nitrogen could probably be the sewage released from nearby villages.

Table 4.34(b) : Water Quality Index for Mor River

Station Code	2007	2008	2009	2010	2011
2674	GE	GE	MG	--	GE

As data is available for very few months the annual WQI index based on this does not give a correct picture.

30. Morna River

Morna River flows through the Akola city. It is one of the tributaries of Purna and Vaan River in Akola. Akola being primarily an industrial and agricultural city, the pollution in the Morna River could be due to the discharges of industrial effluents and agricultural run-offs. MPCB has the following monitoring location of Morna River. Detailed analysis of monitored data is given in **Table 4.35.**

1. **Morna river at D/s of Railway bridge (2675/SWMP)**
   - **Station Details:** Village- Akola, Taluka- Akola, District- Akola.
   - **Pollution sources**: Sewage from Akola city.

Table 4.35(a): Three years Descriptive Statistics for Morna River (2008, 10 &11)

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2675	Mean	7.9	4.6	11.6	322.3	780.0	1.0	2.9
	Std.dev	0.53	1.01	6.62	289.23	570.81	1.25	1.59
	No of Samples	15	13	14	13	15	14	14
	% Exceedance	**13.3**	**23.1**	**92.9**	**--**	**0.0**	**21.4**	**0.0**

For Morna River, it was found that TC and Nitrate nitrogen were as per the MPCB standards. Parameters pH, DO, BOD and Ammonical nitrogen exceeded the standards by 13, 23, 92, and 21% respectively,. The reason probably is the sewage released from Akola city into the Morna River.

Table 4.35(b): Water Quality Index for Morna River

Station Code	2007	2008	2009	2010	2011
2675	GE	Bad	MG	Bad	MG

As data is available for very few months the annual WQI index based on this does not give a correct picture.

31. Muchkundi River

Muchkundi River originates in the mountain of Sahyadri near Vishalgad and flows westward from Ratnagiri district. It meets Arabian Sea at Purnagad. It flows through villages like Satavali, Beni, Harche, Dorle and Gawade Ambere. MPCB has following two monitoring locations of Muchkundi River. Detailed analysis of monitored data is given in **Table 4.36**.

1. **Muchkundi river at Pawarwadi (HP_MU_1/HP)**
   - **Station Details:** Village- Pawarwadi, Taluka- Lanja, District- Ratnagiri.
   - **Pollution sources :** Domestic and human activities
2. **Muchkundi River at Waked, Ratnagiri, near M/s Asahi Maharashtra Glass Ltd (2676/SWMP)**
   - **Station Details:** Village- Waked, Taluka-Lanja, District- Ratnagiri
   - **Pollution sources**: Pollution due to Industrial waste and human activities like bathing, washing etc

Table 4.36(a): Five years Descriptive Statistics for Muchkundi River

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
HP_MU-1	Mean	7.6	7.3	1.3	1180.1	1686.4	0.1	0.1
	Std.dev	0.26	0.91	0.58	1001.02	1855.19	0.00	0.08
	No of Samples	46	46	46	44	45	46	12
	% Exceedance	**0.0**	**0.0**	**0.0**	--	**11.1**	**0.0**	**0.0**
2676	Mean	7.5	6.9	2.2	2.7	70.4	0.5	0.8
	Std.dev	0.52	0.48	0.36	1.19	25.80	0.18	0.54
	No of Samples	35	34	34	33	35	32	33
	% Exceedance	**5.7**	**0.0**	**0.0**	--	**0.0**	**0.0**	**0.0**

For both the stations of Muchukundi River, it was observed that DO, BOD, Ammonical and Nitrate nitrogen complied with the MPCB standards whereas pH exceeded by 6% at Ratnagiri station and TC exceeded by 11% at Pawarwadi station. The reason could be some human activities.

Table 4.36(b): Water Quality Index for Muchkundi River

Station Code	2007	2008	2009	2010	2011
HP_MU-1	GE	GE	GE	GE	GE
2676	--	GE	GE	GE	GE

Monthly WQI values indicated that the water quality of Muchkundi River at Pawarwadi station varied from moderately good to excellent while at Waked it was good to excellent for the available data sets.

32. Mula-Mutha River

The Mula-Mutha is formed by the confluence of the Mula and Mutha Rivers in the city of Pune. It forms a tributary of the Bhima River in the Deccan plateau. Mula River originates from Mulshi Dam near Pune It passes through the towns of Pune and Khadki. Mutha River arises in the Western Ghats and flows eastward until it merges with the Mula River in the city

of Pune. After merging with the River Mula in Pune, it flows as the Mula-Mutha to join the river Bhima. Mula-Mutha is a monsoon based river and usually flooded in the rains and dry in the summer. However the rivers have become polluted in the city. Their confluence is at Sangam Bridge in Pune. MPCB has following eight monitoring locations of Mula-Mutha River. Detailed analysis of monitored data is given in **Table 4.37.**

1. **Mutha river at Sangam Bridge near Ganapathy ghat (2191/SWMP)**
   - **Station Details:** Village- Shivaji Nagar, Taluka- Pune, District- Pune.
   - **Pollution sources**: Domestic sewage, Ganapathy immersion and other human activities.
2. **Mula - Mutha river at Mundhawa bridge (2192/SWMP)**
   - **Station Details:** Village- Mundhawa, Taluka- Haweli, District- Pune.
   - **Pollution sources**: Domestic waste and human activities
3. **Mula river at Aundh bridge ,Aundgaon (2193/SWMP)**
   - **Station Details:** Village- Aundhgaon, Taluka- Haweli, District- Pune.
   - **Pollution sources**: Domestic waste and human activities.
4. **Mula river at Harrison bridge near Mula- Pawana sangam (2194/SWMP)**
   - **Station Details:** Village- Bopodi, Taluka- Haweli, District- Pune.
   - **Pollution sources**: Domestic waste from Bopodi STP, municipal solid waste and human activities.
5. **Mula-Mutha river at D/s of Theur, Pune (2677/SWMP)**
   - **Station Details:** Village- Theur, Taluka- Haweli, District- Pune.
   - **Pollution sources**: Effluent from sugar industries, domestic waste & pollution due to human activities.
6. **Mutha river near Veer Savarkar Bhavan, Pune (2678/SWMP)**
   - **Station Details:** Village- Pune M.C,Taluka- Pune, District- Pune.
   - **Pollution sources**: Domestic sewage and other human activities.
7. **Mutha river at Deccan bridge, Pune(2679/SWMP)**
   - **Station Details:** Village- Deccan, Taluka- Pune, District- Pune
   - **Pollution sources**: Domestic sewage and other human activities.
8. **Mutha river at Khadakvasla Dam, Pune (2680/SWMP)**
   - **Station Details:** Village- Kadakvasla, Taluka- Haweli, District- Pune.
   - **Pollution sources**: No source of pollution.

Table 4.37(a): Five years Descriptive Statistics for Mula-Mutha River (2007-11)

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2191	Mean	7.6	1.7	26.8	271.8	1499.1	9.7	0.5
	Std.dev	0.39	1.03	11.71	103.41	490.00	13.93	0.53
	No of Samples	53	27	52	53	53	52	52
	% Exceedance	**0.0**	**100.0**	**98.1**	**--**	**0.0**	**86.5**	**0.0**
2192	Mean	7.7	1.8	23.5	277.5	1456.1	7.4	0.5
	Std.dev	0.40	1.56	11.62	103.21	499.59	6.05	0.61
	No of Samples	53	53	52	53	53	52	52
	% Exceedance	**1.9**	**86.8**	**100.0**	**--**	**0.0**	**90.4**	**0.0**

Table 4.37(a): Five years Descriptive Statistics for Mula-Mutha River (2007-11)

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2193	Mean	7.8	3.2	18.0	249.1	1354.7	6.2	0.4
	Std.dev	0.36	1.88	12.34	120.80	546.06	8.45	0.42
	No of Samples	52	52	52	51	51	51	51
	% Exceedance	**1.9**	**59.6**	**100.0**	**--**	**0.0**	**82.4**	**0.0**
2194	Mean	7.7	2.8	20.8	268.1	1503.8	6.7	0.6
	Std.dev	0.38	3.27	10.10	107.78	459.68	7.44	0.57
	No of Samples	53	53	52	53	53	52	52
	% Exceedance	**1.9**	**77.4**	**100.0**	**--**	**0.0**	**84.6**	**0.0**
2677	Mean	7.9	4.0	12.9	202.6	1199.5	2.2	0.4
	Std.dev	0.48	1.72	6.95	114.86	526.93	2.63	0.52
	No of Samples	46	45	46	41	46	45	45
	% Exceedance	**10.9**	**48.9**	**91.3**	**--**	**0.0**	**37.8**	**0.0**
2678	Mean	7.6	2.1	23.7	241.4	1418.8	7.3	0.4
	Std.dev	0.36	2.07	11.77	101.43	540.80	8.55	0.41
	No of Samples	46	45	45	46	46	45	45
	% Exceedance	**0.0**	**82.2**	**100.0**	**--**	**0.0**	**75.6**	**0.0**
2679	Mean	7.7	2.1	27.6	260.5	1458.0	10.8	0.5
	Std.dev	0.36	1.38	14.27	112.36	522.42	16.69	0.53
	No of Samples	46	32	46	46	46	45	45
	% Exceedance	**2.2**	**84.4**	**100.0**	**--**	**0.0**	**73.3**	**0.0**
2680	Mean	7.9	6.4	5.0	37.5	258.4	0.3	0.2
	Std.dev	0.47	0.45	2.47	32.98	130.73	0.40	0.28
	No of Samples	40	39	39	40	38	39	40
	% Exceedance	**7.5**	**0.0**	**48.7**	**--**	**0.0**	**2.6**	**0.0**

The descriptive statistics of Mula-Mutha showed that only TC and Nitrate nitrogen were as per the MPCB standards whereas DO, BOD and Ammonical nitrogen did not comply with the standards. The percentage exceedance for DO, BOD and Ammonical nitrogen ranged from 48-100%, 48-100% and 2-90% respectively at almost all the stations of Mula Mutha River. The probable reason for such exceedance could be the domestic waste, human activities and some industrial effluents at these stations. However, percentage exceedance of pH ranged from 2-10% at these stations.

Table 4.37(b): Water Quality Index for Mula-Mutha River

Station Code	2007	2008	2009	2010	2011
2191	Bad	VB	VB	VB	VB
2192	Bad	Bad	VB	VB	Bad
2193	MG	Bad	Bad	Bad	Bad
2194	Bad	Bad	Bad	Bad	VB
2677	MG	Bad	Bad	MG	Bad
2678	Bad	Bad	Bad	VB	Bad
2679	Bad	VB	--	VB	VB
2680	GE	GE	GE	GE	GE

The reason for bad or very bad water quality at Sangam bridge, Mundhawa Bridge and Deccan bridge could be due to the domestic waste and human activities and immersion of Ganpati idols in Mutha River at Sangam Bridge.

33. Nira River

Nira River originates in Sahyadri Hills in Bhor tehsil and flows through Bhor, Baramati, Indapur tahsils covering Pune and Solapur districts of Maharashtra. The confluence of Bhima and Nira River is at Narsingpur and then it flows as Bhima River in Solapur districts. Nira River is a tributary of Bhima River and Karha River is a tributary of Nira River. MPCB has following five monitoring locations of Nira River. Detailed analysis of monitored data is given in **Table 4.38.**

1. **Nira river at Sarola bridge (1463/NWMP)**
   - **Station Details:** Village- Sarola, Taluka- Bhor, District- Pune.
   - **Pollution sources**: Agricultural/human activities domestic sewage.
2. **Nira river at D/s of Jubilant Organosis, Pune (2195/SWMP)**
   - **Station Details:** Village- Nimbut, Taluka- Baramati, District- Pune.
   - **Pollution sources**: Effluent from nearby distilleries, domestic waste.
3. **Nira river at Sangavi (2681/SWMP)**
   - **Station Details:** Village- Sangavi, Taluka- Phaltan, District- Satara
   - **Pollution sources**: Domestic pollution
4. **Nira river at U/s of Jubilant Organosis, Pune (2682/SWMP)**
   - **Station Details:** Village- Nira(Data ghat),Taluka- Baramati, District- Pune.
   - **Pollution sources**: Human activities and domestic waste
5. **Nira river at Shirwal, Satara (2683/SWMP)**
   - **Station Details:** Village- Shindewadi,Shirwal, Taluka- Khandala, District- Satara
   - **Pollution sources**: Domestic Pollution

Table 4.38(a): Five years Descriptive Statistics for Nira River (2007-2011)

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
1463	Mean	8.0	6.1	6.3	112.7	841.9	1.2	0.3
	Std.dev	0.39	0.72	2.16	73.67	487.89	1.77	0.36
	No of Samples	54	53	54	53	54	53	54
	% Exceedance	**7.4**	**1.9**	**70.4**	**--**	**0.0**	**22.6**	**0.0**
2195	Mean	8.0	4.7	10.3	159.3	1226.8	1.3	0.8
	Std.dev	0.42	1.45	5.52	75.39	551.83	2.05	0.63
	No of Samples	52	50	51	52	51	51	52
	% Exceedance	**7.7**	**24.0**	**96.1**	**--**	**0.0**	**29.4**	**0.0**
2681	Mean	8.1	5.2	9.2	122.9	877.7	0.7	0.3
	Std.dev	0.45	1.47	4.50	83.37	579.94	0.98	0.34
	No of Samples	47	47	46	45	46	46	46
	% Exceedance	**19.1**	**21.3**	**87.0**	**--**	**0.0**	**4.3**	**0.0**

Table 4.38(a): Five years Descriptive Statistics for Nira River (2007-2011)

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2682	Mean	8.2	5.8	7.6	145.6	1077.8	0.6	0.4
	Std.dev	0.41	0.83	3.73	74.69	535.27	0.57	0.42
	No of Samples	46	46	45	46	46	45	45
	% Exceedance	**9.4**	**4.3**	**66.7**	**--**	**0.0**	**6.7**	**0.0**
2683	Mean	8.0	5.8	7.6	116.9	816.4	0.5	0.5
	Std.dev	0.38	0.97	2.87	75.44	571.44	0.54	0.90
	No of Samples	45	45	45	45	45	44	44
	% Exceedance	**8.9**	**4.4**	**73.3**	**--**	**0.0**	**4.5**	**0.0**

It was observed that TC and Ammonical nitrogen complied with the MPCB standards at all the stations. However, percent exceedance for pH and DO ranged from 7 -19% and 2-24% respectively. Also, BOD and Ammonical nitrogen exceeded the standards at almost all the stations and it ranged from 66 -96% and 4 -30% respectively. The probable reason for this could be the domestic waste, industrial waste and agricultural run-off.

Table 4.38(b) : Water Quality Index for Nira River

Station Code	2007	2008	2009	2010	2011
1463	GE	MG	MG	MG	MG
2195	MG	Bad	MG	MG	Bad
2681	GE	MG	MG	MG	Bad
2682	MG	MG	MG	MG	MG
2683	MG	MG	MG	MG	MG

The WQI indices evaluated for Nira river showed that the water quality at Sarola village, Sangvi, and U/s of Jubilant Organosis, Pune and Shirwal, Satara was moderately good to excellent. However, at D/s of Jubilant Organosis, Sangavi the water quality varied from very bad to good to excellent probably due to the effluents discharged from nearby distilleries, domestic waste and human activities.

34. Penganga River

The Penganga River is the chief river of the Yavatmal district in the Maharashtra state and flows along the south east boundaries of the district in a winding, meandering course. It rises in the Ajantha range and is a major tributary of the Wardha River, the other major river in the district. After flowing through Buldhana and Washim districts, it then flows along the state border between Maharashtra and Andhra Pradesh before converging into Wardha River. There are two dams being constructed on the river, namely Upper Penganga and Lower Penganga. Also this dam is known as 'Isapur Dam'. MPCB has following two monitoring locations of Penganga River. Detailed analysis of monitored data is given in **Table 4.39**.

1. **Penganga river near water supply scheme of Umarkhed M.C (2697/SWMP)**
   - **Station Details:** Village- Belkhed, Taluka- Umarkhed, District- Yavatmal.
   - **Pollution sources**: Sewage from villages located on river bank.
2. **Penganga river D/s of Isapur Dam (2698/SWMP)**
   - **Station Details:** Village- Isapur, Taluka- Pusad, District- Yavatmal.
   - **Pollution sources**: Sewage from villages located on river bank

Table 4.39(a): Two years Descriptive Statistics for Penganga River (2008 & 2010)

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2697	Mean	7.9	5.8	6.2	43.7	131.0	0.5	1.3
	Std.dev	0.30	0.87	1.83	26.48	87.89	0.31	0.95
	No of Samples	11	11	11	11	11	11	10
	% Exceedance	**0.0**	**0.0**	**72.7**	**-**	**0.0**	**100.0**	**0.0**
2698	Mean	8.1	5.9	5.9	26.3	66.5	0.6	3.6
	Std.dev	0.26	0.54	1.31	16.41	42.40	0.29	4.74
	No of Samples	12	12	12	11	11	12	12
	% Exceedance	**0.0**	**0.0**	**66.7**	**--**	**0.0**	**91.7**	**0.0**

The descriptive statistics of Penganga River showed that pH, DO, TC and Nitrate nitrogen complied with the MPCB standards. However, 72% and 67% exceedance was observed for BOD and 100% and 92% was observed for Ammonia at both the stations i.e. near water supply scheme of Umarkhed M.C and D/s of Isapur Dam. The reason for such exceedance could be the sewage from Belkhed and Isapur villages located on river bank.

Table 4.39(b): Water Quality Index for Penganga River

Station Code	2007	2008	2009	2010	2011
2697	--	GE	--	GE	--
2698	--	GE	--	GE	--

For both the stations of Penganga River i.e. near water supply scheme of Umarkhed M.C and D/s of Isapur Dam, WQI was calculated only for the years 2008 and 2010. The water quality indices evaluated for the available data set indicated that the water quality was good to excellent at both the stations. However this result was based on very few month's data.

35. Panchganga River

The Panchganga River flows through the borders of Kolhapur. It starts from Prayag Sangam. The Panchganga is formed by four streams, the Kasari, the Kumbhi, the Tulsi and the Bhogawati. Local tradition believes in an underground stream Saraswati which together with the other four streams make the Panchganga. The Prayag Sangam confluence marks the beginning of the Panchganga River. From Kolhapur, the Panchganga River winds east about thirty miles till it falls into the Krishna at Kurundvad. MPCB has following four monitoring locations of Panchganga River. Detailed analysis of monitored data is given in **Table 4.40**.

1. **Panchaganga river at Ichalkaranji near MIDC intake well (1311/NWMP)**
   - **Station Details:** Village- Shiradhwad (Ichalkaranji ghat), Taluka- Hatkanangale, District- Kolhapur.
   - **Pollution sources**: Domestic wastes from local bodies are discharged into river. Human activities like bathing, washing, Ganapathi idol immersion etc.
2. **Panchaganga river at U/s of Kolhapur town near Balinga Pumping Station (1904/NWMP)**
   - **Station Details:** Village-Balinga, Taluka- Karvir, District- Kolhapur
   - **Pollution sources**: Pollution due to disposal of domestic sewage from Kolhapur city &other human activities like bathing, washing, Ganapathi idol immersion etc.
3. **Panchaganga river at D/s of Kolhapur town at Gandhi nagar near NH-4 Bridge and MIDC intake well (1905/NWMP)**
   - **Station Details:** Village- Uchegaon, Taluka- Kolhapur, District- Kolhapur
   - **Pollution sources**: Pollution due to disposal of domestic sewage from Kolhapur city &other human activities like bathing, washing, Ganapathi idol immersion etc.
4. **Panchganga at Shirol Intake well, Shirol (2163/NWMP)**
   - **Station Details:** Village- Shirol, Taluka- Shirol, District- Kolhapur
   - **Pollution sources :** Domestic discharges
5. **Panchanganga River at Wadange, Kolhapur**
   - **Station Details:** Village- Wadange, Taluka-Karveer, District- Kolhapur
   - **Pollution sources :** Domestic discharges

Table 4.40(a)I: Five years Descriptive Statistics for Panchganga River (2007-11)

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
1311	Mean	7.4	6.3	2.5	7.3	154.5	0.4	1.2
	Std.dev	0.56	1.04	0.56	4.43	80.96	0.26	0.76
	No of Samples	24	23	23	24	24	23	23
	% Exceedance	**0.0**	**4.3**	**0.0**	**--**	**0.0**	**0.0**	**0.0**
1904	Mean	7.5	6.5	2.3	7.4	121.7	0.4	1.1
	Std.dev	0.54	0.65	0.39	4.52	50.74	0.23	0.72
	No of Samples	55	54	54	54	55	52	53
	% Exceedance	**5.5**	**0.0**	**0.0**	**--**	**0.0**	**0.0**	**0.0**
1905	Mean	7.3	5.7	3.2	12.1	212.7	0.5	1.4
	Std.dev	0.47	1.42	1.28	9.56	113.17	0.50	1.05
	No of Samples	55	54	55	55	54	51	54
	% Exceedance	**0.0**	**14.8**	**12.7**	**--**	**0.0**	**5.9**	**0.0**
2163	Mean	7.5	6.1	2.6	7.8	162.8	0.4	1.4
	Std.dev	0.48	1.30	0.59	3.92	61.36	0.25	0.99
(2008-2011)	No of Samples	43	43	42	41	43	40	41
	% Exceedance	**0.0**	**7.0**	**0.0**	**--**	**0.0**	**0.0**	**0.0**

Table 4.40(a)II :Two years Descriptive Statistics for Panchganga River (2010-2011)

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
Wadange	Mean	7.2	4.5	6.6	10175	11150	0.1	1.9
	Std.dev	0.22	2.60	9.16	7628	7399	0.00	1.66
	No of Samples	12	12	12	12	12	12	12
	% Exceedance	**0.0**	**25.0**	**25.0**	**0.0**	**75.0**	**0.0**	**0.0**

Only two years data is available for the Wadange Station. The descriptive statistics of Panchganga River showed that pH, TC, Ammonical and Nitrate nitrogen complied with the MPCB standards except at U/s of Kolhapur the pH exceeded by 5%and at Wadange Station TC exceeded by 75% However, DO exceeded by 4-25% at all the stations while BOD exceeded 13% at D/s of Kolhapur town at Gandhinagar and 25% at Wadange Station. It could be due to some human activities and domestic sewage.

Table 4.40(b): Water Quality Index for Panchganga River

Station Code	2007	2008	2009	2010	2011
1311	GE	GE	GE	GE	GE
1904	GE	GE	GE	GE	GE
1905	GE	GE	GE	GE	GE
2163	--	GE	GE	GE	GE
Wadange	--	--	--	MG	MG

The WQI evaluated for the stations of Panchganga River showed that the water quality was good to excellent from the year 2007-11 all the stations except Wadange where it was moderately good.

36. Panzara River

The Panzara-Kan or Panjhra is a river in Kandesh region of Maharashtra state. It is a tributary of the Tapi River. Panjhra River originates just few kilometers from a small town Pimpalner, tal-sakri in Dhule District. One small reservoir named Latipada dam is constructed just after its origin. MPCB has following monitoring location of Panzara River. Detailed analysis of monitored data is given in **Table 4.41.**

1. Panzara river near Panzarakan SSK Ltd. (2684)

- **Station détails:** Village- Panzara, Taluka- Dhule, District- Dhule
- **Pollution Sources:** Effluent from Panzarakan SSK Ltd.

Table 4.41(a): Three years Descriptive Statistics for Panzara River (for 2007-09)

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2684	Mean	8.3	5.6	8.8	18	40	1.8	0.9
	Std.dev	0.26	0.99	3.49	9.88	24.98	1.29	0.68
	No of Samples	16	12	15	15	16	13	16
	% Exceedance	**19**	**8**	**87**	**-**	**0**	**62**	**0**

The descriptive statistics of Panzara River showed that only TC and Nitrate nitrogen complied with the MPCB standards whereas 19, 8, 8% and 62% exceedance was observed for pH, DO, BOD and Ammonical nitrogen. It could be due to the effluents released from the industry Panzarakan SSK Ltd. located in Panzara Village.

Table 4.41(b) : Water Quality Index for Panzara River

Station Code	2007	2008	2009	2010	2011
2684	MG	GE	MG	--	--

WQI for Panzara River varied from Moderately Good to Excellent.

37. Patalganga River

Patalganga River is a tributary of Alaknanda River originating in Kunwarikhal catchment. It raises in the steep western scarps of the Matheran uplands where it branches off from the main ridge near Khopoli and maintains a general westward flow till it joins the Dharamtar Creek with a wide estuary. The Patalganga River has its source in the Khandala portion of the Sahyadri scarp. The Balganga River is a tributary stream of the Patalganga only nominally as it flows almost parallel though in a hilly region, and joins the Patalganga only in the Dharamtar creek. MPCB has following eight monitoring location of Patalganga River. Detailed analysis of monitored data is given in **Table 4.42**.

1. **Patalganga at Turade (HP_PG_1/HP)**
   - **Station Details:** Village- Turade, Taluka- Panvel, District- Raigad
   - **Pollution sources :** Domestic discharges
2. **Patalganga river at Shilphata bridge (1151/NWMP)**
   - **Station Details:** Village-Khopoli, Taluka- Khalapur, District- Raigad
   - **Pollution sources**: Domestic effluent is discharged. Nearby industries are not allowed to discharge effluent into river.
3. **Patalganga near intake of MIDC water works (Turade w/w) (1462/NWMP)**
   - **Station Details:** Village- Turade, Taluka- Khalapur, District- Raigad
   - **Pollution sources**: Industries are not allowed to discharge effluents. Water is used for drinking by MIDC Patalganga and Rasayani.
4. **Patalganga river at D/s of Kharpada bridge (2685/SWMP)**
   - **Station Details:** Village-Kharpada, Taluka-Khalapur, District-Raigad
   - **Pollution sources**: Effluent discharge point of HOC Ltd, HIL, MIDC Patalganga etc. Fishing activity.
5. **Patalganga river at Vyal Pump House (2686/SWMP)**
   - **Station Details:** Village-Vyal, Taluka-Khalapur, District-Raigad.
   - **Pollution sources**: Discharge of effluent is not allowed. Non polluting industries are nearby.
6. **Patalganga river at Khalapur Pumping Station (2687/SWMP)**
   - **Station Details:** Village-Khalapur, Taluka-Khalapur, District-Raigad.
   - **Pollution sources**: Discharge of effluent not allowed. Water is used for washing, bathing etc. without filtration.
7. **Patalganga river at Savroli bridge (2688/SWMP)**
   - **Station Details:** Village-Savroli, Taluka-Khalapur, Distict-Raigad.
   - **Pollution sources**: Discharge of effluent not allowed.

8. **Patalganga river at Gagangiri Maharaj Temple (2689/SWMP)**
   - **Station Details:** Village-Khopoli, Taluka-Khalapur, District-Raigad.
   - **Pollution sources**: Holy place & tourist spot. Tailrace water from Tata Thermal Power station. Domestic pollution.

Table 4.42(a) : Five years Descriptive Statistics for Patalganga River (2007-11)

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
HP_PG_1	Mean	7.5	6.9	2.1	3224.6	5125.5	0.1	--
	Std.dev	0.47	0.98	0.89	3379.5	5464.7	0.22	--
	No of Samples	48	48	47	45	47	47	--
	% Exceedance	**0.0**	**0.0**	**0.0**	**0.0**	**42.6**	**0.0**	--
1151	Mean	7.3	6.8	3.7	337.8	742.3	0.4	0.4
	Std.dev	0.34	0.37	0.61	442.4	658.11	1.42	0.42
	No of Samples	54	54	53	53	54	49	51
	% Exceedance	**0.0**	**0.0**	**0.0**	**-**	**0.0**	**2.0**	**0.0**
1462	Mean	7.3	6.7	3.8	136.5	430.5	0.2	0.5
	Std.dev	0.34	0.47	0.85	176.4	439.28	0.38	0.59
	No of Samples	50	50	49	49	50	47	47
	% Exceedance	**0.0**	**0.0**	**4.1**	**-**	**0.0**	**2.1**	**0.0**
2685	Mean	7.1	72.7	4.4	61.2	175.9	1.6	2.6
	Std.dev	0.51	413.9	1.48	93.48	196.3	3.15	2.98
(2008-2011)	No of Samples	38	42	37	37	39	36	37
	% Exceedance	**2.6**	**9.5**	**13.5**	**-**	**0.0**	**22.2**	**0.0**
2686	Mean	7.3	6.8	3.7	78.5	178.9	0.2	0.5
	Std.dev	0.34	0.45	0.95	98.24	184.0	0.30	0.45
(2008-2011)	No of Samples	36	36	36	34	33	31	32
	% Exceedance	**0.0**	**0.0**	**8.3**	**-**	**0.0**	**0.0**	**0.0**
2687	Mean	7.2	6.7	3.6	71.7	167.5	0.2	0.5
	Std.dev	0.37	0.43	0.73	89.86	152.3	0.26	0.44
(2008-2011)	No of Samples	35	35	35	34	34	27	32
	% Exceedance	**0.0**	**0.0**	**2.9**	**-**	**0.0**	**0.0**	**0.0**
2688	Mean	7.3	6.7	3.9	107.3	232.1	0.2	0.5
	Std.dev	0.32	0.49	0.87	121.00	195.09	0.26	0.48
(2008-2011)	No of Samples	36	36	35	35	35	29	35
	% Exceedance	**0.0**	**0.0**	**8.6**	**-**	**0.0**	**0.0**	**0.0**
2689	Mean	7.3	6.8	3.5	117.8	223.6	0.2	0.4
	Std.dev	0.28	0.44	0.55	167.43	244.94	0.19	0.48
(2008-2011)	No of Samples	36	36	35	36	35	33	35
	% Exceedance	**0.0**	**0.0**	**0.0**	**-**	**0.0**	**0.0**	**0.0**

The descriptive statistics of Patalganga River showed that pH, DO complied with the MPCB standards at all stations except at D/s of Kharpada Bridge. BOD exceeded the standards in the range of 3-13% at most of the stations. TC complied with the standards at all stations except at Turade and exceedance was 53%. Percent exceedance for Ammonical nitrogen was 2%, 2% and 22% at Shilphata Bridge, near intake of MIDC water works and at D/s of Kharpada Bridge respectively. The reason for exceedance could be the effluent discharged from HOC Ltd., HIL, and MIDC, domestic waste and fishing activity.

Table 4.42(b): Water Quality Index for Patalganga River

Station Code	2007	2008	2009	2010	2011
HP_PG_1	GE	MG	MG	GE	GE
1151	GE	GE	GE	GE	GE
1462	GE	GE	GE	GE	GE
2685	--	GE	GE	GE	GE
2686	--	GE	GE	GE	GE
2687	--	GE	GE	GE	GE
2688	--	GE	GE	GE	GE
2689	--	GE	GE	GE	GE

38. Pawana River

Pavana River (Pavna) is situated in the west of Maharashtra state, in the Pune District. It originates in the Western Ghats. It is a tributary of Bhima River and merges in the Mula River in Pune city. It flows through Pune city and divides Pune City and Pimpri Chinchwad area. A dam is built on this river at Pavnanagar called as the Pavnanagar dam. MPCB has following seven monitoring locations of Pawana River. Detailed analysis of monitored data is given in **Table 4.43**.

1. **Pawana river at Sangavi gaon, Pune (2196/SWMP)**
   - **Station Details:** Village- Sangavigaon, Taluka- Haweli, District- Pune.
   - **Pollution sources**: Domestic pollution. Sangavigaon STP is nearby.
2. **Pawana river at Kasarwadi, Pune (2690/SWMP)**
   - **Station Details:** Village- Kasarwadi, Taluka- Haweli, District- Pune.
   - **Pollution sources**: Pollution due to domestic sewage and other human activities.
3. **Pawana river at Dapodi bridge, at Pawana- Mulla Sangam, Pune (2691/SWMP)**
   - **Station Details:** Village- Dapodi, Taluka- Haweli, District- Pune.
   - **Pollution sources**: Pollution due to human activities viz.washing, bathing etc.
4. **Pawana river at Ravet Weir, Pune (2692/SWMP)**
   - **Station Details:** Village- Rivet, Taluka- Haweli, District- Pune.
   - **Pollution sources**: Pollution due to human activities viz.washing, bathing etc.
5. **Pawana river at Chinchwadgaon, Pune (2693/SWMP)**
   - **Station Details:** Village- Chinchwadgaon, Taluka- Haweli, District- Pune.
   - **Pollution sources**: Pollution due to domestic sewage and human activities.
6. **Pawana river at Pimpri gaon, Pune (2694/SWMP)**
   - **Station Details:** Village- Pimprigaon, Taluka- Haweli, District- Pune.
   - **Pollution sources**: Pollution due to domestic sewage and human activities.
7. **Pawana river at Sangavi gaon, Pune (100/SWMP)**
   - **Station Details:** Village- Sangavigaon, Taluka- Haweli, District- Pune
   - **Pollution sources**: Pollution due to domestic sewage and human activities.

Table 4.43 (a) : Five years Descriptive Statistics for Pawana River (2007-11)

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2196	Mean	7.7	2.7	20.9	258.8	1626.2	4.9	0.3
	Std.dev	0.38	1.55	10.01	80.92	225.30	6.48	0.32
(2008-2011)	No of Samples	42	35	43	43	42	42	42
	% Exceedance	**0.0**	**82.9**	**100.0**	**--**	**0.0**	**71.4**	**0.0**
2690	Mean	7.7	3.1	15.3	224.8	1357.4	6.6	0.5
	Std.dev	0.46	1.87	5.73	96.13	551.97	9.40	0.71
	No of Samples	46	45	45	46	43	45	45
	% Exceedance	**8.7**	**71.1**	**100.0**	**--**	**0.0**	**75.6**	**0.0**
100	Mean	7.8	2.4	22.7	145	763	13.6	0.5
	Std.dev	0.46	0.97	7.86	56.01	548.12	18.09	0.17
(2007)	No of Samples	10	7	10	9	10	9	8
	% Exceedance	**0**	**86**	**100**	**--**	**0**	**89**	**0**
2691	Mean	7.7	2.5	18.0	238.2	1458.3	7.1	0.5
	Std.dev	0.41	1.69	7.82	102.51	487.60	8.00	0.56
	No of Samples	45	42	44	44	45	44	44
	% Exceedance	**4.4**	**88.1**	**100.0**	**--**	**0.0**	**70.5**	**0.0**
2692	Mean	7.9	6.3	5.6	76.1	522.6	0.8	0.2
	Std.dev	0.32	0.55	3.40	73.61	423.14	1.71	0.26
	No of Samples	45	44	44	45	45	44	44
	% Exceedance	**2.2**	**0.0**	**47.7**	**--**	**0.0**	**11.4**	**0.0**
2693	Mean	7.7	4.4	10.3	174.2	1155.6	2.0	0.4
	Std.dev	0.38	1.27	4.30	75.73	482.24	2.22	0.42
	No of Samples	44	45	45	44	45	44	44
	% Exceedance	**0.0**	**44.4**	**93.3**	**--**	**0.0**	**50.0**	**0.0**
2694	Mean	7.7	3.0	16.3	249.2	1350.0	5.0	0.4
	Std.dev	0.36	1.95	8.39	109.16	540.41	6.84	0.40
	No of Samples	41	37	41	42	42	41	41
	% Exceedance	**0.0**	**75.7**	**100.0**	**--**	**0.0**	**65.9**	**0.0**

The data for the station 100 i.e at Pawana River at Sangavi gaon, Pune is only for two years i.e 2007 and 08. The descriptive statistics of Pawana River showed that TC and Nitrate nitrogen complied with the MPCB standards. pH exceeded the standard marginally at Dapodi Bridge and Rivet Weir and Kasarwadi. Also, DO, BOD and Ammonical nitrogen exceeded the standards in the range of 44-88%, 48-100% and 11-89% respectively at all the stations. It could be due to release of domestic sewage into the river and some human activities.

Table 4.43(b): Water Quality Index for Pawana River

Station Code	2007	2008	2009	2010	2011
2196	--	Bad	Bad	Bad	Bad
2690	Bad	Bad	Bad	Bad	VB
2691	Bad	Bad	Bad	VB	Bad
2692	GE	MG	GE	GE	GE
2693	MG	MG	Bad	MG	Bad
2694	Bad	Bad	Bad	Bad	VB
100	Bad	--	--	--	--`

In general the water quality of Pawana River was bad. The WQI varied between bad and very bad at Sangavi gaon; Kasarwadi; Pawana- Mulla Sangam; and Pimpri gaon. There was insufficient data for the Sangavi gaon so the WQI was calculated only for the year 2007-08 which was bad. Water Quality at Chinchwadgaon, Pune varied between Moderately Good to Bad. However, The WQI evaluated at Rivet Weir indicated that the water quality varied from moderately good to excellent. The reason for this quality of water could be due to the discharge of domestic waste and human activities like bathing, washing, fishing activity, etc.

39. Pedhi River

Pedhi River rises in the southern portion of the Morsi taluka; runs through the centre of the Amraoti talk roughly parallel to the Purna River in a south-westerly direction. It flows through Balgaon and Bhatkuli and leaves the talk at Bapori; and from there taking a bend towards the west meets the Puma. The supply of water is small but perennial. MPCB has following monitoring location of Pedhi River. Detailed analysis of monitored data is given in **Table 4.44**.

1. **Pedhi river near road bridge at Dadhi- Pedhi village (2695/SWMP)**
   - **Station Details:** Village- Asegaon, Taluka-Chandur Bazar, District- Amravati.
   - **Pollution source:** Sewage from Amravati M.C and other nearby villages.

Table 4.44(a) : Four years Descriptive Statistics for Pedhi River (2008-11)

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2695	Mean	8.0	4.5	12.8	207.6	737.4	1.0	4.0
	Std.dev	0.62	1.37	7.20	145.72	508.87	0.85	2.95
	No of Samples	31	31	30	29	31	31	31
	% Exceedance	**25.8**	**32.3**	**90.0**	**--**	**0.0**	**19.4**	**0.0**

It was observed that that TC and Nitrate nitrogen complied with the MPCB standards. However, pH, DO, BOD and Ammonia exceeded by 25%, 32%, 90% and 19% respectively at Pedhi River near Road Bridge. The reason for such exceedance could be sewage released from Amravati M.C and other nearby villages.

Table 4.44(b) : Water Quality Index for Pedhi River

Station Code	2007	2008	2009	2010	2011
2695	--	Bad	MG	Bad	MG

The WQI evaluated for the available data from the year 2008 -11 of the Pedhi River indicated that the water quality varied from bad to moderately good. It could be due to the sewage released from Amravati M.C and other nearby villages. It was found medium to good in the months of Jan -9, Feb 09, Sep-10, Apr-11, Jun-11, Aug-11, Nov-11.

40. Pehlar River

Pelhar is a minor river flowing through Pehlar Village in Vasai Taluka of Thane district. Pehlar Dam is constructed on Pehlar River. MPCB has following monitoring location of Pehlar River. Detailed analysis of monitored data is given in **Table 4.45**.

1. **Pehlar Dam on Pehlar River - Inlet of water works (2696/SWMP)**
   - **Station Details:** Village-Pehlar, Taluka-Vasai, District-Thane.
   - **Pollution source:** No industries nearby. Tabela is at downstream.

Table 4.45(a) : Four years Descriptive Statistics for Pehlar River (2008-11)

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2696	Mean	7.8	6.9	3.6	45.3	94.1	0.2	0.4
	Std.dev	0.23	0.31	0.61	44.83	68.55	0.18	0.24
	No of Samples	35	36	36	34	34	34	34
	% Exceedance	**0.0**	**0.0**	**0.0**	**--**	**0.0**	**0.0**	**0.0**

The descriptive statistics of Pehlar River showed that all the parameters pH, DO, BOD, TC, Ammonical and Nitrate nitrogen complied with the MPCB standards and the water quality was excellent.

Table 4.45(b) : Water Quality Index for Pehlar River

Station Code	2007	2008	2009	2010	2011
2696	--	GE	GE	GE	GE

The WQI evaluated for the available data of the Pehlar River indicated that the water quality was good to excellent.

41. Purna River

Purna River rises in the eastern Satpura Range of southern Madhya Pradesh state, and flows westward, draining Maharashtra's Marathwada, Vidarbha region before emptying into the Tapti River. The watershed lies mostly in eastern Vidarbha region of Maharashtra state and is nearly 7500 km. It originates in Pokhran village which is 2 km away from Bhaisdehi. Bhaisdehi is a district place in Madhya Pradesh adjoining Amravati district of Maharashtra and flows through Akola, Buldhana, Jalgaon, Jalna, Parbhani districts. The river empties into the Gulf of Khambhat near the city of Navsari in Southern Gujarat. Length of Purna River is 170 km. MPCB has following three monitoring locations of Purna River. Detailed analysis of monitored data is given in **Table 4.46**.

1. **Purna river at Dhupeshwar at U/s of Malkapur water works (1913/NWMP)**
   - **Station Details:** Village- Malkapur, Taluka- Akola, District- Akola.
   - **Pollution source:** No industries nearby. No discharge points for industrial and domestic effluents.

2. **Purna river at D/s of confluence of Morna and Purna, at Andura village (2155/SWMP)**
   - **Station Details:** Village- Andura, Taluka- Balapur, District- Akola.
   - **Pollution source:** Sewage from Akola city, Amravati city and villages located on the river bank.
3. **Purna river near Achalpur- Amravati road bridge, Asegaon (2700/SWMP)**
   - **Station Details:** Village- Asegaon, Taluka-Chandur Bazar, District- Amravati.
   - **Pollution source:** Sewage from Chandur Bazar M.C and other nearby villages.

Table 4.46(a)_I : Five years Descriptive Statistics for Purna River (2007-11)

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
1913	Mean	8.2	5.4	6.8	144.6	388.2	1.3	2.1
	Std.dev	0.33	0.65	1.41	149.93	276.30	1.41	1.22
	No of Samples	22	22	21	22	22	22	22
	% Exceedance	**13.6**	**4.5**	**90.5**	**--**	**0.0**	**27.3**	**0.0**
2155	Mean	101.1	4.9	8.8	204.5	650.5	1.0	2.6
	Std.dev	447.73	0.85	3.63	146.17	510.98	1.07	1.43
	No of Samples	23	22	22	21	22	21	21
	% Exceedance	**8.7**	**13.6**	**86.4**	**--**	**0.0**	**23.8**	**0.0**

Table 4.46(a)_II : Three years Descriptive Statistics for Purna River (2008, 10 & 11)

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2700	Mean	8.2	5.2	8.2	126.9	244.3	1.0	3.2
	Std.dev	0.53	1.10	3.59	88.84	102.18	0.81	3.39
	No of Samples	15	15	15	15	14	14	14
	% Exceedance	**33.3**	**6.7**	**73.3**	**--**	**0.0**	**28.6**	**0.0**

Here for the station 2700 i.e at Achalpur-Amravati Road Bridge the data available is only for 3 years i.e of the year 2008, 2010 and 11.It was observed that TC and Nitrate nitrogen complied with the MPCB standards at all the stations of Purna River. However, DO and Ammonical nitrogen exceeded by 4-13% and 23-28% respectively at D/s of confluence of Morna and Purna and near Achalpur. pH exceeded the standards by 8-33%. Also, 73-90% exceedance was observed for BOD. It could be due to sewage from Akola city, Amravati city, from Chandur Bazar M.C and nearby villages located on the river bank.

Table 4.46(b) : Water Quality Index for Purna River

Station Code	2007	2008	2009	2010	2011
1913	MG	MG	MG	MG	MG
2155	--	MG	MG	Bad	MG
2700	--	MG	--	MG	MG

The monthly WQI evaluated for the available data of the Purna River indicated that the water quality varied from moderately good to good to excellent at U/s of Malkapur water works. At D/s of confluence of Morna and Purna, the water quality varied from bad to moderately good.

However it was moderately good near Achalpur- Amravati Road Bridge. The reason for such water quality could be the sewage released from nearby villages and Akola city. There was insufficient data at some stations for the year 2007 and 2009.

42. Rangavali River

Rangavali River flows through Navapur Village of Navapur Taluka in Nandurbar district. MPCB has following monitoring location of Rangavali River. Detailed analysis of monitored data is given in **Table 4.47.**

1. **Rangavali river at D/s of Navapur near Rangavali bridge (1907/NWMP)**
   - **Station Details:** Village- Navapur, Taluka- Navapur, District- Nandurbar.
   - **Pollution source:** Pollution due to domestic waste and human activities.

Table 4.47(a) : Three years Descriptive Statistics for Rangavali River (For 2007-09)

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
1907	Mean	8.2	6.2	7.3	15	44	0.3	0.7
	Std.dev	0.30	1.07	2.29	8.67	39.83	0.37	0.86
	No of Samples	10	10	10	9	10	10	10
	% Exceedance	**10**	**0**	**80**	**--**	**0**	**0**	**0**

It was observed that DO, TC, Ammonical and Nitrate nitrogen complied with the MPCB standards. However, 10% and 80% exceedance was there for pH and BOD respectively. It could be due to domestic waste and human activities.

Table 4.47(b) : Water Quality Index for Rangavali River

Station Code	2007	2008	2009	2010	2011
1907	MG	GE	MG	--	--

The WQI evaluated for the available data of the Rangavali River indicated that the water quality varied from moderately good to good to excellent.

43. Savitri River

River Savitri is one of the five rivers which originate from Mahabaleshwar (Maharashtra). It originates in Mahabaleshwar and flows through Raigad district and eventually meets Arabian Sea at Harehareshwar. It passes through Poladpur, Mahad, Mangaon and Shrivardhan talks. There are many Shiva temples along the banks of river Savitri. MPCB has following seven monitoring locations of Savitri River. Detailed analysis of monitored data is given in **Table 4.48**.

1. **Savitri River at Goregaon (HP_SV_1/HP)**
   - **Station Details:** Village-Goregaon, Taluka- Mahad, District- Raigad
   - **Pollution sources :** Domestic as well as industrial discharges

2. **Savitri River at Kangule (HP_SV_2/HP)**
   - **Station Details:** Village-Kangule, Taluka- Poladpur, District- Raigad
   - **Pollution sources :** Domestic as well as industrial discharges
3. **Savitri river at Ovale Village (2199/SWMP)**
   - **Station Details:** Village-Ovale, Taluka-Mahad, District-Raigad.
   - **Pollution sources :**D/s of CETP disposal point.
4. **Savitri river jack well at Upsa Kendre (2701/SWMP)**
   - **Station Details:** Village-Nangalwadi, Taluka-Mahad, District-Raigad.
   - **Pollution sources :**No industries nearby. No effluent disposal point. Water is used for drinking by Birwadi & MIDC Mahad , after filtration
5. **Savitri riverat Shedav Dov (2702/SWMP)**
   - **Station Details:** Village-Shedav Dov, Taluka-Mahad, Distict-Raigad.
   - **Pollution sources :**No industries nearby. No effluent disposal point. Water is used for drinking by Rajewadi village and surrounding areas
6. **Savitri river at Dadli road bridge (2703/SWMP)**
   - **Station Details:** Village-Dadli, Taluka-Mahad, District-Raigad.
   - **Pollution sources :**No industries nearby. No effluent disposal point.
7. **Savitri river at Muthavali Village (2704/SWMP)**
   - **Station Details:** Village-Muthavali, Taluka-Mahad, District-Raigad.
   - **Pollution sources :**No industries nearby. No effluent disposal point at present. Accidental discharge possible

Table 4.48(a)I: Five years Descriptive Statistics for Savitri River (2007-10)

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
HP_SV_1	Mean	7.7	7.0	1.8	3299.0	4049.7	0.1	--
	Std.dev	0.51	0.69	0.95	2805.32	3201.23	0.04	--
	No of Samples	41	41	41	41	40	41	--
	% Exceedance	**2.4**	**0.0**	**0.0**	--	**45.0**	**0.0**	--
HP_SV_2	Mean	7.9	7.2	1.8	2322.5	3140.3	0.1	--
	Std.dev	0.55	0.58	0.63	1831.28	2635.93	0.03	--
	No of Samples	41	41	40	39	39	40	--
	% Exceedance	**4.9**	**0.0**	**0.0**	--	**23.1**	**0.0**	--

Table 4.48(a)II: Four years Descriptive Statistics for Savitri River (2008, 09-11)

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2199	Mean	7.3	6.1	3.2	4.8	112.7	0.7	2.1
	Std.dev	0.56	1.47	3.48	2.16	26.00	0.55	2.20
	No of Samples	40	39	37	39	39	38	36
	% Exceedance	**0.0**	**7.7**	**8.1**	--	**0.0**	**10.5**	**0.0**
2701	Mean	7.4	6.7	2.1	3.3	79.8	0.4	0.9
	Std.dev	0.64	0.61	0.43	1.86	33.35	0.18	0.90
	No of Samples	37	37	36	35	36	37	36
	% Exceedance	**2.7**	**0.0**	**0.0**	--	**0.0**	**0.0**	**0.0**
2702	Mean	7.6	6.5	2.3	3.6	81.3	0.7	0.9
	Std.dev	0.53	0.71	0.61	2.37	39.79	0.72	0.58
	No of Samples	36	36	36	35	35	35	35
	% Exceedance	**2.8**	**0.0**	**0.0**	--	**0.0**	**11.4**	**0.0**

Table 4.48(a)II: Four years Descriptive Statistics for Savitri River (2008, 09-11)

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2703	Mean	7.5	6.5	2.2	5.3	81.5	0.5	4.3
	Std.dev	0.61	0.71	0.44	4.13	41.55	0.20	5.44
	No of Samples	35	35	35	32	32	35	35
	% Exceedance	**5.7**	**0.0**	**0.0**	**--**	**0.0**	**0.0**	**0.0**
2704	Mean	7.5	6.3	2.7	3.7	82.7	0.5	3.7
	Std.dev	0.58	0.95	2.35	2.06	35.89	0.20	4.97
	No of Samples	37	36	36	34	35	37	37
	% Exceedance	**5.4**	**2.8**	**2.8**	**--**	**0.0**	**0.0**	**0.0**

Here for the station 2199 i.e at Ovale village data was also available for the year 2010. It was observed that TC and Nitrate nitrogen complied with the MPCB standards at all the stations. However, pH exceedance was 3-6% at Goregaon, Kangule and Muthavali village respectively. DO did comply at all stations except at Ovale and Muthavali; exceedance was 8% and 3% resp. The exceedance could be due to domestic sewage from villages and accidental discharge from nearby industries.

Table 4.48(b) : Water Quality Index for Savitri River

Station Code	2007	2008	2009	2010	2011
HP_SV_1	GE	GE	MG	GE	--
HP_SV_2	GE	GE	GE	GE	--
2199	--	GE	GE	GE	GE
2701	--	GE	GE	GE	GE
2702	--	GE	GE	GE	GE
2703	--	GE	GE	GE	GE
2704	--	GE	GE	GE	GE

The WQI evaluated for the available data of the Savitri River indicated that the water quality was good to excellent at all the stations except at Goregaon, Mahad in Raigad District where the monthly WQI varied between moderately good to excellent.

44. Sina River

Sina River rises in Ahmadnagar district near Pimpalgaon. River flows through the district border between Ahmadnagar and Solapur and finally enters in Solapur district. River stream covers longest distance in solapur includes Karmala, Madha and Mohol talukas. Sampling location under water monitoring network is located at Lamboti toll naka which comes under Mohol tehsil. MPCB has following monitoring location of Sina River. Detailed analysis of monitored data is given in **Table 4.49**.

1. **Sina river near Laboti toll naka, Solapur (2705/SWMP)**
   - **Station Details:** Village- Laboti, Taluka- Mohal, District- Solapur
   - **Pollution source:** Pollution due to human activities and domestic waste.

Table 4.49(a) : Five years Descriptive Statistics for Sina River (2007-11)

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2705	Mean	8.1	5.7	8.3	125.5	935.9	0.9	0.5
	Std.dev	0.30	0.98	5.08	77.95	549.63	0.95	0.60
	No of Samples	44	43	43	37	43	43	43
	% Exceedance	**2.3**	**7.0**	**74.4**	**--**	**0.0**	**20.9**	**0.0**

It was observed that TC and Nitrate nitrogen complied with the MPCB standards. However, pH, DO, BOD and Ammonical nitrogen exceedance was 2%, 7%, 74% and 21% respectively. It could be due to human activities and domestic waste.

Table 4.49(b) : Water Quality Index for Sina River

Station Code	2007	2008	2009	2010	2011
2705	GE	MG	MG	MG	MG

45. Shastri River

Shastri River is located in Sangameshwar taluka under Ratnagiri district. The river begins in the Western Ghats and flows westwards towards the Arabian Sea located at Jaigad. At most of the places the river is also called as Jaigad River. The River forms its main flow by combining large network of small water streams. There is only one sampling location on this river. Detailed analysis of monitored data is given in **Table 4.50.**

1. **Shastri River at Kumbharkhani village (HP_SH_1)**
   - **Station Details:** Village-Kumbharkhani,Taluka-Chiplun,District-Ratnagiri
   - **Pollution Source** : Domestic discharges

Table 4.50(a): Five years Descriptive Statistics for Shastri River (2007-11)

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
HP_SH-1	Mean	7.7	7.2	1.5	1519.1	2533.9	0.1	0.1
	Std.dev	0.32	0.45	0.70	1375.14	2672.57	0.00	0.15
	No of Samples	37	36	37	37	37	37	11
	% Exceedance	**0.0**	**0.0**	**0.0**		**16.2**	**0.0**	**0.0**

From the descriptive statistics it is observed that only total coliform was exceeding the standard. TC values were exceeding the standard 23% of the time.

Table 4.50(b): Water Quality Index for Shastri River

Station Code	2007	2008	2009	2010	2011
HP_SH_1	GE	GE	GE	GE	GE

Monthly water quality index for Shastri River at the Kumbharkhani village is mainly categorized in two main classes namely good to excellent and moderately good. In the year 2007, out of six months four times WQI was found to be good to excellent and for remaining it was moderately good. In 2008 and 2009, WQI was found to be moderately good for 3 and 4 months out of 8 and 9 months monitored data. Remaining months were found to be good to excellent in respective year.

46. Surya River

Surya River is one of the important Rivers in Thane district which flows through two talukas namely Vikramgad and Palghar. River starts with small water streams which form the main stream of Surya. Finally it meets River Vaitarna at Dhuktan village. The river water is used for Tarapur MIDC and Boisar Palghar area for drinking purpose. Detailed analysis of monitored data is given in **Table 4.51.**

1. **Surya River, U/S of Surya Dam (2706/SWMP)**
   - **Station Details:** Village-Dhammi, Taluka-Vikramgad, District-Thane.
   - **Pollution sources**: No development zone upto 1 km. Drinking water reservoir.
2. **Surya River at MIDC Pumping Station, Garvshet (2707/SWMP)**
   - **Station Details:** Village-Garvshet, Taluka-palghar, District- Thane.
   - **Pollution sources**: No development zone upto 1 km. Used for drinking by Tarapur MIDC and Boisar- Palghar area..
3. **Surya River at intake of Vasai-Virar w/s Scheme, Masvan (2708/SWMP)**
   - **Station Details:** Village-Masvan, Taluka-Palghar, District- Thane.
   - **Pollution sources**: No development zone upto 1 km. Intake of Vasai- Virar water scheme.

Table 4.51(a) : Four years Descriptive Statistics for Surya River (for the year 2007-11)

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2706	Mean	7.9	7.1	3.5	39.1	80.5	0.2	0.4
	Std.dev	0.57	0.27	0.69	25.61	41.34	0.18	0.38
	No of Samples	34	34	34	28	28	33	27
	% Exceedance	**11.8**	**0.0**	**2.9**	**-**	**0.0**	**0.0**	**0.0**
2707	Mean	8.1	7.0	3.7	41.3	80.1	0.2	0.3
	Std.dev	0.33	0.30	0.67	27.38	48.80	0.18	0.35
	No of Samples	33	33	33	28	28	32	28
	% Exceedance	**9.1**	**0.0**	**0.0**	**-**	**0.0**	**0.0**	**0.0**
2708	Mean	8.1	7.0	3.5	53.3	108.2	0.1	0.3
	Std.dev	0.33	0.42	0.60	30.86	64.57	0.15	0.35
	No of Samples	30	32	32	27	27	29	27
	% Exceedance	**10.0**	**0.0**	**0.0**	**-**	**0.0**	**0.0**	**0.0**

Here the data is not available for the year 2007.Descriptive statistics shows that DO, BOD, TC, Ammonia and Nitrate values complied with the standards. In case of pH, at station numbers 2706, 2707 and 2708, % exceedance was 12%, 9 and 14% respectively.

Table 4.51(b) : Water Quality Index for Surya River

Station Code	2007	2008	2009	2010	2011
2706	--	GE	GE	GE	GE
2707	--	GE	GE	GE	GE
2708	--	GE	GE	GE	GE

Water quality indices at three stations of Surya River show that the water quality category as good to excellent during all the years from 2008-11. For the year 2007 water quality index could not be calculated due to missing values.

47. Tansa River

The Tansa River is a small river on Salsett Island near Mumbai, and is one of Mumbai's water sources via Tansa Lake. It is embanked by one of the largest masonry dams in the world, built in 1892. The embankment is nearly 2 m. long, 118 ft. high and 30 m. thick at the base. The dam has 1310 mcm capacity of water retention. Detailed analysis of monitored data is given in **Table 4.52.**

1. **Tansa River Dakewali village road bridge (2709/SWMP)**
   - **Station Details:** Village-Dakewali, Taluka-Wada, District-Thane
   - **Pollution sources**: Small scale industries prevalent. Air pollution present.

Table 4.52(a) : One years Descriptive Statistics for Tansa River (2011)

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2709	Mean	7.9	6.8	4.2	29.5	76.3	0.1	0.3
	Std.dev	0.61	0.67	1.92	5.50	14.82	0.08	0.25
	No of Samples	18	18	18	10	8	17	17
	% Exceedance	**11.1**	**0.0**	**16.7**	**--**	**0.0**	**0.0**	**0.0**

Here the data were not available for the year 2007, 09 and 2010**.**

Descriptive statistics shows that, 11% of pH and 17% of BOD values were not complying with the standards whereas other parameters were within the standard. Exceedance in DO and BOD values indicate the localized sources of pollution i.e. sewage disposal in main stream.

Table 4.52(b): Water Quality Index for Tansa River

Station Code	2007	2008	2009	2010	2011
2709	--	--	--	--	GE

Water quality index for Tansa River for 2007-2010 could not be calculated due to missing fecal coliform (FC) data. However for the year 2011 the water quality index indicated Good to Excellent quality of water from the given data.

48. Tapi River

The Tapi River is one of the major rivers with a length of around 724 km. The river rises in the eastern Satpura Range of Madhya Pradesh, and flows westward, through, Maharashtra's Kandeshand, East Vidarbha regions in the northwest corner of the Deccan Plateau and south Gujarat, before emptying into the Gulf of Cambay of the Arabian Sea, in the Surat District of Gujarat. The Tapi River basin encompasses an area of 65,145 km². The basin lies in the states of Maharashtra (51,504 km²), Madhya Pradesh (9,804 km²) and Gujarat (3,837 km²). In Maharashtra state, Tapi River flows through Amravati, Akola, Buldhana, Washim, Jalgaon, Dhule, Nandurbarand Nasik districts. MPCB has 21 monitoring locations of Tapi River under NWMP, SWMP and Hydel Project. **Table 4.53** gives the descriptive statistics of these locations.

Monitoring Locations at Tapi River

Sr.	Station Name /Code	Station Details
1	Akkalpada (HP_TP-1)	Taluka- Sakri, District- Dhule
2	Bhusawal (HP_TP-2)	Taluka- Bhusawal, District- Bhusawa
3	Daryapur (HP_TP-3)	Taluka- Daryapur, District- Amravati.
4	Dhule (HP_TP-4)	Taluka- Dhule, District- Dhule
5	Hingona (HP_TP-5)	Taluka- Yawal, District- Jalgaon
6	Kawtha (HP_TP-6)	Taluka- Balapur, District- Akola
7	Khariya (HP_TP-7)	Taluka- Dharni, District- Amravati
8	Lakhpuri (HP_TP-8)	Taluka- Murtizapur, District- Akola
9	Malegaon Mosam (HP_TP-9)	Taluka- Malegaon, District- Nasik.
10	Manasgaon (HP_TP-10)	Taluka- Shehgaon, District- Buldhana
11	Padalse (HP_TP-11)	Taluka- Amalner, District- Jalgaon
12	Sarangkheda (HP_TP-12)	Taluka- Shahadai, District- Nandurbar
13	Sawkheda (HP_TP-13)	Taluka- Mahuli, District- Satara
14	Sukwad (HP_TP-14)	Taluka- Shirpur, District- Dhule
15	Suple (HP_TP-15)	Taluka- Kalwan, District- Nasik
16	TakliKhetri (HP_TP-16)	Taluka- Patur, District- Akola
17	Vishroli (HP_TP-17)	Taluka- Chandurbazar, District- Amravati
18	Warkhed (HP_TP-18)	Taluka-Telhara District- Akola
19	Bhusawal (1251)	Taluka- Bhusawal, District- Jalgaon
20	Ajnad village (1313)	Taluka- Raver, District- Jalgaon
21	Ubad village near Gujrat border (1314)	Taluka- Shahada, District- Nandurbar

Table 4.53(a): Three years Descriptive Statistics for Tapi River

Stn.Code		pH	DO	BOD	FC	TC	Ammonia
HP_TP_8	Mean	8.3	6.3	2.5	54	223	0.1
	Std.dev	0.12	0.41	0.47	50.13	237.65	0.02
(2007-2009)	No of Samples	32	32	28	24	27	13
	% Exceedance	**9**	**0**	**0**	**-**	**0**	**0**
HP_TP_12	Mean	7.8	6.2	11.8	1746	2957	0.1
	Std.dev	0.39	1.09	6.01	1282.10	1799.76	0.00
(2007-2009)	No of Samples	14	14	14	13	13	14
	% Exceedance	**0**	**7**	**100**	**-**	**8**	**0**
HP_TP_13	Mean	8.1	6.1	2.0	11.4	25.4	0.2
	Std.dev	0.40	0.24	0.84	7.83	15.28	--
(2008-2010)	No of Samples	7	7	7	7	7	1
	% Exceedance	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
HP_TP_18	Mean	8.3	6.2	2.5	42	147	0.1
	Std.dev	0.12	0.74	0.74	33.24	118.15	0.01
(2007-2009)	No of Samples	31	33	29	22	25	15
	% Exceedance	**3**	**0**	**0**	**-**	**0**	**0**

Table 4.53(a): Three years Descriptive Statistics for Tapi River (2007-11)

Stn.Code		pH	DO	BOD	FC	TC	Ammonia
HP_TP_3	Mean	8.3	5.4	3.6	130.3	538.9	0.1
	Std.dev	0.31	1.56	0.97	122.26	518.62	0.15
(2007-2008 & 2010)	No of Samples	22	22	17	20	20	12
	% Exceedance	**13.6**	**18.2**	**5.9**	**-**	**0.0**	**0.0**
HP_TP_4	Mean	7.6	5.8	9.0	3854	11856	0.1
	Std.dev	0.17	1.09	2.97	4236.86	7345.60	0.01
(2008)	No of Samples	9	8	6	9	9	9
	% Exceedance	**0**	**13**	**100**	**-**	**89**	**0**
HP_TP_6	Mean	8.4	6.6	2.6	61.0	215.7	0.0
	Std.dev	0.11	0.41	0.48	75.37	274.63	0.02
(2007-2009)	No of Samples	32	31	29	31	30	10
	% Exceedance	**6.3**	**0.0**	**0.0**	**-**	**0.0**	

Table 4.53(a) : Four years Descriptive Statistics for Tapi River

Stn.Code		pH	DO	BOD	FC	TC	Ammonia
HP_TP_1	Mean	8.4	5.9	11.8	1377.5	2400.0	0.1
	Std.dev	0.32	0.76	5.41	408.95	439.01	0.01
(2007-2010)	No of Samples	12	12	12	12	12	4
	% Exceedance	**25.0**	**0.0**	**100.0**	**-**	**0.0**	**0.0**
HP_TP_2	Mean	8.1	6.1	1.9	5.1	44.5	0.0
	Std.dev	0.49	0.83	0.80	5.58	75.78	0.00
(2007-2010)	No of Samples	16	16	15	15	15	0
	% Exceedance	**0.0**	**0.0**	**0.0**	**-**	**0.0**	
HP_TP_5	Mean	8.0	6.4	1.5	5.9	26.9	2.4
	Std.dev	0.33	0.70	0.46	5.70	35.11	
(2007-2010)	No of Samples	11	11	11	10	10	1
	% Exceedance	**0.0**	**0.0**	**0.0**	**-**	**0.0**	**100.0**
HP_TP_9	Mean	8.0	6.3	10.6	2882.5	4396.9	0.1
	Std.dev	0.52	0.40	3.75	2142.88	2733.20	0.02
(2007-2010)	No of Samples	16	15	16	16	16	16
	% Exceedance	**12.5**	**0.0**	**100.0**	**-**	**31.3**	**0.0**
HP_TP_11	Mean	8.1	6.6	2.7	7.1	49.4	0.1
	Std.dev	0.35	0.74	0.91	6.82	100.62	0.08
(2007-2010)	No of Samples	12	12	11	12	11	3
	% Exceedance	**0.0**	**0.0**	**0.0**	**-**	**0.0**	**0.0**
HP_TP_14	Mean	8.0	6.1	13.1	1136.3	2417.9	0.1
	Std.dev	0.36	0.73	11.03	691.22	1139.65	0.01
(2007-2010)	No of Samples	19	19	18	19	19	17
	% Exceedance	**10.5**	**5.3**	**100.0**	**-**	**5.3**	**0.0**
HP_TP_15	Mean	8.1	6.6	10.3	5097.9	8338.5	0.1
	Std.dev	0.36	0.81	3.75	4191.19	6948.75	0.01
(2007-2010)	No of Samples	21	21	21	21	20	21
	% Exceedance	**9.5**	**0.0**	**100.0**	**-**	**60.0**	**0.0**

Table 4.53(a): Five years Descriptive Statistics for Tapi River (2007-11)

Stn.Code		pH	DO	BOD	FC	TC	Ammonia
HP_TP_7	Mean	8.3	6.2	2.9	104.4	361.3	0.0
	Std.dev	0.13	0.62	0.72	178.24	576.69	0.01
	No of Samples	14	13	13	14	14	7
	% Exceedance	**0.0**	**0.0**	**0.0**	**-**	**0.0**	
HP_TP_10	Mean	8.4	6.3	2.6	53	133	0.1
	Std.dev	0.16	0.53	0.35	50.84	136.41	0.00
	No of Samples	32	33	28	26	30	9
	% Exceedance	**9**	**0**	**0**	**-**	**0**	**0**
HP_TP_16	Mean	8.4	6.3	2.7	55	138	0.1
	Std.dev	0.09	0.53	0.46	47.06	107.94	0.01
	No of Samples	31	32	28	27	29	8
	% Exceedance	**6**	**0**	**0**	**-**	**0**	**0**
HP_TP_17	Mean	8.3	6.2	2.6	38	132	0.1
	Std.dev	0.14	0.61	0.39	38.95	131.52	0.02
	No of Samples	33	33	28	28	29	10
	% Exceedance	**3**	**0**	**0**	**-**	**0**	**0**
1251	Mean	7.9	5.8	7.7	12.3	39.0	0.3
	Std.dev	0.49	0.86	3.80	8.45	34.03	0.28
	No of Samples	54	53	54	47	47	44
	% Exceedance	**11.1**	**3.8**	**74.1**	**-**	**0.0**	**0.0**
1313	Mean	8.0	5.9	7.9	14.3	43.5	0.3
	Std.dev	0.45	0.92	3.89	11.95	40.72	0.28
	No of Samples	55	55	54	50	49	47
	% Exceedance	**10.9**	**5.5**	**68.5**	**-**	**0.0**	**0.0**
1314	Mean	7.9	6.0	7.1	14.5	47.1	0.3
	Std.dev	0.45	0.82	3.58	10.07	49.87	0.16
	No of Samples	54	53	53	46	47	45
	% Exceedance	**5.6**	**3.8**	**58.5**	**-**	**0.0**	**0.0**

The data observed at these 21 locations showed that at 15 locations, out of these 21 locations, pH did not meet the standards. The highest exceedance for pH was observed to be 29% at HP_TP_1. BOD did not meet the standard at 10 locations out of which at 6 locations, 100% of the samples did not meet the standards. At 6 locations, DO was below the MPCB standard. At 5 locations TC exceeded the MPCB standard. Ammonical Nitrogen and Nitrate were within the standards at all locations.

Table 4.53(b) : Water Quality Index for Tapi River

Sr.	Station Code	2007	2008	2009	2010	2011
1	**HP_TP_1**	VB	MG	Bad	Bad	--
2	**HP_TP_2**	GE	GE	GE	GE	--
3	**HP_TP_3**	MG	GE	--	MG	--
4	**HP_TP_4**	--	MG	--	--	--

Table 4.53(b) (Contd..) : Water Quality Index for Tapi River

Sr.	Station Code	2007	2008	2009	2010	2011
5	**HP_TP_5**	GE	GE	GE	GE	--
6	**HP_TP_6**	GE	GE	GE	--	--
7	**HP_TP_7**	GE	GE	GE	GE	GE
8	**HP_TP_8**	GE	GE	GE	--	--
9	**HP_TP_9**	MG	MG	Bad	Bad	--
10	**HP_TP_10**	GE	GE	GE	GE	GE
11	**HP_TP_11**	GE	GE	GE	GE	--
12	**HP_TP_12**	MG	Bad	MG	--	--
13	**HP_TP_13**	--	GE	GE	GE	--
14	**HP_TP_14**	MG	MG	MG	Bad	--
15	**HP_TP_15**	MG	MG	Bad	Bad	--
16	**HP_TP_16**	GE	GE	GE	GE	GE
17	**HP_TP_17**	GE	GE	GE	GE	GE
18	**HP_TP_18**	GE	GE	GE	--	--
19	**1251**	MG	GE	GE	GE	GE
20	**1313**	MG	GE	GE	GE	GE
21	**1314**	MG	GE	GE	GE	GE

WQI evaluated at these 21 locations indicate that:

Good to Excellent	Bhusawal, Hingona, Kawtha, Khariya, Lakhpuri, Manasgaon, TakliKhetri, Vishroli, Warkhed,
Moderately Good to excellent	Daryapur, Bhusawal Railway Colony, Ajnad village, Ubad village near Gujarat border,
Bad to moderately good	Malegaon Mosam, Sukwad, Suple, Sarangkheda
Between Very Bad to Bad	Akkalpada
At Sawkheda there was very few data available to evaluate the WQI.	

The water quality at Tapi was poor at several locations.

Table 4.53(c) gives the number of sites out of 21 sites of Tapi with percent exceedances in different ranges for BOD, DO, TC and pH.

Table 4.53(c) : Number of Sites with Percent Exceedances for BOD, DO, TC and pH

Percent Exceedance	BOD	DO	TC	pH
0%	11	14	16	6
1-20%	1	6	2	14
20-40%	0	1	1	1
40-60%	1	--	1	--
60-80%	2		0	--
80-100%	6	--	1	--

Figures 4.7 present the pie charts for percent exceedances for BOD, DO, pH and TC for 21 locations of Tapi River.

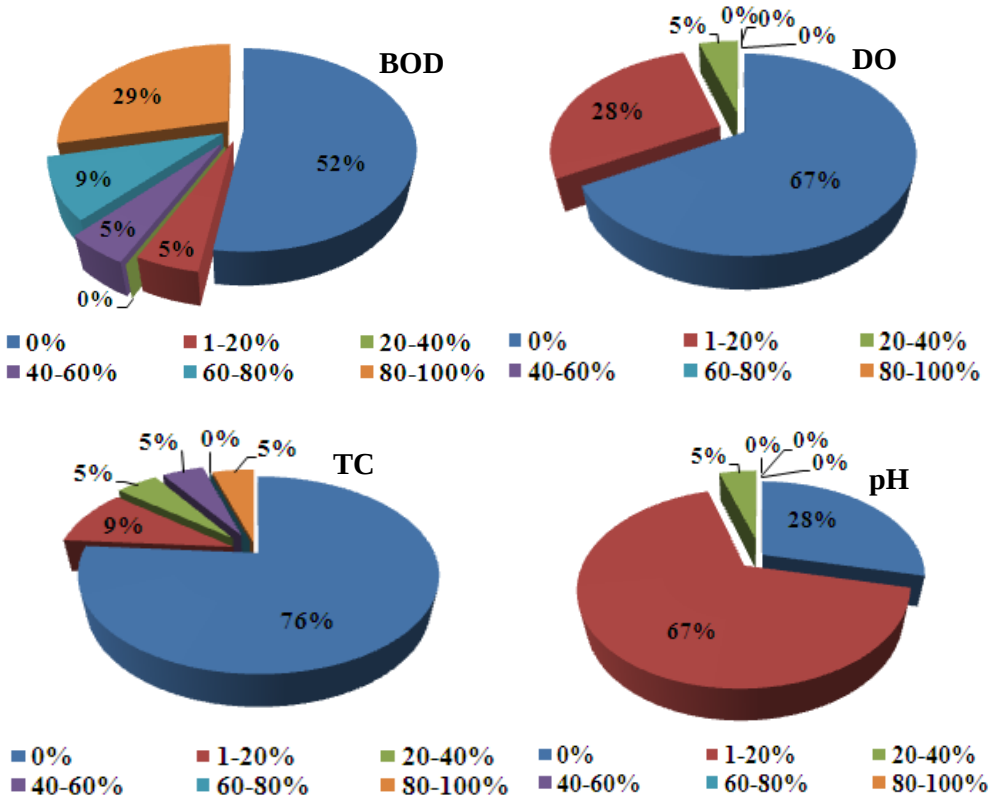

Figure 4.7 : Percent Exceedances at 21 Monitoring Locations of Tapi River

The average water quality index for five years evaluated at 21 sites is presented in **Figure 4.8**. It shows that 67% of the locations had water quality "Good to Excellent", 24% had water quality "Medium to Good" and at 9% locations (2 locations viz. Akkalpada and Dhule) water quality was bad.

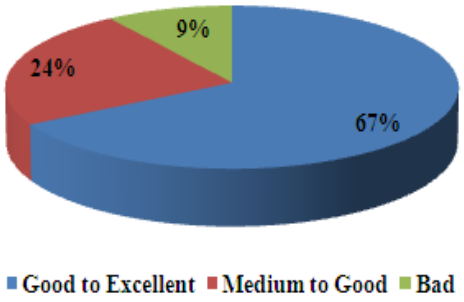

Figure 4.8 : Water Quality Index of 21 Monitoring Locations of Tapi River

49. Titur River

Titur River is one of the tributaries of Tapi River which rises near Chalisgaon in the Jalgaon district and empties down into the Girna River .There is only one monitoring location on this river. Detailed analysis of monitored data is given in **Table 4.54.**

1. **Titur River D/s of Chalisgaon (2710/SWMP)**
   - **Station Details:** Village-Chalisgaon, Taluka-Jalgaon, District-Jalgaon
   - **Pollution sources**: Sewage from Chalisgaon

Table 4.54(a): Five years Descriptive Statistics for Titur River (2007-11)

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2710	Mean	5.8	8.0	17.6	52.1	1.8	0.5	16.9
	Std.dev	1.53	4.92	11.14	65.46	1.31	0.36	9.49
	No of Samples	31	29	31	28	28	29	32
	% Exceedance	**41.9**	**20.7**	**83.9**	**-**	**0.0**	**0.0**	**0.0**

From the descriptive statistics it is seen that TC, Ammonia and Nitrate values complied with the standard. From the data set it can observed that 41%, 20%, 84% of the samples did not meet the standards for pH, DO and BOD respectively. High exceedance in BOD and DO could be due to the domestic sewage disposal in river water.

Table 4.54(b): Water Quality Index for Titur River

Station Code	2007	2008	2009	2010	2011
2710	MG	MG	MG	GE	GE

50. Ulhas River

Ulhas River originates near Karjat in the Western Ghat Range, and flows westward through Raigad and Thane districts. The River flows through Kulgaon-Badlapur, north of Ulhasnagar and Kalyan, where it turns west wards to Thane. Near Raw water pump house of MIDC Jambhul, Barvi Dam is located. The confluence is a tourist and fishing hub for villagers around. At Thane, the river splits into two branches which flow west and south, respectively, around Salsette Island, on which lies the metropolis of Mumbai. Both branches are estuarine, and lie on seismic fault lines. There are six monitoring locations on this river which are listed below. Detailed analysis of monitored data is given in **Table 4.55.**

1. **Ulhas River near Kambe (HP_UH_1)**
   - **Station Details:** Village- Kambe, District- Thane.
   - **Pollution sources :** Domestic activities
2. **Ulhas River near Khapari (HP_UH_2)**
   - **Station Details:** Village- Khapari, District- Thane.
3. **Ulhas River near Manda (HP_UH_3)**
   - **Station Details:** Village- Manda, District- Thane.
4. **U/s of NRC Bunder Mohane village (1093)**
   - **Station Details:** Village- Mohane, Taluka-Kalyan, District- Thane.
   - **Pollution sources :** Domestic discharges/ sewage and industrial waste
5. **U/S of Badalapur waterworks, kulgaon village (1094)**
   - **Station Details:** Village-Kulgaon, Taluka- Ambernath, District- Thane.
   - **Pollution sources :** Domestic discharges/ sewage and industrial waste
6. **Jambhul Water Works(2162)**
   - **Station Details:** Village-Jambhul, Taluka-Anbernath, District- Thane.
   - **Pollution sources :** Domestic discharges/ sewage and industrial waste

Table 4.55(a): Descriptive Statistics for Ulhas River

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
HP_UH_1	Mean	7.8	54.1	--	1286.6	4793.3	0.1	--
	Std.dev	0.38	35.65	--	1129.71	6379.29	0.01	--
(2010-2011)	No of Samples	26	26	0	25	6	25	--
	% Exceedance	**5.4**	**0.0**	--	**0.0**	**33.3**	**0.0**	--
HP_UH_2	Mean	7.7	6.3	7.0	706.6	1631.2	0.1	--
	Std.dev	0.56	0.88	2.62	1079.12	2683.93	0.00	--
(2010-2010)	No of Samples	18	18	17	17	17	17	--
	% Exceedance	**5.6**	**0.0**	**82.4**	**0.0**	**11.8**	**0.0**	--
2162	Mean	7.6	6.8	3.5	97.5	204.1	0.2	0.6
	Std.dev	0.37	0.33	0.48	96.14	156.78	0.31	0.37
(2008-2011)	No of Samples	37	35	36	35	33	30	36
	% Exceedance	**0.0**	**0.0**	**0.0**	**-**	**0.0**	**3.3**	**0.0**
HP_UH_3	Mean	7.2	2.6	24.3	12260.0	21397.1	0.5	--
	Std.dev	0.27	2.02	17.16	15599.42	25109.5	0.84	--
	No of Samples	36	33	37	35	35	36	--
	% Exceedance	**0.0**	**90.9**	**94.6**	**0.0**	**71.4**	**16.7**	--
1093	Mean	7.6	6.7	3.7	355.9	683.4	0.2	0.5
	Std.dev	0.38	0.47	0.78	574.22	658.56	0.23	0.38
	No of Samples	52	49	52	52	52	45	51
	% Exceedance	**0.0**	**0.0**	**3.8**	**--**	**0.0**	**0.0**	**0.0**
1094	Mean	7.6	6.9	3.6	101.9	344.6	0.1	0.4
	Std.dev	0.35	0.38	0.57	248.59	479.90	0.17	0.32
	No of Samples	54	52	54	53	54	47	53
	% Exceedance	**0.0**	**0.0**	**0.0**	**--**	**0.0**	**0.0**	**0.0**

Table 4.55(b) : Water Quality Index for Ulhas River

Station Code	2007	2008	2009	2010	2011
HP_UH _1	--	--	--	GE	GE
HP_UH _2	MG	MG	MG	GE	--
HP_UH _3	Bad	VB	VB	Bad	VB
1093	GE	GE	GE	GE	GE
1094	GE	GE	GE	GE	GE
2162	--	GE	GE	GE	GE

Water Quality Indices of Ulhas River showed good to excellent WQI category for the station near U/S of NRC Bunder, Mohane, U/S of Badalapur water work, Kulgaon village and Jambhul water work for the years 2007-11. In case of Jambhul Water works, WQI for year 2007 could not be calculated due to missing data set. Similarly for Ulhas River at Kambe village WQI could be evaluated only for 2011 due to insufficient data. Ulhas River near Khapari varies between moderately good and good to excellent for the year 2007to 2011. At Manda village WQI varied between very bad to bad.

51. Urmodi River

Urmodi River is one of the minor tributary of Krishna River in Satara district. Detailed analysis of monitored data is given in **Table 4.56.**

1. **Urmodi River near Nagthane village (2711/NWMP)**
   - **Station Details:** Village- Nagothane, Taluka-Satara, District-Satara.
   - **Pollution sources**: Domestic, Agricultural runoff and Human activity

Table 4.56(a) : Five Year Descriptive Statistics for Urmodi River (2007-11)

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2711	Mean	7.9	5.6	7.2	131.8	908.7	0.6	0.4
	Std.dev	0.37	0.78	2.69	86.17	479.12	0.99	0.43
	No of Samples	45	46	46	44	45	45	46
	% Exceedance	**2.2**	**0.0**	**73.9**	**-**	**0.0**	**4.4**	**0.0**

From the statistics of Urmodi River it was found that high exceedance in BOD value of 74% is indicative for domestic pollution caused by various human activities by nearby villagers. Other than BOD, pH and ammonical nitrogen showed exceedance of 2 and 4% in monitored values. Whereas all other measured parameter concentrations complied with the standards.

Table 4.56(b) : Water Quality Index for Urmodi River

Station Code	2007	2008	2009	2010	2011
2711	MG	MG	MG	MG	MG

52. Vaitarna River

Vaitarna is an important river in Thane District that flows across Shahapur, Wade and Palghar talukas. The tributaries of this river are Dahreja, Surya, and Tansa. A dam has been built on the river. Datiware Creek is near the mouth of the river. Detailed analysis of monitored data is given in **Table 4.57.**

1. **Vaitarna River near Alman village (HP_VN_1)**
   - **Station Details:** Village- Alman, Taluka-Wada, District-Thane.
2. **Vaitarna River near Alman village (HP_VN_2)**
   - **Station Details:** Village- Chinchara, Taluka-Wada, District-Thane.
3. **Vaitarna River near Kasa (HP_VN_3)**
   - **Station Details:** Village-Kasa, Taluka-Wada, District-Thane.
4. **Vaitarna River near Waghivali(HP_VN_4)**
   - **Station Details:** Village-Waghivali, Taluka-Wada, District-Thane.
5. **Vaitarna River near Gandhare (2712/NWMP)**
   - **Station Details:** Village-Gandhare, Taluka-Wada, District- Thane.

   Pollution sources of all these stations : Domestic discharges and human activities

Table 4.57(a): Four years Descriptive Statistics for Vaitarna River (2007-10)

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
HP_VN_1	Mean	7.7	7.0	8.6	1450.3	8198.9	0.1	--
	Std.dev	0.41	0.71	4.65	1208.29	23792.42	0.00	--
	No of Samples	15	16	16	15	15	15	--
	% Exceedance	**0.0**	**0.0**	**75.0**	--	**6.7**	**0.0**	--
HP_VN_2	Mean	7.6	6.4	8.9	4612.4	7921.5	0.1	--
	Std.dev	0.48	0.85	4.84	16332.56	25728.08	0.01	--
	No of Samples	19	18	19	18	18	18	--
	% Exceedance	**0.0**	**0.0**	**78.9**	--	**11.1**	**0.0**	--
HP_VN_3	Mean	7.6	6.1	19.9	16662.2	30193.9	0.1	--
	Std.dev	0.43	0.77	29.92	51006.72	95364.49	0.03	--
	No of Samples	19	19	19	19	19	19	--
	% Exceedance	**0.0**	**0.0**	**78.9**	--	**10.5**	**0.0**	--
HP_VN_4	Mean	7.5	6.6	6.4	1223.9	1855.9	0.1	--
	Std.dev	0.52	0.90	3.12	1042.50	1424.47	0.02	--
	No of Samples	18	18	17	18	17	18	--
	% Exceedance	**0.0**	**0.0**	**70.6**	--	**5.9**	**0.0**	--
2712	Mean	7.9	6.6	4.3	28.6	65.6	0.1	0.4
	Std.dev	0.63	0.86	1.94	11.98	28.55	0.20	0.31
(2011)	No of Samples	19	19	18	9	9	17	18
	% Exceedance	**10.5**	**0.0**	**16.7**	--	**0.0**	**0.0**	**0.0**

Only two years data i.e 2008 and 2011 is available for the station 2712.The descriptive statistics for five stations of Vaitarna River showed that water parameters such as DO, and Ammonical nitrogen complied with the state board standards. Nitrate was monitored only at Station number 2712 where the values were within the standard.

Table 4.57(b) : Water Quality Index for Vaitarna River

Station Code	2007	2008	2009	2010	2011
HP_VN _1	MG	MG	MG	GE	--
HP_VN _2	MG	MG	MG	GE	--
HP_VN _3	MG	MG	MG	GE	--
HP_VN _4	MG	MG	MG	GE	--
2712	--	--	--	--	GE

For Vaitarna River Water monitoring was carried out in the period of June to October during all four years. From the water quality indices of sampling stations under HP network it was categorized in groups as good to excellent and moderately good. WQI could not be estimated for station number 2712 for four years 2007-10 due to unavailability of FC.

53. Vashishti River

It is one of the larger rivers in Konkan coast of Maharashtra. The town of Chiplun lies on its banks. The river begins in the Western Ghats and snakes its way westwards towards the Arabian Sea. Kolkiwadi Dam, near Alore has a vast reservoir which feeds a tributary of the river. Many villages and some industries are located on its bank. Detailed analysis of monitored data is given in **Table 4.58.**

1. **U/s of Three M Paper Mills near M/s Multifilms Plastic Pvt. Ltd. (2164/NWMP)**
   - **Station Details:** Village- Kherdi, Taluka- Chiplun, District- Ratnagiri.
   - **Pollution sources**: Industrial and Domestic pollution
2. **D/s of Three M Paper Mills near M/s Multifilms Plastic Pvt. Ltd. (2713/NWMP)**
   - **Station Details:** Village- Kherdi, Taluka- Chiplun, District- Ratnagiri.
   - **Pollution sources**: Industrial and Domestic pollution
3. **U/s of Pophali near Konphansawane Bridge. (2714/NWMP)**
   - **Station Details:** Village- Konphanawane, Taluka- Chiplun, District- Ratnagiri.
   - **Pollution sources**: Domestic and Human activity
4. **Vashshti river near Pimpali village (HP_VA_2)**
   - **Station Détails:** Village-Pimpali, Taluka-Chiplun, District-Ratnagiri.
   - **Pollution sources**: Domestic and Human activity

Table 4.58(a): Four years Descriptive Statistics for Vashishti River (2008-11)

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2164	Mean	7.0	6.9	2.1	3	72	0.5	1.1
	Std.dev	0.37	0.40	0.28	0.89	33.25	0.13	0.73
	No of Samples	17	18	18	16	17	17	18
	% Exceedance	**0**	**0**	**0**	**--**	**0**	**0**	**0**
2713	Mean	7.1	6.8	2.2	2	53	0.4	0.7
	Std.dev	0.59	0.48	0.28	0.00	26.33	0.18	0.17
	No of Samples	19	18	19	16	17	16	14
	% Exceedance	**0**	**0**	**0**	**--**	**0**	**0**	**0**
2714	Mean	7.1	6.9	2.1	3	49	0.4	0.6
	Std.dev	0.57	0.37	0.46	1.01	20.79	0.11	0.36
	No of Samples	12	12	12	11	12	12	12
	% Exceedance	**0**	**0**	**0**	**--**	**0**	**0**	**0**

Here data was not available for the year 2007 at all stations**.**

Table 4.58(a) : Five years Descriptive Statistics for Vashishti River (2007-11)

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
HP_VA_2	Mean	7.7	7.0	1.3	1411.1	1869.1	0.1	0.2
	Std.dev	0.26	0.78	0.53	1035.17	1460.72	0.00	0.33
	No of Samples	45	46	45	45	45	45	12
	% Exceedance	**0.0**	**0.0**	**0.0**	**--**	**6.7**	**0.0**	**0.0**

From the descriptive statistics, for all four locations of Vashshti River, it was observed that parameters such as DO, BOD, Ammonia and Nitrate complied with the standard. pH and TC values are within the standard for other three locations.

Table 4.58(b) : Water Quality Index for Vashishti River

Station Code	2007	2008	2009	2010	2011
2164	--	GE	GE	GE	GE
2713	--	GE	GE	GE	GE
2714	--	GE	GE	GE	GE
HP_VA_2	GE	GE	GE	GE	GE

54. Vel River

Vel River originates from the Pune district it is a small tributary of Bhima River. It covers many villages belongs to Shirur and Ranger nagar (Khed) taluka. Detailed analysis of monitored data is given in **Table 4.59.**

1. **Vel River near Shikrapur village (2715/NWMP)**
   - **Station Details:**Village-Shikrapur, Taluka-Shirur, District- Pune.
   - **Pollution sources** : Domestic discharges

Table 4.59(a): Five years Descriptive Statistics for Vel River (2007-11)

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2715	Mean	8.1	5.7	7.5	131.3	934.8	0.8	0.3
	Std.dev	0.55	0.75	3.12	93.25	522.34	1.04	0.37
	No of Samples	32	31	32	30	32	31	31
	% Exceedance	**9.4**	**3.2**	**71.9**	**--**	**0.0**	**19.4**	**0.0**

The descriptive statistics of Vel river location showed that DO, BOD, Ammonia and pH exceeded the standards in 3.2, 72%, 19% and 9% samples respectively. However TC and Nitrate were within the standards. The probable reason for exceedance could be the organic content of domestic sewage from nearby villages of Shirur and Khed talukas.

Table 4.59(b): Water Quality Index for Vel River

Station Code	2007	2008	2009	2010	2011
2715	MG	MG	MG	MG	MG

Monthly Water quality index of the Vel River near Shikrapur is most of the time moderately good. However it was found good to excellent in the year 2010 and 2011 except in the month of Oct and Nov of 2011 when it was found to be bad.

55. Venna River

Venna River one of the tributary of Krishna River rises near Parli village under Satara district and taluka. Many small villages are located along the length of the river which mostly utilize the river water for domestic and irrigation purpose. River gets drain down in main flow of Krishna at Koparde village. Detailed analysis of monitored data is given in **Table 4.60.**

1. **Venna River near Varye village (2186/NWMP)**
   - **Station Details:** Village- Varye, Taluka- Satara, District- Satara.
2. **Venna River near Mahabaleshwar (2716/NWMP)**
   - **Station Details:** Village/Taluka-Mahabaleshwar, District- Satara.
3. **Venna River near Mahuli (2717/NWMP)**
   - **Station Details:** Village-Mahuli, Taluka-Satara, District- Satara.

Table 4.60(a): Five years Descriptive Statistics for Venna River (2007-11)

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2186	Mean	7.9	5.9	7.3	140.0	938.1	0.4	0.5
	Std.dev	0.29	0.68	4.02	110.34	480.18	0.61	0.52
	No of Samples	53	53	52	52	52	52	53
	% Exceedance	**1.9**	**0.0**	**76.9**	**-**	**0.0**	**1.9**	**0**
2716	Mean	7.9	6.1	5.8	59.1	457.5	0.4	0.2
	Std.dev	0.49	0.70	2.60	52.85	403.15	0.65	0.27
	No of Samples	45	46	45	45	46	45	45
	% Exceedance	**4.4**	**0.0**	**55.6**	**-**	**0.0**	**2.2**	**0**
2717	Mean	7.9	5.7	7.4	148.7	932.1	0.7	0.4
	Std.dev	0.41	0.77	2.67	95.45	544.68	0.81	0.59
	No of Samples	46	45	45	46	45	45	45
	% Exceedance	**2.2**	**0.0**	**80.0**	**-**	**0.0**	**11.1**	**0**

It is seen that at all three stations 55-80% of BOD values are not within the standard. For pH 2-4% of values were exceeding the standard. 2-11% of Ammonical nitrogen values were exceeding the standard. Remaining parameters were found to be below the standard. Significant exceedance of BOD could be the result of large domestic and human activities by nearby villages in the river basin.

Table 4.60(b): Water Quality Index for Venna River

Station Code	2007	2008	2009	2010	2011
2186	MG	MG	MG	MG	MG
2716	GE	GE	MG	GE	GE
2717	MG	MG	MG	MG	MG

Monthly Water quality index of Venna River at vary village and Mahuli village most of the time varied between moderately good to excellent. While at Mahabaleshwar it was seen to be good to excellent. At Mahuli village, WQI during November 07-08, May-08 and Apr-10 was bad.

56. Waghur River

Waghur River is one of the tributaries of Tapi River It begins near Jamner Taluka of Jalgaon district and flows to Bhusaval it covers many small villages and finally meets Tapi River. There is one monitoring location on this river. Detailed analysis of monitored data is given in **Table 4.61.**

1. **Waghur river, At- Sakegaon before, Confluence with Tapi river (2718/NWMP)**
   - **Station Details:** Village-Sakegaon, Taluka-Bhusaval, District- Jalgaon.

Table 4.61(a) : Five years Descriptive Statistics for Waghur River (2007-11)

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2718	Mean	8.1	5.9	7.8	14.3	33.6	0.9	1.5
	Std.dev	0.44	0.98	5.16	10.75	15.46	1.17	1.12
	No of Samples	32	29	31	26	26	27	32
	% Exceedance	**18.8**	**3.4**	**61.3**	**-**	**0.0**	**25.9**	**0.0**

From the descriptive statistics of Waghur River it was seen that 18% in pH, 3% of DO, 61% of BOD and 25% of Ammonia values were exceeding the standard, this is mainly due to the domestic activities carried out by the villagers. There is no exceedance observed for the other parameters clearly indicating that the domestic and human activities are the main source responsible to affect the river water quality.

Table 4.61(b) : Water Quality Index for Waghur River

Station Code	2007	2008	2009	2010	2011
2718	GE	GE	GE	GE	GE

Monthly WQI calculation for the sampling station at Sakegaon village near confluence point of Waghur and Tapi River shows most of the time good to excellent and moderately good water quality.

57. Wardha River

Wardha River originates at an altitude of 777 meters at Satpura Range near Multai in Betul District of Madhya Pradesh. From the origin it flows 32 km in Madhya Pradesh and then enters into Maharashtra. After traversing 528 km, it joins Wainganga and ultimately flows into the Godavari River. A huge dam (Upper Wardha Dam) is built on Wardha River near Morshi and considered as lifeline for Amravati city, Morshi and Warud Talukas. Detailed analysis of monitored data is given in **Table 4.62.**

1. **Wardha River at Rajura bridge (1212/NWMP)**
   - **Station Détails:** Village-Rajura, Taluka-Chandrapur, District-Chandrapur.
   - **Pollution sources**: Industrial effluent from Pulp & Paper industry and sewage from Municipal Councils are discharged.

2. **Wardha River at Pulgaon Railway Bridge (1315/NWMP)**
   - **Station Details:** Village-Pilgaon, Taluka-Wardha, District-Wardha.
   - **Pollution sources**: Pollution due to agricultural runoffs. Domestic wastes from local bodies are discharged into river.
3. **Wardha River at confluence point of Penganga & Wardha. (2156/SWMP)**
   - **Station Details:** Village-Jugad, Taluka-Wani, District-Yavatmal.
4. **Wardha River at D/S of ACC Ghuggus. (2174/SWMP)**
   - **Station Détails:** Village-Ghuggus, Taluka-Chandrapur, District- Chandrapur.
   - **Pollution sources**: Domestic & industrial pollution.
5. **Wardha River at D/s of Erai River at Hadasti near Arun Engg. Works. (2719/SWMP)**
   - **Station Details:** Village-Hadasti, Taluka-Chandrapur, District- Chandrapur.
   - **Pollution sources**: Domestic & industrial pollution.
6. **Wardha River at U/s of ACC Ghuggus. (2721/SWMP)**
   - **Station Details:** Village-Ghuggus, Taluka-Chandrapur, District- Chandrapur.
   - **Pollution sources**: Domestic & industrial pollution.
7. **Wardha River at U/s of Erai River, Hadasti. (2720/SWMP)**
   - **Station Details:** Village- Hadasti, Taluka- Chandrapur, District- Chandrapur
   - **Pollution sources**: Domestic & industrial pollution.

Table 4.62(a) : Five Years Descriptive Statistics for Wardha River (2007-11)

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
1212	Mean	8.0	5.6	6.7	80.1	161.4	0.7	1.6
	Std.dev	0.42	0.85	2.43	79.05	109.09	0.70	0.95
	No of Samples	23	23	22	23	22	22	22
	% Exceedance	**8.7**	**0.0**	**77.3**	**--**	**0.0**	**9.1**	**0.0**
1315	Mean	8.1	5.6	7.0	102.5	252.7	1.0	1.5
	Std.dev	0.44	0.76	2.28	122.12	245.26	1.06	1.70
	No of Samples	56	55	55	54	55	56	55
	% Exceedance	**14.3**	**0.0**	**81.8**	**--**	**0.0**	**25.0**	**0.0**

Table 4.62(a): Four Years Descriptive Statistics for Wardha River (2008-11)

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2156	Mean	8.0	5.7	7.0	55.4	118.4	0.8	3.5
	Std.dev	0.45	0.65	2.39	38.72	77.76	0.91	3.33
	No of Samples	30	28	30	28	29	29	30
	% Exceedance	**10.0**	**0.0**	**76.7**	**0.0**	**0.0**	**10.3**	**0.0**
2174	Mean	8.0	5.4	7.4	79.9	171.5	1.1	1.4
	Std.dev	0.48	0.62	2.51	47.81	89.85	1.30	0.86
	No of Samples	35	35	34	31	31	35	33
	% Exceedance	**11.4**	**2.9**	**85.3**	**0.0**	**0.0**	**22.9**	**0.0**
2719	Mean	7.9	5.4	8.0	74.5	150.0	1.1	1.6
	Std.dev	0.49	0.82	4.20	66.97	99.27	1.26	1.00
	No of Samples	30	29	29	24	23	29	29
	% Exceedance	**13.3**	**6.9**	**82.8**	**--**	**0.0**	**24.1**	**0.0**
2721	Mean	7.9	5.8	5.9	43.3	96.4	1.1	1.3
	Std.dev	0.48	0.63	1.72	28.93	51.82	1.20	0.64
	No of Samples	33	33	33	26	26	33	32
	% Exceedance	**6.1**	**0.0**	**72.7**	**--**	**0.0**	**24.2**	**0.0**

Table 4.62(a): Four Years Descriptive Statistics for Wardha River (2008-11)

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2720	Mean	8.0	5.8	6.6	40.7	112.3	1.0	1.5
	Std.dev	0.48	0.78	2.60	33.03	110.92	1.11	0.98
	No of Samples	31	31	31	24	24	30	30
	% Exceedance	**12.9**	**3.2**	**71.0**	**--**	**0.0**	**20.0**	**0.0**

From the descriptive statistics for Wardha River for the period 2007-11, it can be observed that pH and BOD values were exceeding in the range of 6-14% and 71-85% resp. This could be due to the domestic activities by nearby villagers as well as discharge of industrial effluent from the industries in main stream of the river. Station No. 2174, 2719 and 2720 shows 3%, 7% and 3% exceedance in DO values for available month's data. In case of Ammonical nitrogen the exceedance was ranging between 9-25 % at all seven stations of Wardha River. TC and Nitrate nitrogen values were complying with MPCB standards for the available data sets.

Table 4.62(b) : Water Quality Index for Wardha River

Station Code	2007	2008	2009	2010	2011
1212	GE	MG	MG	MG	GE
1315	MG	MG	MG	MG	MG
2156	--	MG	GE	MG	MG
2174	--	MG	MG	MG	MG
2719	--	MG	GE	MG	MG
2720	--	MG	MG	GE	GE
2721	--	GE	GE	GE	GE

From the monthly WQI it is observed that during the year 2007 water quality at Rajura and Pulgaon village was most of the time moderately good whereas in monsoon period it was good to excellent. This could be mainly due to dilution effect due to rain water. In case of other five stations, in 2007 WQI could not be calculated due to missing data. In year 2008 to 2011, water quality at all stations varied between moderately good and good to excellent.

58. Wainganga River

The Wainganga originates about 12 km from Mundara village of Seoni district in the southern slopes of the Satpura Range of Madhya Pradesh, and flows south through Madhya Pradesh and Maharashtra in a very winding course of approximately 360 miles. After joining the Wardha, the united stream, known as the Pranahita, ultimately falls into the River Godavari. The river has developed extensive flood plains with sweeping graceful meanders and low alluvial flats and meander terraces. The Wainganga river receives numerous tributaries on either bank and drains the western, central and eastern regions of the Chandrapur, Gadchiroliand Nagpur districts. The chief tributaries of the Wainganga are

the Garhavi, Khobragadi, Kathani and Potphondi on the western bank and Andhari on the eastern bank. Detailed analysis of monitored data is given in **Table 4.63.**

1. **Wainganga river at Ashti bridge (11/NWMP)**
   - **Station Details:** Village- Ashti, Taluka-Gondpipri, District-Chandrapur.
   - **Pollution source :** Domestic and city sewage and industrial discharges
2. **Wainganga after confluence with Kanhan (1910/NWMP)**
   - **Station Details:** Village- Ambhora, Taluka- Kuhi, District- Nagpur.
   - **Pollution sources**: Domestic discharges and agricultural runoff
3. **Wainganga river at D/s of Ellora Paper Mill (2172/NWMP)**
   - **Station Details:** Village- Tumsar, Taluka-Tumsar, District-Bhandara.
   - **Pollution source :** Domestic and industrial discharges
4. **Wainganga river at U/s of Ellora Paper Mill (2173/NWMP)**
   - **Station Details:** Village- Tumsar, Taluka-Tumsar, District-Bhandara.
   - **Pollution source :** Domestic and industrial discharges
5. **Wainganga river at U/s of Gaurav Paper Mill (2175/NWMP)**
   - **Station Details:** Village- Bramhapuri, Taluka-Chandrapur, District-Chandrapur.
   - **Pollution source :** Domestic and industrial discharges
6. **Wainganga river at D/s of Gaurav Paper Mill (2176/NWMP)**
   - **Station Details:** Village- Bramhapuri, Taluka- Chandrapur, District Chandrapur
   - **Pollution source :** Domestic and industrial discharges

Table 4.63(a): Five years Descriptive Statistics for Wainganga River (2007-11)

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
11	Mean	8.0	5.8	6.5	86.0	193.1	0.8	0.9
	Std.dev	0.47	0.68	2.36	75.89	103.19	0.72	0.81
	No of Samples	56	56	56	55	55	55	55
	% Exceedance	**12.5**	**0.0**	**69.6**	**-**	**0.0**	**9.1**	**0**
1910	Mean	7.9	5.8	6.3	108.3	415.0	1.1	1.5
	Std.dev	0.50	0.65	1.68	124.06	491.50	1.01	1.22
	No of Samples	23	22	22	22	23	22	22
	% Exceedance	**13.0**	**0.0**	**81.8**	**-**	**0.0**	**27.3**	**0**

Table 4.63(a): Four years Descriptive Statistics for Wainganga River (2008-11)

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2172	Mean	7.9	5.2	7.9	126.0	259.8	0.7	1.7
	Std.dev	0.38	0.71	2.63	97.85	179.03	0.74	1.93
	No of Samples	43	43	42	42	41	42	42
	% Exceedance	**4.7**	**4.7**	**90.5**	**-**	**0.0**	**11.9**	**2**
2173	Mean	8.0	5.9	6.0	64.0	141.3	0.6	1.6
	Std.dev	0.35	0.63	1.47	40.45	75.49	0.63	2.38
	No of Samples	42	42	41	41	40	41	42
	% Exceedance	**4.8**	**2.4**	**70.7**	**-**	**0.0**	**9.8**	**7**
2175	Mean	8.0	6.0	5.9	81.8	156.0	0.7	1.2
	Std.dev	0.39	0.70	1.85	59.41	66.28	0.58	0.65
	No of Samples	30	30	29	30	30	29	29
	% Exceedance	**10.0**	**0.0**	**58.6**	**-**	**0.0**	**6.9**	**0**

Here in the above table data is not available for the year 2007.

Table 4.63(a) : Two years Descriptive Statistics for Wainganga River (2010-11)

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2176	Mean	8.0	5.2	7.1	113.5	278.7	0.7	8.0
	Std.dev	0.40	0.67	2.34	79.67	140.50	0.55	0.40
	No of Samples	15	15	15	15	15	14	15
	% Exceedance	**6.7**	**0.0**	**73.3**	**-**	**0.0**	**7.1**	**6.7**

It was observed that BOD values were exceeding the MPCB standard in the range of 70-90%. Ammonical nitrogen was exceeding in the range of 7-12%. TC values were within the standard. pH values were exceeding in the range of 4-13%. DO was observed within the standards except at the station 2172 and 2173.And also Nitrate was exceeding from the range of 2-7%.The exceedance could be mainly due to domestic activities by nearby villagers as well as discharge of industrial effluent from the industries in main stream of the river.

Table 4.63(b): Water Quality Index for Wainganga River

Station Code	2007	2008	2009	2010	2011
11	MG	MG	MG	MG	GE
1910	MG	MG	GE	MG	GE
2172	--	MG	MG	MG	MG
2173	--	GE	GE	MG	GE
2175	--	MG	MG	MG	GE
2176	--	--	--	MG	MG

From the water quality indices it was observed that during all five years water quality was between good to excellent for upstream of Wainganga river.

The total numbers of monitoring sites of Wardha and Wainganga rivers are 13. Percent exceedances in different ranges for BOD, DO, TC and pH are given **Table 4.63(c)**.

Table 4.63(c): Number of Sites of Wardha and Wainganga Rivers with Percent Exceedances for BOD, DO, TC and pH

Percent Exceedance	BOD	DO	TC	pH
0%	0	8	13	0
1-20%	**0**	5	0	13
20-40%	**0**	0	0	0
40-60%	1	0	0	0
60-80%	7	0	0	0
80-100%	5	0	0	0

Percent exceedances for BOD and DO for 13 locations in Wardha Wainganga Rivers are shown in **Figures 4.9**. TC concentrations are within the standard at all the sites. Percent exceedances of pH at all the sites range between 5-14%.

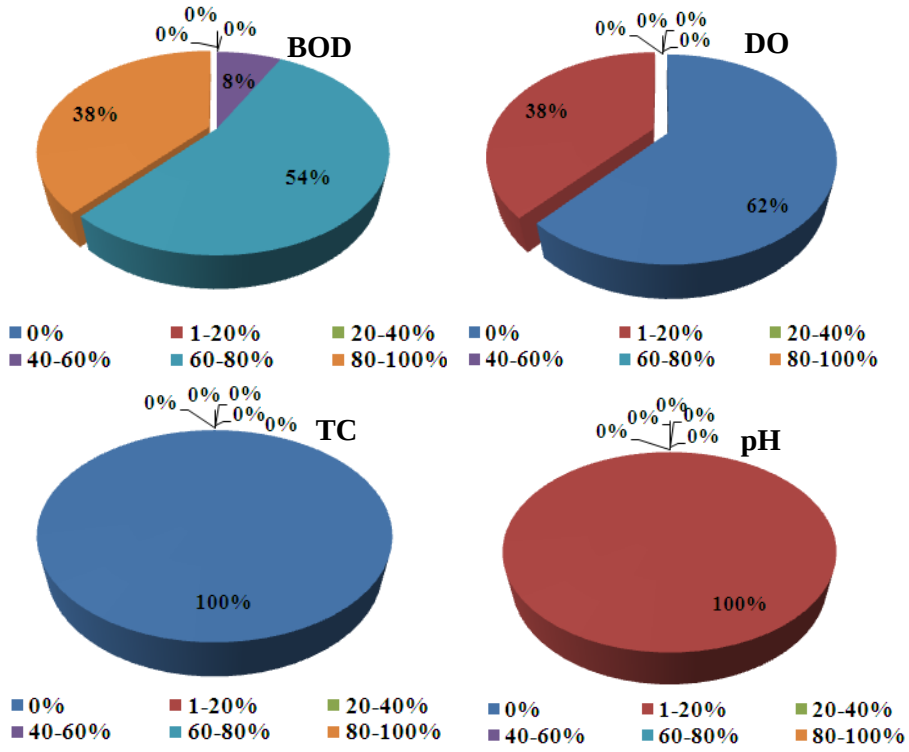

Figure 4.9 : Percent Exceedances at 13 Monitoring Locations of Wardha Wainganga River

The water qualities of Wardha Wainganga Rivers were "Medium to Good" at 9 sites and "Good to Excellent at 4 sites." None of the sites had "Bad" water quality (**Figure 4.10**).

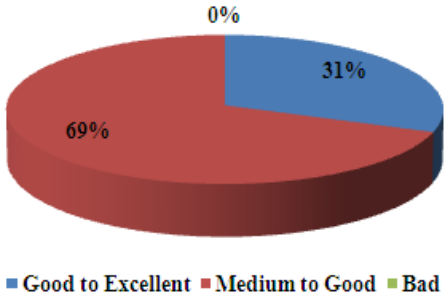

Figure 4.10: Water Quality Index of 13 Monitoring locations of Wardha and Wainganga Rivers

59. Wena River

Wena River mainly flows from Wardha district where it covers two talukas viz Samudrapur and Hinganghat. Wena is one of the tributary of Wardha River. Vena river get together with other two small rivers flowing from the same district namely Pothara and Lai before confluence with Wardha River. Detailed analysis of monitored data is given in **Table 4.64.**

1. **U/s of Mohata Mills, near Railway bridge on Wardha – Chandrapur Railway line(2722/NWMP)**
   - **Station Details:** Village-Hinganghat, Taluka-Wardha, District- Wardha.
   - **Pollution sources**: Domestic & industrial pollution
2. **D/s.Mohata Mills, near road bridge on Hinganghat- Wadner road (2723/NWMP)**
   - **Station Details:** Village-Hinganghat, Taluka-Wardha, District- Wardha.
   - **Pollution sources**: Domestic & industrial pollution

Table 4.64(a): Five years Descriptive Statistics for Wena River (2007-11)

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2722	Mean	8.1	5.8	6.2	41.4	119.2	1.2	1.6
	Std.dev	0.43	0.63	1.87	29.19	78.52	0.89	1.99
	No of Samples	38	38	38	37	37	38	38
	% Exceedance	**18.4**	**0.0**	**71.1**	**--**	**0.0**	**23.7**	**0.0**
2723	Mean	8.1	5.2	8.3	76.4	285.9	1.5	1.3
	Std.dev	0.48	0.71	2.64	40.05	270.83	1.22	1.11
	No of Samples	36	36	36	35	36	36	35
	% Exceedance	**13.9**	**5.6**	**91.7**	**--**	**0.0**	**36.1**	**0.0**

Percentage exceedance of BOD was significantly high at both the locations i.e 72 and 92%. pH values were found to be exceeding 14% time at downstream of the river whereas 18% time at upstream. Similar trend could be marked in Ammonical nitrogen values i.e 23% and 36%. For Nitrate and TC values, the concentrations were within the standard. DO was found to be exceeded by 5% at the downstream.

Table 4.64(b): Water Quality Index for Wena River

Station Code	2007	2008	2009	2010	2011
2722	MG	GE	GE	MG	GE
2723	MG	MG	MG	MG	MG

From the water quality indices it was observed that during all five years water quality was between good to excellent for upstream of Wena river whereas for downstream location it was moderately good. From the WQI it could be inferred that water quality towards the downstream gets affected by the nearby industrial activity. In Apr Dec -10 and Feb-11 the WQI was found bad.

Chapter 5

Evaluation of Sea Water Quality

With a 720 km long coast line, the beaches of Maharashtra extends from Dahanu and Bordi in the north up to Goa in south. From adventurous sea surfing, to irresistible sand bath to the grandeur of warm sands, to catching the exquisite sun setting in the blue Arabian Sea, beaches of Maharashtra offers you everything. Mangrove forests on creeks are habitat to a variety of fish and crustaceans, as well as serve as a sanctuary for migratory birds. **Table 5.1** gives the list of 34 water quality monitoring stations along the seafronts and creeks of Maharashtra.

Table 5.1 : Water Monitoring Network of Beaches, Seafronts and Creeks

Sr.	Sea/Creek Name	No. of Stations		Sr.	Sea/Creek Name	No. of Stations
1	Arnala Sea	1		16	Mahim creek	1
2	Bassein Creek	1		17	Malabar Hill	1
3	Bhagwati Bunder	1		18	Mandavi Bunder	1
4	Bhayander Creek	1		19	Nariman point	1
5	Charni Road Chowpatty	1		20	Navapur Sea	1
6	Dadar Chowpatty	1		21	Panvel creek	1
7	Dahanu Creek	1		22	Saravli Creek	1
8	Dandi Creek	1		23	Sawta Creek	1
9	Ganpatipule	1		24	Thane creek	1
10	Gateway of India	1		25	Ulhas Creek	5
11	Sea water at Haji Ali	1		26	Uttan Sea	1
12	Sea water at Juhu Beach	1		27	Vashi creek	2
13	Kharekuran Murbe Cr.	1		28	Versova	1
14	Kalwa creek	1		29	Worli Seaface	1
15	Karambhavane Creek	1				**34**

5.1 Sea Water Quality Evaluation

The water quality of seafronts and creeks were evaluated by identifying the parameters which exceed the permissible limits stipulated by CPCB. Percentage of time, the monitored data exceeded the standards has been calculated. This exercise helps to identify the most critical sampling locations, which warrant immediate action to minimize the pollution. The water quality data for selected physico-chemical parameters for the years 2007-11 were compared with the central pollution control board (CPCB) water quality standards of class SW-II for commercial fishing, contact recreation, bathing water. Monthly and yearly average WQI categories at different locations are given in **Annexure VIII.** The pictorial view of three years WQI for the locations located on the coastal line of Maharashtra is given in **Annexure VI.**

5.2 Summary Observation

Water quality at Ganapatipule, Bhagwati Bunder, Karambhavanene creek and Mandavi Bunder is good. At these four sites FC is within CPCB water quality standards of class SW-II throughout the year for the period 2007 to 2011. At Bhagawati Bundar, Mandavi Bander, Ganapatipule the percent exceedance for BOD is 7% at all three sites. At Karambhane creek the percent exceedance for BOD is 15%. At Karambhane creek and Mandavi Bander the percent exceedance for DO is 5 and 7% respectively. However, the percent exceedance for pH at Bhagwati Bunder, Ganapatipule, Karambhane creek and Mandavi Bunder, are 19, 35, 5 and 29% respectively. Water quality index evaluated for each month for the period 2007-2011 show that at Ganapatipule, Bhagwati Bunder, Karambhane creek and Mandavi Bunder water quality index lie between good to excellent.

The water quality of all other Seafronts and Creeks of Maharashtra are poor. Percent exceedance of BOD in all these 30 beaches and seafronts are 100%. WQI evaluated for 29 beaches and seafronts for each month for the period 2007-2011 is bad to moderately good. Percent exceedance of pH, DO, BOD and TC for the sea water for the period 2007-11 are given in **Table 5.2.**

Table 5.2: Percent Exceedance of pH, DO, BOD and FC for the Sea Water During the Period 2007-2011

Sr.	Location	Station Code	pH	DO	BOD	FC
1	Arnala Sea	2805	0	25	100	70
2	Bassein Creek at Vasai Fort, Thane.	1316	0	16	100	78
3	Bhagawati Bunder, Ratnagiri,	2814	19	0	7	0
4	Bhayandar Creek at D/s of Railway Bridge, Jesal Park Choupatty	2797	0	26	100	80
5	Charni Road Chowpatty, Mumbai.	2166	0	27	100	87
6	Shivaji Park, Dadar Chowpatty, Mumbai	2811	4	35	100	96
7	Dahanu Creek at Dahanu Fort	2802	0	26	100	94
8	Dandi Creek	2799	0	29	100	29
9	Ganapatipule, Ratnagiri	2813	35	0	7	0
10	Gateway of India, Mumbai	2165	0	38	100	83
11	Haji Ali	2810	4	44	100	87
12	Juhu Beach	2812	0	13	100	78
13	Kharekuran Murbe Creek	2798	0	7	100	100
14	Kalwa Creek	2793	0	38	100	79
15	Karambhavane Creek at Chiplun Village	2804	5	5	15	0
16	Mahim creek at Mahim Bay, Mumbai	1318	6	31	100	72
17	Malabar Hill	2809	4	36	100	92
18	Mandavi Bunder	2815	29	7	7	0
19	Nariman Point	2808	4	46	100	96
20	Navapur Sea	2807	0	13	100	100

Table 5.2: (Contd.): Percent Exceedance of pH, DO, BOD and FC for the Sea Water During the Period 2007-2011

Sr.	Location	Station Code	pH	DO	BOD	FC
21	Panvel Creek, Kopra	2803	0	43	100	100
22	Sarwali Creek	2800	0	27	100	88
23	Savta Creek	2801	4	16	100	59
24	Thane Creek at Elephanta Island. Mumbai	1317	0	14	100	63
25	Ulhas Creek at Retibunder, D/S of Kalyan Bhiwandi Bridge	2791	0	36	100	100
26	Ulhas Creek at Versova bridge.	2796	0	26	100	86
27	Ulhas Creek at Gaimukh at Nagla Bunder	2795	0	26	100	91
28	Ulhas Creek at Mumbra Reti Bunder	2792	0	28	100	87
29	Ulhas Creek at Kolshet Reti Bunder	2794	0	24	100	83
30	Uttan Sea	2806	0	30	100	84
31	Vashi Creek at Airoli Bridge,Thane.	2184	0	35	100	85
32	Vashi Creek at Vashi Bridge, Mumbai	2185	0	39	100	73
33	Versova, Mumbai.	2169	0	28	100	56
34	Worli Seaface, Mumbai.	2167	0	19	100	81

The details of the monitoring locations, the mean and standard deviation of the parameters after removing the outliers, percent exceedance with respect to the CPCB standards are given below.

1) Arnala Sea

Arnala Sea is located in the Virar region of Mumbai. MPCB has one sampling location on Arnala Sea under GEMS/MINARS programme.

1. Arnala Sea (2805 /SWMP)

- **Station Details**: Village-Arnala, Taluka-Vasai, Distinct-Thane
- **Pollution sources**: No industries nearby. Domestic effluents from nearby villages are discharged.

Table 5.3(a): Four Years Descriptive Statistics for Arnala Sea

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2805	Mean	7.9	4.7	9.8	188.1	387.4	0.2	1.3
	Std.dev	0.3	1.09	4.1	153.1	302.1	0.2	0.7
	No of Samples	24	24	24	23	23	22	23
	% Exceedance	0.0	25.0	100.0	69.6	-	-	-

pH complied with the SW II standard whereas DO, BOD and FC showed 25, 100 and 70% exceedance respectively. Such exceedance may be due to the domestic effluents discharged from nearby villages.

Table 5.3(b): Water Quality Index for Arnala Sea

Station Code	2007	2008	2009	2010	2011
2805	--	MG	Bad	MG	MG

Water quality indices for the available data of Arnala Sea showed that the water quality varied from bad to moderately good. The probable reason could be the discharge of domestic effluent from nearby village.

2. Bassein Creek

Bassein Creek is located in Bassein village of Vasai taluka in Thane district. MPCB has one monitoring location on Bassein Creek under GEMS/MINARS programme. **Table 5.4** gives five years descriptive statistics for Bassein Creek for the period 2007 to 2011.

1. Bassein Creek at Vasai Fort, Thane (1316/NWMP)

- **Station Details**: Village- Bassein, Taluka- Vasai, District- Thane.
- **Pollution source**: Domestic and industrial waste from Mumbai, Thane, Mira-Bhayander area is discharged.

Table 5.4(a): Five years Descriptive Statistics for Bassein Creek Water

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
1316	Mean	7.9	5.0	9.0	297.6	761.1	0.2	1.4
	Std.dev	0.26	1.07	3.22	207.33	500.56	0.24	0.72
	No of Samples	20	19	20	18	19	20	19
	% Exceedance	**0.0**	**15.8**	**100.0**	**77.8**	-	-	-

It was observed that pH complied with the CPCB standards. However, DO, BOD and FC showed 16, 100 and 78% exceedance respectively to the CPCB standards. The reason for this exceedance could be the domestic and industrial waste discharged from Mumbai, Thane, Mira-Bhayander areas.

Table 5.4(b): Water Quality Index for Bassein Creek

Station Code	2007	2008	2009	2010	2011
1316	MG	MG	MG	Bad	MG

The WQI evaluated for Bassein creek showed that the water quality mostly varied from bad to moderately good. This could be due to domestic and industrial waste discharge from Mumbai, Thane, Mira-Bhayander areas.

3. Bhagwati Bunder Creek

Bhagwati Bunder Creek is located in Mirkarwada village of Ratnagiri district. MPCB has following monitoring location on Bhagwati Bunder Creek under GEMS/MINARS programme. **Table 5.5** gives four years descriptive statistics for Bhagwati Bunder Creek for the period 2008-2011.

1. Bhagwati Bunder, Ratnagiri near Ultra Tech Cement Jetty. (2814 /SWMP)

- Station Details: Village- Mirkarwada, Taluka-Ratnagiri, District- Ratnagiri.
- Pollution source: Pollution due to shipping and other related activities.

Table 5.5(a): Four years Descriptive Statistics for Sea Water at Bhagwati Bunder

Stn. Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2814	Mean	7.1	5.9	2.5	2.9	57.6	0.6	3.4
	Std.dev	0.73	0.56	0.39	1.01	30.05	0.18	1.20
	No of Samples	31	29	30	28	30	28	29
	% Exceedance	**19.4**	**0.0**	**6.7**	**0.0**	**-**	**-**	**-**

DO and FC were the SWII standards. pH and BOD exceeded the standards by 19 and 7% respectively.

Table 5.5(b): Water Quality Index for Bhagwati Bunder

Station Code	2007	2008	2009	2010	2011
2814	--	GE	GE	GE	GE

4. Bhayander Creek

Exactly below Mumbai Western Railway Bridge between Naigaon and Bhayander lies the Creek of Bhayander, well known as *Bhayander ki khadi*. Widely used during Ganesh visarjan at bhayander, it is famous for fishing and sand business which villagers get from this creek. This creek contains lot of Fish and is widely used for disposal of flowers and other stuff that is used for worshipping, which makes it dirty. MPCB has the following monitoring location on Bhayander Creek under GEMS/MINARS programme. **Table 5.6** gives four years descriptive statistics for Bhayander Creek for the years 2008 to 2011.

1. Bhayander Creek at D/s of Railway Bridge at Jasal park Chowpatty (2797 /SWMP)

- **Station Details**: Village-Navghar, Taluka-Bhayander, District-Thane
- **Pollution source**: Industrial & domestic effluent through local nalla and drains.

Table 5.6(a): Four years Descriptive Statistics for Bhayander Creek Water

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2797	Mean	7.8	4.6	9.8	281.0	461.0	0.1	2.2
	Std.dev	0.30	1.17	3.65	250.85	240.03	0.19	1.17
	No of Samples	23	23	22	20	20	21	23
	% Exceedance	**0.0**	**26.1**	**100.0**	**80.0**	**-**	**-**	**-**

It was observed that pH complied with the CPCB standards. However, DO, BOD and FC exceeded 26, 100 and 80% respectively. It could be due to the industrial & domestic effluent discharged through local nallas and drains and the prevailing fishing activity.

Table 5.6(b) : Water Quality Index for Bhayander Creek Water

Station Code	2007	2008	2009	2010	2011
2797	--	Bad	Bad	MG	MG

The WQI evaluated for Bhayander Creek showed that the water quality was moderately good most of the time. However, it was bad in few months. It could be due to excess discharge of untreated waste from industries in those months.

5. Charni Road Chowpatty

Charni Road Chowpatty is located in Girgaon area of Mumbai. MPCB has the following monitoring location at Charni Road Chowpatty under GEMS/MINARS programme. **Table 5.7** gives four years descriptive statistics for Charni Road Chowpatty for the period 2008-2011.

1. Sea water at Charni Road Chowpatty (2166/SWMP)

- **Station Details**: Village-Girgaon, Taluka-Mumbai, District-Mumbai
- **Pollution source**: Tourist spot. Domestic pollution

Table 5.7(a): Four years Descriptive Statistics for Sea water at Charni Road Chowpatty

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2166	Mean	7.7	4.8	10.6	465.4	819.8	0.3	1.3
	Std.dev	0.33	0.92	3.81	486.09	582.50	0.35	0.75
	No of Samples	33	30	32	30	30	29	32
	% Exceedance	**0.0**	**26.7**	**100.0**	**86.7**	-	-	-

It was observed that pH complied with the CPCB standards. However, DO, BOD and FC exceeded 27, 100 and 87% respectively. Charni Road Chowpatty could be polluted from domestic pollution.

Table 5.7(b): Water Quality Index for Charni Road Chowpatty

Station Code	2007	2008	2009	2010	2011
2166	--	MG	Bad	MG	MG

The WQI evaluated for the available data of Charni Road Chowpatty indicated that the water quality varied from bad to moderately good. It could be due to the domestic pollution as well as the waste dumped by tourists.

6. Shivaji Park (Dadar Chowpatty)

MPCB has following monitoring location of Sea Water at Shivaji Park (Dadar Chowpatty) under GEMS/MINARS programme. **Table 5.8** gives four years descriptive statistics for Shivaji Park (Dadar Chowpatty) for the period 2008-2011.

1. Sea water at Shivaji Park (Dadar Chowpatty) (2811 /SWMP)

- **Station Details**: Village-Dadar, Taluka-Dadar, District-Mumbai.
- **Pollution source**: Tourist Spot. Domestic effluent is discharged through nallas

Table 5.8(a): Four years Descriptive Statistics for Sea Water at Shivaji Park (Dadar Chowpatty)

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2811	Mean	7.7	4.6	10.3	754.6	1016.0	0.2	1.3
	Std.dev	0.39	1.01	4.03	595.54	562.22	0.15	0.95
	No of Samples	26	23	24	22	22	23	26
	% Exceedance	**3.8**	**34.8**	**100.0**	**95.5**	-	-	-

The descriptive statistics showed that pH, DO, BOD and FC exceeded 5%, 38%, 100% and 93% respectively to the CPCB standards. It could be due to the domestic effluent discharged through nallas and the waste dumped by tourists at the Chowpatty.

Table 5.8(b) : Water Quality Index for Shivaji Park (Dadar Chowpatty)

Station Code	2007	2008	2009	2010	2011
2811	--	Bad	Bad	Bad	Bad

The monthly water quality of Sea Water at Shivaji Park was found to vary from very bad to moderately good. It could be due to the waste dumped by tourists and the domestic effluent. The annual average water quality at Shivaji park was bad.

7. Dahanu Creek

Dahanu Creek is located in Danugaon village of Dahanu taluka in Thane district. MPCB has following monitoring location Dahanu Creek under GEMS/MINARS programme. **Table 5.9** gives four years descriptive statistics for Dahanu Creek for the period 2008 to 2011.

1. Dahanu Creek at Dahanu Fort (2802 /SWMP)

- **Station Details**: Village-Danugaon, Taluka-Dahanu, District-Thane
- **Pollution source**s: Domestic effluent from Dahanu Municipal Corporation. Thermal Power Plant nearby.

Table 5.9(a): Four years Descriptive Statistics for Dahanu Creek Water

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2802	Mean	8.0	4.9	10.9	262.8	596.3	0.1	0.7
	Std.dev	0.24	1.01	3.30	212.68	240.33	0.11	0.41
	No of Samples	22	23	23	16	16	22	21
	% Exceedance	**0.0**	**26.1**	**100.0**	**93.8**	**-**	**-**	**-**

pH complied with the CPCB standards. However, percentage exceedance for DO, BOD and FC were 26,100 and 94% respectively. The reason for such an exceedance could be the domestic effluent released from Dahanu Municipal Corporation and Thermal Power Plant situated nearby.

Table 5.9(b) : Water Quality Index for Dahanu Creek Water

Station Code	2007	2008	2009	2010	2011
2802	--	MG	Bad	GE	Bad

The WQI evaluated for the available data set of Dahanu creek indicated that the water quality varied from bad to moderately good. It could be due to the waste released from Thermal Power Plant located nearby and the domestic effluent released from Dahanu Municipal Corporation.

8. Dandi Creek

Dandi creek meets Arabian Sea near Dandi Village at Dahanu taluka in Thane district. MPCB has following monitoring location at Dandi creek under GEMS/MINARS programme. **Table 5.10** gives three years descriptive statistics for Dandi Creek for the years 2008, 2010 and 2011.

1. Dandi Creek (2799 145/SWMP)

- **Station Details**: Village-Dandi, Taluka-Palghar, District-Thane.
- **Pollution source**: Effluent discharge from MIDC Tarapur. Domestic sewage from nearby villages.

Table 5.10(a): Three years Descriptive Statistics for Dandi Creek

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2799	Mean	7.9	4.6	10.1	129.3	265.0	0.5	1.7
	Std.dev	0.25	0.71	3.85	120.98	146.88	0.60	0.81
	No of Samples	15	14	16	7	7	14	16
	% Exceedance	**0.0**	**28.6**	**100.0**	**28.6**	**-**	**-**	**-**

It was observed that pH was as per the CPCB standards. However, DO, BOD and FC exceeded the CPCB standards by 29,100 and 29% respectively. The exceedance could be due to the effluent discharge from MIDC Tarapur and domestic sewage from nearby villages.

Table 5.10(b) : Water Quality Index for Dandi Creek

Station Code	2007	2008	2009	2010	2011
2799	--	Bad	--	GE	MG

The data available was very less. Based on the available data the water quality indices varied between bad to good to excellent.

9. Ganapatipule

Ganapatipule is a small village in Ratnagiri district of Konkan region. Ganapatipule is a popular beach haven. MPCB has following monitoring location at Ganapatipule under GEMS/MINARS programme. **Table 5.11** gives four years descriptive statistics for Ganapatipule for the period 2008 to 2011.

1. Sea Water at Ganapatipule (2813 /SWMP)

- **Station Details**: Village- Ganapatipule, Taluka-Ratnagiri, District- Ratnagiri
- **Pollution source**: Pollution due to domestic waste and other human activities

Table 5.11(a): Four years Descriptive Statistics for Sea water at Ganpatipule

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2813	Mean	7.0	6.0	2.4	2.2	58.4	0.5	3.7
	Std.dev	0.77	0.48	0.33	0.56	30.35	0.15	0.91
	No of Samples	29	25	28	24	28	25	27
	% Exceedance	**34.5**	**0.0**	**7.1**	**0.0**	**--**	**--**	**--**

pH and BOD exceeded the CPCB standards by 35 and 7% respectively, whereas DO and FC were as per the standards.

Table 5.11(b): Water Quality Index for Ganpatipule

Station Code	2007	2008	2009	2010	2011
2813	--	GE	GE	GE	GE

The water quality indices evaluated for the available data set of Ganapatipule indicated that the water quality was good to excellent.

10. Gateway of India

Gateway of India is located in Apollo Bunder area in South Mumbai. MPCB has following monitoring location at Gateway of India under GEMS/MINARS programme. **Table 5.12** gives four years descriptive statistics for the years 2008-2011 for Gateway of India.

1. Sea Water at Gateway of India (2165/SWMP)

- **Station Details**: Village-Colaba, Taluka-Colaba, District-Mumbai
- **Pollution source**s: Tourist spot. Domestic pollution

Table 5.12(a): Four years Descriptive Statistics for Sea water at Gateway of India

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2165	Mean	7.7	4.6	10.6	550.3	743.7	0.4	1.4
	Std.dev	0.40	1.06	3.66	533.06	497.12	0.57	0.58
	No of Samples	34	32	32	30	27	31	34
	% Exceedance	0.0	37.5	100.0	83.3	-	-	-

It was observed that pH complied with the CPCB standards whereas non-compliance for DO, BOD and FC was 38%, 100% and 83% respectively. It could be due to the domestic waste and also the waste dumped by tourists.

Table 5.12(b): Water Quality Index for Gateway of India

Station Code	2007	2008	2009	2010	2011
2165	--	MG	Bad	MG	Bad

The water quality indices evaluated for the available data set showed that the water quality varied from bad to moderately good. It could be due to the domestic waste and the waste dumped by tourists.

11. Haji Ali

Haji Ali is in the Worli region of Mumbai. Near the heart of the city proper, the dargah is one of the most recognizable landmarks of Mumbai. MPCB has following monitoring location at Haji Ali under GEMS/MINARS programme. **Table 5.13** gives four years descriptive statistics for the years 2008-2011 for Haji Ali.

1. Sea water at Haji Ali (2810 /SWMP)

- Station Details: Village-Worli, Taluka-Worli, District-Mumbai
- Pollution source: Tourist spot. Domestic pollution

Table 5.13(a): Three years Descriptive Statistics for Sea water at Haji Ali

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2810	Mean	7.8	4.4	10.7	512.4	900.1	0.3	1.2
	Std.dev	0.39	1.33	4.30	478.58	453.63	0.36	0.72
	No of Samples	26	25	25	23	22	25	26
	% Exceedance	**3.8**	**44.0**	**100.0**	**87.0**	**-**	**-**	**-**

It was observed that pH was as per the CPCB standards for the available data set. However, DO, BOD and FC exceeded 44%, 100% and 87% respectively. It could be due to the domestic pollution and the waste dumped by tourists.

Table 5.13(b): Water Quality Index for Haji Ali

Station Code	2007	2008	2009	2010	2011
2810	--	MG	Bad	Bad	Bad

The monthly water quality indices evaluated for the available data set of Sea water at Haji Ali showed that the water quality varied from very bad to moderately good. It could be due to the domestic waste and the waste dumped by tourists.

12. Juhu Beach

Juhu Beach is one of the most famous beaches in Mumbai. It is situated on the shores of Arabian Sea in Juhu suburb. There are three main entrances to the beach. One is from the Vile Parle side, another is from the Santacruz side and the third one is from the Andheri side. Many tourists make it a point to visit the beach when they come to Mumbai. MPCB has following monitoring location at Juhu Beach under GEMS/MINARS programme. **Table 5.14** gives four years descriptive statistics for the years 2008 to 2011 for Juhu Beach.

1. Sea water at Juhu Beach (2812 /SWMP)

- **Station Details**: Village-Juhugaon, Taluka-Santacruz, District-Mumbai
- **Pollution source**s: Tourist spot. Domestic pollution present

Table 5.14(a): Four years Descriptive Statistics for Sea water at Juhu Beach

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2812	Mean	7.9	4.6	11.0	204	321	0.2	1.0
	Std.dev	0.4	0.6	3.0	156.7	185.6	0.1	0.5
	No of Samples	18	16	18	14	14	15	16
	% Exceedance	**0**	**13**	**100**	**64**	**--**	**--**	**--**

At Juhu Beach pH complied with the CPCB standards. However, DO, BOD and FC exceeded the standards by 13, 100 and 64% respectively. It could be due to the domestic pollution and waste dumped by tourists.

Table 5.14(b) : Water Quality Index for Juhu Beach

Station Code	2007	2008	2009	2010	2011
2812	--	MG	Bad	Bad	Bad

The water quality indices evaluated for the available data set of Sea water at Juhu Beach showed that the water quality varied from bad to moderately good. It could be due to the domestic waste and the waste dumped by tourists.

13. Kharekuran Murbe Creek

MPCB has following monitoring location at Kharekuran Murbe Creek under GEMS/MINARS programme. **Table 5.15** gives three years descriptive statistics for Kharekuran Murbe Creek for the years 2008, 2010 and 2011**.**

1. Sea water at Kharekuran Murbe Creek (2798 /SWMP)

- **Station Details**: Village-Kharekuran, Taluka-Palghar, District-Thane
- **Pollution source**: Effluent discharge from MIDC Tarapur. Domestic sewage from nearby villages

Table 5.15(a): Two years Descriptive Statistics for Kharekuran Murbe Creek

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2798	Mean	7.7	5.0	10.8	142.9	337.5	0.8	1.9
	Std.dev	0.40	0.92	4.57	12.54	30.62	1.40	1.19
	No of Samples	16	14	16	7	6	16	15
	% Exceedance	**0.0**	**7.1**	**100.0**	**100.0**	**--**	**--**	**--**

The descriptive statistics of Kharekuran Murbe Creek indicated that pH was as per the CPCB standards. DO, BOD and FC exceeded by 7,100 and 100% respectively. It could be due to effluent discharge from MIDC Tarapur and domestic sewage from nearby villages.

Table 5.15(b): Water Quality Index for Kharekuran Murbe Creek

Station Code	2007	2008	2009	2010	2011
2798	--	--	--	MG	MG

The data available for this site is scarce. The water quality indices could not be evaluated for 2007-2009. Water quality indices evaluated for 2010 and 2011 show that the water quality varied between bad to moderately good.

14. Kalwa creek

MPCB has following monitoring location at Kalwa Creek under GEMS/MINARS programme.

1. Sea Water at Kalwa Creek (2793 SWMP)

- Station Details: Kalwa
- Pollution source: Domestic effluent

Table 5.16(a): Four years Descriptive Statistics for Sea water at Kalwa Creek Sea face

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2793	Mean	7.4	4.7	8.6	638.9	902.6	0.9	2.4
	Std.dev	0.34	1.21	2.90	571.01	558.09	1.24	1.52
	No of Samples	20	21	20	19	19	19	21
	% Exceedance	**0.0**	**38.1**	**100.0**	**78.9**	**-**	**-**	**-**

The descriptive statistic of Kalwa creek showed that pH was in compliance with CPCB standards. However, percentage exceedance for DO, BOD and FC were 38, 100 and 79% respectively. It could be due to the municipality effluents.

Table 5.16(b): Water Quality Index for Kalwa Creek Sea face

Station Code	2007	2008	2009	2010	2011
2793	--	MG	MG	MG	MG

The water quality indices evaluated for the period 2008 to 2011 for the available data set of Kalwa Creek indicated that the water quality varied from bad to excellent.

15. Karambhavane Creek

MPCB has following monitoring location at Karambhavane Creek under GEMS/MINARS programme.

1. Sea water at Karambhavane Creek (2804 /SWMP)

- **Station Details**: Village- Karambavane, Taluka-Chiplun, District- Ratnagiri
- **Pollution source**s: Industrial and domestic pollution

Table 5.17(a): Four years Descriptive Statistics for Karambhavane Creek

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2804	Mean	7.4	6.1	2.4	3.1	78.3	0.6	1.3
	Std.dev	0.58	1.08	0.59	1.03	28.91	0.21	1.16
	No of Samples	21	21	20	19	20	20	19
	% Exceedance	**4.8**	**4.8**	**15.0**	**0.0**	**--**	**--**	**--**

It was observed that 95% pH and DO samples and 85% BOD samples were as per the SWII standards. Non compliance of few samples could be due to Industrial and domestic pollution.

Table 5.17(b) : Water Quality Index for Karambhavane Creek

Station Code	2007	2008	2009	2010	2011
2804	--	GE	GE	GE	GE

The water quality indices evaluated for the available data set of Karambhavane Creek indicated that the water quality was good to excellent.

16. Mahim Creek

Mahim Creek (locally known as *Bandra ki Khadi*) is a creek in Mumbai, India. The Mithi River drains into the creek which drains into the Mahim Bay. The creek forms the boundary between the city and suburbs. The creek is swamped by mangroves and has a mini-ecosystem within it. The waters of the creek are foul smelling due to the dumping of untreated industrial effluents further upstream. In recent years, the mushrooming of slums around the waters has caused concern for the mangrove ecosystem, vital to the ecosystem of Mumbai. MPCB has following monitoring location at Mahim Creek under GEMS/MINARS programme. **Table 5.18** gives five years descriptive statistics for Karambhavane Creek for the period 2007-2011.

1. Mahim creek at Mahim Bay (1318/SWMP)

- **Station Details**: Village-Mahim, Taluka-Bandra, District- Mumbai
- **Pollution source**: Industrial and domestic pollution

Table 5.18(a): Five years Descriptive Statistics for Mahim Creek

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
1318	Mean	7.8	4.0	28.3	660.4	1020.4	1.1	1.6
	Std.dev	0.50	1.55	52.37	678.37	651.02	1.76	0.78
	No of Samples	18	16	18	18	18	18	18
	% Exceedance	**5.6**	**31.3**	**100.0**	**72.2**	**-**	**-**	**-**

It was observed that pH, DO, BOD and FC exceeded by 6, 31, 100 and 72% respectively. It could be due to Industrial and domestic pollution.

Table 5.18(b): Water Quality Index for Mahim Creek

Station Code	2007	2008	2009	2010	2011
1318	Bad	MG	Bad	Bad	Bad

The water quality indices evaluated for the available data set of Mahim Creek indicated that the water quality varied from very bad to moderately good. The probable reason could be the industrial and domestic pollution.

17. Malabar Hill

MPCB has following monitoring location at Malabar Hill under GEMS/MINARS programme.

1. Sea water at Malabar Hill (2809 /SWMP) .

- Station Details: Village-Walkeshwar, Taluka-Mumbai, District-Mumbai
- Pollution source: Tourist spot. Domestic pollution

Table 5.19(a): Four years Descriptive Statistics for Sea water at Malabar Hill

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2809	Mean	7.8	4.5	11.3	658.7	959.7	0.4	1.1
	Std.dev	0.37	1.07	4.37	571.36	493.47	1.02	0.68
	No of Samples	27	25	26	24	24	26	27
	% Exceedance	**3.7**	**36.0**	**100.0**	**91.7**	**-**	**-**	**-**

At Malabar Hill pH, DO, BOD and FC exceeded the standards by 4, 36, 100 and 92% respectively. This is due to domestic pollution from non-point sources.

Table 5.19(b) : Water Quality Index for Malabar Hill

Station Code	2007	2008	2009	2010	2011
2809	--	Bad	Bad	Bad	Bad

The water quality indices evaluated for the available data set of Sea water at Malabar Hill indicated that the water quality varied from very bad to moderately good. The reason for such water quality could be the domestic pollution and the waste dumped by tourists.

18. Mandvi Bunder

Mandvi Bunder is located in Ratnagiri district. MPCB has following monitoring location at Mandvi Bunder under GEMS/MINARS programme.

1. Sea Water at Mandvi (2815 /SWMP)

- **Station Details**: Village- Sadanand Wadi, District-Ratnagiri
- **Pollution sources**: Fishing activity and domestic discharges

Table 5.20(a): Four years Descriptive Statistics for Sea water at Mandvi Bunder

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2815	Mean	7.2	5.9	2.5	2.2	60.3	0.6	3.3
	Std.dev	0.74	0.90	0.60	0.62	28.39	0.21	1.24
	No of Samples	31	30	30	29	30	29	29
	% Exceedance	**29.0**	**6.7**	**6.7**	**0.0**	**-**	**-**	**-**

For the available data set of Sea water at Mandavi Bunder, it was observed that pH showed 29% exceedance to CPCB standards whereas DO and BOD showed 7 % exceedance to standards. FC complied with the standards.

Table 5.20(b) : Water Quality Index for Mandvi Bunder

Station Code	2007	2008	2009	2010	2011
2815	--	GE	GE	GE	GE

The water quality indices evaluated for the available data set of Sea water at Mandavi Bunder indicated that the water quality was good to excellent.

19. Nariman Point

Nariman point is located in south of Mumbai on Back Bay. MPCB has following monitoring location at Nariman Point under GEMS/MINARS programme.

1. Sea water at Nariman Point (2808 /SWMP)

- Station Details: Village-Colaba, Taluka-Colaba, District-Mumbai
- Pollution source: Tourist spot. Domestic pollution

Table 5.21(a): Four years Descriptive Statistics for Sea Water at Nariman Point

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2808	Mean	7.8	4.4	11.0	529.6	799.1	0.5	1.2
	Std.dev	0.36	1.07	4.03	507.89	515.78	1.01	0.73
	No of Samples	25	24	25	23	23	23	26
	% Exceedance	**4.0**	**45.8**	**100.0**	**95.7**	**-**	**-**	**-**

It was observed that pH, DO, BOD and FC exceeded the CPCB standards and the exceedance was 4, 46, 100 and 96% respectively. The reason for such high exceedance could be the presence of non point sources

Table 5.21(b) : Water Quality Index for Nariman Point

Station Code	2007	2008	2009	2010	2011
2808	--	Bad	Bad	MG	Bad

The water quality indices evaluated for the available data of Sea water at Nariman point indicated that the water quality varied from very bad to moderately good. It could be due to the domestic pollution and the waste dumped by the tourists.

20. Navapur Sea

MPCB has following monitoring location at Navapur Sea in Thane region under GEMS/MINARS programme. **Table 5.22** gives two years descriptive statistics for Navapur Sea.

1. Navapur Sea (2807 /SWMP)

- **Station Details**: Village-Navapur, Taluka-Palghar, District-Thane
- **Pollution sources**: Effluent discharge from MIDC Tarapur. Domestic sewage from nearby villages

Table 5.22(a): Two years Descriptive Statistics for Navapur Sea

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2807	Mean	7.9	5.0	9.8	292.5	600.0	0.2	1.7
	Std.dev	0.19	0.92	4.44	257.04	448.01	0.29	0.87
	No of Samples	15	15	16	8	8	16	15
	% Exceedance	**0.0**	**13.3**	**100.0**	**100.0**	**-**	**-**	**-**

It was observed that pH was as per the CPCB standards. However DO, BOD and FC showed 13, 100 and 100% exceedance respectively. It could be due to effluent discharge from MIDC Tarapur and domestic sewage from nearby villages.

Table 5.22(b): Water Quality Index for Navapur Sea

Station Code	2007	2008	2009	2010	2011
2807	--	--	--	MG	MG

The water quality indices could not be evaluated for Navapur Sea for 2007, 2008 and 2009 due to insufficiency of data. Water quality evaluated for 2010 and 2011 showed that it varied between bad and moderately good.

21. Panvel Creek

MPCB has following monitoring location at Panvel Creek in Thane region under GEMS/MINARS programme. The data is limited. **Table 5.23** gives one year descriptive statistics for Panvel Creek for the year 2011.

1. Panvel Creek (2803 /SWMP)

- **Station Details**: Village-Kopra, Tal. Panvel, Dist. Thane
- **Pollution sources**: Domestic sewage from nearby villages

Table 5.23(a): One year Descriptive Statistics for Panvel Creek

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2803	Mean	7.3	3.8	9.7	158.6	464.3	0.1	1.8
	Std.dev	0.30	1.71	2.60	66.19	106.90	0.09	1.26
	No of Samples	7	7	6	7	7	6	7
	% Exceedance	**0.0**	**42.9**	**100.0**	**100.0**	**-**	**-**	**-**

It was observed that pH was as per the CPCB standards whereas 43, 100 and 100% exceedance was observed for DO, BOD and FC respectively.

Table 5.23(b) : Water Quality Index for Panvel Creek

Station Code	2007	2008	2009	2010	2011
2803	--	--	--	--	MG

For 2011 the water quality was bad to moderately good.

22. Sarwalli Creek

MPCB has following monitoring location at Sarwali Creek in Thane region under GEMS/MINARS programme. **Table 5.24** gives three years descriptive statistics for Sarvalli Creek for the years 2008, 2010 and 2011. The data is limited.

1. Sarwalli Creek (2800 /SWMP)

- Station Details: Village-Sarwalli, Taluka-Palghar, District-Thane
- Pollution source: Effluent discharge from MIDC Tarapur. Domestic sewage from nearby villages

Table 5.24(a): Two years Descriptive Statistics for Sarwalli Creek

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2800	Mean	7.7	4.8	9.2	413.1	750.0	0.1	2.0
	Std.dev	0.31	1.41	3.84	195.17	187.08	0.14	1.61
	No of Samples	16	15	16	8	7	15	16
	% Exceedance	**0.0**	**26.7**	**100.0**	**87.5**	**-**	**-**	**-**

It was observed that pH was as per the CPCB standards whereas 27, 100 and 88% % exceedance was there for DO, BOD and FC respectively. It could be due to effluent discharge from MIDC Tarapur and domestic sewage from nearby villages.

Table 5.24(b) : Water Quality Index for Sarwalli Creek

Station Code	2007	2008	2009	2010	2011
2800	--	--	--	MG	MG

The water quality indices could not be evaluated for Sarvalli Creek for 2007, 2008 and 2009 due to insufficient data. For 2010 and 2011 the water quality was moderately good.

23. Savta Creek

MPCB has following monitoring location at Savta Creek in Thane Region under GEMS/MINARS programme. **Table 5.25** gives four years descriptive statistics for Savta Creek for the period 2008 to 2011.

1. Savta Creek (2801 /SWMP)

- Station Details: Village-Savta, Taluka-Dahanu, District-Thane
- Pollution source: No polluting industries nearby. Intake point of Thermal Power Plant

Table 5.25(a): Four years Descriptive Statistics for Savta Creek

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2801	Mean	8.1	5.4	8.5	124.1	370.6	0.2	0.7
	Std.dev	0.29	1.22	3.98	52.42	121.59	0.16	0.50
	No of Samples	23	25	25	17	17	22	24
	% Exceedance	**4.3**	**16.0**	**100.0**	**58.8**	-	-	-

All the parameters i.e. pH, DO, BOD and FC exceeded the CPCB standards and the exceedance was 4, 16, 100 and 59% respectively. It could be due to waste released from Thermal Power Plant.

Table 5.25(b) : Water Quality Index for Savta Creek

Station Code	2007	2008	2009	2010	2011
2801	--	MG	MG	MG	MG

The monthly water quality indices evaluated for the available data set of Savta creek indicated that the water quality varied from bad to excellent. The probable reason for decreased water quality could be the waste released from Thermal Power Plant.

24. Thane Creek

MPCB has one monitoring location at Thane creek under GEMS/MINARS programme. **Table 5.26** gives five years descriptive statistics for Thane Creek.

1. Thane creek at Elephanta Island (1317/NWMP).

- **Station Details**: Elephanta Island, Mumbai
- **Pollution source**s: Domestic and industrial waste from Mumbai, and surrounding areas are discharged. Human activities such as fishing, boating etc

Table 5.26(a): Two years Descriptive Statistics for Thane Creek

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
1317	Mean	7.8	5.0	10.1	493.1	742.8	0.2	1.3
	Std.dev	0.28	0.99	2.57	644.69	630.12	0.15	0.67
	No of Samples	19	7	18	19	19	18	18
	% Exceedance	**0.0**	**14.3**	**100.0**	**63.2**	-	-	-

It was observed that pH complied with CPCB standards.. However, exceedance for DO, BOD and FC was 14, 100 and 63% respectively. Human activities such as fishing, boating etc. at the island could be the reason for exceedance.

Table 5.26(b) : Water Quality Index for Thane Creek

Station Code	2007	2008	2009	2010	2011
1317	--	--	--	Bad	Bad

Water quality data for 2007 to 2009 being insufficient, WQI could not be evaluated for this period. The water quality indices evaluated for 2010 and 2011 indicated that the water quality varied from bad to moderately good. The probable reason for bad water quality could be the human activities and discharge of domestic and industrial waste from Mumbai, and surrounding areas.

25. Ulhas Creek

MPCB has following five monitoring locations at Ulhas Creek under GEMS/MINARS programme. **Table 5.27** gives four years descriptive statistics for Ulhas Creek for the period 2008 to 2011.

1. Ulhas Creek at Reti Bunder at D/s of Kalyan- Bhiwandi bridge (2791 /SWMP).

- Station Details: Village-Kalyan, Taluka-Kalyan, District-Thane
- Pollution source: Domestic and industrial effluent from Badlapur, Ambernath and Ulhas nagar

2. Ulhas Creek at Mumbra Reti Bunder (2792 /SWMP)

- Station Details: Village-Mumbra, Taluka-Thane, District-Thane
- Pollution source: No Polluting industries nearby. Domestic pollution present.

3. Ulhas Creek at Kolshet Reti Bunder (2794 /SWMP)

- Station Details: Village-Kolshet, Taluka-Thane, District-Thane
- Pollution source: Industries are 1-2 km away. Industrial effluents from Kolshet, Dhokali area are discharged through nalla. Sandoz nalla meets here.

4. Ulhas Creek at Gaimukh at Nagla Bunder on Ghod Buder road (2795 /SWMP)

- Station Details: Village-Nagla, Taluka-Thane, District-Thane
- Pollution source: Industries are 1-2 km away. No approach nalla here

5. Ulhas Creek at Versova bridge (2796 /SWMP)

- Station Details: Village-Versova, Taluka-Vasai, District-Thane
- Pollution source: Industrial effluent from Kalyan, Ambernath & Thane

Table 5.27(a): Four years Descriptive Statistics for Ulhas Creek

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2791	Mean	7.4	4.5	9.1	1580.0	1760.0	0.8	2.1
	Std.dev	0.44	1.86	4.99	389.87	89.44	1.42	1.74
(2011)	No of Samples	14	14	13	5	5	12	14
	% Exceedance	**0.0**	**35.7**	**100.0**	**100.0**	-	-	-
2792	Mean	7.5	5.0	8.2	476.7	748.9	0.4	2.2
	Std.dev	0.22	1.27	1.97	534.97	613.04	0.48	1.82
	No of Samples	24	25	24	23	23	24	25
	% Exceedance	**0.0**	**28.0**	**100.0**	**87.0**	-	-	-
2794	Mean	7.5	4.8	8.9	763.1	947.2	0.4	2.4
	Std.dev	0.27	1.07	2.89	693.57	657.49	0.48	1.69
	No of Samples	24	25	25	23	23	23	24
	% Exceedance	**0.0**	**24.0**	**100.0**	**82.6**	-	-	-
2795	Mean	7.5	4.8	9.5	280.1	581.1	0.2	2.8
	Std.dev	0.25	1.29	3.16	161.87	276.47	0.15	1.81
	No of Samples	22	23	23	22	22	22	23
	% Exceedance	**0.0**	**26.1**	**100.0**	**90.9**	-	-	-
2796	Mean	7.6	4.7	9.7	502.2	737.2	0.2	2.4
	Std.dev	0.29	1.36	4.11	538.65	551.42	0.20	1.34
	No of Samples	23	23	21	22	22	21	23
	% Exceedance	**0.0**	**26.1**	**100.0**	**86.4**	-	-	-

The descriptive statistics of the stations of Ulhas creek showed that pH complied with the CPCB standards at all the stations. DO and FC exceeded in the range of 24-36% and 83 -

100% respectively at all the stations. BOD exceedance was 100% at all the stations. The reason for this exceedance could be the domestic and industrial effluents discharged from Thane, Kalyan, Ulhasnagar, Ambernath and Badlapur areas.

Table 5.27(b) : Water Quality Index for Ulhas Creek

Station Code	2007	2008	2009	2010	2011
2791	--	--	--	--	Bad
2792	--	MG	MG	MG	MG
2794	--	MG	MG	MG	Bad
2795	--	MG	MG	MG	MG
2796	--	MG	Bad	MG	MG

At Reti Bunder at D/s of Kalyan- Bhiwandi Bridge WQI could not be evaluated for 2007-2011 as data was not available for this period.At Mumbra Reti Bunder and Gaimukh at Nagla Bunder water quality was moderately good At Kolshet Reti Bunder and Versova bridge water quality varied between bad to moderately good.

26. Uttan Sea

Uttan Beach is located in Uttan village approximately 7-8 kilometers from the city of Bhayander. MPCB has following monitoring location at Uttan Sea under GEMS/MINARS programme. **Table 5.28** gives four years descriptive statistics for Uttan Sea for the period 2008 to 2011.

1. Uttan Sea at Bhayander (2806 /SWMP)

- Station Details: Village-Uttan, Taluka-Bhayander, District-Thane
- Pollution source: Domestic effluent from nearby villages. Fishing activity prevalent

Table 5.28(a): Four years Descriptive Statistics for Uttan Sea

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2806	Mean	8.0	4.7	10.1	210.6	543.6	0.1	1.7
	Std.dev	0.22	0.87	3.71	166.44	393.84	0.13	0.91
	No of Samples	22	23	23	19	20	22	23
	% Exceedance	**0.0**	**30.4**	**100.0**	**84.2**	**--**	**--**	**--**

It was observed that pH complied with the CPCB standards. However, exceedance for DO, BOD and FC was 30, 100 and 84% respectively. The exceedance could be due to domestic effluents from nearby villages and prevailing Fishing activity.

Table 5.28(b) : Water Quality Index for Uttan Sea

Station Code	2007	2008	2009	2010	2011
2806	--	MG	Bad	MG	Bad

The water quality indices evaluated for the available data set of Uttan Sea indicated that the water quality was bad to moderately good. It could be due to domestic effluents from nearby villages and prevailing Fishing activity

27. Vashi Creek

MPCB has following monitoring location at Vashi Creek under GEMS/MINARS programme. **Table 5.29** gives four years descriptive statistics for Versova Beach for 2008-2011.

1. Vashi Creek at Airoli bridge (2184/SWMP)

- **Station Details**: Village-Airoli, Taluka-Thane, District-Thane
- **Pollution sources**: Industries 1.5 km away. Domestic pollution from nearby residential area

2. Vashi Creek at Vashi bridge (2185/SWMP)

- **Station Details**: Village-Airoli, Taluka-Thane, District-Thane
- **Pollution source**s: MIDC, TTC effluent disposal point

Table 5.29(a) : Four years Descriptive Statistics for Vashi Creek

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2184	Mean	7.7	4.7	9.9	298.7	666.1	0.3	1.8
	Std.dev	0.38	1.04	3.77	334.94	511.38	0.40	0.86
	No of Samples	28	29	29	26	27	28	28
	% Exceedance	**0.0**	**34.5**	**100.0**	**84.6**	**-**	**-**	**-**
2185	Mean	7.6	4.4	10.9	282.5	599.8	0.2	1.8
	Std.dev	0.27	0.79	3.25	226.56	422.93	0.24	0.67
	No of Samples	28	26	28	26	26	25	27
	% Exceedance	**0.0**	**38.5**	**100.0**	**73.1**	**-**	**-**	**-**

Exceedance for DO was 35 and 39% at Airoli Bridge and Vashi Bridge respectively. Exceedance for FC was 85 and 73% at Airoli Bridge and Vashi Bridge respectively. Also, 100% exceedance was observed for BOD at both the stations. It could be due to MIDC, TTC effluents and domestic non point sources from nearby residential areas.

Table 5.29(b) : Water Quality Index for Vashi Creek

Station Code	2007	2008	2009	2010	2011
2184	--	MG	MG	MG	Bad
2185	--	Bad	MG	MG	Bad

The monthly water quality indices evaluated for the available data set of Vashi Creek at Airoli Bridge indicated that the water quality varied from bad to excellent. The water quality indices evaluated for Vashi Creek at Vashi Bridge indicated that the water quality varied from bad to moderately good. It could be due to MIDC, TTC effluents and domestic pollution from nearby residential areas. The annual WQI showed that the water quality at both the sites varied between where moderately good to bad.

28. Versova Beach

The Versova Beach is located North of Juhu Beach in Greater Mumbai and faces the Arabian Sea. Versova Beach is among Mumbai's hot attractions. As a continuation of Juhu

Beach, is separated by a creek. It is also home to Mumbai's largest fishing community - the Kolis. MPCB has following monitoring location at Versova beach under GEMS/MINARS programme. **Table 5.30** gives four years descriptive statistics for Versova Beach for 2008-2011.

1. Sea Water at Versova beach (2169/SWMP)

- Station Details: Village-Versova, Taluka-Andheri, District-Mumbai
- Pollution source: Domestic pollution. Fishing activity

Table 5.30(a): Four years Descriptive Statistics for Sea water at Versova

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2169	Mean	7.8	4.4	11.1	488.5	672.5	0.3	1.2
	Std.dev	0.34	0.84	3.58	635.73	675.45	0.33	0.72
	No of Samples	34	32	33	32	31	33	34
	% Exceedance	**0.0**	**28.1**	**100.0**	**56.3**	**-**	**-**	**-**

It was observed that pH complied with the CPCB standards. However, DO, BOD and FC showed exceedance of 28, 100 and 56% respectively. It could be due to domestic pollution and fishing activity at the Versova Beach.

Table 5.30(b): Water Quality Index for Versova

Station Code	2007	2008	2009	2010	2011
2169	--	MG	MG	MG	VB

The water quality of Versova beach in 2008 to 2010 was moderately good but in 2011 it deteriorated to very bad. The reason for this could be the domestic pollution at the Versova Beach.

29. Worli Seaface

Worli is a part of South Mumbai bounded by the Arabian Sea to the west. The Worli Seaface is a major residential area extending from Worli Fort in the north to Narayan Pujari Nagar in the south. Worli Seaface has been a very pretty landmark for Mumbai so it has become a tourist spot. MPCB has following monitoring location at Worli Seaface under GEMS/MINARS programme. **Table 5.31** gives three years descriptive statistics for Worli Seaface.

1. Sea Water at Worli Seaface (2167/SWMP)

- Station Details: Village-Worli, Taluka-Worli, District-Mumbai
- Pollution source: Tourist spot. Domestic effluent from Worli Dairy. Large scale industries nearby

Table 5.31(a): Four years Descriptive Statistics for Sea water at Worli Seaface

Stn.Code		pH	DO	BOD	FC	TC	Ammonia	Nitrate
2167	Mean	7.7	4.9	12.5	489.9	772.2	0.3	1.3
	Std.dev	0.32	0.97	12.51	478.78	540.40	0.65	0.62
	No of Samples	35	32	34	32	30	30	34
	% Exceedance	**0.0**	**18.8**	**100.0**	**81.3**	--	--	--

The descriptive statistic of Worli Seaface showed that pH was in compliance with CPCB standards. However, % exceedance for DO was 19, 100 and 81% respectively. It could be due to the effluents from Worli Dairy and Large scale industries situated nearby.

Table 5.31(b) : Water Quality Index for Worli Seaface

Station Code	2007	2008	2009	2010	2011
2167	--	MG	MG	MG	Bad

The water quality indices evaluated for the available data set of Worli Seaface indicated that the water quality varied from bad to moderately good. The reason for this may be the effluents from Worli Dairy and Large scale industries situated nearby.

Chapter 6

Evaluation of Groundwater Quality

6.1 Ground Water Monitoring in Maharashtra

Groundwater contamination occurs due to either natural causes or anthropogenic activities. It needs regular monitoring to device ways and means to protect it. Groundwater Survey and Development Agency (GSDA), Central Ground Water Board (CGWB) and MPCB conduct groundwater quality monitoring in various Districts of Maharashtra. It involves identification of major pollutants and confirmation of suitability of groundwater for human consumption.

6.2 Sources of Pollution in Ground Water

pH: Low pH is one of the common problems of ground water. The primary cause of low pH is addition of acidic rain water. Other ions found in ground water such as nitrates and sulfates may result in lower pH. The negative effects of acidic water are many. Highly acidic water may result in pipe corrosion, release of iron, lead, or copper into the tap water. A low pH may discolor the water and give it a bitter taste.

TDS: Total dissolved solids (TDS) is defined as the concentration of all dissolved minerals in water. The results of early epidemiological studies suggest that even low concentrations of TDS in drinking-water may have beneficial effects, although adverse effects have been reported in two limited investigations. Water containing TDS concentrations below 1000 mg/litre is usually acceptable to consumers, although acceptability may vary according to circumstances (WHO/SDE/WSH/03.04/16). BIS desirable limit for TDS is 500 mg/l whereas permissible limit is 2000 mg/l. The presence of high levels of TDS in water may be objectionable to consumers owing to the resulting taste and to excessive scaling in water pipes, heaters, boilers, and household appliances. Sources for TDS include agricultural run-off, urban run-off, industrial wastewater, sewage, and natural sources such as leaves, silt, plankton, and rocks.

Hardness: Hardness of water is related to presence of Ca^{+} and Mg^{+} in water basically depending on soil type of that area. No evidence is available to document harm to human health from harder drinking water. Perhaps only high magnesium content (hundreds of mg/l) coupled with a high sulphate content may cause diarrhea. In areas supplied with drinking water harder than 500 mg/l $CaCO_3$, higher incidence rates of gallbladder disease, urinary stones, arthritis and arthropathies as compared with those supplied with softer water were reported *(Muzalevskaya et al., 1993)*. An epidemiological study carried out in a particular region (Tambov) found hard water (more than 400-500 mg/l of $CaCO_3$) to be possible cause

of higher incidence rates of some diseases including cancer *(Golubev et al., 1994). (http://www.lenntech.com/health-risks-demineralized-water.htm#ixzz2psvEbb3A).* Hardness in groundwater naturally occurs from weathering of limestone, sedimentary rocks and calcium bearing minerals. Hardness can also occur locally in groundwater from chemical and mining industry effluent.

Sulphate (SO_4^{-2}): The existing data do not identify a level of sulfate in drinking-water that is likely to cause adverse human health effects. The data from the liquid diet piglet study and from tap water studies with human volunteers indicate a laxative effect at concentrations of 1000–1200 mg/litre, but no increase in diarrhea, dehydration or weight loss. The presence of sulfate in drinking-water can also result in a noticeable taste; the lowest taste threshold concentration for sulfate is approximately 250 mg/litre as the sodium salt. Sulfate may also contribute to the corrosion of distribution systems. In the light of the above considerations, no health-based guideline value for sulfate in drinking water is proposed. However, there is an increasing likelihood of complaints arising from a noticeable taste as concentrations in water increase above 500 mg/litre. (WHO/SDE/WSH/03.04/114). Sulphate can be found in almost all natural water. The origin of most Sulphate compounds is oxidation of sulfite ores, presence of shales, or the industrial wastes. Excess sulphate in water could be due to soil type as some soils contain sulphite minerals. As groundwater moves through these, some of the sulphate is dissolved into the water. Some minerals that contain Sulphate are Sodium Sulphate (Glauber's salt), Magnesium Sulphate (Epsom salt), and Calcium Sulphate (gypsum).

Fluoride (F^-): Fluoride has beneficial effects on teeth at low concentrations in drinking water but excessive exposure to fluoride in drinking water can give rise to a number of adverse effects. These range from mild dental fluorosis to crippling skeletal fluorosis as the level and period of exposure increases. Fluoride is a common constituent of groundwater. Natural sources are connected to various types of rocks. Agricultural (use of phosphatic fertilizers) and industrial activities (clays used in ceramic industries or burning of coals) also contribute to high fluoride concentrations in groundwater. During weathering and circulation of water in rocks and soils, fluorine can be leached out and dissolved in groundwater and thermal gases. The fluoride content of groundwater varies greatly depending on the geological settings and type of rocks. The most common fluorine-bearing minerals are fluorite, apatite and micas. Therefore, fluoride problems tend to occur in places where these minerals are most abundant in rocks.

Nitrate (NO_3^-): Nitrate levels above the BIS drinking water quality standard of 45 mg/l may cause methemoglobinemia in infants. Proper management of fertilizers, manures, and other

nitrogen sources can minimize contamination of drinking water supplies. The formation of nitrates is an integral part of the nitrogen cycle in our environment. In moderate amounts, nitrate is a harmless constituent of food and water. Plants use nitrates from the soil to satisfy nutrient requirements and may accumulate nitrate in their leaves and stems. Due to its high mobility, nitrate also can leach into groundwater. Nitrates form when microorganisms break down fertilizers, decaying plants, manures or other organic residues. Usually plants take up these nitrates, but sometimes rain or irrigation water can leach them into groundwater. Although nitrate occurs naturally in some groundwater, in most cases higher levels are thought to result from human activities. Common sources of nitrate include: fertilizers and manure, animal feedlots, municipal wastewater and sludge, septic systems, N-fixation from atmosphere by legumes and bacteria.

Chloride (Cl^-): The concentration of Chlorine is high in the regions of high temperature and less rainfall. Soil porosity and permeability can build up chloride ions in water.

Micro-organisms- Microorganisms, more specifically bacteria, can be found virtually in any water sample. Most microorganisms contained within normal well water supplies do not pose a threat to human health. Bacteria are generally introduced into a well by foreign means. Bacteria thrive in environments which contain iron, nitrogen, or sulfur compounds. Sources of these compounds may be derived from sewage, animal manure, and leaky septic systems. Well water serves as excellent living environment for bacteria. Wells high in nitrate (>10 mg/L) and sulfate levels should be bacteriologically tested. Bacteria can convert nitrate in water to the more dangerous nitrite. Water rich in sulfur could contain bacteria which may convert sulfate ions to potentially toxic sulfide ions.

6.3 Ground Water Network

The number of ground water monitoring stations (villages) in each Taluka is listed in **Table 6.1.**

Table 6.1: Number of Ground Water Monitoring Stations in Each Taluka

Sr.	District	Talukas (No. of Villages Monitored)
1	Ahmednagar (167)	Ahmednagar (21), Akole (11), Jamkhed (7), Karjat (11), Kopargaon (16), Newasa (18), Parner (11), Rahata (1), Rahuri (14), Sangamner (16), Shevgaon (11), Shrigonda (14), Srirampur (15), Pathardi (1)
2	Akola (104)	Akola (29), Akot (23), Balapur (10), Barshi Takli (11), Murtizapur (11), Patur (11), Telhara (9)
3	Amravati (183)	Achalpur (2), Amravati (13), Anjangaon Surji (4), Bhatkuli (17), Chandurbazar (9), Chandur Railway (9), Chikhaldara (15), Daryapur (16), Dhamangaon railway (8), Dharni (26), Morshi (18), Nandgaon khandeshwar (17), Tiwasa (4), Warud (25)

Table 6.1 (Contd..) : Number of Ground Water Monitoring Stations in Each Taluka

Sr.	District	Talukas (No. of Villages Monitored)
4	Aurangabad (96)	Aurangabad (14), Kannad (12), Khultabad (8), Paithan (13), Phulambri (9), Sillod (13), Soygaon (6), Vaijapur (10), Gangapur (11)
5	Beed (67)	Ambejogai (7), Ashti (11), Beed (7), Dharur (3), Gewrai (10), Kej (3), Majalgaon (8), Parli (6), Patoda (7), Shirur Kasar (3), Wadwani (2)
6	Bhandara (68)	Bhandara (12),Lakhandur (6), Lakhani (2), Mohadi (11), Pauni (12), Sakoli (12), Tumsar (13)
7	Buldhana (139)	Buldhana (10), Chikhali (11), Jalgaon jamod (5), Khamgaon (15), Lonar (13), Malkapur (6), Mehkar (12), Motala (11), Nandura (12), Sangrampur (11), Shegaon (14), Sindhkhedraja (10), Deolgaonraja (9)
8	Chandrapur (113)	Ballarpur (3), Bhadrawati (7), Brahmapur (7), Chandrapur (19), Chimur (14), Gondpipri (6), Jiwati (1), Korapna (1), Mul (11), Nagbhid (8), Rajura (14), Pombhurna (1), Sawali (1), Sindewahi (13), Waroda (7)
9	Dhule (100)	Dhule (27), Sakri (18), Shirpur (26), Sindkheda (29)
10	Gadchiroli (117)	Aheri (16), Armori (8), Bhamragarh (5), Chamorshi (11), Desaiganj/Wadsa (5), Dhanora (12), Etapalli (12), Gadchiroli (14), Korchi (9), Kurkheda (15), Mulchera (6), Sironcha (4)
11	Gondia (68)	Amgaon (7), Arjuni Moregaon (12), Deori (10), Gondia (14), Goregaon (1), Sadak Arjuni (6), Salekasa (6), Tiroda (12)
12	Hingoli (31)	Aundha-Nag (4), Basmatnagar (10), Hingoli (9), Sengaon (3), Kalmnuri (5)
13	Jalgaon (120)	Amalner (11), Bhadgaon (6), Bhusawal (3), Bodwad (1), Chalisgaon (12), Chopda (11), Dharangaon (2), Erandol (13), Jalgaon (15), Jamner (5), Mukainagar (1), Parola (10), Pachora (7), Raver (11), Yaval (12)
14	Jalna (116)	Ambad (13), Badnapur (12), Bhokardan (29),Ghansawangi (12), Jafrabad (17), Jalna (16), Mantha (9), Parthur (8)
15	Kolhapur (138)	Ajra (8), Bhudargad (13), Chandgad (16), Gadinglaj (11), Gagan bauda (4), Hatkanangale (17), Kagal (12), Kolhapur (21), Panhala (7), Radhanagari (9), Shahuwadi (8), Shirol (12)
16	Latur (95)	Ahmadpur (13), Ausa (17), Chakur (11), Jalkot (2), Latur (16), Mahroli (Chemur) (1), Nilganga (14), Renapur (7), Udgir (9), Deoni (3), Shirur Anantpal (3)
17	Mumbai (8)	City & Suburban : Borivali (1), Goregaon East (1), Kurla(1), Mahroli Chembur (1), Church Gate (1), Colaba (Dandi) (1), Deulwadi (1), Mahim (1)
18	Nagpur (124)	Bhivapur (7), Hingna (9), Kalmeshwar (9), Kamptee (8), Kuhi (5), Mouda (6), Nagpur (23), Narkhed (11), Parseoni (11), Ramtek (9), Saoner (11), Umred (7), Katol (5), Nagpur Rural (3)
19	Nanded (106)	Ardhapur (3), Bhokar (6), Biloli (1), Deglur (8), Dharmabad (4), Mahur (3), Hadgaon (12), Himayat nagar (4), Kinmat (15), Kandhar (9), Mukhed (11), Mudkhed (2), Nanded (12), Naigaon (6), Loha (5), Umri (5)
20	Nandurbar (63)	Akkalkuva (7), Dhadgaon (5), Nandurbar (16), Nawapur (15), Shahada (14), Taloda (6)
21	Nasik (174)	Baglan (13), Chandwad (7), Deola (2), Dindori (14), Igatpuri (10), Kalwan (11), Malegaon (19), Nandgaon (17), Nasik (25), Niphad (19), Peinth (5), Satana (3),Sinnar (14), Surgana (3),Trimbakeshwar (3), Yeola (9)
22	Osmanabad (76)	Bhum (5), Kalambh (14), Lohara (1), Omerga (13), Osmanabad (21), Paranda (8), Tuljapur (14)

Table 6.1 (Contd..) : Number of Ground Water Monitoring Stations in Each Taluka

Sr.	District	Talukas (No. of Villages Monitored)
23	Parbhani (68)	Gangakhed (12), Jintur (11), Manwat (2), Palam (6), Parbhani (16), Pathari (8), Purna (4), Selu (7), Sonpeth (2),
24	Pune (148)	Ambegaon (7), Baramati (17), Bhor (3), Daund (12), Pune Haveli (19), Indapur (16), Junnar (15), Mawal (6), Mulshi (7), Purandar (13), Rajgurnagar(Khed) (12), Shirur (19), Wadgaon (1), Wehle (1)
25	Raigad (113)	Alibag (14), Karjat (13), Khalapur (5), Mahad (12), Mangaon (5), Mhasala (15), Murud (6), Panvel (10), Pen (9), Poladpur (2), Raigad (3), Roha (7), Sudhagad (3), Shrivardhan (4), Tala (2), Uran (3)
26	Ratnagiri (133)	Chiplun (20), Dapoli (11), Guhagar (17), Khed (20), Lanja (3), Mandangarh (5), Rajapur (25), Ratnagiri (19), Sangameshwar (13)
27	Sangli (148)	Atpadi (18), Islampur (1), Jath (23), Kadegaon (6), Kavathemahankal (17), Khanapur (21), Miraj (21), Palus (4), Shirala (10), Tasgaon (9), Walwa (18)
28	Satara (146)	Javali (2), Karad (18), Khandala (9), Khatav (19), Koregaon (11), Mahabaleshwar (3),Man-dahivadi (19), Medha (2), Patan (16), Phaltan (16), Satara (22), Wai (9)
29	Sindhudurg (105)	Devgad (13), Dodamarg (11), Kankavali (14), Kudal (18), Malvan (15), Sawantwadi (11), Vaibhavwadi (8), Vengurla (15)
30	Solapur (48)	Akkalkot (4), Barshi (6), Karmala (3), Madha (3), Malshiras (6), Mangalvedhe (4), Mohol (4), North Solapur (4), Pandharpur (7), Sangola (3), Solapur (3), South Solapur (1)
31	Thane (137)	Ambernath (4), Bhiwandi (14), Dahanu (12), Jawhar (7), Kalyan (4), Mokhada (6), Murbad (7), Murud (6), Palghar (17), Shahapur (12), Thane (14), Talasari (5), Ulhasnagar (4), Vasai (15), Wada (10)
32	Wardha (128)	Arvi (15), Ashti (11), Deoli (13), Hinganghat (18), Karanja (8), Samudrapur (18), Seloo (28), Wardha (17)
33	Washim (67)	Karanja (12), Mangrulpir (8), Malegaon (9), Manora (8), Risod (17), Washim (13)
34	Yavatmal (180)	Arni (15), Babhulgaon (15), Darwha (12), Digras (11), Ghatanji (11), Kalamb (16), Kelapur (13), Mahagaon (6), Maregaon (4), Ner (11), Pusad (9), Ralegaon (11), Umarkhed (12), Wani (13), Yavatmal (11), Zari Jamni (10)

6.3.1 Summary Observations

During 2007 to 2009 some of the talukas in Akola, Amravati, Buldhana, Washim and Yavatmal districts do not have concentrations of Fe; which was available for 2010 and 2011; accordingly data sets were arranged and water quality indices calculated. **We observe that out of 369 Talukas there are 36 Talukas in Maharashtra where water quality is within permissible limits i.e. pH, Total Dissolved solids, Total hardness, Fluoride and Nitrate do not exceed the standards throughout the study period i.e. 2007 to 2011. Table 6.2** gives the list of these Talukas. Theses 36 Talukas with good ground water include 9 Talukas in Raigad, 5 Talukas in Mumbai and 4 Talukas in Kolhapur district, 3 Talukas in Chandrapur and Ratnagiri.

Table 6.2: Talukas in Maharashtra With No Exceedance for Selected Parameters

Sr.	District	Taluka	Sr.	District	Taluka
1	Ahmednagar	Pathardi	19	Raigad	Khalapur
2	Beed	Ambejogai	20		Panvel
3	Chandrapur	Jiwati	21		Poladpur
4		Pombhurna	22		Raigad
5		Korapna	23		Roha
6	Gondia	Goregaon	24		Sudhagad
7	Gadchiroli	Bhamragarh	25		Shrivardhan
8	Kolhapur	Gaganbawada	26		Tala
9		Panhala	27		Uran
10		Radhanagari	28	Ratnagiri	Chipalun
11		Shahuwadi	29		Mandangarh
12	Mumbai	Kurla	30		Lanja
13		Church Gate	31	Sangli	Walwa
14		Deulwadi	32	Satara	Mahabaleshwar
15		Mahim	33		Medha
16		Mahroli (Chembur)	34	Sindhudurg	Devagad
17	Nagpur	Umred	35	Thane	Wada
18	Nanded	Biloli	36		Talasari

We observe that out of 369 Talukas, in 76 Talukas in Maharashtra, Total Hardness and Nitrate exceed BIS permissible limits 100% of the time during 2007 to 2011. Table 6.3 gives the name and district of these Talukas. It is observed that NO_3 in ground water exceed the permissible limit of 45 mg/l in 3 Talukas in Maharashtra 100% of the time. Total Hardness in ground water exceeds the permissible limit of 600 mg/l; 100% of the time in 74 Talukas in Maharashtra. TDS, pH and F do not exceed 100% of the time in any Taluka.

Table 6.3: Talukas in Maharashtra with 100% Exceedance for Selected Parameters

Sr.	District	Taluka	pH	TDS	TH	F	NO_3
1	Ahmednagar	Hahata	0	0	100	0	100
2	Jalgaon	Dharangaon	0	0	20	0	100
3		Bodwad	0	0	0	0	100
4	Nandurbar	Dhadgaon	35	0	100	0	0
5		Shahada	25	25	100	0	0
6		Akkalkuva	25	17	100	0	0
7		Nandurbar	14	39	100	0	10
8		Navapur	13	9	100	0	7
9		Taloda	12	6	100	0	0
10	Nasik	Yeola	53	35	100	6	12
11		Surgana	50	0	100	0	0

Table 6.3 (Contd..): Talukas in Maharashtra with 100% Exceedance

Sr.	District	Taluka	pH	TDS	TH	F	NO_3
12	Nasik (Contd..)	Kalwan	46	21	100	0	0
13		Nandgaon	38	62	100	3	10
14		Deola	33	83	100	17	17
15		Sinnar	30	63	100	3	8
16		Peinth	29	0	100	0	0
17		Baglan	27	46	100	2	2
18		Chandwad	27	13	100	0	0
19		Igatpuri	26	5	100	0	0
20		Niphad	22	59	100	7	20
21		Malegaon	16	63	100	3	3
22		Dindori	16	9	100	6	3
23		Nasik	14	32	100	0	9
24		Satana	0	83	100	0	33
25		Trimbakeshwar	0	0	100	0	0
26	Osmanabad	Paranda	40	30	100	10	20
27		Tuljapur	32	35	100	6	0
28		Kallam	28	24	100	0	7
29		Omerga	26	16	100	6	5
30		Bhoom	25	17	100	0	8
31		Osmanabad	13	45	100	5	18
32		Lohara	0	0	100	0	33
33	Parbhani	Palam	14	71	100	14	7
34		Pathri	6	33	100	17	6
35		Gangakhed	4	29	100	17	0
36		Jintur	0	57	100	22	4
37		Manwat	0	50	100	33	33
38		Sonpeth	0	50	100	25	0
39		Parbhani	0	46	100	20	14
40		Selu	0	44	100	28	0
41		Purna	0	25	100	0	0
42	Pune	Indapur	36	48	100	0	31
43		Baramati	19	51	100	0	54
44		Ambegaon	16	37	100	0	47
45		Shirur	10	51	100	0	49
46		Daund	8	59	100	0	32
47		Pune (Haveli)	6	42	100	2	38
48		Junnar	5	18	100	0	20
49		Purandar	0	29	100	0	39
50		Khed	0	13	100	0	50
51		Bhor	0	0	100	0	33
52		Mawal	0	0	100	0	0
53		Mulshi	0	0	100	0	0

Table 6.3 (Contd..): Talukas in Maharashtra with 100% Exceedance

Sr.	District	Taluka	pH	TDS	TH	F	NO_3
54	Pune (Contd..)	Wadgaon (Maval)	0	0	100	0	0
55		Wehle	0	0	100	0	0
56	Washim	Karanja	18	32	100	3	39
57		Manora	15	37	100	0	44
58		Malegaon	14	49	100	0	49
59		Mangarulpir	10	33	100	0	43
60		Risod	8	89	100	1	62
61	Yavatmal	Digras	9	55	100	0	42
62		Pusad	8	25	100	0	25
63		Zari Jamni	7	14	100	21	14
64		Wani	7	86	100	31	38
65		Ner	7	50	100	0	57
66		Umarkhed	4	48	100	0	39
67		Darwha	3	36	100	0	33
68		Arni	0	52	100	0	48
69		Ralegaon	0	42	100	0	48
70		Kalamb	0	40	100	0	50
71		Bhabhulgaon	0	37	100	0	53
72		Yavatmal	0	33	100	0	39
73		Ghatanji	0	29	100	6	44
74		Pandharkawada(Kelapur)	0	26	100	3	32
75		Maregaon	0	25	100	0	25
76		Mahagaon	0	25	100	0	6

Table 6.4 gives the percent exceedances of all Talukas for selected parameters in ground water in Maharashtra.

Table 6.4 : Percent Exceedance for Selected Parameters in Ground Water in Maharashtra

Sr.	District	Taluka	pH	TDS	TH	F	NO_3
1	Ahmednagar	Ahmednagar	4	14	36	0	16
		Akole	12	6	24	0	24
		Jamkhed	9	0	9	9	9
		Karjat	0	9	22	4	26
		Kopargaon	12	12	24	3	18
		Newasa	9	13	38	0	23
		Parner	0	4	9	4	4
		Pathardi	0	0	0	0	0
		Rahuri	19	23	32	0	21
		Hahata	0	0	100	0	100
		Sangamner	7	23	30	0	5
		Shevgaon	0	14	34	0	31
		Shrigonda	5	5	30	0	38
		Srirampur	14	6	18	0	0

Table 6.4 (Contd..) : Percent Exceedance for Selected Parameters in Ground Water

Sr.	District	Taluka	pH	TDS	TH	F	NO_3
2	Akola	Akola	13	16	26	1	53
		Akot	3	23	38	2	46
		Balapur	10	2	7	0	44
		Barshi-takli	6	3	17	0	51
		Murtizapur	6	9	19	2	57
		Patur	11	0	0	0	39
		Telhara	8	25	14	0	44
3	Amravati	Achalpur	0	20	40	0	40
		Amravati	14	0	17	7	59
		Anjangaon	11	22	0	0	44
		Bhatkuli	20	18	37	2	51
		Chandur bazar	18	9	9	0	50
		Chandur railway	4	4	11	0	63
		Chikhaldara	2	0	4	2	21
		Daryapur	34	16	31	0	69
		Dhamangaon railway	13	0	0	6	56
		Dharni	0	0	3	3	29
		Morshi	4	1	21	0	51
		Nandgaon khandeshwar	0	4	11	0	64
		Tiwasa	5	0	16	0	68
		Warud	1	0	1	1	50
4	Aurangabad	Aurangabad	14	0	12	9	22
		Kannad	16	2	7	7	18
		Khultabad	14	0	0	5	5
		Paithan	20	25	28	20	19
		Phulambri	10	0	3	3	13
		Sillod	16	0	2	2	11
		Soygaon	17	0	10	4	7
		Vaijapur	14	17	17	7	5
		Gangapur	13	19	19	4	2
5	Beed	Ambejogai	25	0	0	0	15
		Ashti	29	4	13	0	4
		Beed	19	0	0	0	6
		Dharur	0	0	29	29	29
		Ambejogai	0	0	0	0	0
		Gewrai	13	9	17	0	9
		Kej	25	0	0	0	25
		Parli	11	0	22	11	33
		Patoda	23	0	8	0	23
		Shirur	0	0	20	0	80
		Wadwani	0	0	40	0	60
		Majalgaon	11	0	0	0	0
6	Bhandara	Bhandara	7	4	22	15	19
		Lakhandur	0	0	8	23	23
		Lakhani	0	0	0	0	40
		Mohadi	4	0	20	4	24
		Pauni	8	0	13	25	4
		Sakoli	11	0	4	4	11
		Tumsar	6	3	3	9	27

Table 6.4 (Contd..) : Percent Exceedance for Selected Parameters in Ground Water

Sr.	District	Taluka	pH	TDS	TH	F	NO_3
7	Buldhana	Buldhana	10	0	16	3	65
		Chikhali	0	0	0	5	21
		Jalgaon jamod	0	0	0	0	75
		Khamgaon	3	0	11	5	84
		Lonar	28	0	11	0	56
		Malkapur	7	29	36	0	79
		Mehkar	5	0	0	0	50
		Motala	0	0	0	0	92
		Nandura	11	0	11	11	67
		Sangrampur	24	0	5	5	29
		Shegaon	15	4	12	8	65
		Sindkhed Raja	0	0	20	0	20
		Deolgaon Raja	0	0	0	0	33
8	Chandrapur	Ballarpur	0	17	0	17	50
		Bhadrawati	0	0	0	13	0
		Brahmapuri	0	0	19	0	25
		Chandrapur	0	0	11	6	33
		Chimur	0	4	4	20	15
		Jiwati	0	0	0	0	0
		Mul	7	0	21	14	0
		Nagbhid	7	0	29	7	50
		Pombhurna	0	0	0	0	0
		Rajura	5	0	5	10	40
		Sawali	0	0	0	67	67
		Sindewahi	5	0	16	16	11
		Waroda	0	0	9	55	45
		Gondipipri	0	0	14	14	14
		Korapna	0	0	0	0	0
9	Dhule	Dhule	23	0	5	4	17
		Sakri	31	0	0	4	4
		Shirpur	26	0	0	5	7
		Sindkheda	28	3	11	1	7
10	Gondia	Amgaon	0	0	0	6	18
		Arjuni Moregaon	0	0	5	0	35
		Deori	25	0	0	0	19
		Gondia	10	0	3	3	17
		Goregaon	0	0	0	0	0
		Sadal Arjuni	38	0	0	0	13
		Tiroda	30	0	10	15	40
		Salekasa	63	0	0	0	13
11	Gadchiroli	Aheri	16	0	19	3	38
		Bhamragarh	0	0	0	0	0
		Chamorshi	21	0	14	7	21
		Desaiganj (Wadsa)	27	0	0	0	27
		Dhanora	12	0	0	0	24
		Etapalli	13	0	0	6	44
		Gadchiroli	0	0	7	0	21
		Korchi	33	0	11	0	11

Table 6.4 (Contd..) : Percent Exceedance for Selected Parameters in Ground Water

Sr.	District	Taluka	pH	TDS	TH	F	NO_3
11	Gadchiroli (Contd..)	Kurkheda	0	0	0	0	6
		Mulchera	20	0	40	10	60
		Sironcha	14	0	14	0	57
		Armori	0	0	0	0	7
12	Hingoli	Aundha (Nag.)	30	0	0	20	0
		Basmatnagar	5	0	0	11	16
		Hingoli	21	0	8	4	8
		Sengaon	17	0	0	17	0
		Kalmnuri	0	0	14	0	0
13	Jalgaon	Amalner	38	25	38	6	25
		Bhadgaon	0	0	20	0	30
		Bhusawal	14	0	0	14	0
		Bodwad	0	0	0	0	100
		Chalisgaon	0	0	6	0	31
		Chopda	10	0	10	3	3
		Dharangaon	0	0	20	0	100
		Erandol	12	0	12	0	15
		Jamner	0	0	9	0	64
		Parola	11	0	0	0	11
		Raver	17	0	0	4	17
		Yaval	32	0	0	0	0
		Jalgaon	7	0	7	4	30
		Pachora	57	0	0	0	29
14	Jalna	Ambad	8	8	5	14	19
		Badnapur	45	0	10	15	15
		Bhokardan	20	2	15	11	24
		Ghansawangi	24	0	10	31	17
		Jafrabad	17	21	29	0	33
		Jalna	19	3	10	10	23
		Mantha	12	6	29	6	41
		Parthur	17	0	17	13	22
15	Kolhapur	Ajra	29	0	0	0	10
		Bhudargad	19	0	0	0	4
		Chandgad	9	0	0	0	3
		Gadinglaj	7	0	0	0	29
		Gaganbawada	0	0	0	0	0
		Hatkanangale	0	0	3	0	23
		Kagal	0	0	0	0	4
		Kolhapur	0	0	4	0	9
		Panhala	0	0	0	0	0
		Radhanagari	0	0	0	0	0
		Shahuwadi	0	0	0	0	0
		Shirol	0	0	4	0	63
16	Latur	Ahmadpur	16	0	10	0	13
		Nilanga	17	0	0	0	9
		Ausa	3	0	3	3	6
		Chakur	25	0	4	0	17
		Jalkot	24	0	0	0	0
		Latur	24	0	3	0	21

Table 6.4 (Contd..) : Percent Exceedance for Selected Parameters in Ground Water

Sr.	District	Taluka	pH	TDS	TH	F	NO_3
16	Latur (Contd..)	Renapur	20	0	0	7	0
		Udgir	26	0	0	0	0
		Deoni	17	0	0	0	0
		Shirur Anantpal	17	0	0	0	0
17	Mumbai	Borivali	0	0	0	0	50
		Goregaon East	0	0	0	0	33
		Kurla	0	0	0	0	0
		Bombay (Church Gate)	0	0	0	0	0
		Colaba (Dandi)	0	0	0	0	33
		Deulwadi	0	0	0	0	0
		Mahim	0	0	0	0	0
		Mahroli (Chemur)	0	0	0	0	0
18	Nagpur	Bhivapur	0	0	18	18	18
		Hingna	0	0	42	0	47
		Kalmeshwar	0	18	24	18	41
		Kamptee	0	0	0	6	24
		Kuhi	0	0	44	33	0
		Mouda	0	0	7	21	0
		Nagpur	0	0	8	12	23
		Nagpur(Rural)	33	0	0	0	0
		Narkhed	0	0	29	0	52
		Parseoni	0	0	0	12	15
		Ramtek	0	0	18	27	36
		Saoner	3	0	14	3	34
		Umred	0	0	0	0	0
		Katol	0	0	9	9	0
19	Nanded	Ardhapur	67	0	0	0	0
		Bhokar	33	0	11	0	22
		Hadgaon	29	0	0	24	6
		Himayat Nagar	40	0	20	20	25
		Kinwat	19	0	0	50	0
		Mahur	33	0	0	0.0	33
		Mukhed	10	0	0	10	33
		Mudkhed	25	0	0	25	0
		Nanded	17	0	0	0	50
		Biloli	0	0	0	0	0
		Naigaon	14	0	14	33	0
		Deglur	36	0	0	29	0
		Dharmabad	60	0	0	20	0
		Kandhar	42	0	0	17	0
		Loha	29	0	0	43	17
		Umri	60	0	0	10	0
20	Nandurbar	Akkalkuva	25	17	100	0	0
		Nandurbar	14	39	100	0	10
		Navapur	13	9	100	0	7
		Taloda	12	6	100	0	0
		Dhadgaon	35	0	100	0	0
		Shahada	25	25	100	0	0

Table 6.4 (Contd..) : Percent Exceedance for Selected Parameters in Ground Water

Sr.	District	Taluka	pH	TDS	TH	F	NO_3
21	Nasik	Baglan	27	46	100	2	2
		Deola	33	83	100	17	17
		Dindori	16	9	100	6	3
		Igatpuri	26	5	100	0	0
		Kalwan	46	21	100	0	0
		Malegaon	16	63	100	3	3
		Nandgaon	38	62	100	3	10
		Nasik	14	32	100	0	9
		Niphad	22	59	100	7	20
		Peinth	29	0	100	0	0
		Satana	0	83	100	0	33
		Trimbakeshwar	0	0	100	0	0
		Yeola	53	35	100	6	12
		Sinnar	30	63	100	3	8
		Surgana	50	0	100	0	0
		Chandwad	27	13	100	0	0
22	Osmanabad	Bhoom	25	17	100	0	8
		Kallam	28	24	100	0	7
		Lohara	0	0	100	0	33
		Osmanabad	13	45	100	5	18
		Omerga	26	16	100	6	5
		Paranda	40	30	100	10	20
		Tuljapur	32	35	100	6	0
23	Parbhani	Jintur	0	57	100	22	4
		Manwat	0	50	100	33	33
		Parbhani	0	46	100	20	14
		Palam	14	71	100	14	7
		Pathri	6	33	100	17	6
		Selu	0	44	100	28	0
		Gangakhed	4	29	100	17	0
		Purna	0	25	100	0	0
		Sonpeth	0	50	100	25	0
24	Pune	Ambegaon	16	37	100	0	47
		Baramati	19	51	100	0	54
		Daund	8	59	100	0	32
		Pune (Haveli)	6	42	100	2	38
		Indapur	36	48	100	0	31
		Junnar	5	18	100	0	20
		Mawal	0	0	100	0	0
		Mulshi	0	0	100	0	0
		Purandar	0	29	100	0	39
		Khed	0	13	100	0	50
		Shirur	10	51	100	0	49
		Wadgaon (Maval)	0	0	100	0	0
		Wehle	0	0	100	0	0
		Bhor	0	0	100	0	33

Table 6.4 (Contd..) : Percent Exceedance for Selected Parameters in Ground Water

Sr.	District	Taluka	pH	TDS	TH	F	NO_3
25	Raigad	Alibag	7	0	0	0	0
		Karjat	0	0	4	0	0
		Khalapur	0	0	0	0	0
		Mahad	0	9	9	0	0
		Mangaon	7	0	0	0	0
		Mhasala	10	0	0	0	0
		Panvel	0	0	0	0	0
		Pen	0	7	7	0	0
		Poladpur	0	0	0	0	0
		Raigad	0	0	0	0	0
		Roha	0	0	0	0	0
		Sudhagad	0	0	0	0	0
		Shrivardhan	0	0	0	0	0
		Tala	0	0	0	0	0
		Uran	0	0	0	0	0
		Murud	8	0	0	0	0
26	Ratnagiri	Chipalun	0	0	0	0	0
		Dapoli	0	0	0	0	2
		Guhagar	5	0	0	0	0
		Khed	8	0	0	0	2
		Mandangarh	0	0	0	0	0
		Rajapur	4	2	2	0	0
		Ratnagiri	3	0	0	0	3
		Sangameshwar	6	0	0	0	0
		Lanja	0	0	0	0	0
27	Sangli	Atpadi	19	0	3	0	13
		Islampur	0	0	0	0	50
		Jath	2	6	23	0	30
		Kadegaon	0	0	0	0	22
		Kavathemahankal	0	6	13	0	22
		Khanapur	24	0	7	0	7
		Miraj	0	11	15	0	48
		Palus	0	0	0	0	50
		Shirala	9	0	0	0	9
		South Solapur	0	0	67	0	0
		Tasgaon	0	8	17	0	42
		Walwa	0	0	0	0	0
28	Satara	Javali	25	0	0	0	25
		Karad	29	0	0	0	13
		Khandala	0	0	0	0	19
		Khatav	8	0	0	0	16
		Koregaon	31	0	0	0	27
		Mahabaleshwar	0	0	0	0	0
		Man	15	0	4	0	38
		Medha	0	0	0	0	0
		Satara	3	0	8	3	5
		Patan	18	11	11	0	18
		Phaltan	17	0	9	0	35
		Wai	17	0	0	0	0

Table 6.4 (Contd..) : Percent Exceedance for Selected Parameters in Ground Water

Sr.	District	Taluka	pH	TDS	TH	F	NO_3
29	Sindhudurg	Devagad	0	0	0	0	0
		Dodamarg	5	0	0	0	0
		Kankavali	11	0	0	5	0
		Kudal	5	0	2	5	0
		Malwan	5	0	0	0	0
		Sawantwadi	7	0	0	0	0
		Vaibhawadi	0	0	6	0	0
		Vengurla	4	0	4	0	0
30	Solapur	Akkalkot	0	0	29	0	43
		Barshi	0	0	25	0	58
		Karmala	0	0	0	0	40
		Madha	0	0	17	0	83
		Malshiras	0	0	13	0	38
		Mangalvedhe	0	0	20	0	40
		Mohol	0	0	33	0	44
		N.Solapur	0	0	38	0	25
		Pandharpur	0	20	47	0	47
		Sangola	0	0	0	0	60
		Solapur	0	0	0	0	20
31	Thane	Bhivandi	12	0	0	2	2
		Dahanu	0	0	3	0	0
		Jawhar	0	0	0	0	6
		Mokhada	0	0	0	0	10
		Murbad	3	0	0	6	0
		Palghar	0	2	0	2	2
		Shahapur	16	0	0	0	0
		Thane	6	2	4	2	0
		Vasai	11	0	9	0	0
		Wada	0	0	0	0	0
		Ambernath	17	8	0	0	0
		Kalyan	0	0	0	7	0
		Murud	83	0	0	0	0
		Talasari	0	0	0	0	0
		Ulhasnagar	0	0	0	18	0
32	Wardha	Arvi	0	0	13	0	57
		Ashti	0	0	25	5	50
		Deoli	0	0	13	0	64
		Hinganghat	5	0	20	14	77
		Karanja	0	0	14	0	36
		Samudrapur	0	2	5	4	55
		Seloo	5	5	17	3	73
		Wardha	0	8	28	0	64
33	Washim	Karanja	18	32	100	3	39
		Mangarulpir	10	33	100	0	43
		Malegaon	14	49	100	0	49
		Manora	15	37	100	0	44
		Risod	8	89	100	1	62
		Washim	14	41	95	2	38

Table 6.4 (Contd..) : Percent Exceedance for Selected Parameters in Ground Water

Sr.	District	Taluka	pH	TDS	TH	F	NO_3
34	Yavatmal	Arni	0	52	100	0	48
		Bhabhulgaon	0	37	100	0	53
		Darwha	3	36	100	0	33
		Digras	9	55	100	0	42
		Ghatanji	0	29	100	6	44
		Kalamb	0	40	100	0	50
		Pandharkawada(Kelapur)	0	26	100	3	32
		Mahagaon	0	25	100	0	6
		Maregaon	0	25	100	0	25
		Ner	7	50	100	0	57
		Pusad	8	25	100	0	25
		Ralegaon	0	42	100	0	48
		Umarkhed	4	48	100	0	39
		Wani	7	86	100	31	38
		Yavatmal	0	33	100	0	39
		Zari Jamni	7	14	100	21	14

The frequency distribution of selected parameters and contour maps of average concentrations of pH, TDS, TH, Fluoride and Nitrate are given in **Figure 6.1** and **Figures 6.2 through 6.6**. From Figures we observe the following:

- 216 Talukas from Ahmednagar, Akola, Amravati, Aurangabad, Beed, Bhandara, Buldhana, Chandrapur, Dhule, Gadchiroli, Gondia, Hingoli, Jalgaon, Jalna, Kolhapur, Latur, Nagpur, Nanded, Nandurbar, Nashik, Osmanabad Parbhani, Pune, Raigad, Ratnagiri, Sangli, Satara, Sindhudurg, Thane and Wardha, Washim and Yavatmal districts have pH concentrations not complying with the BIS standard of 6.5-8.5 mg/l.
- 137 Talukas in 27 districts have Fluoride levels above permissible limits of 1.5 mg/l. Chandrapur, Nanded, Nagpur, Parbhani, Jalna and Yavatmal have high Fluoride levels.
- 3 Talukas in Ahmednagar and Jalgaon districts have shown nitrate levels above desirable limits, 100% of the time. The districts with high concentrations of Nitrate are Aurangabad, Ahmednagar, Amravati, Buldhana, Beed, Chandrapur, Dhule, Gadchiroli, Jalna, Jalgaon, Solapur, Washim and Wardha.
- The analysis shows that 124 Talukas of Maharashtra show exceedance of permissible limit. Total dissolved solids in ground water exceeded the BIS standard of 2000 mg/l in most of the Talukas of Amravati, Ahmednagar, Akola, Buldhana, Dhule, Nadurbar, Nashik, Parbhani and Washim having high concentrations of TDS in ground water.
- Groundwater in 74 Talukas in 17 Districts shows Total Hardness exceeding the permissible limits (600mg/l) 100% of the time. In Talukas of Amhednagar, Aurangabad, Dhule and Nagpur, and in certain part of Nashik and Pune; Washim and Yavatmal where total hardness in ground water exceeded 100% of the time.

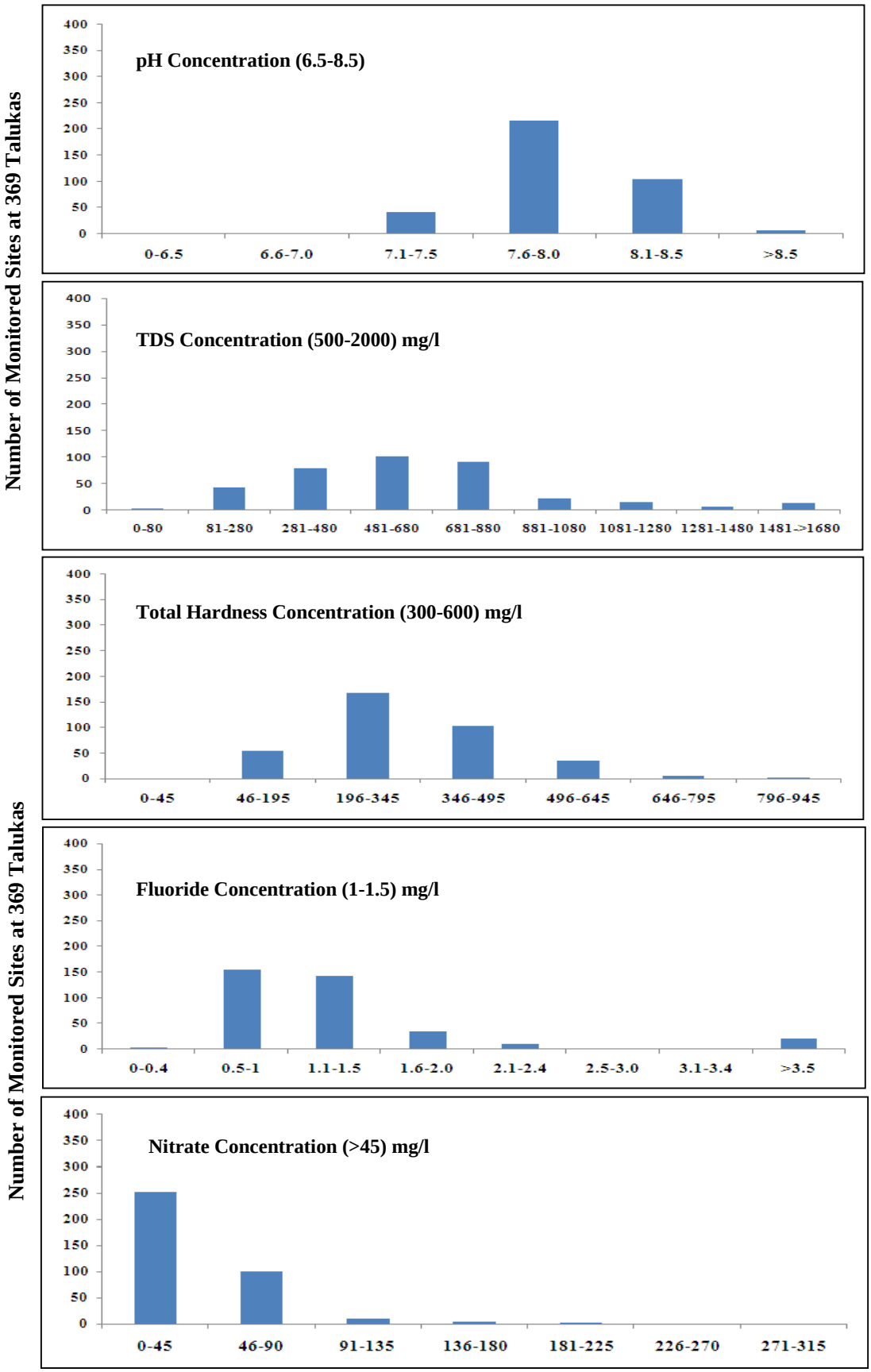

Figure 6.1 : Frequency Distribution of Average Concentration of Selected Parameters in Ground Water of Maharashtra

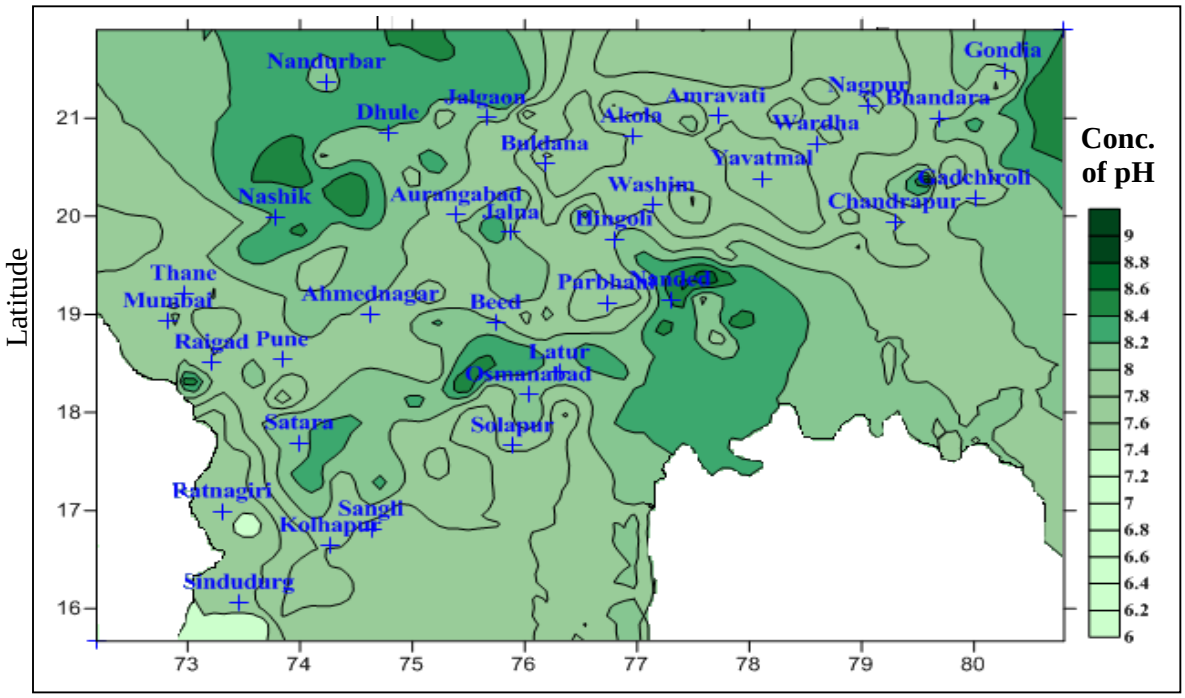

Figure 6.2 : Contour Map of Average Concentration of pH

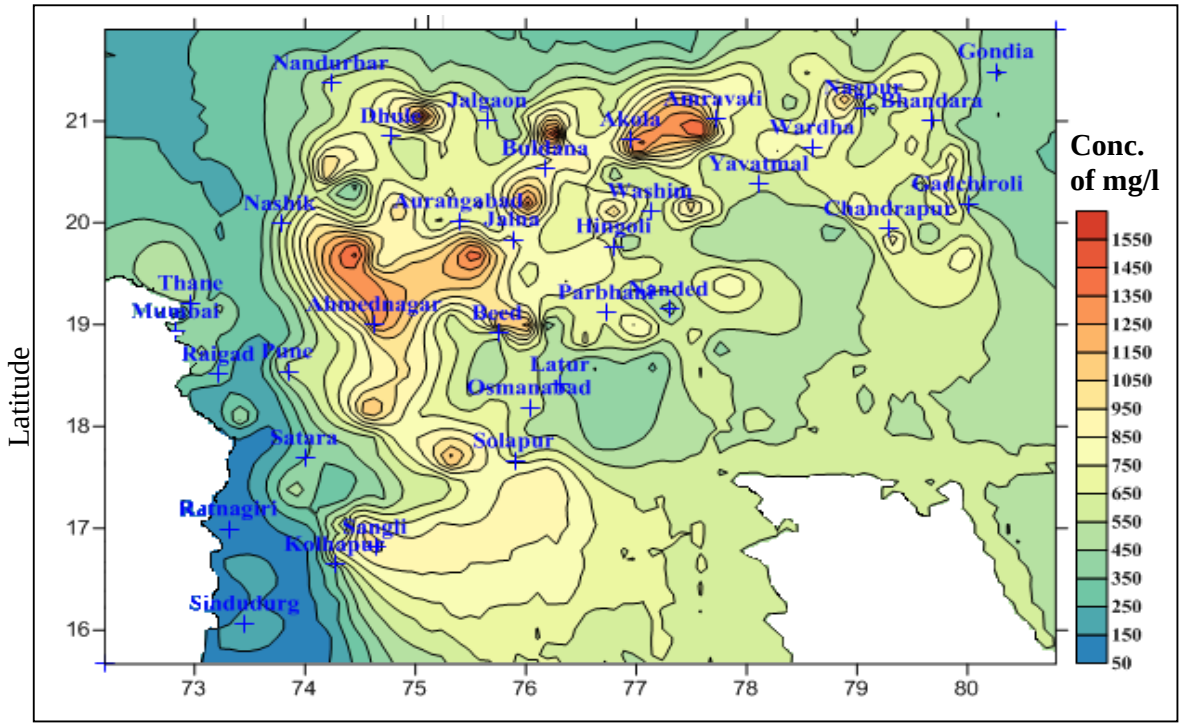

Figure 6.3 : Contour Map of Average Concentration of Total Dissolved Solids

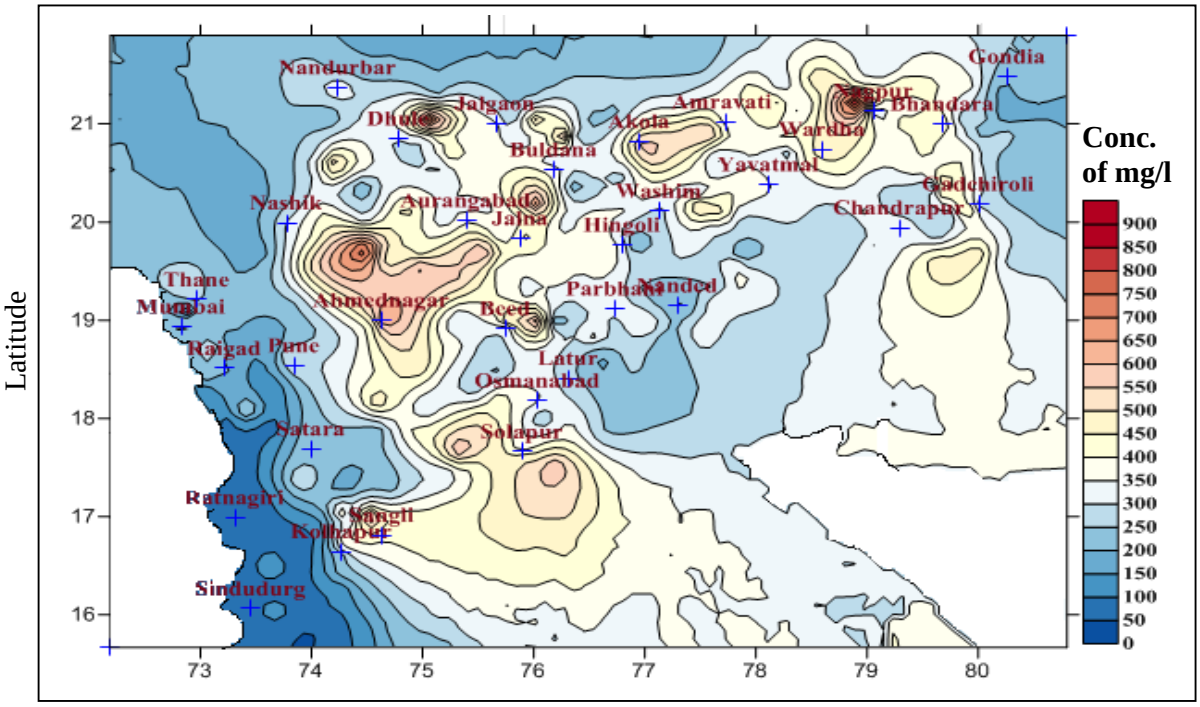

Figure 6.4 : Contour Map of Average Concentration of Total Hardness

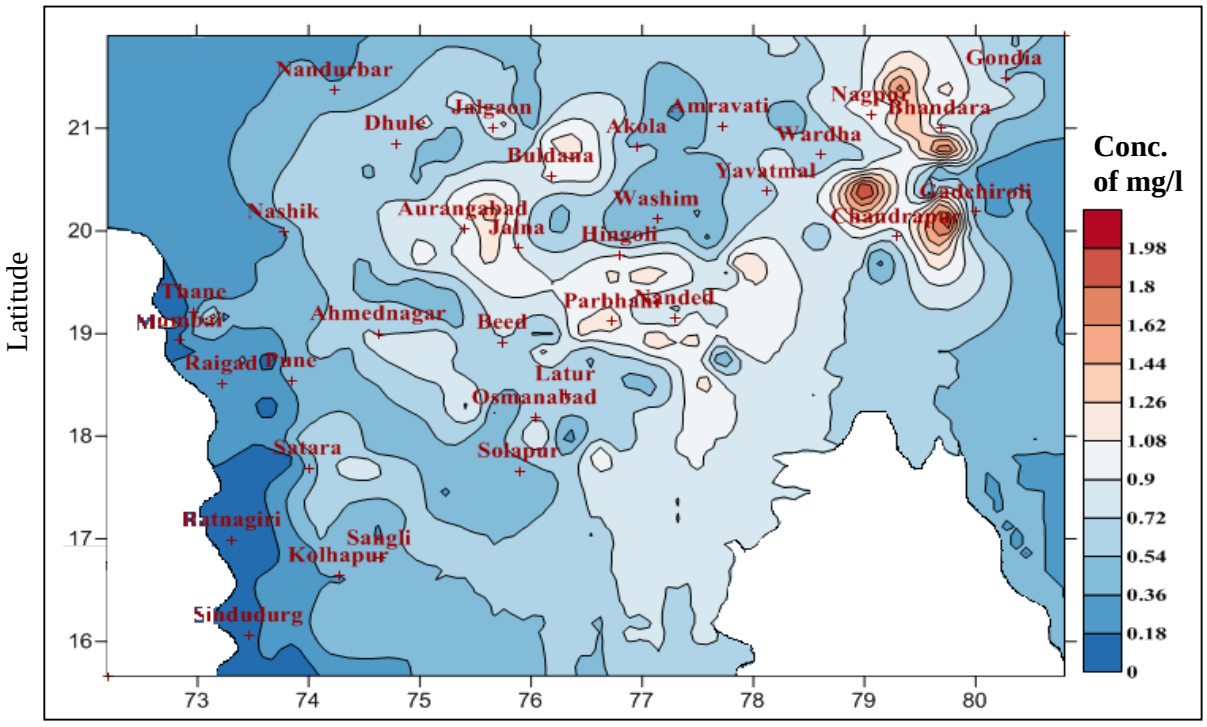

Figure 6.5 : Contour Map of Average Concentration of Fluoride

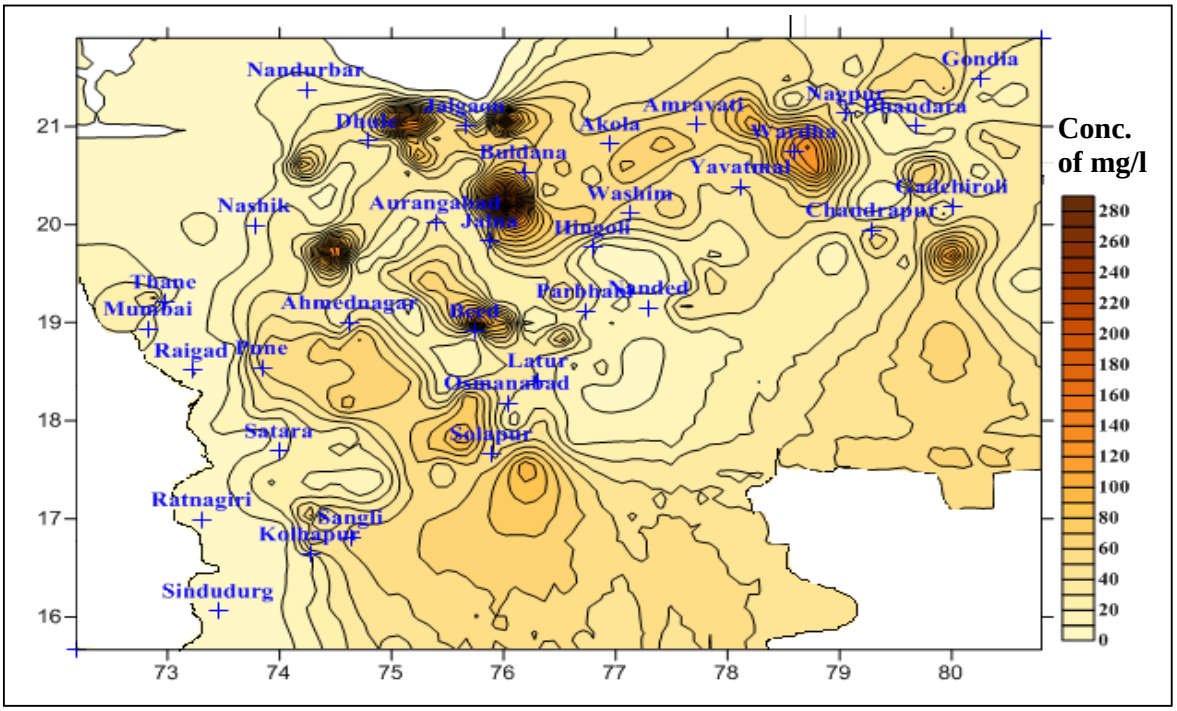

Figure 6.6 : Contour Map of Average Concentration of Nitrate

6.3.2 Correlation Matrix for Different Ground Water Parameters

Table 6.5 presents the correlation coefficient matrix between major parameters of ground water. Significant correlation between NO_3^- and SO_4^{2-} concentration at 5% (*) level of significance was observed in ground water samples collected from districts namely, Amravati (r=0.654), Aurangabad (r=0.608), Bhandara (r=0.638), Buldhana (r=0.511), Chandrapur (r=0.494), Dhule (r=0.943),and Washim (r=0.7). Similarly 1% (**) level of significance were observed at, Gadchiroli (r=0.927), Gondia (r=0.880), Kolhapur (r=0.947), Latur (r=0.856), Nandurbar (r=0.664), Nasik (r=0.646), Osmanabad (r=0.624),Pune (r=0.826),Satara (r=0.927),and Wardha (r=0.870). Such high correlation indicates contamination of groundwater with nitrate and sulphate from point sources, i.e. fertilizers, sewage and animal wastes. While studying nitrate concentrations in ground water of some rural areas of Rajasthan, *Suthar et al., 2009* also reported a significant relationship between NO_3^- and SO_4^{2-}.

NO_3^- showed good correlation with Cl^- at the significance level of 5% (*) at Bhandara (r=0.564), Dhule (r=0.811), Gondia (r=0.743), Gadchiroli (r=0.635), Mumbai (r=0.577), Nadurbar (r=0.68), Sangli (r=0.525), Wardha (r=0.632) and Washim (r=0.565); whereas, significance level of 1% (**) where observed at Ahmednagar (r=0.662), Amravati (r=0.671), Aurangabad (r=0.846), Jalgaon (r=0.661), Jalana (r=0.931), Kolhapur (r=0.955), Latur (r=0.726), Nasik (r=0.768), Osmanabad (r=0.598), Pune (r=0.856) and Satara (r=0.913).

Table 6.5: District Wise Correlation Matrix for Different Ground Water Parameters

1. Ahmednagar (n-14)		SO_4^{-2}	F^-	NO_3^-	2. Akola (n-7)		SO_4^{-2}	F^-	NO_3^-
	Cl^-	-0.068	-0.116	.662**		Cl^-	.905(**)	0.417	0.261
	SO_4^{-2}	1	-.602*	0.126		SO_4^{-2}	1	0.454	0.442
	F^-		1	-0.168		F^-		1	-0.262
3. Amravati (n-14)		SO_4^{-2}	F^-	NO_3^-	**4. Aurangabad (n=9)**		SO_4^{-2}	F^-	NO_3^-
	Cl^-	.844**	-0.399	.671**		Cl^-	.740*	-0.267	.846**
	SO_4^{-2}		-0.116	.654*		SO_4^{-2}		-0.351	0.608
	F^-			-0.013		F^-			-0.166
5. Beed (n=11)		SO_4^{-2}	F^-	NO_3^-	**6. Bhandara (n=7)**		SO_4^{-2}	F^-	NO_3^-
	Cl^-	.787**	.768**	-0.02		Cl^-	.923**	-0.281	0.564
	SO_4^{-2}	1	.972**	0.14		SO_4^{-2}	1	-0.174	0.638
	F^-		1	0.133		F^-		1	-0.454
7. Buldhana (n=13)		SO_4^{-2}	F^-	NO_3^-	**8. Chandrapur (n=15)**		SO_4^{-2}	F^-	NO_3^-
	Cl^-	0.336	0.446	0.194		Cl^-	0.475	-0.231	0.422
	SO_4^{-2}	1	-0.198	0.511		SO_4^{-2}	1	-0.261	0.494
	F^-		1	-0.318		F^-		1	0.117
9. Dhule (n=4)		SO_4^{-2}	F^-	NO_3^-	**10. Gadchiroli (n=12)**		SO_4^{-2}	F^-	NO_3^-
	Cl^-	.959*	0.103	0.811		Cl^-	.730**	0.498	.635*
	SO_4^{-2}	1	0.38	0.943		SO_4^{-2}	1	.720**	.927**
	F^-		1	0.666		F^-		1	.672*
11. Gondia (n=8)		SO_4^{-2}	F^-	NO_3^-	**12. Hingoli (n=5)**		SO_4^{-2}	F^-	NO_3^-
	Cl^-	.877**	0.546	.743*		Cl^-	0.873	0.736	-0.155
	SO_4^{-2}	1	0.634	.880**		SO_4^{-2}	1	0.392	0.323
	F^-		1	0.248		F^-		1	-0.47
13. Jalgaon (n=15)		SO_4^{-2}	F^-	NO_3^-	**14. Jalana (n=8)**		SO_4^{-2}	F^-	NO_3^-
	Cl^-	.875**	0.171	.661**		Cl^-	0.386	-.820*	.931**
	SO_4^{-2}	1	0.286	0.48		SO_4^{-2}	1	-0.17	0.239
	F^-		1	-0.246		F^-		1	-.741*
15. Kolhapur (n=12)		SO_4^{-2}	F^-	NO_3^-	**16. Latur (n=10)**		SO_4^{-2}	F^-	NO_3^-
	Cl^-	.953**	0.51	.955**		Cl^-	.787**	-0.565	.726*
	SO_4^{-2}	1	0.433	.947**		SO_4^{-2}	1	-0.304	.856**
	F^-		1	0.559		F^-		1	-0.371
17. Mumbai (n=8)		SO_4^{-2}	F^-	NO_3^-	**18. Nagpur (n=14)**		SO_4^{-2}	F^-	NO_3^-
	Cl^-	.692**	0.45	0.577		Cl^-	0.195	0.118	0.342
	SO_4^{-2}	1	0.139	.765*		SO_4^{-2}	1	0.031	0.339
	F^-		1	-0.225		F^-		1	-0.165
19. Nanded (n=16)		SO_4^{-2}	F^-	NO_3^-	**20. Nandurbar (n=6)**		SO_4^{-2}	F^-	NO_3^-
	Cl^-	.836**	.586*	0.075		Cl^-	.965**	0.685	0.68
	SO_4^{-2}	1	0.233	0.426		SO_4^{-2}	1	0.768	0.664
	F^-		1	-0.43		F^-		1	0.333
21. Nasik (n=16)		SO_4^{-2}	F^-	NO_3^-	**22. Osmanabad (n=7)**		SO_4^{-2}	F^-	NO_3^-
	Cl^-	.954**	0.412	.768**		Cl^-	.798*	-0.365	0.598
	SO_4^{-2}	1	0.378	.646**		SO_4^{-2}	1	-0.625	0.624
	F^-		1	0.289		F^-		1	-0.56

Note : ** Correlation is significant at 0.01 levels (2 tailed)* Correlation is significant at 0.05 levels (2 tailed)

Table 6.5 (Contd..) : Correlation Matrix for Different Ground Water Parameters

23. Parbhani (n=9)		**SO_4^{-2}**	**F^-**	**NO_3^-**	**24. Pune (n=14)**		**SO_4^{-2}**	**F^-**	**NO_3^-**
	Cl^-	0.44	0.164	-0.016		**Cl^-**	.961**	.611*	.856**
	SO_4^{-2}	1	0.247	0.147		**SO_4^{-2}**	1	.545*	.826**
	F^-		1	-0.123		**F^-**		1	.726**
25. Raigad (n=15)		**SO_4^{-2}**	**F^-**	**NO_3^-**	**26. Ratnagiri (n=9)**		**SO_4^{-2}**	**F^-**	**NO_3^-**
	Cl^-	.778**	0.092	0.06		**Cl^-**	-0.151	0.408	0.121
	SO_4^{-2}	1	0.092	0.36		**SO_4^{-2}**	1	-0.337	-0.066
	F^-		1	-0.073		**F^-**		1	0.189
27. Santali (n=12)		**SO_4^{-2}**	**F^-**	**NO_3^-**	**28. Satara (n=12)**		**SO_4^{-2}**	**F^-**	**NO_3^-**
	Cl^-	0.322	-0.185	0.525		**Cl^-**	.860**	0.554	.913**
	SO_4^{-2}	1	0.108	0.224		**SO_4^{-2}**	1	.592*	.927**
	F^-		1	-0.292		**F^-**		1	.712**
29. Sindhudurg (n=8)		**SO_4^{-2}**	**F^-**	**NO_3^-**	**30. Solapur (n=12)**		**SO_4^{-2}**	**F^-**	**NO_3^-**
	Cl^-	0.196	0.341	0.331		**Cl^-**	.856**	0.333	0.177
	SO_4^{-2}	1	.859**	-0.37		**SO_4^{-2}**	1	0.299	-0.013
	F^-		1	-0.578		**F^-**		1	-0.089
31. Thane (n=15)		**SO_4^{-2}**	**F^-**	**NO_3^-**	**32. Wardha (n=8)**		**SO_4^{-2}**	**F^-**	**NO_3^-**
	Cl^-	.851**	-0.214	-0.069		**Cl^-**	.783*	0.223	0.632
	SO_4^{-2}	1	0.073	0.167		**SO_4^{-2}**	1	0.689	.870**
	F^-		1	0.028		**F^-**		1	0.601
33. Washim (n=6)		**SO_4^{-2}**	**F^-**	**NO_3^-**	**34. Yavatmal (n=16)**		**SO_4^{-2}**	**F^-**	**NO_3^-**
	Cl^-	0.629	0.364	0.565		**Cl^-**	0.373	-0.051	.572*
	SO_4^{-2}	1	0.417	0.7		**SO_4^{-2}**	1	0.443	0.011
	F^-		1	-0.105		**F^-**		1	0.152

Note : ** Correlation is significant at 0.01 levels (2 tailed)* Correlation is significant at 0.05 levels (2 tailed)

Similarly SO_4^{2-} also exhibited good relationship with Cl^- for groundwater samples found to be at significance level of 5% (*) at Aurangabad (*r*=0.740), Dhule (*r*=0.959), Hingoli (*r*=0.873), Osmanabad (*r*=0.798), Wardha (*r*=0.783). Whereas, 1% (**) significance level was observed at Akola (*r*=0.905), Amravati (*r*=0.844), Beed (*r*=0.787), Bhandara (*r*=0.923), Gadchiroli (*r*=0.730), Gondia (*r*=0.877), Kolhapur (*r*=0.953), Latur (*r*=0.787), Mumbai (*r*=0.692),Nanded(*r*=0.836), Nandurbar(*r*=0.965), Nasik (*r*=0.954), Pune (*r*=0.961), Raigad (*r*=0.778), Satara (*r*=0.860) and Thane (*r*=0.851). The correlation matrix between important parameters of water **(Table 6.5)** suggested that major source of NO_3^- and SO_4^{2-}, in ground water of this region were nitrogenous fertilizers, sewerage, animal waste, organic manure, non-point sources etc.

Based on water quality index calculated as per the methodology given in ***Chapter 3***, the list of Talukas having the ground water quality Excellent, Good, Poor, Very Poor and Unsuitable for drinking based on the monitored data is given in **Table 6.6** The pictorial view of five years WQI for the approx.369 talukas (3694 villages) in 34 district of Maharashtra is given in **Annexure XI**.

Table 6.6 : Classification of Ground Water Quality of Talukas as Excellent, Good, Poor, Very Poor and Unsuitable for Drinking

Sr.	District Taluka /Villages	Taluka Name	Excellent NS/ (%)		Good Water NS / (%)		Poor Water NS / (%)		Very Poor NS / (%)		Unsuitable NS / (%)		No.of Samples (5 Yrs.)
1.	**Ahmadnagar 14/ 167 (418 Samples)**	Ahmednagar	4	**7**	25	**44**	20	**35**	2	**4**	6	**11**	57
		Akole	4	**25**	6	**38**	4	**25**	2	**13**			16
		Jamkhed			8	**80**	2	**20**					10
		Karjat			11	**50**	9	**41**	1	**5**	1	**5**	22
		Kopargaon	4	**12**	12	**36**	14	**42**	2	**6**	1	**3**	33
		Newasa			26	**55**	12	**26**	6	**13**	3	**6**	47
		Parner	2	**9**	11	**48**	9	**39**	1	**4**			23
		Pathardi			1	**50**	1	**50**					2
		Rahata					2	**67**	1	**33**			3
		Rahuri	9	**19**	13	**28**	16	**34**	8	**17**	1	**2**	47
		Sangamner	3	**7**	25	**58**	6	**14**	7	**16**	2	**5**	43
		Shevgaon	4	**14**	8	**28**	14	**48**	2	**7**	1	**3**	29
		Shrigonda			18	**49**	15	**41**	3	**8**	1	**3**	37
		Srirampur	11	**22**	26	**53**	9	**18**	2	**4**	1	**2**	49
2.	**Akola 7/104 (393 Samples)**	Akola	3	**3**	45	**48**	36	**38**	7	**7**	3	**3**	94
		Akot	7	**8**	34	**39**	31	**36**	10	**11**	5	**6**	87
		Balapur			34	**83**	5	**12**	1	**2**	1	**2**	41
		Barshi-takli	2	**6**	27	**77**	3	**9**	2	**6**	1	**3**	35
		Murtizapur	3	**6**	24	**44**	21	**39**	3	**6**	3	**6**	54
		Patur	8	**17**	34	**74**	4	**9**					46
		Telhara	8	**22**	15	**42**	10	**28**	2	**6**	1	**3**	36

** NS= Number of Samples*

Table 6.6 (Contd..) : Classification of Ground Water Quality of Talukas as Excellent, Good, Poor, Very Poor and Unsuitable for Drinking

Sr.	District Taluka /Villages	Taluka Name	Excellent NS/ (%)		Good Water NS / (%)		Poor Water NS / (%)		Very Poor NS / (%)		Unsuitable NS / (%)		No.of Samples (5 Yrs.)
3.	**Amravati 14/183 (527 Samples)**	Achalpur			2	**40**	3	**60**					5
		Amravati			21	**72**	8	**28**					29
		Anjangaon	1	**11**	4	**44**	4	**44**					9
		Bhatkuli			17	**35**	28	**57**	3	**6**	1	**2**	49
		Chandur Bazar	1	**5**	18	**82**	3	**14**					22
		Chandur Rly.	3	**11**	18	**67**	6	**22**					27
		Chikhaldara	12	**25**	34	**71**	2	**4**					48
		Daryapur	1	**3**	16	**52**	11	**35**	3	**10**			31
		Dhamangaon Rly.	3	**19**	8	**50**	5	**31**					16
		Dharni	21	**29**	48	**67**	3	**4**					72
		Morshi	7	**10**	34	**49**	28	**41**					69
		Nandgaon Kh.	3	**5**	33	**60**	18	**33**	1	**2**			55
		Tiwasa			13	**68**	6	**32**					19
		Warud	4	**5**	64	**84**	8	**11**					76
4.	**Aurangabad 9/96 (378 Samples)**	Aurangabad	1	**2**	26	**52**	23	**46**					50
		Gangapur	1	**2**	35	**73**	8	**17**	3	**6**	1	**2**	48
		Kannad			33	**75**	10	**23**	1	**2**			44
		Khultabad			20	**91**	2	**9**					22
		Paithan	2	**3**	26	**38**	30	**43**	6	**9**	5	**7**	69
		Phulambri	1	**3**	20	**67**	9	**30**					30
		Sillod	4	**9**	32	**73**	7	**16**			1	**2**	44
		Soygaon	1	**3**	22	**76**	6	**21**					29
		Vaijapur	1	**2**	21	**50**	15	**36**	3	**7**	2	**5**	42

** NS= Number of Samples*

Table 6.6 (Contd..) : Classification of Ground Water Quality of Talukas as Excellent, Good, Poor, Very Poor and Unsuitable for Drinking

Sr.	District Taluka /Villages	Taluka Name	Excellent NS/ (%)		Good Water NS / (%)		Poor Water NS / (%)		Very Poor NS / (%)		Unsuitable NS / (%)		No.of Samples (5 Yrs.)
5.	**Beed 10/67 (126 Samples)**	Ambejogai	6	**30**	12	**60**	2	**10**					20
		Ashti	1	**4**	17	**71**	6	**25**					24
		Beed			13	**81**	3	**19**					16
		Dharur			5	**71**	2	**29**					7
		Gewrai	1	**4**	13	**57**	9	**39**					23
		Kej	0	**0**	3	**75**	1	**25**					4
		Majalgaon	4	**44**	5	**56**							9
		Patoda	1	**8**	10	**77**	2	**15**					13
		Shirur Kasar			2	**40**	1	**20**	2	**40**			5
		Wadwani			2	**40**	2	**40**	1	**20**			5
6.	**Bhandara 7/68 (154 Samples)**	Bhandara	3	**11**	15	**56**	9	**33**					27
		Lakhandur			6	**46**	7	**54**					13
		Lakhani			5	**100**							5
		Mohadi	2	**8**	13	**52**	10	**40**					25
		Pauni	1	**4**	16	**67**	5	**21**	2	**8**			24
		Sakoli	6	**22**	17	**63**	4	**15**					27
		Tumsar			24	**73**	8	**24**	1	**3**			33
7.	**Buldhana 13/139 (294 Samples)**	Buldhana	1	**3**	13	**42**	17						31
		Chikhali	3	**16**	13	**68**	3	**16**					19
		Deolgaon Raja	1	**8**	4	**33**	7	**58**					12
		Jalgaon jamod	1	**6**	11	**69**	4	**25**					16
		Khamgaon			17	**45**	21	**55**					38
		Lonar			10	**56**	8	**44**					18
		Malkapur			5	**36**	6	**43**	2	**14**	1	**7**	14

** NS= Number of Samples*

Table 6.6 (Contd..) : Classification of Ground Water Quality of Talukas as Excellent, Good, Poor, Very Poor and Unsuitable for Drinking

Sr.	District Taluka /Villages	Taluka Name	Excellent NS/ (%)		Good Water NS / (%)		Poor Water NS / (%)		Very Poor NS / (%)		Unsuitable NS / (%)		No.of Samples (5 Yrs.)
7.	**Buldhana Contd.. 13/139 (294 Samples)**	Mehkar			13	**59**	9	**41**					22
		Motala	1	**4**	14	**54**	11	**42**					26
		Nandura	1	**3**	23	**64**	12	**33**					36
		Sangrampur	2	**10**	16	**76**	3	**14**					21
		Shegaon			12	**46**	13	**50**	1	**4**			26
		Sindkhed Raja	3	**20**	9	**60**			3	**20**			15
8.	**Chandrapur 15/113 (186 Samples)**	Ballarpur			5	**83**			1	**17**			6
		Bhadrawati	1	**13**	5	**63**	2	**25**					8
		Brahmapuri			9	**56**	7	**44**					16
		Chandrapur	4	**11**	18	**50**	14	**39**					36
		Chimur	1	**4**	18	**69**	6	**23**	1	**4**			26
		Gondipipri			5	**71**	2	**29**					7
		Jiwati			2	**100**							2
		Korapna			2	**100**							2
		Mul			4	**29**	10	**71**					14
		Nagbhid			3	**21**	11	**79**					14
		Pombhurna			2	**100**							2
		Rajura			13	**65**	7	**35**					20
		Sawali			1	**33**	2	**67**					3
		Sindewahi	3	**16**	6	**32**	10	**53**					19
		Waroda			6	**55**	5	**45**					11

** NS= Number of Samples*

Table 6.6 (Contd..) : Classification of Ground Water Quality of Talukas as Excellent, Good, Poor, Very Poor and Unsuitable for Drinking

Sr.	District Taluka /Villages	Taluka Name	Excellent NS/ (%)		Good Water NS / (%)		Poor Water NS / (%)		Very Poor NS / (%)		Unsuitable NS / (%)		No.of Samples (5 Yrs.)
9.	**Dhule 4/100 (253 Samples)**	Dhule	14	**19**	48	**64**	10	**13**	3	**4**			75
		Sakri	16	**33**	30	**63**	2	**4**					48
		Shirpur	7	**12**	47	**81**	4	**7**					58
		Sindkheda	3	**4**	49	**68**	19	**26**	1	**1**			72
10.	**Gadchiroli 12/117 (182 Samples)**	Aheri	3	**9**	18	**56**	11	**34**					32
		Armori	2	**14**	11	**79**	1	**7**					14
		Bhamragarh			8	**100**							8
		Chamorshi			9	**64**	5	**36**					14
		Desaiganj-Wadsa	3	**27**	6	**55**	2	**18**					11
		Dhanora	7	**41**	9	**53**	1	**6**					17
		Etapalli	1	**6**	14	**88**	1	**6**					16
		Gadchiroli	11	**39**	14	**50**	3	**11**					28
		Korchi	4	**44**	4	**44**			1	**11**			9
		Kurkheda	7	**44**	9	**56**							16
		Mulchera	1	**10**	3	**30**	4	**40**	2	**20**			10
		Sironcha	1	**14**	3	**43**	3	**43**					7
11.	**Gondia (8/68) (121 Samples)**	Amgaon	6	**35**	8	**47**	3	**18**					17
		Arjuni Moregaon	8	**40**	7	**35**	5	**25**					20
		Deori	4	**25**	12	**75**							16
		Gondia	15	**52**	11	**38**	3	**10**					29
		Goregaon			3	**100**							3
		Sadal Arjuni	2	**25**	6	**75**							8
		Salekasa	3	**38**	4	**50**	1	**13**					8
		Tiroda			14	**70**	5	**25**	1	**5**			20

** NS= Number of Samples*

Table 6.6 (Contd..) : Classification of Ground Water Quality of Talukas as Excellent, Good, Poor, Very Poor and Unsuitable for Drinking

Sr.	District Taluka /Villages	Taluka Name	Excellent NS/ (%)		Good Water NS / (%)		Poor Water NS / (%)		Very Poor NS / (%)		Unsuitable NS / (%)		No.of Samples (5 Yrs.)
12.	**Hingoli 5/31 (66 Samples)**	Aundha (Nag)			7	**70**	3	**30**					10
		Basmatnagar	2	**11**	15	**79**	2	**11**					19
		Hingoli	1	**4**	17	**71**	6	**25**					24
		Kalmnuri			6	**86**	1	**14**					7
		Sengaon	1	**17**	5	**83**							6
13.	**Jalgaon 15/120 (223 Samples)**	Amalner			6	**38**	6	**38**	1	**6**	3	**19**	16
		Bhadgaon			8	**80**			2	**20**			10
		Bhusawal			7	**100**							7
		Bodwad			2	**100**							2
		Chalisgaon			15	**94**	1	**6**					16
		Chopda	2	**6**	17	**55**	12	**39**					31
		Dharangaon			2	**40**	2	**40**	1	**20**			5
		Erandol	2	**8**	19	**73**	4	**15**	1	**4**			26
		Jalgaon			21	**78**	4	**15**	2	**7**			27
		Jamner	1	**9**	6	**55**	4	**36**					11
		Mukainagar					1	**100**					1
		Pachora			5	**71**	2	**29**					7
		Parola			14	**74**	5	**26**					19
		Raver	2	**9**	20	**87**	1	**4**					23
		Yaval	5	**23**	16	**73**	1	**5**					22

** NS= Number of Samples*

Table 6.6 (Contd..) : Classification of Ground Water Quality of Talukas as Excellent, Good, Poor, Very Poor and Unsuitable for Drinking

Sr.	District Taluka /Villages	Taluka Name	Excellent NS/ (%)		Good Water NS / (%)		Poor Water NS / (%)		Very Poor NS / (%)		Unsuitable NS / (%)		No.of Samples (5 Yrs.)
14.	**Jalna 8/116 (235 Samples)**	Ambad			12	**32**	25	**68**					37
		Badnapur	1	**5**	12	**60**	7	**35**					20
		Bhokardan			39	**72**	12	**22**	3	**6**			54
		Ghansawangi	2	**7**	21	**72**	6	**21**					29
		Jafrabad	2	**8**	13	**54**	5	**21**	1	**4**	3	**13**	24
		Jalna			17	**55**	12	**39**	1	**3**	1	**3**	31
		Mantha	2	**12**	6	**35**	8	**47**			1	**6**	17
		Parthur	1	**4**	12	**52**	10	**43**					23
15.	**Kolhapur 12 /138 (311 Samples)**	Ajra	9	**43**	12	**57**							21
		Bhudargad	11	**41**	16	**59**							27
		Chandgad	26	**74**	9	**26**							35
		Gadinglaj	7	**25**	18	**64**	3	**11**					28
		Gaganbawada	12	**100**									12
		Hatkanangale			24	**69**	11	**31**					35
		Kagal	4	**16**	19	**76**	2	**8**					25
		Kolhapur	18	**39**	26	**57**	2	**4**					46
		Panhala	11	**61**	7	**39**							18
		Radhanagari	19	**90**	2	**10**							21
		Shahuwadi	10	**53**	9	**47**							19
		Shirol	1	**4**	6	**25**	17	**71**					24

** NS= Number of Samples*

Table 6.6 (Contd..) : Classification of Ground Water Quality of Talukas as Excellent, Good, Poor, Very Poor and Unsuitable for Drinking

Sr.	District Taluka /Villages	Taluka Name	Excellent NS/ (%)		Good Water NS / (%)		Poor Water NS / (%)		Very Poor NS / (%)		Unsuitable NS / (%)		No.of Samples (5 Yrs.)
16.	**Latur 12 /95 (209 Samples)**	Ahmadpur	11	**35**	16	**52**	4	**13**					31
		Ausa	7	**23**	20	**65**	4	**13**					31
		Chakur	5	**21**	16	**67**	3	**13**					24
		Deoni	2	**33**	3	**50**	1	**17**					6
		Jalkot	1	**25**	3	**75**							4
		Latur	12	**32**	22	**58**	4	**11**					38
		Nilanga	9	**26**	24	**69**	2	**6**					35
		Renapur	4	**27**	10	**67**	1	**7**					15
		Shirur Anantpal	2	**33**	4	**67**							6
		Udgir	4	**21**	13	**68**	2	**11**					19
17.	**Mumbai 9 /8 (15 Samples)**	Bombay (Church Gate)			1	**100**							1
		Borivali	1	**50**	1	**50**							2
		Colaba (Dandi)			3	**100**							3
		Deulwadi			1	**100**							1
		Goregaon East	2	**67**	1	**33**							3
		Kurla	1	**100**									1
		Mahim	3	**100**									3
		Mahroli(Chembur)			1	**100**							1

** NS= Number of Samples*

Table 6.6 (Contd..) : Classification of Ground Water Quality of Talukas as Excellent, Good, Poor, Very Poor and Unsuitable for Drinking

Sr.	District Taluka /Villages	Taluka Name	Excellent NS/ (%)		Good Water NS / (%)		Poor Water NS / (%)		Very Poor NS / (%)		Unsuitable NS / (%)		No.of Samples (5 Yrs.)
18.	**Nagpur 14/124 (264 Samples)**	Bhivapur	1	**9**	4	**36**	6	**55**					11
		Hingna	2	**11**	6	**32**	11	**58**					19
		Kalmeshwar			5	**29**	8	**47**	2	**12**	2	**12**	17
		Kamptee			11	**65**	6	**35**					17
		Katol			8	**73**	3	**27**					11
		Kuhi	2	**22**	2	**22**	5	**56**					9
		Mouda			11	**79**	3	**21**					14
		Nagpur	5	**10**	36	**69**	10	**19**	1	**2**			52
		Nagpur (Rural)			3	**100**							3
		Narkhed			18	**58**	13	**42**					31
		Parseoni	2	**8**	22	**85**	2	**8**					26
		Ramtek			5	**45**	6	**55**					11
		Saoner	2	**6**	21	**60**	11	**31**	1	**3**			35
		Umred	1	**13**	6	**75**	1	**13**					8
19.	**Nanded 16/106 (153 Samples)**	Ardhapur			3	**100**							3
		Bhokar			6	**67**	3	**33**					9
		Biloli	1	**50**	1	**50**							2
		Deglur			12	**86**	2	**14**					14
		Dharmabad			5	**100**							5
		Hadgaon			16	**94**	1	**6**					17
		Himayat Nagar			4	**80**	1	**20**					5
		Kandhar	1	**8**	10	**83**	1	**8**					12
		Kinwat	2	**13**	14	**88**							16
		Loha			5	**71**	2	**29**					7
		Mahur	1	**33**	2	**67**							3

Table 6.6 (Contd..) : Classification of Ground Water Quality of Talukas as Excellent, Good, Poor, Very Poor and Unsuitable for Drinking

Sr.	District Taluka /Villages	Taluka Name	Excellent NS/ (%)		Good Water NS / (%)		Poor Water NS / (%)		Very Poor NS / (%)		Unsuitable NS / (%)		No.of Samples (5 Yrs.)
19.	**Nanded Contd.. 16/106 (153 Samples)**	Mudkhed			4	**100**							4
		Mukhed	2	**10**	16	**76**	3	**14**					21
		Naigaon			5	**71**	2	**29**					7
		Nanded##			13	**72**	5	**28**					18
		Umri	2	**20**	7	**70**	1	**10**					10
		Mudkhed			4	**100**							4
20.	**Nandurbar 6/63 (186 Samples)**	Akkalkuva	10	**42**	13	**54**	1	**4**					24
		Dhadgaon	13	**76**	4	**24**							17
		Nandurbar	11	**22**	34	**67**	5	**10**	1	**2**			51
		Navapur	15	**33**	30	**67**							45
		Shahada	15	**47**	14	**44**	3	**9**					32
		Taloda	7	**41**	10	**59**							17
21.	**Nasik 16/174 (434 Samples)**	Baglan	10	**21**	31	**65**	7	**15**					48
		Chandvad	3	**20**	12	**80**							15
		Deola			2	**33**	4	**67**					6
		Dindori	12	**38**	18	**56**	2	**6**					32
		Igatpuri	21	**54**	18	**46**							39
		Kalwan	4	**14**	21	**75**	3	**11**					28
		Malegaon	4	**11**	20	**53**	14	**37**					38
		Nandgaon	4	**14**	16	**55**	8	**28**	1	**3**			29
		Nasik	21	**30**	42	**61**	6	**9**					69
		Niphad	4	**10**	23	**56**	12	**29**	2	**5**			41
		Peinth	10	**71**	4	**29**							14

** NS= Number of Samples*

Table 6.6 (Contd..) : Classification of Ground Water Quality of Talukas as Excellent, Good, Poor, Very Poor and Unsuitable for Drinking

Sr.	District Taluka /Villages	Taluka Name	Excellent NS/ (%)		Good Water NS / (%)		Poor Water NS / (%)		Very Poor NS / (%)		Unsuitable NS / (%)		No.of Samples (5 Yrs.)
21.	**Nasik Contd.. 16/174 (434 Samples)**	Satana	1	**17**	3	**50**			2	**33**			6
		Sinnar	3	**8**	25	**63**	10	**25**	2	**5**			40
		Surgana	3	**50**	3	**50**							6
		Trimbakeshwar	5	**83**	1	**17**							6
		Yeola	6	**35**	7	**41**	4	**24**					17
22.	**Osmanabad 7/ 76 (142 Samples)**	Bhum	2	**17**	10	**83**							12
		Kalambh	7	**24**	18	**62**	2	**7**	2	**7**			29
		Lohara			3	**100**							3
		Omerga	2	**11**	15	**79**	1	**5**			1	**5**	19
		Osmanabad##	2	**5**	27	**71**	9	**24**					38
		Paranda			9	**90**	1	**10**					10
		Tuljapur	8	**26**	20	**65**	3	**10**					31
23.	**Parbhani 9/68 (150 Samples)**	Gangakhed	1	**4**	22	**92**	1	**4**					24
		Jintur	2	**9**	12	**52**	9	**39**					23
		Manwat			4	**67**	2	**33**					6
		Palam			12	**86**	2	**14**					14
		Parbhani##			27	**77**	8	**23**					35
		Pathari	1	**6**	12	**67**	5	**28**					18
		Purna			8	**100**							8
		Selu	1	**6**	14	**78**	3	**17**					18
		Sonpeth	1	**25**	2	**50**	1	**25**					4

** NS= Number of Samples*

Table 6.6 (Contd..) : Classification of Ground Water Quality of Talukas as Excellent, Good, Poor, Very Poor and Unsuitable for Drinking

Sr.	District Taluka /Villages	Taluka Name	Excellent NS/ (%)		Good Water NS / (%)		Poor Water NS / (%)		Very Poor NS / (%)		Unsuitable NS / (%)		No.of Samples (5 Yrs.)
24.	**Pune 14/148 (371 Samples)**	Ambegaon	3	**16**	10	**53**	6	**32**					19
		Baramati	1	**3**	18	**49**	13	**35**			5	**14**	37
		Bhor			3	**100**							3
		Daund	2	**5**	21	**57**	8	**22**	6	**16**			37
		Indapur			25	**60**	15	**36**	1	**2**	1	**2**	42
		Junnar	7	**18**	28	**70**	5	**13**					40
		Mawal	10	**77**	3	**23**							13
		Mulshi	15	**94**	1	**6**							16
		Pune (Haveli)	11	**21**	28	**54**	12	**23**	1	**2**			52
		Purandar	8	**20**	22	**54**	11	**27**					41
		RajgurNgr(Khed)	7	**29**	12	**50**	5	**21**					24
		Shirur	4	**10**	22	**54**	13	**32**	2	**5**			41
		Wadgaon(Maval)	2	**100**									2
		Wehle	4	**100**									4
25.	**Raigad 16/113 (244 Samples)**	Alibag	13	**46**	15	**54**							28
		Karjat	18	**69**	7	**27**	1	**4**					26
		Khalapur	11	**79**	3	**21**							14
		Mahad	19	**83**	2	**9**			1	**4**	1	**4**	23
		Mangaon	13	**93**	1	**7**							14
		Mhasala	18	**90**	2	**10**							20
		Murud	9	**69**	4	**31**							13
		Panvel	12	**55**	9	**41**	1	**5**					22
		Pen	18	**67**	7	**26**	1	**4**	1	**4**			27

** NS= Number of Samples*

Table 6.6 (Contd..) : Classification of Ground Water Quality of Talukas as Excellent, Good, Poor, Very Poor and Unsuitable for Drinking

Sr.	District Taluka /Villages	Taluka Name	Excellent NS/ (%)		Good Water NS / (%)		Poor Water NS / (%)		Very Poor NS / (%)		Unsuitable NS / (%)		No.of Samples (5 Yrs.)
25.	**Raigad 16/113 (244 Samples)**	Poladpur	5	**100**									5
		Raigad	4	**57**	3	**43**							7
		Roha	22	**100**									22
		Shrivardhan	5	**56**	4	**44**							9
		Sudhagad	4	**80**	1	**20**							5
		Tala	2	**50**	2	**50**							4
		Uran	5	**100**									5
26.	**Ratnagiri 9/ 133 (368 Samples)**	Chipalun	47	**98**	1	**2**							48
		Dapoli	40	**95**	2	**5**							42
		Guhagar	42	**100**									42
		Kehd	64	**97**	1	**2**			1	**2**			66
		Lanja	7	**100**									7
		Mandangarh	18	**100**									18
		Rajapur	46	**96**			2	**4**					48
		Ratnagiri	60	**95**	2	**3**	1	**2**					63
		Sangameshwar	34	**100**									34
27.	**Sangli 11/148 (241 Samples)**	Atpadi	1	**3**	25	**78**	6	**19**					32
		Islampur			1	**50**	1	**50**					2
		Jath			30	**57**	21	**40**			2	**4**	53
		Kadegaon	4	**44**	5	**56**							9
		Kavathemahankal	2	**6**	19	**59**	9	**28**			2	**6**	32
		Khanapur	5	**17**	21	**72**	3	**10**					29
		Miraj	3	**11**	10	**37**	13	**48**	1	**4**			27
		Palus			4	**67**	2	**33**					6

** NS= Number of Samples*

Table 6.6 (Contd..) : Classification of Ground Water Quality of Talukas as Excellent, Good, Poor, Very Poor and Unsuitable for Drinking

Sr.	District Taluka /Villages	Taluka Name	Excellent NS/ (%)		Good Water NS / (%)		Poor Water NS / (%)		Very Poor NS / (%)		Unsuitable NS / (%)		No.of Samples (5 Yrs.)
27.	**Sangli Cond.. 11/148 (241 Samples)**	Shirala	3	**27**	7	**64**	1	**9**					11
		South Solapur			1	**33**	2	**67**					3
		Tasgaon	2	**17**	4	**33**	5	**42**	1	**8**			12
		Walwa	11	**44**	12	**48**	2	**8**					25
28.	**Satara 12/146 (246 Samples)**	Javali	2	**50**	2	**50**							4
		Karad	4	**17**	18	**75**	2	**8**					24
		Khandala	12	**46**	14	**54**							26
		Khatav	10	**40**	13	**52**	2	**8**					25
		Koregaon	2	**8**	18	**69**	6	**23**					26
		Mahabaleswar	8	**89**	1	**11**							9
		Man(dahivadi)	2	**8**	17	**65**	7	**27**					26
		Medha	5	**100**									5
		Patan	9	**32**	13	**46**	3	**11**	3	**11**			28
		Phaltan	2	**9**	12	**52**	9	**39**					23
		Satara	18	**47**	17	**45**	3	**8**					38
		Wai	1	**8**	9	**75**	2	**17**					12
29.	**Sindhudurg 8/105 (242 Samples)**	Devgad	26	**100**									26
		Dodamarg	20	**100**									20
		Kankavli	34	**89**	4	**11**							38
		Kudal	35	**81**	6	**14**	2	**5**					43
		Malvan	35	**88**	5	**13**							40
		Sawantwadi	29	**100**									29
		Vaibhavwadi	13	**72**	4	**22**	1	**6**					18
		Vengurla	22	**79**	5	**18**	1	**4**					28

** NS= Number of Samples*

Table 6.6 (Contd..) : Classification of Ground Water Quality of Talukas as Excellent, Good, Poor, Very Poor and Unsuitable for Drinking

Sr.	District Taluka /Villages	Taluka Name	Excellent NS/ (%)		Good Water NS / (%)		Poor Water NS / (%)		Very Poor NS / (%)		Unsuitable NS / (%)		No.of Samples (5 Yrs.)
30.	**Solapur 12/48 (60 Samples)**	Akkalkot			5	**71**	1	**14**	1	**14**			7
		Barshi	2	**17**	4	**33**	6	**50**					12
		Karmala			3	**60**	2	**40**					5
		Madha			2	**33**	4	**67**					6
		Malshiras			3	**38**	5	**63**					8
		Mangalwedha			3	**60**	2	**40**					5
		Mohol			5	**56**	4	**44**					9
		N.Solapur			4	**50**	4	**50**					8
31.	**Thane 15/137 (439 Samples)**	Ambernath	6	**50**	5	**42**	1	**8**					12
		Bhivandi	24	**59**	16	**39**	1	**2**					41
		Dahanu	27	**79**	4	**12**	3	**9**					34
		Jawhar	12	**71**	5	**29**							17
		Kalyan	11	**73**	4	**27**							15
		Mokhada	16	**80**	4	**20**							20
		Murbad	21	**64**	10	**30**	2	**6**					33
		Murud	6	**100**									6
		Palghar	28	**54**	23	`			1	**2**			52
		Shahapur	24	**75**	8	**25**							32
		Talasari	22	**88**	3	**12**							25
		Thane	24	**48**	24	**48**	2	**4**					50
		Ulhasnagar	3	**27**	6	**55**	2	**18**					11
		Vasai	22	**47**	19	**40**	6	**13**					47
		Wada	29	**66**	15	**34**							44

** NS= Number of Samples*

Table 6.6 (Contd..) : Classification of Ground Water Quality of Talukas as Excellent, Good, Poor, Very Poor and Unsuitable for Drinking

Sr.	District Taluka /Villages	Taluka Name	Excellent NS/ (%)		Good Water NS / (%)		Poor Water NS / (%)		Very Poor NS / (%)		Unsuitable NS / (%)		No.of Samples (5 Yrs.)
32.	**Wardha 8/128 (293 Samples)**	Arvi			17	**74**	4	**17**	1	**4**	1	**4**	23
		Ashti			11	**55**	8	**40**	1	**5**			20
		Deoli			25	**64**	11	**28**	2	**5**	1	**3**	39
		Hinganghat	1	**2**	18	**41**	19	**43**	6	**14**			44
		Karanja	2	**14**	7	**50**	5	**36**					14
		Samudrapur	2	**4**	26	**47**	26	**47**	1	**2**			55
		Seloo			27	**46**	26	**44**	2	**3**	4	**7**	59
		Wardha	2	**5**	22	**56**	11	**28**			4	**10**	39
33.	**Washim 6/67 (260 Samples)**	Karanja	2	**5**	31	**82**	5	**13**					38
		Mangarulpir			20	**95**	1	**5**					21
		Malegaon			23	**66**	12	**34**					35
		Manora	1	**4**	23	**85**	3	**11**					27
		Risod	3	**4**	53	**70**	20	**26**					76
		Washim	6	**10**	54	**86**	3	**5**					63
34.	**Yavatmal 16/180 (417 Samples)**	Arni	1	**4**	20	**74**	6	**22**					27
		Babhulgaon			24	**80**	6	**20**					30
		Darwha			29	**81**	7	**19**					36
		Digras	1	**3**	18	**55**	14	**42**					33
		Ghatanji	1	**3**	27	**79**	6	**18**					34
		Kalamb			24	**80**	6	**20**					30
		Kelapur	1	**3**	27	**87**	3	**10**					31

** NS= Number of Samples*

Table 6.6 (Contd..) : Classification of Ground Water Quality of Talukas as Excellent, Good, Poor, Very Poor and Unsuitable for Drinking

Sr.	District Taluka /Villages	Taluka Name	Excellent NS/ (%)		Good Water NS / (%)		Poor Water NS / (%)		Very Poor NS / (%)		Unsuitable NS / (%)		No.of Samples (5 Yrs.)
34.	**Yavatmal Contd.. 16/180 (417 Samples)**	Mahagaon	1	**6**	15	**94**							16
		Maregaon	1	**13**	6	**75**	1	**13**					8
		Ner	2	**7**	22	**73**	6	**20**					30
		Pusad	2	**17**	10	**83**							12
		Ralegaon			22	**71**	9	**29**					31
		Umarkhed	1	**4**	18	**78**	4	**17**					23
		Wani			16	**55**	13	**45**					29
		Yavatmal	2	**6**	29	**88**	2	**6**					33
		Zari Jamni	1	**7**	10	**71**	3	**21**					14

** NS= Number of Samples*

Districts with very poor quality of ground water (more than 10% of the Talukas) is presented in **Table 6.7**

Table 6.7: Districts with Very Poor Quality of Ground Water (More than 10% of the Talukas)

District	No of Talukas with Very Poor Water Quality	No of Talukas with Unsuitable Ground Water
Ahmednagar	5	1
Akola	1	-
Beed	2	-
Buldhana	2	-
Chandrapur	1	-
Gadchiroli	2	-
Jalgaon	2	1
Jalna	--	1
Nagpur	1	1
Nasik	1	-
Pune	1	1
Satara	1	-
Solapur	1	-
Wardha	1	1

Technologies for water quality improvement are given in **Appendices I toVI.**

6.4 District Wise Ground Water Status of Maharashtra (CGWB and GSDA)

Ground water is one of the sources for drinking, domestic and irrigation purposes. In the present study, ground water quality was evaluated based on five years monitored data by different agencies. Based on the selected inorganic and physical parameters, ground water quality is estimated. District wise ground water quality status of Maharashtra with respect to BIS standards and water quality index is described in subsequent sections.

1) Ahmednagar District

Ahmednagar district is the largest district of Maharashtra state. There are hilly off-shoots of Sahayadris in the western part of the district. In the northern part of the district, plains are found along the banks of rivers Godavari and Pravara as well as in the southern part, along the rivers Bhima -Mula, Ghod, Dhora and Sina. Physiologically, the Ahmednagar district is divided into three divisions: (a) Western Hilly Region,(b) Central Plateau Region and (c) the region of northern and southern plains.

General Information:
Geographical Area: 17412 sq. km
Taluka-14: Ahmednagar, Akole, Jamkhed, Karjat, Kopargaon, Newasa, Parner, Rahata, Rahuri, Sangamner, Shevgaon, Shrigonda, Srirampur and Pathardi
Villages: 1581, Population: 40,88,000

Soil Type:

The soil type in the district can generally be classified into three groups: 1) black or *kali*, 2) red or *tambat*, and 3) laterite and the gray of inferior quality locally known as *barad* including white or *pandhari*. Of these, *barad* soils are very poor in fertility.

Annual Rainfall: 566 mm

Geology: Recent: Alluvium, Upper Cretaceous-Lower Eocene: Deccan Trap Basalt

Major Ground Water Problems and Issues:

In most of the parts of this district, water is generally good for both domestic and irrigation purposes. Generally the ground water levels are up to eight to nine meters during the summer.

Ground Water Quality with Respect to BIS Standard and Water Quality Index

In Ahmadnagar, 167 villages in 14 talukas were monitored. The descriptive statistics of ground water quality carried out are given in **Annexure IX. Table 6.8 and Annexure X(1)** gives the water quality index of ground water for five years in Ahmednagar district.

Ahmadnagar, Akole, Karjat, Shrigonda and Shevgaon: From the descriptive statistics of these talukas, it was observed that in most of the villages of these talukas, nitrate levels were very high and also the concentration of TDS and hardness. The percentage of samples exceeding the permissible limits ranged from 15-37% for nitrate, 21-35% for total hardness, and 5-14% for TDS during the five years' time period. The water quality indices calculated for the villages of these talukas showed that the average five year ground water quality of these locations were poor, except Akole. The Ahmednagar taluka showed trend of a poor water quality continuously for five years.

In ***Ahmednagar taluka***, water quality of Manjur village remained unsuitable over the years, Jakhangaon village showed slight improvement in water quality during 2010. The water quality of Walki and Burudgaon village worsened in 2011 leading it to unsuitable. In ***Akole taluka,*** Rajur, Parakadpur and Vadegaon Madhe villages are having poor water quality. Kolwadi, Rassin, Mahi jalgaon villages in ***Karjat Taluka*** also showed poor water quality.

Dahigaon, Ghotan, Jeur, Hingangaon villages of ***Shevgaon taluka*** indicate poor water quality, while Khanapur and Antrawali shows good water quality. In ***Shrigonda taluka,*** village Chikhale and Banpimpri show continuously degraded water quality, whereas Kokangaon indicated good water quality.

The probable sources of contamination of ground water could be over-application nitrate based fertilizers in farms, agricultural run-off, leaking storage tanks, etc. and contamination by micro-organisms from domestic activity etc. in the vicinity of ground water resources.

Sangamner and Shrirampur: Descriptive statistics showed that samples from Shrirampur did not exceed the permissible limits, but in Sangamner Taluka there was 30-32% exceedance for Total Hardness and Magnesium and 23% for TDS. Water quality at Ambikhalsa, Chandanapuri and Sangamner villages were all reported good to excellent in ***Sangamner taluka***. Ghulewadi, Chikhali. Hangewadi and Nimgaonjali villages regularly showed poor water. At ***Srirampur taluka,*** villages viz. Bote, Srirampur, Undirgaon, Eklahare, Rajankhol showed good WQI, whereas, Rampur, Bableshwar, Belapur kh showed very poor water quality. The WQI was deteriorating at Chitali, Loni kh for 2011. Five years WQI clearly indicated that over the year's water quality varied between good to poor. This may be due to eutrophication caused by human activities and agricultural runoff.

Jamkhed: For Jamkhed taluka water quality of villages Arangaon, Nanaj and Jamkhed were varied between from good to poor.

Kopargaon: Exceedance of TH- 24%, Mg^{2+}-30%, TDS -12% and nitrate 18% were reported for this taluka. Kolpewadi and Talegaon Male village showed good WQI, whereas, Apegaon, Chas Takali and Shinganapur villages had good to poor WQI. Dhamori, Shahajapur, Derde korhale and Puntamba villages showed poor water quality in 2011. Changes in water quality may be due to mineral deposits in the taluka.

Nevasa: Statistical analysis showed that TH was exceeded 38% of the time. Magnesium and nitrate for 23% of the time. Water quality of Vadala Bhairoba, Belpandhari Watapur, Galnimb and Kukana were reported to be poor to unsuitable. Whereas, Newasa kh, and Suregaon dahigaon showed good to excellent water quality. Water qualities were uneven at Bambori and Babulwedhe Villages. Five years WQI indicates poor water quality for all the years. The most common source of nitrate in the soil could be e use of nitrate containing fertilizers whereas, the hardness in water is mostly due to Ca^{2+} and Mg^{2+} naturally occurring from weathering of limestone, sedimentary rock and calcium bearing minerals.

Parner, Rahata, Rahuri and Pathardi: In ***Parner taluka***, Supe, Chambut and Devibhoire were reported to have unsuitable WQI, whereas, WQI at Deswade and Tas were excellent. WQI in Village ***Rahata*** was consistently reported bad, because 100% exceedance was observed for hardness, magnesium and nitrate. Maximum concentration for TH - 1058 mg/l, magnesium -233 mg/l and nitrate 205 mg/l was observed. WQI in Rahuri bk, and Wambori

village were also reported unsuitable, whereas, Warshinde, Devlali, Malharwadi water quality were uneven. At Kendal kh, Tambhere and Warshinde villages WQI were reported to be good in 2011. Kasar Pimpalgaon village of ***Pathardi taluka*** showed improvement in water quality from poor to good.

WQI of 5 years for ***Parner taluka*** showed that it improved to good. As against this, at Rahuri, no improvement in water quality was observed for 5 years. Water is not potable and proper treatment is required. Water quality for ***Rahuri*** was excellent in 2007 and poor in 2008 to 2011. Exceedance was observed to be 30-40% for TDS and TH, 21% for nitrate and 19% for sulphate. The sources for these ions could be natural weathering of limestone and calcium bearing minerals, over application of fertilizers. In ***Pathardi*** taluka, average WQI for 2 years was reported to be good.

Table 6.8: Water Quality Index of Groundwater of Ahmednagar District

Talukas	2007		2008		2009		2010		2011		5 Yrs. WQI	
	WQI	Catg.	WQI	Catg.	WQI	Catg.	WQI	Catg.	WQI	Catg.	WQI	Catg.
Ahmednagar	164	PW	142	PW	212	VPW	119	PW	124	PW	**130**	**PW**
Akole	135	PW	146	PW	143	PW	--	--	64	GW	**96**	**GW**
Jamkhed	64	GW	104	PW	100	PW	106	PW	76	GW	**85**	**GW**
Karjat	167	PW	136	PW	196	PW	120	PW	79	GW	**115**	**PW**
Kopargaon	117	PW	60	GW	63	GW	120	PW	128	PW	**115**	**PW**
Nevasa	142	PW	97	GW	117	PW	166	PW	116	PW	**129**	**PW**
Parner	328	UNS	84	GW	116	PW	79	GW	94	GW	**96**	**GW**
Rahata	210	VPW	253	VPW	194	PW	--	--	--	--	**195**	**PW**
Rahuri	49	EXL	180	PW	170	PW	143	PW	118	PW	**126**	**PW**
Sangamner	60	GW	87	GW	70	GW	145	PW	123	PW	**120**	**PW**
Shevgaon	207	VPW	139	PW	166	PW	86	GW	112	PW	**125**	**PW**
Shrigonda	147	PW	173	PW	143	PW	117	PW	99	GW	**125**	**PW**
Srirampur	54	GW	61	GW	61	GW	89	GW	104	PW	**90**	**GW**
Pathardi	--	--	--	--	--	--	113	PW	74	GW	**93**	**GW**

From the overall five years WQI of Ahmadnagar district, it was observed that talukas namely Akole, Jamkhed, Parner, Shrirampur and Pathardi were good; while others Ahmednagar, Karjat, Kopargaon, Nevasa, Rahata, Rahuri, Sangamner, Shevgaon and Shrigonda zwere reported to be poor. The cause of this is natural deposition of minerals, hardness in soil and excessive use of fertilizers, which deposit nitrates and sulphates. Proper precautionary measures are required to be taken to improve the water quality.

2) Akola District

Akola district is one of the eleven districts of Vidarbha region of Maharashtra. It is situated in the northern part of the State. The northern fringe of the district is hilly and forms part of Satpura Range. South of these hill ranges, covering almost entire north-central part constitutes the alluvial plain. Southern part of the district is characterized by hilly rugged terrain as a part of Deccan Plateau. Purna is the main river flowing through the district. Other important rivers are Man, Murna and Kate.

General Information:
Geographical Area: 5417 sq. km.
Taluka-7: Akola, Akot, Balapur, Barshi Takli, Murtijapur, Patur and Telhara
Villages: 1009 Population: 16,30,239
Soil Type:

Two types of soils have been observed in the district namely medium black soil occurring in plain central part of trap origin and deep black soil occurring in valley in northern part.

Annual Rainfall: 750 to 950 mm
Geology: Pliestocene-Recent: Alluvium,
Upper Cretaceous-Lower Eocene: Basalt (Deccan Traps)

Major Ground Water Problems and Issues:

The areas of Purna River covering Akot and Telhara talukas and northern parts of Akola and Balapur talukas are affected by inland salinity problem coupled with the problems of drought and water level decline. Wide range of problems were faced during exploratory drilling operations in hard rock areas of Akola district i.e., mainly encountering of caving formation (red bole) and loss of drilling medium.

Ground Water Quality with Respect to BIS Standard and Water Quality Index

In Akola district some of the villages under different talukas are monitored by two different agencies where Fe was monitored by GSDA along with other parameter. Whereas, CGWB data excluded Fe in ground water quality analysis. Due to this non uniformity in monitored data, WQI was estimated considering Fe weightage at respective monitoring stations. In Akola district 7 talukas were monitored for 104 villages. The descriptive statistics of ground water monitoring carried out in the villages are given in **Annexure IX. Table 6.9 and Annexure X(2)** gives the water quality indices of ground water for five years at Akola district.

Akola: The overall water quality of this taluka was poor, for all the five years. High concentrations of TDS, hardness, Mg^{2+}, nitrate and sulphate ions were observed. The observed concentrations exceeded the permissible limit in 16% of the samples for TDS, 12%

for pH, 25% for TH and Mg^{2+}, and 55% for nitrate. Water quality indices show that water quality varied from good to unsuitable for drinking. Kurankhed, Akola, Agar, Apatapa, Katyar, Palso Bk, Kati were reported to be very poor and unsuitable over the years. In some of the villages i.e. Ugwa, Dhamna, water quality further declined in 2010-11, whereas, some improvement was observed in Wanirambhapur, Kapileshwar and Palso Bk villages. Overall water quality of the taluka was poor. The excess level of inorganic pollutants could be due to over application of fertilizers in farms along with natural weathering of limestone and calcium bearing minerals.

Akot: As observed from the descriptive statistics of this taluka, TDS exceeded the permissible limit in 23-30%, TH in 37-45%, Mg^{2+} and nitrate in 40% of the samples. The WQI cal**c**ulated for the villages Patsula, Palsad, Devarda, Kinkhed, Hilaladad, Girijapur were reported unsuitable for all 5 years. In villages, viz. Deori, Mundgaon water quality varied over the years. Poptkhed, Shahanur showed excellent WQI over the period. The overall quality of ground water in the taluka was poor.

Balapur: In the initial years, poor water quality could be due to exceedance of hardness and nitrate. Nitrate was exceeded in 48% of samples. WQI evaluated for the Ural, Wadegaon, Gaigaon and Wyala villages varied from poor to good. The overall quality of ground water in this taluka was poor in 2007- 2009, while later it changed towards good.

Barshi Takli: As per the statistics of this taluka, the major pollutants of ground water were hardness, Mg^{2+} and nitrate as they exceeded the permissible limit 51, 14 and 17% of the time for nitrate, TH and Mg^{2+}. WQI evaluated for the villages, Dhaba, Hatola, Kajaleshwar, Kasarkhed, and Barshi Takli were reported to vary between good to excellent for these 5 years. Village Rahit is all together polluted. When iron was considered, poor WQI was reported for 2008-2009, but overall trend showed good water quality for the taluka.

Murtizapur: Maximum concentration of TDS was 8490 mg/l, TH -2010 mg/l, Mg^{2+}- 454.7 mg/l, NO_3^--682 mg/l, Cl^--2090 mg/l, and SO_4^{-2} -1149 mg/l in this taluka. Percent exceedances with respect to permissible limits of BIS were 57, 18 and 27% for nitrate, TH and Mg^{2+}. Murtizapur, Rasalpur, Dapura and Kinkhed villages of this taluka showed poor quality in 2007-2009, and when Fe was considered for WQI, its quality varied from poor to good. WQI of Kolsara village was all together unsuitable. Madhapuri village showed excellent water quality for 5 years.

Patur: In Parur taluka, 39 and 10% exceedance for nitrate and pH respectively was reported. WQI for the villages Khetri, Chikhalwal, Sawarkhed, Chani and Patur, both with

and without Fe showed good to excellent water quality. Water quality of this taluka for 5 years was observed to be good to excellent.

Telhara: It was observed that some of the parameters showed percent exceedance in the range of 20-50% during five years. In this taluka, monitoring of Telhara village was done for the year 2007 only without iron, which showed poor water quality. Water quality of villages Adsul, Wangargaon was unsuitable and Hingani, Wariwarkhed were excellent. Overall 5 years WQI varied between poor and good.

Table 6.9: Water Quality Index of Groundwater of Akola District

Talukas	2007		2008		2009		2010		2011		5 Yrs. WQI	
	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg
Akola (*)	142	PW	174	PW	122	PW	--	--	--	--	**146**	**PW**
Akola (+)	--	--	152	PW	129	PW	88	GW	96	GW	**119**	**PW**
Akot (*)	--	--	171	PW	175	PW	--	--	--	--	**--**	**--**
Akot (+)	182	--	172	--	115	PW	106	PW	118	PW	**136**	**PW**
Balapur (*)	177	PW	151	PW	166	PW	--	--	--	--	**--**	**--**
Balapur (+)	80	GW	158	PW	97	GW	76	GW	82	GW	**96**	**GW**
Barshi T. (*)	80	GW	84	GW	73	GW	--	--	--	--	**--**	**--**
Barshi Takli(+)	84	GW	152	PW	112	PW	75	GW	79	GW	**98**	**GW**
Murtizapur (*)	297	VPW	149	PW	--	--	--	--	--	--	**--**	**--**
Murtizapur (+)	179	PW	162	PW	133	PW	88	GW	91	GW	**125**	**PW**
Patur (*)	71	GW	62	GW	73	GW	--	--	--	--	**--**	**--**
Patur (+)	75	GW	83	GW	77	GW	56	GW	59	GW	**68**	**GW**
Telhara (*)	187	PW	--	--	--	--	--	--	--	--	**--**	**--**
Telhara (+)	125	PW	179	PW	92	GW	61	GW	89	GW	**102**	**PW**

** Wt_Fe : Without Fe, + W_Fe : With Fe; UNS- Un-suitable*

From five years ground water quality it was found that, Balapur and Patur Talukas had good water quality, whereas others are indicted as poor to very poor. The villages namely Wanirambhapur, Akolkhed, Popatkhed, Ruikhed, Wadegaon, Shahanpur, Kajaleshwar, Madhapuri, Hingani Bk, Chikhalwal, and Sawarkhed have excellent water quality. The other villages where the water quality was unsuitable for drinking are namely Agar, Katyar Patsul, Girijapur, Rahit, Kolsara, Wangargaon, Hilaldad, Panhagavan and Lohara.

3) Amravati District

Amravati District is one of the district of Vidarbha regions of Maharashtra. Wardha River forms the eastern boundary of the district. The district can be broadly divided into two physiographic unit's viz., Melghat Hill range made up of Gawilgarh hills, which are a part of the Satpura hill ranges and plain area of the Paynghat. The eastern part of the district falls under Godavari basin and consists of 20 watersheds, whereas the western and north western parts fall in Tapi basin and consists of 23 watersheds. It is situated in the northern part of the State. The major part of the district comes under Purna- Tapi and Wardha River basins. The important rivers flowing through the district are Tapi, Purna, Wardha, Pedhi and Chandrabhaga.

General Information:
Geographical Area: 12210 sq. km
No of Talukas -14: Achalpur, Amravati, Anjangaon Surji, Bhatkuli, Chandurbazar, Chandur Rly. Chikhaldara, Daryapur, Dhamangaon Railway, Dharni, Morshi, Nandgaon khandeshwar and Tiwasa, Warud
Villages: 1698; Population: 26,06,063
Soil Type:
Medium to deep black soil and deep brown to red soil (Regur)
Annual Rainfall : 700 to 1700 mm
Geology: Recent: Alluvium, Upper Cretaceous-Lower Eocene: Basalt (Deccan Traps) Turonian: Lameta Beds, Upper Carboniferous - Permian: Gondwana, Archean: Metamorphics (Gneisses /Granites)

Major Ground Water Problems and Issues:

Drought area has been observed in south-western parts of the district. Deeper water levels of more than 20m below ground level are also observed in small isolated areas in parts of Achalapur, Chandur Bazar talukas, in central part of the district and in part of Chandur Railway in southern part of the district. The areas of Purna River Alluvium covering southern parts of Anjangaon and Achalpur talukas and entire Daryapur taluka are affected by inland salinity problem.

Ground Water Quality with Respect to BIS Standard and Water Quality Index

In all 183 villages in Amravati ground water was monitored by two different agencies where Fe was monitored by GSDA along with other parameters. CGWB data excluded Fe in ground water analysis. Due to this non uniformity in monitored data, WQI was estimated considering Fe weightage at respective monitoring stations. The descriptive statistics of ground water monitoring carried out in the villages are given in **Annexure IX. Table 6.10 and Annexure X(3)** gives the water quality index of ground water for five years at Akola district.

Achalpur: The WQI evaluated for the villages Devgaon, Nimbhari and Pathrot without taking iron into consideration showed that the water quality was good in 2007 and poor in 2009. Chaushala village of this Taluka, showed poor water quality for 2009 and later years. Fe was considered for evaluating WQI for 2009 and later years.

Amravati: The water quality varied from good to poor for drinking, as overall water quality was poor from 2007 to 2009, which varies in 2010 and 2011. The unsuitable villages are Walgaon, Kher and Sindola, whereas, Pimpri, Arao and Chinkhedi showed good to excellent water quality. When iron was considered in WQI calculations, it was observed that villages including Nandgaonpeth, Mardi and Amla had poor water quality, which may due to exceedance of pH, TH, Mg^{2+} and nitrate as 13, 17, 10 and 58% respectively.

Anjangaon Surji: The water quality indices evaluated for Kolkaz village of Anjangaon taluka without taking iron into consideration showed that the water quality was excellent during all three years. WQI of Anjangaon Surji, Bhandaraj and Karla villages was good in 2007 and 2009. Samsherpur village had poor quality throughout the years. The overall exceedance of BIS standards was observed in the range of 20-30% of the samples for pH, TDS, Mg^{2+}, F^{-} and nitrate.

Bhatkuli : In this taluka percent exceedances are 20,18, 37,37, and 53% for pH, TDS, TH, Mg^{2+} and nitrate respectively. The WQI evaluated for Bhatkulijain, Ganori, Sayat, Nimbha and Khar Talegaon showed poor quality for 2007-2009. Slight improvement in water quality was observed for the villages Bhatkulijain and Sayat in 2010-11. Five year WQI was poor as parameters exceeded the standards.

Chandur Bazar: Exceedance of 53% for nitrate, 18% for pH and 10% for both TDS and TS was observed in this taluka. WQI evaluated for Chandur Bazar and Kurha villages showed good water quality without Fe. WQI calculated for later years for the villages Belora, Vishroli and Ghatladki varied from year to year, but cumulative effect showed good water quality.

Chandur Railway: WQI evaluated for Anjansingi, Chandur Railway and Shendurjana villages without taking iron into consideration showed that the overall water quality was poor during 2007-2009, but if iron was included for WQI calculation, then it showed reverse trend of good water quality for all the years. Shendurjana Khurd is the village of good water quality, whereas, Baggi and Borgaon showed varying quality. 63% exceedance for nitrate and 11% for TH and Mg was observed in this taluka. Irregular trend of WQI was observed for 5 years.

Chikhaldara : Ground water quality parameters were found to be less than desirable limit of BIS standards. WQI evaluated for Silona, Adhav, Chunkhadi, Semadoh, Ghular Gh. Barukheda and Hatru villages showed good to excellent water quality for all the five years.

Daryapur: In the Daryapur and Wadnergangai villages of this taluka the overall water quality was very poor in 2007-08 and unsuitable in 2009 to 2011. WQI of other villages of this taluka varied from good to poor but the overall water quality was poor during all five years. Percent exceedance observed were 15% for TDS, 30-40% for pH, TH and Mg^{2+} and 68% for nitrate. The maximum concentration was observed to be 4524 mg/l for TDS and 360 mg/l for nitrate. The overall trend for 5 years indicates that water quality was poor and unsuitable for drinking.

Dhamangaon Railway: Borgaon Dhan and Titamba villages showed that the water quality varied from excellent to poor. Shendurjana Kh. and Gavhanipani villages showed poor water. Titamba and Degaon villages showed excellent water quality. The overall water quality of the taluka was good in 2007 and 2009 while it was poor in 2008.

Dharni Taluka: The WQI for most of the villages' viz. Malkapur, Ranpisa, Dhulghat Rly, Gobarkhau, Chandpur, Cahuryakund, Rangubeli, Diya, Khongda, Sawalikheda, Tarubanda, Lawada and Harisal varied from excellent to good in all five years. However, Bhokarbardi and Wairgad villages showed slightly poor water quality. At all villages, parameters were found to be within desirable limit of BIS standard.

Morshi and Nandgaon Khandeshwar: Percent exceedance of 50 to 60% for nitrate and 10 to 15% for TH and Mg^{2+} was observed. In ***Morshi*** taluka, Pala, Rithpur villages showed poor to very poor water quality. In Khanapur village water quality improved to good quality in 2008. Nershipur, Chikhalsawgi and Dapori also showed good water quality. But in Umarkhed, Yerla and Morshi it deteriorated in later years. When Fe was included for calculating WQI, then at ***Nandgaon Khandeshwar***, Mahuli Chor and Pimpri Nipani varying water quality trends were observed, however most of the time it was poor water quality. If 5 years trend was calculated for WQI considering Fe than it showed Good water quality, and without Fe it showed Poor water quality for these talukas.

Tiwasa and Warud taluka: WQI for Teosa village in ***Tiwasa taluka*** showed poor quality without considering Fe, but if Fe was included for evaluating WQI, then overall pattern changed to good for five years. In ***Warud taluka,*** Jamgaon (via Khadka), Mahendri, Pandhari, Mangruli, Ekdara showed good to excellent water quality as compared to villages Tembhurkheda, Wadgaon (Fattepur),Warud where water was almost poor for all the years.

50-60% exceedance for nitrate was observed in both the talukas. If iron was taken for calculation then good water quality and if Fe was not included then poor water quality indices were noticed for these 5 years.

Table 6.10: Water Quality Index of Groundwater of Amravati District

Talukas	2007		2008		2009		2010		2011		5 Yrs. WQI	
	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg
Achalpur (*)	64	GW	127	PW	--	--	--	--	--	--	**96**	**GW**
Achalpur (+)	--	--	--	--	--	--	85	GW	111	PW	**109**	**PW**
Amravati (*)	--	--	219	VPW	207	VPW	--	--	--	--	**196**	**PW**
Amravati (+)	80	--	71	--	76	GW	93	GW	89	GW	**87**	**GW**
Anjangaon (*)	39	EXL	43	EXL	39	EXL	--	--	--	--	**40**	**EXL**
Anjangaon (+)	91	GW	84	GW	--	--	118	PW	101	PW	**93**	**GW**
Bhatkuli (*)	172	PW	172	PW	215	VPW	--	--	--	--	**186**	**PW**
Bhatkuli (+)	141	PW	152	PW	143	PW	118	PW	107	PW	**132**	**PW**
Chandur Bz. (*)	84	GW	98	GW	78	GW	--	--	--	--	**87**	**GW**
Chandur Bz. (+)	106	PW	57	GW	45	EXL	92	GW	87	GW	**82**	**GW**
Chandur Rly (*)	120	PW	118	PW	112	PW	--	--	--	--	**117**	**PW**
Chandur Rly (+)	126	PW	69	GW	73	GW	83	GW	78	GW	**85**	**GW**
Chikhaldara (*)	69	GW	72	GW	60	GW	--	--	--	--	**67**	**GW**
Chikhaldara (+)	65	GW	149	PW	51	GW	57	GW	63	GW	**60**	**GW**
Daryapur (*)	275	VPW	300	VPW	332	UNS	--	--	--	--	**302**	**UNS**
Daryapur (+)	127	PW	124	PW	108	PW	232	VPW	95	GW	**124**	**PW**
Dharni (*)	91	GW	60	GW	65	GW	--	--	--	--	**72**	**GW**
Dharni (+)	67	GW	--	--	61	GW	75	GW	59	GW	**63**	**GW**
DhamGa.Rly (+)	91	GW	145	PW	63	GW	85	GW	--	--	**86**	**GW**
Morshi(*)	187	PW	183	PW	137	PW	--	--	--	--	**169**	**PW**
Morshi (+)	130	PW	108	PW	69	GW	91	GW	91	GW	**97**	**GW**
Nandgaon Kh.(*)	190	PW	185	PW	116	PW	--	--	--	--	**164**	**PW**
Nandgaon Kh.(+)	99	GW	109	PW	101	PW	98	GW	84	GW	**95**	**GW**
Tiwasa (*)	102	PW	101	PW	100	PW	--	--	--	--	**101**	**PW**
Tiwasa (+)	109	PW	96	GW	91	GW	97	GW	84	GW	**96**	**GW**
Warud (*)	100	GW	130	PW	98	GW	--	--	--	--	**109**	**PW**
Warud (+)	67	GW	--	--	77	GW	81	GW	84	GW	**78**	**GW**

** Wt_Fe : Without Fe, + W_Fe : With Fe; UNS- Un-suitable; EXL – Excellent; DamGa= Dhamangaon*

Anjangaon, Dharni, Chandur bazar, Chikaldhara, Dhamangaon Rly had good water quality during 2007-2011. Ground Water quality at Bhatkuli and Daryapur was poor. Water quality at Achalpur, Amravati, Chandur Rly, Morshi, Nandgaon Kh, Tiwasa, Warud varied between good and poor throughout these 5 years.

4) Aurangabad District

Aurangabad district is one of the largest districts in Maharashtra; the urban area is around 37.53% as on 2001 census. The district is divided into two distinct sections: 1) the '**Uplands**' to the north- between the basins of the three rivers which take their rise in the higher lands of Takli, Kanhar, and Ajanta and parallel with the course of the rivers, there are flat-topped ranges of hills enclosing valleys of much beauty and fertility. 2) The '**Lowlands**' in the valley of the Godavari to the south. The lowland area presents little diversity in its physical aspect, and consists of wide undulating plains to the south, south-east, and west. Aurangabad district is located mainly in the Godavari River Basin and partly in the Tapi Basin.

General Information:
Geographical Area: 10,100 sq. km
Taluka-9: Aurangabad, Kannad, Khultabad, Paithan, Phulambri, Sillod, Soygaon, Vaijapur, Gangapur
Villages: 1581 Population: 28,97,013
Soil Type:

There are two kinds of superficial formations: 1) one consisting of upland soil derived from the decomposition of the rocks on the spot, peculiar to the hilly region, and 2) the alluvial soil, deposited by water, belonging to the plains and to the hollows in the valleys of rivers.

Annual Rainfall : 734 mm
Geology: Recent: Alluvium, Upper Cretaceous-Lower Eocene: Deccan Trap Basalt

Ground Water Quality with Respect to BIS Standard and Water Quality Index

Out of 9 talukas of Aurangabad, 96 villages were monitored by CGWB. The descriptive statistics of ground water monitoring carried out in the villages are given in **Annexure IX**. **Table 6.11and Annexure X(4)** give the water quality index of ground water for five years at Aurangabad district.

Aurangabad and Kannad: Nitrate exceeded 18-22% and pH-15% of the permissible limit of these talukas. In ***Aurangabad taluka*** Kinnal, Walur Tanda, Apatgaon showed poor quality for years 2007-2009.For these villages data is not available for 2010 and 2011. But Golthgaon, Kadrabad and Shendra villages show varying water quality. Shekta village inclined towards poor water quality. In ***Kannad Taluka***, Digar Pishore, Hatnur, Hingni and Saigavan villages showed poor to very poor water quality indices. Other villages have good water quality. As first three years poor water quality and for 2010 and 2011 good water quality was observed for these two talukas, cumulative WQI was poor for Aurangabad and good for Kannad. The probable reason for poor water quality is the nitrate levels in ground water.

Khultabad: All parameters were within desirable limits, except pH which did not comply 15% of the time. Only villages Wanegaon and Deolena BK showed poor water quality during 2011. Five years WQI was good.

Paithan: It was observed that 10-20% exceedances for TDS, hardness, Ca^{2+}, Mg^{2+}, SO_4^{2-} and nitrate. In Adul village, the higher levels of inorganic pollutants resulted in unsuitable water quality for drinking purpose in 2007-2009.Thergaon, Bidkin, Murma and Dera also showed the same, whereas Ektuni, Telwadi and Takali Ambad showed variable water quality.

Phulambri and Sillod: pH and nitrate did not comply with the standards in Phulambri and Sillod talukas. Gevrai and Gungi villages showed excellent water quality. In ***Silod Taluka***, Ajanta, Madani, Mangrul and Bhavan villages had poor water quality. Wadala, Sillod, Jamthi showed varying water quality. Five years cumulative WQI was good for both the talukas.

Soygaon: Comparison with standards showed that all the values were within the permissible limits. The WQI calculated for Fardapur village of Soygaon taluka showed that the water quality was good in 2007 and poor in 2008-09. Village Galwada showed good to excellent water quality, whereas Jarandi and Ghanegaon were poor. The probable contaminating sources could be the micro-organisms entering through the contaminated drilling tools and improperly sealed well casing.

Vaijapur: The levels of TDS, hardness, Mg^{2+}, and nitrate exceeded in 10-25% of the samples. WQI indicated that water quality in Rotegaon was good, whereas for Tunki it was unsuitable for drinking for 2007-2009. At Vajapur, Borsar and Jambargaon poor quality was noticed and other villages had varying WQ . The overall water quality of the taluka was very poor.

Gangapur: Parameters pH, hardness, TDS and magnesium did not comply with the standards at Gangapur taluka. Kinhala, Kaigaon and Agathan had very poor to unsuitable water quality, whereas Dahegaon was reporting good to excellent. Sufficient data is not available for calculation of five years trend, as it's actually ranging between poor to good, but inclined towards poor.

Table 6.11: Water Quality Index of Groundwater of Aurangabad District

Talukas	2007		2008		2009		2010		2011		5 Yrs. WQI	
	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg
Aurangabad	143	PW	155	PW	129	PW	95	GW	96	GW	**101**	**PW**
Kannad	123	PW	126	PW	107	PW	81	GW	89	GW	**88**	**GW**
Khultabad	87	GW	85	GW	82	GW	74	GW	81	GW	**78**	**GW**
Paithan	704	UNS	--	--	330	UNS	141	PW	133	PW	**147**	**PW**
Phulambri	137	PW	92	GW	131	PW	88	GW	88	GW	**91**	**GW**
Sillod	94	GW	92	GW	91	GW	98	GW	74	GW	**86**	**GW**
Soygaon	77	GW	103	PW	115	PW	85	GW	80	GW	**83**	**GW**
Vaijapur	204	VPW	--	--	241	VPW	114	PW	110	PW	**122**	**PW**
Gangapur	--	--	--	--	--	--	93	GW	109	PW	**101**	**PW**

UNS- Un-suitable; VPW- Very Poor Water

Five years water quality of Aurangabad district indicated that the water quality in talukas namely Kannad, Khultabad, Phulambri, Sillod and Soygaon was good. Whereas, Aurangabad, Paithan,Vaijapur and Gangapur showed poor quality. Paithan and Gangapur which are religious places have human activities which affect the water quality.

5) Beed District

It is flanked by Aurangabad and Jalna districts in the north, Parbhani in the east, Latur in the south east, Osmanabad in south and Ahmadnagar district in the west and southwest. The district can be broadly divided into 3 physiographic units: 1) Lowland Beed- the low lying northern part comprising of Godavari valley and is also known as Gangathari. 2) Highland Beed- occupies the southern part forming a part of Balaghat Plateau 3) Sina basin- low lying undulating area southwest and west of Highland Beed comprising almost whole of Ashti taluka. The major part of the district comes under Godavari basin. Godavari, Manjra and Sina are the major rivers that drain the district along with their tributaries.

General Information:
Geographical Area: 10615 sq. km.
Taluka- 11: Ambejogai, Ashti, Beed, Dharur, Gewrai, Kej, Majalgaon, Parli, Patoda, Shirur Kasar, Wadwani
Villages: 1282 Population: 21,61,000

Soil Type:
Rocky and thin layered soil is observed in major part of the district except on the banks of Godavari and Sindphana Rivers, where dark brown to black and clayey loamy to loamy soils are observed. The nutrient levels in almost all the soils are low.

Annual Rainfall: 600 mm to 800 mm
Geology: Recent: Alluvium, Upper Cretaceous-Lower Eocene: Deccan Trap Basalt

Major Ground Water Problems and Issues:

The drought area has been observed in entire district except the western part of the district around Ashti. In major parts of the district low water level is observed which include Georai, Majalgaon, Ambejogai talukas and parts of Kaij, Beed and Patoda talukas. Thus ground water conservation and recharge need to be prioritized in these areas.

Ground Water Quality with Respect to BIS Standard and Water Quality Index

Out of 11 talukas of Beed, 67 villages are monitored by CGWB. The descriptive statistics of ground water monitoring carried out in the villages are given in **Annexure IX**. **Table 6.12and Annexure X(5)** gives the water quality index of ground water for five years at Beed district.

Ambejogai and Beed: Descriptive statistics showed that none of the samples except pH complied with the permissible limit. ***Ambejogai taluka*** had excellent water quality for all the consecutive years. Kumbhephal, Talni and Sonawala villages also showed good water quality. In ***Beed taluka*** Pali, Pithi and Bhend Takli and Beed also had good water quality. Dharur village showed poor quality in 2011.

Ashti, Gewrai and Kej: In ***Ashti taluka***, the WQI of Ashti village was poor but improvement was observed in 2011, whereas, reverse trend was observed for Kuntephal village, where it changed from excellent to poor. Nimgaon choba village showed poor water quality in 2011. In ***Gewrai taluka***, exceedance of 10-15% of TDS, TH were observed, villages' viz. Patrud, Georai, Hirapur had poor WQI. Tagadgaon, Mahar takli showed poor quality, and Talwada showed excellent water quality in 2011. In ***Kaij taluka***, Bansarola and Malegaon villages had good water quality in 2010 to 2011, whereas Kej village had poor quality in 2009. Five year WQI for all these talukas were good.

Dharur and Parali : Water quality indices for Dharur village of ***Dharur taluka*** showed that WQI was poor. The poor water quality could be due to nitrate and hardness, where 20-50% of these samples exceeded the permissible limit. Sirsala and Parli villages in ***Parli taluka*** showed poor water quality in 2007-2009. Dharmapuri, village was good in 2008. At the same time villages Wadgaon and Pimpri bk. showed excellent water quality in 2011. The five years WQI for Dharur was good and for Parli it was poor.

Patoda: As per descriptive statistics of Patoda taluka all the samples were within the desirable limit except pH. WQI for Patoda and Daskhed villages were poor and good respectively. However, the overall water quality of the taluka was poor in 2007 which is improved in consecutive years.

Shirur Kasar Wadwani and Majalgaon: The village viz. Manur and ***Shirur Kasar*** showed poor quality, as also Telgaon and Wadwani villages of ***Wadwani taluka***. The overall water quality of Shirur Kasar and Wadwani were reported poor. As seen from the descriptive statistics, around 40-50% samples of Mg^{2+}, nitrate and total hardness exceeded the permissible limit. The natural source of Mg^{+} and Ca^{+} in the soil could be the weathering of limestone and minerals. The ***Majalgaon taluka's*** villages viz. Roshanpuri, Khamgaon and Longaon Camp were reported from good to excellent and all parameters are within permissible limits.

Table 6.12: Water Quality Index of Groundwater of Beed District

Talukas	2007		2008		2009		2010		2011		5 Yrs. WQI	
	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg
Ambejogai	66	GW	96	GW	79	GW	65	GW	63	GW	**67**	**GW**
Ashti	113	PW	121	PW	--	--	66	GW	97	GW	**83**	**GW**
Beed	58	GW	66	GW	87	GW	53	GW	73	GW	**69**	**GW**
Dharur	104	PW	135	PW	63	GW	--	--	80	GW	**92**	**GW**
Gewrai	--	--	--	--	155	PW	86	GW	81	GW	**86**	**GW**
Kej	--	--	--	--	130	PW	69	GW	67	GW	**80**	**GW**
Parli	194	PW	134	PW	162	PW	--	--	62	GW	**103**	**PW**
Patoda	105	PW	98	GW	89	GW	63	GW	72	GW	**75**	**GW**
Shiruru Kasar	242	VPW	177	PW	99	GW	--	--	122	PW	**148**	**PW**
Wadwani	158	PW	120	PW	242	VPW	--	--	--	--	**142**	**PW**
Majalgaon	--	--	--	--	--	--	--	--	52	GW	**52**	**GW**

Five years water quality of Beed indicated that talukas namely Ambejogai and Beed were good for all 5 years. Talukas namely Ashti, Dharur, Gewrai Kej and Patoda reported poor ground water in 2007 but improvement was observed in following years. From analyzed data it was found that WQI at Parli, Shirur Kasar and Wadwani talukas were poor to very poor as hardness, minerals and nitrate contamination are the major issues of these talukas.

6) Bhandara District

Bhandara district is situated on the left bank of river Wainganga. It is fondly called as the 'District of Lakes'. Hilly region of the northern side consists of Satpuda range, Bhivsen Koka are small hillocks in this range. Gaymukh and Ambagad are prominent hills in northern hilly region. The Wainganga is the principal river in the district, and the only stream that does not dry up in the hot weather.

General Information:
Geographical Area: 3716.65 sq. km
Taluka-7: Bhandara, Lakhandur, Lakhani, Mohadi, Pauni, Sakoli, Tumsar
Villages: 870, Population: 11,35,835

Soil Type:

The soils of the district are varied, arising out of the weathering of crystalline metamorphic and igneous rocks. Along the southern extremes of the Wainganga valley, alluvial soils predominate. Kali or black regur soils derived from the weathering of basalts generally have an admixture of sands or lime or both. Khardi soils are dark in colour with a considerable admixture of lime; they are generally shallow.

Annual Rainfall: 1470.6 mm

Geology: Recent: Alluvium (Soil, kankar, laterite) Upper Cretaceous-Lower Eocene: Deccan Trap Basalt Archean: Older granites and gneiss

Ground Water Quality with Respect to BIS Standard and Water Quality Index

All 7 talukas of Bhandara district including 68 villages were monitored by CGWB. The descriptive statistics of ground water monitoring carried out in the villages are given in **Annexure IX. Table 6.13 and Annexure X(6)** give the water quality index of ground water for five years at Bhandara district.

Bhandara, Lakhandur, Lakhani and Pauni: Exceedance for magnesium ranged from 10-12%, nitrate from 8-40%. At Lakhani, Nitrate exceeded upto 40% of the samples. It could be due to soil pattern, and use of chemical fertilizers. Poor water quality was reported for Sakra, Pahela and Varti villages in ***Bhandara taluka***. Water quality at Dighori, Lakhandur, Palandur and Soni villages in ***Lakhandur taluka*** varied as also villages of Adyal, Kanhalgaon, Nilaj (Amgaon) and Bhavad in ***Pauni taluka***. Villages Dighori and Soni showed poor water quality. Variable water quality in other villages at ***Lakhani taluka*** was observed. The five year evaluations for these talukas show that WQI irregularly changed.

Mohadi and Sakoli: The statistical analysis of this taluka shows 20-30% of times samples were exceeding the TH, Mg^{2+} and nitrate. In ***Mohadi taluka***, the water quality index for Jamb, Kharbi, Chicholi and Wasera were reported poor. At Koka and Ussara villages' water quality in 2008 to 2010 varied. The common sources of contamination could be leaking of storage tanks, use of chemicals in farms, etc. Nitrate concentrations exceeded 11% of the time in ***Sakoli taluka***. Village Pitezari reported poor water quality in 2009, Parsodi and Sakoli in 2010. Ekodi and Mundipar villages of this taluka indicated good to excellent WQI.

Tumsar: This taluka indicated that all the parameters were within the permissible limit except pH, nitrate and fluoride, which showed exceedance of 6, 27 and 10% respectively. The overall ground water quality was good in the year 2007-08, whereas it was poor in 2009, which once again improved in 2010-11. Tumsar Khapa and Sihora villages showed poor WQI, whereas, Chikhli (kamkasur) and Khapa (Tumsar) showed good water quality.

Table 6.13: Water Quality Index of Groundwater of Bhandara District

Talukas	2007		2008		2009		2010		2011		5 Yrs. WQI	
	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg
Bhandara	66	GW	99	GW	90	GW	102	PW	--	--	**96**	**GW**
Lakhandur	90	GW	81	GW	101	PW	109	PW	--	--	**106**	**PW**
Lakhani	68	GW	66	GW	70	GW	--	--	--	--	**68**	**GW**
Mohadi	93	GW	143	PW	136	PW	97	GW	--	--	**104**	**PW**
Pauni	67	GW	57	GW	59	GW	103	PW	--	--	**97**	**GW**
Sakoli	49	EXL	51	GW	80	GW	83	GW	--	--	**73**	**GW**
Tumsar	88	GW	91	GW	105	PW	102	PW	--	--	**93**	**GW**

Five years water quality of Bhandara district showed good water quality at Bhandara, Lakhani, Pauni, Sakoli and Tumsar talukas and poor at Mohadi and Lakhandur. In general water quality was good in 2007 but water quality deteriorated in later years in all the talukas. As nitrate and fluoride exceedance was reported in specific talukas, they need a special attention.

7) Buldhana District

Buldhana is the western district of Vidarbha. In the north is a hilly strip of the Satpudas, Purna plains in the middle and the Ajanta range comprising of Buldhana plateau in the south. The northern region forms a part of Satpudas, which rise to general elevation of 600 to 700 m above mean sea level with occasional peaks rising up to 1000 meter from sea level or more. Purna plain is the main lowland region of the district, with average elevation ranging between 250 to 270 m. The Ajanta range covers the southern part of the district. The district forms part of Godavari and Tapi basin. Purna and Penganga are the main rivers flowing through the district.

General Information:
Geographical Area: 9670 sq. km.
Taluka- 13: Buldhana, Chikhali, Jalgaon jamod, Khamgaon, Lonar, Malkapur, Mehkar, Motala, Nandura, Sangrampur, Shegaon, Sindhkhedraja, Deolgaonraja
Villages: 1427 Population: 22,32,480
Soil Type:

The Satpudas have shallow, gravely and stony reddish soil. The soil over the piedmont deposits is coarse, highly friable and is locally known as Malli soil and is well suited for horticulture. To the south of the Satpuda piedmont, the Alluvial plains are covered by deep Alluvial soil, locally known as Bharkali soil, which are deep black, very fine in texture and highly retentive of moisture. Southwards away from the river, the soils are replaced by Kali regular soils, which are moderately deep. The soils of the plateau are Bhorandi or Khelk, a thin yellowish coarse soil, often less than half meter deep. The upper plateau is generally covered by shallow, black, brown or reddish soil. These are locally known as Barad soils.

Annual Rainfall: 500 to 900 mm
Geology: Recent: Alluvium, Upper Cretaceous-Lower Eocene: Basalt (Deccan Traps)

Major Ground water problems and issues:

Northern part of the district comprising of Jalgaon (Jamod) and the southern part comprising of Chikhli, Mehkar, Donegaon and Deolgaon Raja talukas comes under "Drought Area". Deeper water levels of more than 20 m below ground level are observed in parts of Malkapur, Nandura and Jalgaon (Jamod) talukas. Ground water quality is affected by nitrate contamination. In north eastern part of Shegaon taluka brackish to saline ground water is observed.

Ground Water Quality with Respect to BIS Standard and Water Quality Index

All 13 talukas were monitored for 139 villages by CGWB and GSDA. CGWB data excluded Fe in ground water analysis. Due to this non uniformity in monitored data, WQI was estimated considering Fe weightage at respective monitoring stations. The descriptive statistics of ground water monitoring carried out in the villages are given in **Annexure IX**. **Table 6.14**and **Annexure X(7)**gives the water quality index of ground water for five years at Buldhana district.

Bludhana and Chikhali: Considering with and without Fe parameters for calculation of WQI, the five year trend of the water quality is almost poor to unsuitable. The villages affected are Buldhana, Dongar Khandala, Kolori, Dattapur, Dhad, Mhasala BK, Nandrakoli and Mondhala. The major reason for unsuitability at ***Buldhana taluka*** was exceedance of TDS, pH, hardness, calcium, and magnesium around 10-30%, whereas nitrate exceedance is almost about 67% of the samples. At ***Chikhali taluka*** Khamgaon, Kelwad villages have poor water quality in 2007-09, Sawana and Undri villages have poor water quality in 2011 as Calcium and nitrate levels are high. Borgaon Kakde and Pimpalgaon Raja villages showed good water quality. In general good water quality was observed at chikhali taluka.

Khamgaon and Jalgaon Jamod: In ***Khangaon taluka***, water quality at village Garadgaon is good for all the years. Khamgaon improved in 2010 from poor to good. However, villages Hiwarkhed, Kokta, Lakhanwada, Nimkawada, Nipana, Divthana, and Sutala had poor water quality, the reason could be exceedanc of calcium and nitrate which is higher in 2010-11, so water quality in these years are poor. But in other villages WQI improved to good,. 75% exceedance of nitrate was observed at ***Jalgaon Jamod taluka.***

Lonar and Malkapur: The water quality of villages Dhad, Wadhav, Lonar, Dhayaphal, Shara of ***Lonar taluka*** and Malkapur, Hingana Kazi, Umali, Wagola of ***Malkapur taluka*** is

almost poor to unsuitable; the quality deteriorated ever year. Statistical analysis showed exceedance of TDS, pH, hardness, calcium and magnesium is about 10-22%, whereas for nitrate exceedance is about 56%. Both these talukas have poor WQI.

Mehakar and Motal: Villages Ajani Bk., Fardapur, Mehkar and Wishvi of ***Mehakar taluka*** had poor WQI. Nitrate exceeded 55% of the time in Mehekar Taluka. As also for five year WQI, if Fe was not considered for calculation the quality is poor. Otherwise, almost all villages showed good water quality. At ***Motal taluka*** Rohinkhed, Motala, Pimpalgaon Devi villages showed poor to very poor WQI for 2007-2009. Nimkhed, Dhamangaon Bade and Shlelapur for 2010-11 showed poor WQI. Exceedance of nitrate is highest i.e 92% and calcium is 38% at Motala Taluka.

Nandura and Sangrampur: In ***Naduara taluka***, exceedance of nitrate is 67%; exceedance of 11-16% for hardness and magnesium. In ***Sangrampur taluka*** exceedance of nitrate is 33%. Patorka, Khiroda and Dhamangaon had poor WQI. Other villages had good to excellent WQI.

Shegaon, Sindkhed Raja and Deolgaon Raja: ***Shegaon*** village was consistently unsuitable from 2007 onward. Bhongaon, Amsari, Manasgaon, Matargaon Bk. Nagzari and Nimbhi villages had poor quality. The exceedance of nitrate is almost 65% and hardness, calcium and magnesium is around 11-38% for Shgaon Taluka. The place is of religious importance and is a drought area. Kingaon Raja village of ***Sindkhed Raja taluka*** had unsuitable Water quality. The percent exceedances ofNO_3^- and Mg^{2+} are 20%. In ***Deolgaon Raja taluka*** nitrate and Calcium exceedances are 33 and 41% respectively. At Mehuna and Mahi poor water quality was noticed. In Shegaon and Sindkhed Raja talukas poor water quality is observed. The WQI in Deolgaon Raja was good.

Table 6.14: Water Quality Index of Groundwater of Buldhana District

Talukas	2007		2008		2009		2010		2011		5 Yrs. WQI	
	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg
Buldhana(*)	211	VPW	181	PW	98	GW	--	--	--	--	**163**	**PW**
Buldhana(+)	92	GW	--	--	107	PW	107	PW	123	PW	**107**	**PW**
Chikhali(*)	82	GW	89	GW	109	PW	--	--	--	--	**93**	**GW**
Chikhali(+)	--	--	--	--	76	GW	--	--	71	GW	**73**	**GW**
Khamgaon(*)	91	GW	84	GW	86	GW	--	--	--	--	**87**	**GW**
Khamgaon(+)	116	PW	--	--	73	GW	109	PW	102	PW	**105**	**PW**
Lonar(*)	126	PW	189	PW	158	PW	--	--	--	--	**158**	**PW**
Lonar(+)	--	--	107	PW	--	--	--	--	100	GW	**103**	**PW**

** Wt_Fe : Without Fe, + W_Fe : With Fe; UNST- Un-suitable; EXL – Excellent; DamGa= Dhamangaon*

Table 6.14 (Contd..) : Water Quality Index of Groundwater of Buldhana District

Talukas	2007		2008		2009		2010		2011		5 Yrs. WQI	
	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg
Malkapur(*)	--	--	--	--	171	PW	--	--	--	--	**171**	**PW**
Malkapur(+)	174	PW	--	--	50	GW	145	PW	153	PW	**148**	**PW**
Mehkar(*)	204	VPW	193	PW	--	--	--	--	--	--	**199**	**PW**
Mehkar(+)	--	--	91	GW	--	--	88	GW	91	GW	**91**	**GW**
Motala(*)	204	PW	180	PW	180	PW	--	--	--	--	**188**	**PW**
Motala(+)	--	--	--	--	84	GW	94	GW	109	PW	**96**	**GW**
Nandura(*)	104	PW	134	PW	91	GW	--	--	--	--	**110**	**PW**
Nandura(+)	119	PW	--	--	107	PW	85	GW	89	GW	**95**	**GW**
Sangrampur(*)	--	--	--	--	131	PW	--	--	--	--	**131**	**PW**
Sangrampur(+)	87	GW	--	--	107	PW	61	GW	80	GW	**76**	**GW**
Shegaon(*)	409	UNS	430	UNS	374	UNS	--	--	--	--	**404**	**UNS**
Shegaon(+)	127	PW	95	GW	--	--	102	PW	113	PW	**112**	**PW**
Sindkhed Raja(*)	180	PW	172	PW	140	PW	--	--	69	GW	**100**	**PW**
Deolgaon Raja(*)	147	PW	135	PW	130	PW	--	--	85	GW	**94**	**GW**
Jalgaon Jamod(+)	--	--	--	--	51	GW	86	GW	83	GW	**80**	**GW**

** Wt_Fe : Without Fe, + W_Fe : With Fe; UNS- Un-suitable; EXL – Excellent; DamGa= Dhamangaon*

Buldhana, Lonar, Malkapur, Shegaon, Sindkhed Raja Talukas had poor 5 year WQI. Chikali, Deolgaon Raja and Jalgaon Jamod had good WQI. At Mehkar, Khamgaon, Motala, Nandura, Sangrampur, water quality varied between poor and good. The major reasons for the poor or unsuitable water quality could be hardness, Ca^{2+}, Mg^{2+} and nitrate levels exceeding the permissible limit in most of the villages. For improving the ground water quality status, urgent action required with special attention.

8) Chandrapur District

Chandrapur district is located in Vidarbha region of Maharashtra. Wardha River forms the western boundary, whereas Wainganga River forms the eastern boundary of the district. Chandrapur district can be divided into two physiographic regions: 1) ***Plane region in valleys of Wardha, Penganga and Wainganga Rivers***- The plane region is made up of widely spread and flat terrain occurring mostly along Wardha River. In Wainganga valley, flat terrain exhibits rolling topography with residual hills in the southern part, while in the northern part wide alluvial flood plains are observed. In Penganga valley, flat terrain covers very little area in south western part of the district. 2) ***Upland Hilly Region***- It lies between Wardha and Wainganga rivers comprising parts of Warora, Chandrapur, Mul and Brahmapuri talukas. The south western part of the district in Penganga basin and covering

parts of Rajura and Chandur talukas exhibit hilly topography. The entire area of the district falls in Godavari basin. Wardha, Wainganga and Penganga are the main rivers flowing through the district.

General Information:
Geographical Area 10920 sq. km
Taluka- 15: Ballarpur, Bhadrawati, Brahmapur, Chandrapur, Chimur, Gondpipri, Jiwati, Korapna, Mul, Nagbhid, Rajura, Pombhurna, Sawali, Sindewahi and Waroda
Villages: 1791, Population: 20,71,000
Soil Type: Three types of soil, Shallow course, Medium black and Deep black
Annual Rainfall: 1200 to 1450 mm
Geology: Recent: Alluvium, Upper Cretaceous-Lower Eocene: Deccan Trap Basalt
Upper Carboniferous –Triassic: Gondwana, Pre-Cambrian: Vindhyan
Archean: Crystalline and Older metamorphics

Major Ground Water Problems and Issues:

The major parts of the district show decrease in ground water levels, mainly in southern, north western and north eastern parts of the district comprising almost entire Rajura, Gondpipri, Chandrapur, Bhadravati, Warora and parts of Chimur, Brahmapuri and Sindewahi, The ground water quality is mainly affected by nitrate. Apart from these, the ground water quality is getting affected due to industrial pollution in and around Ballarpur, whereas, fluoride contamination is also observed in parts of Rajura, Warora and Chimur talukas of the district.

Ground Water Quality with Respect to BIS Standard and Water Quality Index

Out of 15 talukas of Chandrapur, 113 villages were monitored by CGWB. The descriptive statistics of ground water monitoring carried out in the villages are given in **Annexure IX**. **Table 6.15 and Annexure X(8)** give the water quality index of ground water for five years at Chandrapur district.

Ballarpur, Brahmapuri and Bhadrawati: The poor ground water quality as per the descriptive statistics could be due to higher levels of fluoride and nitrate, i.e. 16-50% of the samples, probably due to weathering and circulation of water in rocks and soils causing leaching of fluorine and over application of chemicals in farms. The water quality indices evaluated for the Chora village at ***Ballarpur taluka***; Ralegaon, Khatoda and Bhadrawati villages of ***Bhadrawati taluka*** and villages viz; Mangli, Mendki, Aksapur and Surbodi from ***Brahmapuri taluka*** shows very poor water quality during 2007 to 2009. Whereas, other villages of these talukas had overall good indices. Ground water quality of Moharli village from Bhadrawati was reported to be excellent for the year 2010. As per five year WQI, at

initial year during 2007 all villages accounted as poor, but gradual changes towards good was noticed.

Chandrapur, Chimur and Gondipipri: Exceedance of 6-14% of fluoride, and 14- 33% of nitrate was observed in collected sample of these areas. The total hardness was also reported high i.e. 15-18%. The water quality indices thus evaluated for the villages indicated that the water quality varied from good to poor during the five years. Shergaon, Wihar Khurd, Dabha, Ghugus, Tadali and Padoli villages of ***Chandrapur Taluka*** were reported to have poor water quality for all the years. Similarly Jambhulghat, Shedgaon, Wadala had very poor water quality during 2010; WQI in Shankarpur village in ***Chimur Taluka*** varied between good to poor. Tadoba village of Chimur taluka in 2007 had excellent water quality. Ganpur and Wadholi villages of ***Gondipipri taluka*** also reported as poor in 2010. Other villages of these talukas reported good WQI.

Jiwati, Korapna and Mul: All five years data was not available. Ballarsha from ***Jiwati taluka*** and Gadchandur from ***Korapna taluka*** were reported to be good. Villages namely Rajoli Tukkum, Mul, Susi dabgaon, Pardi and Vyahad Kh. of ***Mul Taluka*** had poor water quality during all the five years. Magnesium, fluoride and total hardness exceeded in 14-21% of the samples. The five year trend shows that Mul taluka was poor to very poor for all the years. Other two taluka's with limited data showed good water quality indices.

Nagbhid, Pombhurna and Rajura: Exceedance 40-50% for nitrate and 5-28% for total hardness was observed at Rajura and Nagbhid talukas. Fluoride also exceeded 10-50% for all the three talukas. Mohadi Mokasa, Nagbhir, Chikalgaon, Kirmiti mendha and Talodhi villages of ***Nagbhid Taluka*** and Mahurli, Wirur, Gadegaon, Sasti (census town), Virur Stn. of ***Rajura Taluka,*** reported poor water quality for all the five years. The five year trend for Nagbhid showed poor water quality. Rajura taluka reported poor quality in 2008, but overall water quality was good. At ***Pombhurna taluka*** limited samples were analyzed and water quality was reported as good.

Sawali, Sindewahi and Warora Taluka: Exceedance of 10-60% for nitrate, 54-80% for fluoride, 9-15% for total hardness and 5-9% for was observed. Poor water quality at ***Sawali taluka*** was reported for 2007-2009; villages of ***Sindewahi taluka*** namely Gadbori, Gadmaushi chak, Sindewahi, Purkepar and Ratnapur and villages of ***Warora taluka*** Bhandak, Chargaon, Dongargaon, Chargaon, Chikni had poor to very poor water quality. But some places like Salori and Shegaon bk. (Warora); Niphandra (Sindewahi) reported excellent water quality for all the years. The three taluka's five year trend shows poor water quality indices.

Table 6.15: Water Quality Index of Groundwater of Chandrapur District

Talukas	2007		2008		2009		2010		2011		5 Yrs. WQI	
	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg
Ballarpur	151	PW	94	GW	81	GW	--	--	--	--	**107**	**PW**
Bhadrawati	103	PW	--	--	80	GW	87	GW	--	--	**86**	**GW**
Brahmapuri	122	PW	141	PW	123	PW	76	GW	--	--	**103**	**PW**
Chandrapur	98	GW	109	PW	105	PW	86	GW	--	--	**91**	**GW**
Chimur	81	GW	94	GW	81	GW	114	PW	--	--	**89**	**GW**
Gondipipri	--	--	--	--	--	--	100	GW	--	--	**100**	**GW**
Jiwati	--	--	65	GW	67	GW	--	--	--	--	**59**	**GW**
Korapna	--	--	--	--	--	--	77	GW	--	--	**77**	**GW**
Mul	152	PW	147	PW	--	--	104	PW	--	--	**108**	**PW**
Nagbhid	136	PW	160	PW	134	PW	106	PW	--	--	**115**	**PW**
Pombhurna	81	GW	96	GW	--	--	--	--	--	--	**79**	**GW**
Rajura	99	GW	118	PW	99	GW	99	GW	--	--	**96**	**GW**
Sawali	108	PW	125	PW	116	PW	--	--	--	--	**104**	**PW**
Sindewahi	119	PW	133	PW	44	EXL	100	PW	--	--	**101**	**PW**
Waroda	112	PW	103	PW	78	GW	134	PW	--	--	**111**	**PW**

UNS- Un-suitable; EXL – Excellent

Out of 15 talukas poor water quality indices was observed at Ballarpur, Brahmapuri, Mul, Nagbhid, Sawali, Sindewahi and Waroda talukas. Exceedance of nitrate, fluoride, total hardness could be due to weathering and circulation of water in rocks and soils causing leaching of fluorine, and also municipal and industrial discharges and excessive use of chemical fertilizers/ pesticides.

9) Dhule District

Dhule district is located in northern part of Maharashtra State. The district can be broadly divided into 2 physiographic units: 1) Tapi valley proper- The Tapi River valley is observed in parts of Shirpur and Sindkhed talukas. 2) The region of the dykes and residual hills of the Sahayadri Spurs- It comprises southern part of Sindkheda and entire Sakri and Dhule talukas. Tapi River flows westward through the central part of the district. Panjra and Aner rivers are the main tributaries of Tapi flowing northward and southward respectively to join Tapi River. Agriculture is the main occupation of the people.

General Information:
Geographical Area: 8061 sq. km.
Taluka- 4 : Dhule, Sakri, Shirpur and Shindkheda
Villages: 681; Population: 17,08,000
Soil Type:

In Tapi valley proper, the soil is deep black and extremely fertile except in some portions near the main river and its tributaries, which have cut down the land very badly and removed the top soil. Otherwise the soil grade from deep fertile soil to coarse shallow

and stony is away from the river either northwards towards the Satpudas or south ward towards the residual hills and dykes.

Annual Rainfall: 500 mm to 655 mm

Geology: Recent: Alluvium, Upper Cretaceous-Lower Eocene: Deccan Trap Basalt
Middle - Upper Cretaceous Bagh Beds

Major Ground Water Problems and Issues:

The drought area has been observed in western and southern parts of the district occupying parts of Sakri and Dhule talukas. Moderate to deeper water levels of 10 to 20 m below ground level (parts of Shirpur and Sindkheda talukas) are observed in most parts of the district, occupying Dhule and Shirpur talukas and eastern parts of Sindkheda and parts of Sakri talukas.

Ground Water Quality with Respect to BIS Standard and Water Quality Index

In 4 talukas of Dhule, 100 villages were monitored by CGWB. The descriptive statistics of ground water monitoring carried out in the villages are given in **Annexure IX**. **Table 6.16** and **Annexure X(9)** gives the water quality index of ground water for five years at Dhule district.

Dhule: Villages namely Avdhan, Mukti, Walwadi, Hisala and Ner are reported to have poor to very poor water quality in 2007 to 2009. Other villages reported to be excellent, are Khordad, Bendrapada, Sadgaon, Dhamanar, Purmepada and Nimdale. The overall quality is good for this taluka.

Sakri and Shirpur: Gondas, Lonkhede, Akkalpada, Umarpata and Khampada villages, showed excellent water quality, and the overall taluka indicated good quality. In ***Shirpur Taluka*** all the villages had good water quality except Kherde, Khmkheda and Palasner in 2008.Villages Wagjadi, Thalner, Boradi, Nimzari, Shirpur and Kolid during 2010 and 2011reported excellent water quality.

Sindkheda: This taluka showed poor quality in 2007 and 2008 as some of the villages Nardana, Dalwade, Chimthane, Mahalsar, Sindkheda, Takarkhede and Varpada always showed poor to very poor WQI. The pH of this region showed 27% exceedance. Only at Betavad, Shevade and Degaon water quality is excellent during 2010.The 5 yr WQI was good for all four talukas of Dhule district.

Table 6.16: Water Quality Index of Groundwater of Dhule District

Talukas	2007		2008		2009		2010		2011		5 Yrs. WQI	
	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg
Dhule	124	PW	120	PW	115	PW	66	GW	63	GW	**79**	**GW**
Sakri	102	PW	108	PW	67	GW	49	EXL	63	GW	**60**	**GW**
Shirpur	62	GW	103	PW	--	--	68	GW	65	GW	**68**	**GW**
Sindkheda	188	PW	148	PW	--	--	85	GW	80	GW	**88**	**GW**

UNS- Un-suitable; EXL – Excellent

10) Gadchiroli District

Gadchiroli District is situated in the North-eastern side of Maharashtra. The district is divided into three Sub-Divisions i.e. Gadchiroli, Aheri and Desaiganj and each sub-division has four talukas. The main river basin of the district is Godavari which borders the southern boundary of the district and flows west to east. The eastern part of district ie, Dhanora, Etappali, Aheri and Sironcha talukas are covered by the forest. Hills are located in Bhamaragad, Tipagad, Palasgad and Surjagad.

General Information:
Geographical Area: 14,412 sq. km
Taluka-12; Aheri, Armori, Bhamragarh, Chamorshi, Desaiganj/Wadsa, Dhanora, Etapalli, Gadchiroli, Korchi, Kurkheda, Mulchera, Sironcha
Villages: 1679 Population: 9,70,294
Soil Type:
The predominant soil cover in the district is clay, clay-gravel, sandy loam, deep black soil, reddish and yellowish brown soils on hill slopes, brown & gray soils of plains and laterite & lateritic soil.
Annual Rainfall: 892.9 mm
Geology: Recent: Alluvium, Laterite, Gondwana: Upper Sand stone, clays,
Lower Kamthi Ferruginous Sandstone and clays,
Pre-Cambrian: Vindhyan Sandstone, Limestone, Conglomerates,
Cuddapaha Shales, Archeans: Oldest crystalline and metamorphic

Ground Water Quality with Respect to BSI Standard and Water Quality Index

All 12 talukas of Gadchiroli district were monitored for 117 villages by CGWB. The descriptive statistics of ground water monitoring carried out in the villages are given in **Annexure IX. Table 6.17 and Annexure X(10)** gives the water quality index of ground water for five years at Gadchiroli district.

Aheri, Armori and Bhamragarh: Nitrate exceedance was reported as 40% and 7% of the samples at Aheri and Armori taluka respectively. High nitrate levels could be due to mineral deposition and chemical fertilizers and use of pesticides. Govindpur, Allapalli, Rajeram and Modumadgu villages reported to have poor WQI in ***Aheri*** Taluka. Talodhi Rampur showed

excellent WQI in Aheri. Five year WQI was reported to be good. Armori village of ***Armori*** taluka had poor water quality during 2008.Other villages had good WQI. Excellent WQI was observed Delanwadi and Wairagarh villages in Armori Taluka. Limited data was available for ***Bhamragarh*** taluka, and the analysis indicated as good WQI for most of the villages as all the values are within the desirable or permissible limits.

Chamorshi, Mulchera and Korchi: Exceedance of parameters viz. pH, hardness, magnesium, fluoride and nitrate are reported at Chamorshi (21, 14, 7, 7 and 21%); Mulchera (20, 40, 20, 10, 60%) and Korchi (33, 11, 11, 0, 11%) respectively. This could be due to lime deposition and excessive use of chemicals in agricultural field. The village's viz. Konsari, Kurud and Shankarpur Heti in ***Chamorshi*** taluka, and Chaudampalli and Ghot in ***Mulchera*** Taluka was reported to have poor to very poor WQI over the years. In ***Korchi*** taluka Bori village also showed poor water quality. Bedgaon, Malewara and Zankargondi villages had excellent WQI. The five year WQI shows that, at initial years it was reporting poor and later years it improved to good WQI.

Desaiganj (wadsa), Dhanora and Etapalli: Exceedance of pH was reported to be 11-27% and nitrate was 27-43% of the times. It is due to weathering and circulation of water in rocks and soils and excessive use of chemical fertilizers. Shankarpur village in ***Desaiganj*** taluka was reported as poor in 2007 -08, which showed improvement in 2009.Poor water quality was reported in Elchil and Aldandi villages of ***Etapalli*** taluka during 2007. As this region comes under forest area and Godavari basin most of villages are reported to have good to excellent WQI. Some of the villages viz. Shankarpur and Vihirgaon in Desaiganj taluka; Dhanora, Murumgaon and Chatgaon in Dhanora taluka had excellent water quality indices.

Gadchiroli, Sironcha and Kurkheda: Percent exceedance for Nitrate was 21% and 6% in Gadchiroli and Khurkheda Talukas. It is 57% for nitrate, and 14% for pH, hardness and magnesium in Kurkheda taluka. Villages with excellent WQI are Porla, Gowardha, Erkar and Khondala in ***Gadchiroli taluka***; Bijarpurtola, Gothangaon, Gargada, Wadhona, Yengelkheda and Mendha in ***Kurkheda*** taluka. Five year trend also shows good WQ indices as most of the parameters were within the desirable or permissible limits.

Table 6.17: Water Quality Index of Groundwater of Gadchiroli District

Talukas	2007		2008		2009		2010		2011		5 Yrs. WQI	
	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg
Aheri	91	GW	123	PW	98	GW	95	GW	--	--	**94**	**GW**
Armori	66	GW	99	GW	46	EXL	67	GW	--	--	**67**	**GW**
Bhamragarh	59	GW	--	--	--	--	72	GW	--	--	**70**	**GW**
Chamorshi	110	PW	112	PW	103	PW	80	GW	--	--	**87**	**GW**
Desaiganj (wadsa)	88	GW	107	PW	73	GW	64	GW	--	--	**72**	**GW**
Dhanora	78	GW	59	GW	52	GW	60	GW	--	--	**60**	**GW**
Etapalli	76	GW	98	GW	78	GW	76	GW	--	--	**74**	**GW**
Gadchiroli	74	GW	68	GW	45	EXL	78	GW	--	--	**63**	**GW**
Korchi	226	VPW	61	GW	--	--	49	EXL	--	--	**64**	**GW**
Mulchera	153	PW	181	PW	197	PW	72	GW	--	--	**130**	**PW**
Sironcha	104	PW	98	GW	117	PW	75	GW	--	--	**88**	**GW**
Kurkheda	--	--	92	GW	--	--	53	GW	--	--	**55**	**GW**

UNS- Un-suitable; EXL – Excellent

Five years trend shows, water quality of Gadchiroli is good except at Mulchera taluka. At initial year's upto 2009, it showed poor WQI, but significant improvement was noticed in later years. Sandstone, clays and limestone are the major soil constituents, which may cause the contamination in ground water quality. Forest area maintains the ground water recharging.

11) Gondia District

Gondia district is situated on North-Eastern side of Maharashtra state having state borders of Madhya Pradesh and Chattisgarh. This is undeveloped district and most of the land is covered with forest. The main profession of people is farming. There are many rice mills in the district as paddy is the main agriculture produce. Geomorphologically the district can be divided into two parts 1) North-Western, north eastern, south-eastern and central parts which have structural units like hills and ridges. 2) The northern, north-central, west central, south and south-west portions having undulating topography over denudational units like pediments and fluvial units. Wainganga River is the largest and most important river. Rivers like Bagh, Chulbandh, Gadhavi and Bavanthadi are the tributaries of river Wainganga.

General Information:
Geographical Area: 4843.13 sq. km
Taluka-8: Amgaon, Arjuni Moregaon, Deori, Gondia, Goregaon, Sadak Arjuni, Salekasa and Tiroda
Villages: 954, Population: 1200151
Soil Type:
The soil is sandy to sandy-loam in texture and reddish in colour.
Annual Rainfall: 1197 mm

Geology: Pleistocene to Recent: Alluvium and Lalerite; Protozoic: Vindhyan Super Group
Archaean: Granite & Gneisses

Major Ground Water Problems and Issues:

In most of the parts of Gondia district, high amount of fluoride is observed. This has caused many diseases due to excessive fluorine.

Ground Water Quality with Respect to BIS Standard and Water Quality Index

All 8 talukas of Gondia district were monitored for 68 villages by CGWB. The descriptive statistics of ground water monitoring carried out in the villages are given in **Annexure IX**. **Table 6.18 and Annexure X(11)** give the water quality index of ground water for five years at Gondia district.

Amgaon, Arjuni Moregaon and Deori: Overall five year water quality indices show that this talukas have good water quality. 17-35% noncompliance with the standards for nitrate was observed in these three talukas. 25% non compliance with the standard for pH was observed at Deori taluka. Only villages' viz., Navegaon Kh. Karandli, Tadgaon and Zanshinagar in ***Arjuni Moregaon*** taluka and Amgaon and Padmapur in ***Amgaon*** taluka showed poor water quality during 2009-2011. There are no major pollution sources, which results in overall good to excellent WQI. Villages with excellent WQI are Dongargaon and Kalimati in Amgaon taluka; Bondgaon, Navegaon and Karandli in Arjuni Moregaon and Chichgarh and Borgaon Bazar in ***Deori*** taluka.

Gondia, Goregaon and Sadal Arjuni: The overall water quality of these talukas was excellent during 2007-11. All the parameters were within the permissible limits in ***Goregaon Taluka***. Percent non compliance for nitrate and pH at ***Gondia taluka*** were 17 and 10% respectively. Percent non compliance for nitrate and pH at ***Sadal Arjuni*** were 13 and 38% respectively.

Tiroda and Salekasa: As per descriptive statistics 30% (pH) and 40% (nitrate) exceedance was reported for Trioda taluka, whereas it was 63 and 13% respectively for Salekasa taluka. All other parameters were within the permissible limits. Village's viz. Salebardi, Tiroda during 2008-2009 and Chorkhamara, Kawalewada and Rustampur during 2010 showed poor WQI in ***Tiroda*** taluka. Poor water quality may be due to excessive use of fertilizers in rice fields. ***Salekasa taluka*** showed good water quality.

Table 6.18: Water Quality Index of Groundwater of Gondia District

Talukas	2007		2008		2009		2010		2011		5 Yrs. WQI	
	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg
Amgaon	48	EXL	51	GW	56	GW	101	PW	--	--	**66**	**GW**
Arjuni Moregaon	55	GW	58	GW	91	GW	88	GW	--	--	**72**	**GW**
Deori	59	GW	59	GW	76	GW	59	GW	--	--	**57**	**GW**
Gondia	41	EXL	45	EXL	64	GW	89	GW	--	--	**55**	**GW**
Goregaon	73	GW	61	GW	57	GW	--	--	--	--	**56**	**GW**
Sadal Arjuni	58	GW	52	GW	52	GW	67	GW	--	--	**60**	**GW**
Tiroda	89	GW	80	GW	89	GW	120	PW	--	--	**96**	**GW**
Salekasa	41	EXL	37	EXL	--	--	72	GW	--	--	**62**	**GW**

UNS- Un-suitable; EXL – Excellent

Yearly water quality of Gondia district showed excellent water quality at Salekasa and Gondia talukas in 2007 and 08. Good WQI was observed at Arjuni Moregaon, Deori, Goregaon and Sadal Arjuni. Talukas viz. Amgaon, Gondia, and Tiroda with problems of fluoride contamination needs special attention.

12) Hingoli District

It is situated at the northern part of Marathwada region. Borders of Hingoli are surrounded by Akola and Yavatmal in northern side, Parbhani in western side and Nanded at south-eastern side. This district is part of Aurangabad division.

General Information:
Geographical Area: 4,526 sq. km
Taluka-5 : Aundha-Nag, Basmatnagar, Hingoli, Kalmnuri, Sengaon
Population: 9,87,160
Soil Type:

Two types of soil is found in this district. They are: 1. Heavy soil: Clay- more than 40%; silt- 25 to 30%. 2. Medium soil: sand 23 to 52%; silt- 28 to 50%; Clay- 7 to 27%; depth- 25 to 50 cm.

Annual Rainfall: 895 mm

Ground Water Quality with Respect to BIS Standard and Water Quality Index

Out of 5 taluka's 31 villages were monitored by CGWB. The descriptive statistics of ground water monitoring carried out in the villages are given in **Annexure IX**. **Table 6.19 and Annexure X(12)** give the water quality index of ground water for five years at Hingoli district.

Aundha (Nag), Basmatnagar and Hingoli –20% percent exceedance of fluoride, and 30% noncompliance of pH was noticed in ***Aundha taluka***. Fluoride and Nitrate did not comply

with the standards in 11 and 16% of the samples in ***Basmatnagar taluka***. Nitrate and pH did not comply in 8 and 21% of the samples in ***Hingoli taluka***.

Kalmnuri and Sengaon : Percent exceedance was 14%for in ***Kalmunri*** taluka, whereas fluroide and pH exceedance were 17% for ***Sengaon*** taluka. From limited data Tuppa village in Kalmunri taluka showed poor WQI.

Table 6.19: Water Quality Index of Groundwater of Hingoli District

Talukas	2007		2008		2009		2010		2011		5 Yrs. WQI	
	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg
Aundha (Nag)	66	GW	68	GW	--	--	90	GW	91	GW	**84**	**GW**
Basmatnagar	76	GW	60	GW	--	--	67	GW	77	GW	**70**	**GW**
Hingoli	117	PW	153	PW	139	PW	69	GW	84	GW	**85**	**GW**
Sengaon	55	GW	61	GW	--	--	54	GW	73	GW	**57**	**GW**
Kalmnuri	--	--	--	--	--	--	94	GW	75	GW	**83**	**GW**

The overall water quality of Hingoli district showed good water quality, but Hingoli Taluka was found to be poor during 2007-09.

13) Jalgaon District

Jalgaon district is situated in north western part of Maharashtra. The district is bounded on the north by Madhya Pradesh State. The district can be divided into three main physiographic divisions i.e. Satpura hill ranges in the northern part with dense forest; Tapi valley consisting of alluvial plain in the central part of the district and Ajanta hill ranges, in the southern part of the district. The major part of the district comes under Tapi basin.

General Information:
Geographical Area: 11,765 sq. km.
Taluka-15: Amalner, Bhadgaon, Bhusawal, Bodwad, Chalisgaon, Chopda, Dharangaon, Erandol, Jalgaon, Jamner, Mukainagar, Parola, Pachora, Raver and Yaval
Villages: 1519 Population (2001): 36,82,690
Soil Type:

The soils in Jalgaon district are essentially derived from the basaltic lava flows and are classified as follows: a) **Deep black soil**- observed in northern part of Amalner, Erandol, Jalgaon, Bhusaval and Edilabad talukas. b) **Medium black soil**- occur over large areas in the district viz.; the central belt of the wide Tapi valley and southern hills. c) **Loamy and sandy soil**- observed in the southern-most part of Amalner, Erandol, Jalgaon and Bhusaval. d) **Forest soil**- observed on the foothills of Satpura ranges and near southern hillocks and occur on slopes mainly in the Satpura ranges.

Annual Rainfall: 669.86 mm
Geology**:** Alluvium, Quaternary to Recent: Bazada (Talus and Screen), Younger Alluvium, Older Alluvium, Upper Cretaceous-Lower Eocene: Basalt (Deccan Traps)

Major Ground Water Problems and Issues:

Deeper water levels have been observed in parts of Yaval, Raver and Chopda talukas. Ground water quality is affected at many places by high concentration of nitrate and fluoride.

Ground Water Quality with Respect to BIS Standard and Water Quality Index

Out of 15 talukas, 120 villages were monitored by CGWB. The descriptive statistics of ground water monitoring carried out in the villages are given in **Annexure IX**. **Table 6.20**and **Annexure X(13)**gives the water quality index of ground water for Jalgaon district.

Amalner, Bhadgaon, Bhusawal and Bodwad: Nearly 30% exceedance of pH, magnesium and hardness, 18% for calcium, chloride and sulphate and 25% for dissolved solids and nitrate was observed in the samples of ***Amalner*** taluka. Maximum concentration of 1153 mg/l for nitrate and 2080 mg/l for TDS was reported at Amalner taluka. 10-30% exceedance of hardness, calcium, magnesium and nitrate was observed in ***Bhadgaon*** Taluka. At ***Bhusawal*** taluka 14% exceedance for pH and fluoride was observed. Maximum exceedance of 90% for nitrate was reported at ***Bodwad*** taluka. Unsuitable and very poor water quality was reported at Sadavan Bk., Bodwad, and Dhar and Mehergaon villages of Amalner taluka. Villages Varkhedi of Bhadgaon taluka and nearly all villages of Bodwad reported poor water quality. Domestic and small industrial discharges, excessive use of fertilizers in agricultural, mineral deposition in soil reflected the water quality. The five year trends show at Amalner and Bhadgaon had unsuitable to poor water quality. Bhusawal had good WQI.

Chalisgaon, Chopda, Dharangaon and Erandol: Percent exceedances of 31, 3, 90 and 15% respectively for Nitrate were reported for these talukas. Exceedances of 6-12% for pH, TH, calcium, magniusm and fluoride were also observed. ***Chalisgaon*** water quality was reported to be very poor for consecutive years. Dhanora, Deoziri, Adgaon, Hated bk., Chahardi villages of ***Chopad*** taluka and Dharangaon and Pimpalkotha of ***Dharangaon*** taluka also reported poor water quality during the analyzed years. Village Kasoda in ***Erandol taluka*** was noticed to have poor WQI during 2007-09. Poor quality of water could be due to chemical fertilizers, pesticides and sewerage contamination.

Jamner, Mukainagar, Parola and Raver: The maximum exceedance of nitrate was 100%at Mukainagar and Parola; whereas Jamner and Raver Talukas reported 64 and 22% respectively. Exceedance of 10% for hardness and magnesium was also reported at Jamner. It was observed that Jamner reported poor and overall WQI for ***Jamner*** taluka varied from good to poor in all the five years. With limited data available, Narvel village in ***Mukainagar***

taluka reported poor water quality, similarly poor water quality was observed at Raver and Talwade Kd. villages of ***Raver*** taluka. Villages Adgaon, Rajwad, Mhasve and Undirkheda in ***Parola*** taluka reported poor water quality. The other villages of this talukas had good water quality.

Jalgaon, Pachora and Yaval: Nearly 30% exceedance was reported for nitrate in Jalgaon and Pachora talukas. Similarly Non compliance of pH ranged between 30-58% in Pachora and Yaval talukas. Other WQI parameters were marginally exceeded as 5-9%. Villages' viz. Naseerabad, Higone, Mendhoda and Vakdi of ***Jalgaon*** taluka during 2007-2009; Vadgaon ambe and Khurad bk. of ***Pachora*** taluka during 2011 was observed to have poor water quality. In ***Yaval*** taluka village namely Bamnod was reported as poor in 2010, but same is showing excellent in 2011, which may be due local forces affecting the quality for particulate year.

Table 6.20: Water Quality Index of Groundwater of Jalgon District

Talukas	2007		2008		2009		2010		2011		5 Yrs. WQI	
	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg
Amalner	449	UNS	726	UNS	615	UNS	105	PW	110	PW	**188**	**PW**
Bhadgaon	152	PW	145	PW	--	--	--	--	77	GW	**110**	**PW**
Bhusawal	84	GW	73	GW	68	GW	81	GW	--	--	**69**	**GW**
Bodwad	82	GW	--	--	101	PW	--	--	--	--	**81**	**GW**
Chalisgaon	138	PW	83	GW	100	GW	--	--	68	GW	**79**	**GW**
Chopda	46	EXL	134	PW	54	GW	119	PW	81	GW	**93**	**GW**
Dharangaon	193	PW	117	PW	108	PW	--	--	--	--	**128**	**PW**
Erandol	132	PW	96	GW	112	PW	101	PW	76	GW	**90**	**GW**
Jamner	119	PW	96	GW	84	GW	--	--	--	--	**87**	**GW**
Mukainagar	156	PW	--	--	--	--	--	--	--	--	**139**	**PW**
Parola	--	--	126	PW	130	PW	88	GW	67	GW	**80**	**GW**
Raver	80	GW	83	GW	87	GW	80	GW	57	GW	**68**	**GW**
Yaval	62	GW	46	EXL	52	GW	75	GW	69	GW	**68**	**GW**
Jalgaon	125	PW	107	PW	87	GW	82	GW	--	--	**92**	**GW**
Pachora	--	--	--	--	--	--	--	--	86	GW	**86**	**GW**

UNS- Un-suitable; EXL – Excellent

Five years water quality of Jalgaon district showed good water quality at Bhusawal, Bodwad, Chalisgaon, Chopda, Erandol, Jamner, Parola, Raver, Yaval, Jalgaon, Pachora; whereas poor water quality was observed in Bhadgaon, Dharangaon and Mukainagar talukas. In case of Amalner taluka water quality was found to be unsuitable for drinking. In most of the regions of Jalgaon district, ground water is mainly affected by excess concentration of nitrate along with other inorganic pollutant such as TDS, TH, Ca^{+2} and Mg^{+2}. Higher surrounding temperature increases the evaporation rate and lower down the ground water levels and results in accumulation of the pollutants in water. Apart from this, human activities, agricultural runoff and domestic discharges resulting deterioration of ground water quality.

14) Jalna District

The district has moderately to gently sloping undulated topography. The Northern part of the district is occupied by Ajanta and satmala hill ranges. 95% area of the district falls in the Godavari basin. The river Godavari flows along the Southern boundary from West to East direction. The rivers Dudhana, Gulati, Purna are the principal tributaries of river Godavari, which flow through the district. The major part of the district falls in the Purna sub basin. The river Purna flows from the central part of the district and meets river Godavari in the neighboring district. The southern part of the district falls in Godavari sub basin. A small part of the district located in the North East falls in the Tapi basin.

General Information
Geographical Area: 7612 sq. km
Taluka-8: Ambad, Badnapur, Bhokardan, Ghansawangi, Jafrabad, Jalna, Mantha, Parthur
Villages: 970 Population: 16,12,357
Soil Type:

The soils of the district are black with considerable variation in texture and depth. They are light, medium and heavy soils. The soils along the river banks especially in Ambad and Partur blocks are deep black and fertile. The soils in northern part of the district i.e. in Jalna, Bhokardan and Jaffrabad blocks are coarser.

Annual Rainfall: 763 mm
Geology: Recent: Alluvium, Upper Cretaceous to Lower Eocene: Basalt (Deccan Trap)

Major Ground Water Problems and Issues:

The major part of the district forms the moderately dissected basaltic plateau, which has moderate to good groundwater potential. The northern part forms the highly dissected basaltic plateau; the ground water potential is expected to be poor.

Ground Water Quality with Respect to BSI Standard and Water Quality Index

All 8 talukas covering 116 villages were monitored by CGWB. The descriptive statistics of ground water monitoring carried out in the villages are given in **Annexure IX**. **Table 6.21 and Annexure X(14)** gives the water quality index of ground water for five years at Jalna district.

Ambad, Badnapur, Bhokardan and Ghansawangi: As per descriptive statistics, exeedance of permissible limit for pH was 8-20%, hardness, dissolved solids, calcium, magnesium, iron, sulphate and fluoride 5-14% and nitrate 15-24%. In ***Ambad*** taluka, the villages namely Ambad and Shahagad show poor to very poor water quality for all the reported years. Most of the villages' viz. Rohilagad, Shevga, Pangarkheda and Tahadgaon also show poor quality. In 2007, Dungaon was observed to be good but deteriorated in 2010. Similarly Shahapur showed poor water quality in 2010 which improved in 2011 to good.

The villages Silegaon, Dhopteshwar and Chanegaon were observed poor, whereas Kandari kh was reported excellent in ***Badnapur taluka*****. In Bhokardan taluka,** Hasnabad and Longaon were observed to have poor water quality for all consecutive years. Mixed trend was observed for villages namely Malkapur, Gosegaon and Khandala. The ground water quality of Rajani, Tirthpuri and Masegaon villages were also noticed as poor in **Ghansawangi taluka,** Water quality of Ghonshi bk. and Raniunchagaon villages were observed to vary between poor and good.

Jafrabad, Jalna, Mantha and Parthur: The percent exceedance of pH, TDS, TH, Ca^{2+} and Mg^{2+} were reported to be 10-25%. 21-41% exceedance of nitrate, 5-13% of chloride, sulphate and fluoride were noticed in these talukas. Water quality was unsuitable at ***Jafrabad*** for almost all the years. Water quality was poor at Bhutkheda village for all the years. However, Mahora and Revgaon villages in Jafrabad taluka had excellent water quality during 2010-11. At ***Jalna taluka***, Jalna, Tirthpuri, Viregaon, Badnapur and Rohanwadi villages were observed to have very poor to unsuitable water.

Table 6.21: Water Quality Index of Groundwater of Jalna District

Talukas	2007		2008		2009		2010		2011		5 Yrs. WQI	
	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg
Ambad	144	PW	119	PW	151	PW	122	PW	87	GW	**116**	**PW**
Badnapur	132	PW	92	GW	--	--	94	GW	67	GW	**92**	**GW**
Bhokardan	202	VPW	160	PW	318	UNS	98	GW	75	GW	**99**	**GW**
Ghansawangi	76	GW	179	PW	--	--	96	GW	67	GW	**88**	**GW**
Jafrabad	385	UNS	1311	UNS	647	UNS	113	PW	91	GW	**206**	**VPW**
Jalna	150	PW	115	PW	93	GW	115	PW	85	GW	**109**	**PW**
Mantha	135	PW	290	VPW	73	GW	125	PW	63	GW	**115**	**PW**
Parthur	152	PW	157	PW	166	PW	99	GW	71	GW	**99**	**GW**

UNS- Un-suitable; EXL – Excellent

Five years water quality of Jalna district showed poor water quality at Ambad, Jalna and Mantha talukas whereas; Jafrabad ground water quality was found to be unsuitable for drinking in 2007-2009. Significantly high concentrations of TDS, TH, Ca^{2+}, Mg^{2+} and nitrate affecting the overall water quality could be due to geological and soil texture of this region. The Purna River carries wastewater from nearby cities impact the ground water recharge. Proper implementation of STPs and demarcation of ground water recharge zone can improve the quality. The ground water requires proper treatment before using for drinking purpose.

15) Kolhapur District

Kolhapur district is the southernmost district of Maharashtra. The city is situated on the banks of river Panchganga. Two distinct trends in the hill ranges are seen in the district. One runs roughly north-south, along the main range of the Western Ghats presenting wild and picturesque hill slopes and valleys. The other one comprises the narrow broken-crested ridges and flat topped masses stretching eastwards and merging gradually into the plains in the east. The rivers Hiranyakeshi, Krishna, Vedganga, Dudhganga, Bhogvati and Panchganga drain the area towards east.

General Information:
Geographical Area: 7692 sq. km
Taluka-12 : Ajra, Bhudargad, Chandgad, Gadinglaj, Gagan bauda, Hatkanangale, Kagal, Kolhapur, Panhala, Radhanagari, Shahuwadi, Shirol
Villages: 1009, Population: 35,15,413
Soil Type:

The district is covered by the basaltic Sahayadri ranges. The land gradually slopes towards the east into the Deccan plateau which is gently undulating with ridges and valleys. Due to these topographical features, the soils in the district vary from tract to tract, so much so that even in a single village, as between field and field, a variety of soils from rich-loam to poor thin *murmad* is met with. The soils are derived mainly from trap, except in the forest covered mountainous area in the west where they are of lateritic origin. The laterite overlies the trap rock. Consequently, in the western portion the hill tops and ridges are covered with lateritic soils; while in the valleys the soils are of mixed character, varying in colour from brownish to reddish. In the eastern portion, due to its undulating nature, deeper soils are formed in the low-lying parts, while the ridges are covered by shallow soils, more or less partially eroded. Physiographically, Kolhapur district can be divided into three broad soil zones: (*a*) the western part, with heavy rainfall (is mountainous and woody and is covered with lateritic soils); (*b*) the fertile central part, with brownish well-drained soils of neutral reaction; and (*c*) the dry eastern zone, with precarious rainfall and covered with medium black soil of varying depth.

Annual Rainfall: 1138.5 mm
Geology: Recent and Sub-Recent: Soil and Laterite, Lower Eocene: Deccan trap
Cuddapah: Lower Kaladgi Series, Archaean: Granite-gneiss Dharwars

Ground Water Quality with Respect to BIS Standard and Water Quality Index

Out of 12 talukas 138 villages were monitored by CGWB. The descriptive statistics of ground water monitoring carried out in the villages are given in **Annexure IX**. **Table 6.22** and **Annexure X(15)** give the water quality index of ground water for five years at Kolhapur district.

Ajra, Bhudargad and Chandgad: Percent exceedances for pH were in the ranges of 9-29% and 3-10% for nitrate. Fe also exceeded the standard 11-14% of the time at Ajra and Bhudargad talukas respectively. Many rivers like Panchganga, Krishna and dudhganga are

flowing in this region and annual rainfall is also high resulting in good ground water recharge. The overall water quality indices were observed to be good. Villages' viz. Harur, Gavase and Lakudwadi reported excellent quality at ***Ajra*** taluka. Similarly, Nitawade, Naganwadi, Karadwadi, Gargoti, Tiravade, Patgaon and Pimpalgaon villages of ***Bhudargad*** taluka also showed excellent quality. The same trend was also reported at Karve, Adkur, Chandgad, Hajgoli, Shinoli Bk. and Tambulwadi villages of ***Chandgad*** taluka for all the years.

Gadinglaj, Gagan bauda, Hatkanangale: At Gadinglaj and Hatkanangale talukas percent exceedance of nitrate were 29 and 23% respectively.TH, SO_4^{-2} and Fe also exceeded the standards slightly. At location Halkarni and Kasba Nool water quality was poor during 2010; excellent water quality was reported at Nesari, Mahagaon, Donewadi and Gadhinglaj villages at ***Gadinglaj*** taluka. The whole ***Gaganbawada*** taluka was observed to be excellent for given samples in all the years. The villages of Halondi, Ichalkarnji, Kabnoor, Pargaon, Vadgoan and Halondi ***of Hatkanangale*** taluka were observed to have poor water quality during 2010.

Kagal, Kolhapur and Panhala: All the parameters were within the desirable or permissible limits except nitrate which exceeded the permissible standards 4-8% of the time. The villages of ***Kagal*** taluka viz. Walve Kh. and Murud had excellent WQI and other villages showed good WQI. Ground water recharge and proper precautionary measures taken by Municipal Corporation's resulted in good to excellent water quality in Kolhapur district. Some of the villages viz. Authur, Shiroli and Halkarne of ***Kolhapur taluka***, showed poor WQI during 2007 and 2008. Kurukali, Kerli, Partangale and Kogli Bk had excellent water quality. ***Panhala*** taluka had good to excellent WQI as it is situated in the hilly region. Excellent WQI was reported for Pimplethane, Kisrool, Panhala and Marali villages of Panhala taluka for all the years.

Radhanagari, Shahuwadi and Shirol: All the parameters at Radhanagari and Shahuwadi taluka were within the permissible limits. Only at Shirol taluka, nitrate exceedance was reported 63% of the time. Magnesium, TH, calcium, sulphate also exceeded the permissible limit and percent exceedance ranged between 4-8%. At ***Radhanagari*** and ***Shahuwadi*** talukas most of the villages reported to have excellent water quality. The reverse trend was observed at ***Shirol*** taluka where 80-90 percent villages had poor WQI. Danwad Nave, Ghosarwad, Kurundwad, Ganeshwadi and Jambhali villages of Shirul taluka had poor WQI. This is due to high nitrate in this region because of excessive use of fertilizer and soil structure.

Table 6.22: Water Quality Index of Groundwater of Kolhapur District

Talukas	2007		2008		2009		2010		2011		5 Yrs. WQI	
	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg
Ajra	78	GW	55	GW	64	GW	58	GW	--	--	**58**	**GW**
Bhudargad	28	EXL	66	GW	39	EXL	55	GW	--	--	**51**	**GW**
Chandgad	22	EXL	--	--	22	EXL	44	EXL	--	--	**41**	**EXL**
Gadinglaj	47	EXL	47	EXL	45	EXL	76	GW	--	--	**68**	**GW**
Gaganbawada	17	EXL	23	EXL	17	EXL	33	EXL	--	--	**26**	**EXL**
Hatkanangale	94	GW	92	GW	79	GW	96	GW	--	--	**94**	**GW**
Kagal	64	GW	80	GW	57	GW	69	GW	--	--	**68**	**GW**
Kolhapur	70	GW	72	GW	60	GW	59	GW	--	--	**60**	**GW**
Panhala	33	EXL	32	EXL	24	EXL	55	GW	--	--	**46**	**EXL**
Radhanagari	53	GW	33	EXL	42	EXL	43	EXL	--	--	**42**	**EXL**
Shahuwadi	33	EXL	59	GW	46	EXL	51	GW	--	--	**47**	**EXL**
Shirol	--	--	--	--	--	--	120	PW	--	--	**120**	**PW**

UNS- Un-suitable; EXL – Excellent

Five years water quality of Kolhapur district showed excellent water quality at Chandgad, Gaganbawada, Panhala, Radhanagari and Shahuwadi. Only at Shirol it's observed to be poor, with limited data available for 2010. Heavy rainfall in this district helps to recharge the ground water.

16) Latur District

Latur is one of the drought districts of Marathwada region of Maharashtra State. It is situated in the south-eastern part of the state, and at the border of Maharashtra and Karnataka states. The district forms part of Godavari basin. Manjra River is the main river flowing through the district.

General Information:
Geographical Area: 7157 sq. km.
Talukas -10: Ahmadpur, Ausa, Deoni, Chakur, Jalkot, Latur, Nilganga, Renapur, Shirur Anantpal and Udgir
Villages: 945, Population (2001): 20,80,285
Soil Type:

The district can be divided into the following two zones based on soil characteristics i.e., the first zone which occurs in eastern part of the district comprises of Ahmedpur, Udgir and parts of Latur and Ausa talukas. It consists of light and light medium soil of inferior type. They are not retentive of moisture and are therefore suitable for the cultivation of Kharif crops only. The second zone which occurs in western part of the district has heavy deep black cotton soil. Owing to the peculiarity of the soil, both Kharif and Rabi crops are cultivated in this zone.

Annual Rainfall: 650 mm to 800 mm
Geology: Recent: Alluvium, Upper Cretaceous-Lower Eocene: Deccan Trap Basalt

Major Ground Water Problems and Issues

The entire district comes under “drought area”. In major parts of the district in almost entire Nilanga, Ausa, Latur and Renapur talukas and northern part of Ahmadpur and southern part of Udgir taluka falling/declining water levels have been observed. These areas have deeper pre-monsoon water levels in the range of 10 to 20 m below ground level.

Ground Water Quality with Respect to BIS Standard and Water Quality Index

95 villages in 10 talukas were monitored by CGWB. The descriptive statistics of ground water monitoring carried out in the villages are given in **Annexure IX**. **Table 6.23** and **Annexure X(16)** give the water quality index of ground water in Latur district for five years.

Ahmadpur, Ausa, Chakur and Deoni: Exceedance of TH, iron and nitrate (10-16%) was observed in ***Ahmadpur*** taluka. Most of the villages had good water quality except Kingaon, Ahmasdpur.

Exceedance of pH, TH, iron, Fluoride and nitrate (3-7%) were observed in Ausa taluka The WQI for ***Ausa*** taluka was good throughout the years, except for Belkund (2007) and Shivali (2010) where it was poor. The overall ground water quality was found to be good in 2008-09, and in 2010 villages’ namely Kharosa, Killari, Borgaon, Kharosa and Talni showed excellent water quality.

Exceedance of pH(25%), TH(4%), iron(8%), and nitrate (17%) were observed in Chakur taluka. At ***Chakur*** taluka villages of Chapoli, Ashta showed poor water quality and also Shivankhed village in 2010. WQI for Ashta, Latur road and Kabansangvi were excellent; whereas, villages of ***Deoni*** taluka showed mixed WQI.

Jalkot, Latur, Nilanga and Renapur: Exceedance of 10-24% in pH and nitrate were observed in these talukas. The Patoda and Kolnoor villages of ***Jalkot*** taluka showed good WQI from 2007 to 2010. In ***Latur*** taluka Borgaon Kale, Murud- Akola and Panderwadi villages indicated poor water quality in 2007 to 2009. This may due to intensive fertilizer in agriculture use, intrusion of un-sewered sanitation. Improvement was observed in 2010. Villages Bhatkheda, Bhisewagholi, and Karsa had good to excellent WQI. Village Kasar Sirsi of ***Nilanga*** taluka showed good water quality in all the years except 2009 when it was poor. Other villages had good to excellent water quality. Sarwadi, Shivni kothal, Nilanga, Barmachiwadi, Garsuli, Sindgoan and Dawangaon villages of ***Renapur*** taluka indicated good to excellent water quality in all the years.

Shirur Anantpal and Udgir: The ground water quality indices evaluated for the villages of these talukas indicated that the water quality was good throughout the years. All the parameters were within the permissible limits except pH which ranged between (17-26%).

Table 6.23: Water Quality Index of Groundwater of Latur District

Talukas	2007		2008		2009		2010		2011		5 Yrs. WQI	
	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg
Ahmadpur	122	PW	113	PW	108	PW	69	GW	54	GW	**68**	**GW**
Ausa	179	PW	76	GW	68	GW	68	GW	--	--	**70**	**GW**
Chakur	94	GW	97	GW	90	GW	65	GW	--	--	**71**	**GW**
Deoni	--	--	--	--	--	--	67	GW	--	--	**67**	**GW**
Jalkot	--	--	54	GW	58	GW	64	GW	--	--	**57**	**GW**
Latur	101	PW	112	PW	99	GW	57	GW	--	--	**68**	**GW**
Nilanga	79	GW	81	GW	94	GW	57	GW	62	GW	**63**	**GW**
Renapur	67	GW	45	EXL	--	--	56	GW	--	--	**55**	**GW**
Shirur Anantpal	--	--	--	--	--	--	60	GW	--	--	**60**	**GW**
Udgir	72	GW	--	--	62	GW	66	GW	--	--	**65**	**GW**

UNS- Un-suitable; EXL – Excellent

Five years water quality of Latur district showed good water quality for whole district. Being a drought district, drinking water problems are severe, especially during summer season. At some places pH and nitrate contamination is the major issue for this district which needs a special attention.

17) Mumbai District

The broad physiographic feature of the Mumbai district is broad and flat terrain flanked by north - south hill ranges. The hill ranges form almost parallel ridges in the eastern and western part of the area. The Powai - Kanheri hills form the largest hilly terrain in the central part of the Salsette Island and are the feeder zone for the three lakes viz., Powai, Vihar and Tulsi. The area is drained by Mahim, Mithi and Dahisar rivers.

General Information:
Geographical Area: 630 sq. km. (Mumbai City- 69 sq. km.; Mumbai Suburb- 561 sq. km.
Taluka/ Villages /Wards : Churchgate, Colaba, Deulwadi, Mahim, Borivali, Goregaon-Andheri and Kurla
Population (2001): 1,77,02,761
Soil Type: Medium to deep black and reddish coloured soil
Annual Rainfall: 1800 mm to 2400 mm
Geology: Recent: Alluvium, Upper Cretaceous to Lower Eocene: Basalt (Deccan Trap), Rhyolite and Trachyte

Major Ground Water Problems and Issues

Drinking water supply is provided through water reservoirs like Modak sagar, Tansa and Vaitarna located in Thane district from where water is pumped to Mumbai city. Ground water exploitation for commercial purposes like construction, hotel industry and domestic purposes of the housing societies is carried out in entire district. Water is extracted from existing dug wells and bore wells, even new bore wells are being drilled for this purpose. Being complex city, underground sewer system leakage affect the ground water resources. Geologically existing rivers viz. Mithi and Dahisar are now a days highly polluted due to non point discharges of domestic sewage and industrial effluents. In addition to this various dumping locations, oil refineries, reactors, fertilizers industry are also affecting the ground water quality in nearby areas.

Ground Water Quality with Respect to BIS Standard and Water Quality Index

Out of 24 wards in Mumbai, 8 locations were monitored by CGWB. The city is mainly divided into main city and suburban area. The descriptive statistics of ground water monitoring carried out in Mumbai district are given in **Annexure IX**. **Table 6.24** and **Annexure X(17)** give the water quality index of ground water for five years for Mumbai district.

Mumbai City: Data for 2010 and 2011 is not available. With the available data it was observed that all the parameters except nitrate were within permissible levels. Percent exceedances of Nitrate in Colaba, Borivali (Dahisar) and Goregaon east talukas were 33, 50 and 33% respectively. The WQI evaluations of Mumbai (Churchgate) and Colaba (Dandi) indicated that the ground water quality was good for given years. Mahim taluka indicated that the ground water quality varied between good and excellent during 2007 to 2009. Ground water monitoring of Kurla was done in 2008 and the water quality was excellent. At Andheri water quality varied between good and excellent. Ground water monitored in Deulwadi in 2007 had good water quality. Dahisar village in Borivali taluka was monitored in the years2007 and 09 and it showed having poor water quality during 2007 which improved to excellent in 2009. In Mahroli (Chemur) area water quality was observed to be good in 2009.

Table 6.24: Water Quality Index of Groundwater of Mumbai District

Talukas	2007		2008		2009		2010		2011		5 Yrs. WQI	
	WQI	Catg.	WQI	Catg	WQI	Catg.	WQI	Catg	WQI	Catg	WQI	Catg.
Mumbai City												
Church Gate	75	GW	90	GW	70	GW	--	--	--	--	**70**	**GW**
Colaba	58	GW	76	GW	58	GW	--	--	--	--	**57**	**GW**
Deulwadi	63	GW	--	--	--	--	--	--	--	--	**57**	**GW**
Mahim	49	EXL	54	GW	37	EXL	--	--	--	--	**41**	**EXL**
Chembur					73	GW	--	--	--	--	**65**	**GW**
Mumbai Suburban Area												
Borivali	--	--	109	PW	46	EXL	--	--	--	--	**69**	**GW**
Goregaon -Andheri	38	EXL	60	GW	38	EXL	--	--	--	--	**40**	**EXL**
Kurla	--	--	25	EXL	--	--	--	--	--	--	**22**	**EXL**

Even though the overall water quality is good, but still the city is facing problem of water contamination by local activities like sewer lines. Salinity and hardness is of major concern because of coast line area. As very limited data is available conclusions can not be drawn and requires extensive data collection.

18) Nagpur District

Nagpur district is one of the districts of Vidarbha Region of Maharashtra State. The district forms part of Deccan Plateau. Eastward and northeastwards the landscape changes due to the change in the underlying rocks. On the north, the upland ranges are the extension of Satpuras which gradually narrow down towards west. South of these upland range stretches the Ambegad hills, the western extremity of which is the Nagpur district. The northeastern and east central parts of the district are drained by the Wainganga and its tributaries. The central and western portion is drained by Wena which is a tributary of Wardha River. The district forms part of Godavari basin. Wainganga River is the main river flowing through the district.

General Information:
Geographical Area: 9892 sq. km.
Taluka-14: Bhivapur, Hingna, Kalmeshwar, Kamptee, Kuhi, Katol, Mouda Nagpur, Narkhed, Nagpur Rural, Parseoni, Ramtek, Saoner, Umred
Villages: 1562 Population: 40.51 Lakh
Soil Type:

Some of the soil pattern found in Nagpur district are : 1) Kali soils: These are black cotton soils which are fine grained clayey in texture and varies in depth from 1 m to 6 m or more and retain moisture. They are found around Kalmeshwar, Saoner and Nagpur. 2) Morand soils: These are predominant in the district. They are black cotton soils with higher percentage of lime than the Kali soils. They are black, grey or light to dark brown in colour, clayey in texture and have a depth of about 1 to 3 m. 3) Khardi soils: They are shallow soils mixed with sand and found mainly in hills. These are grey in colour, clay loam in texture. 4) Bardi soils: They are red gravel covered with boulders found on

summits and slopes of trap hills and are less fertile in nature. 5) Kachchar soils: They are mainly found in the banks of Kanhan River and are alluvial soils, loamy in nature and vary in depth from 1 to 3 m. 6) Wardi soils: They are red soils with a large amount of sand. They are shallower and clayey loam in nature. They are mainly found in the paddy tracts in the eastern part of the district.

Annual Rainfall: 1000 mm to 1200 mm

Geology: Recent: Alluvium, Upper Cretaceous-Lower Eocene: Deccan Trap Basalt, Cretaceous: Lameta, Permian to Carboniferous: Gondwana, Archean: Crystalline rocks

Major Ground Water Problems and Issues

Ground water quality in parts of Nagpur city is adversely affected by nitrate contamination, whereas in Kalmeshwar and Hingna MIDC areas the contamination of ground water has taken place due to discharge of industrial effluents.

Ground Water Quality with Respect to BIS Standard and Water Quality Index

124 villages in 14 talukas were monitored by CGWB. The descriptive statistics of ground water monitoring carried out in the villages are given in **Annexure IX**. **Table 6.25** and **Annexure X(18)** give the water quality index of ground water of Nagpur district for five years.

Bhivapur, Hingna, Kalmeshwar, Kamptee: As per descriptive statistics the exceedance of TH reported as 10-30%, Ca^{2+}, $Mg^{2+}$and Fluoride (5-20%), and nitrate exceedance 20-40% was observed in these talukas. The village of Nawegaon ***Bhivapur*** taluka shows good WQI for 2007-09, whereas Zamkoli, Kargaon, Kargaon and Panjrepar villages are showing poor water quality, if Fe was considered as WQI parameter in 2010. ***In Hingna*** taluka, village of Amgaon indicated good WQI in 2007-2009. Otherwise mix trend pointing towards poor WQI was observed in this taluka and affected villages are Kanholibora, Saongi Deoli, Takalghat and Mangli. The unsuitable water quality was observed at Kalmeshwar village which reflects to all the years, as also Telkamthi, Khumari and Telkamthi reported poor in ***Kalmeshwar*** taluka. Mix trend also observed at ***Kamptee*** taluka were most of the villages namely Kamptee, Koradi and Adka are reported very badly. The unprecedented city growth of Nagpur and lack of awareness programme impacted this region. Five years trend also shows quality of water decline over the years.

Kuhi, Katol, Mouda, Nagpur, and Narkhed: As per BIS standard, hardness exceeded 44% at Kuhi and 29% at Narkhed. Exceedance of Fluoride about 11-30% at Kuhi and Mouda; and nitrate exeedance of 20% at Nagpur and 52% at Narkhed was reported in given samples.

The mineral deposition and rock pattern affect the fluoride and nitrate contamination. In 2007 ***Kuhi*** taluka was showing good quality which deteriorated in 2010 as also village namely Gothangaon and Mandhal shows poor WQI. Most of the villages of ***Katola*** taluka spotted towards good WQI only at Katol and Dhotiwada villages it impacted as poor, if Fe was considered as indicator. All the villages of ***Mouda*** taluka showing good WQI except at Chacher and Mathni it was poor. Overall ***Nagpur*** taluka city is impacted as good WQI as city civic authorities and local body movement helps to rejuvenate ground water quality programme, but some places namely Mangli, Kanholi bara, Bokhara and Gonhi villages are showing poor WQI. Similarly mix trend was observed at ***Narkhed*** taluka where quality is replicated towards poor and good, affected villages are Narkhed, Sawargaon and Belona.

Nagpur Rural, Parseoni, Ramtek, Saoner, Umred and Katol: The overall water quality of ***Rural Nagpur*** was good as not major interference of anthropogenic activities, which also reflect in ***Parseoni*** taluka only fluoride and nitrate exceedance of 10-15% was reported. In ***Ramtek*** taluka villages namely Ramtek, Karwahi, Salai and Chorbaoli reported poor, if we considered iron as a parameter. Most of the times ***Saoner*** taluka inclined towards poor WQI, the village namely Kothulna reported all the time bad as against Khubala village shows good to excellent in 2007 to 2008, other villages are in mix trend. ***Umred*** taluka, monitored data showed that the water quality was good to excellent as all the parameters were within the desirable or permissible limit. ***Katol*** taluka is also indicating mix status ie. good to poor and impacted villages are Katol and Dhotiwada. As observed from all these taluka exceedance of TH (14-18%), Fluoride (3-20%), and nitrate (15-30%) were observed, which the probable reasons for poor water quality.

Table 6.25: Water Quality Index of Groundwater of Nagpur District

Talukas	2007		2008		2009		2010		2011		5 Yrs. WQI	
	WQI	Catg.	WQI	Catg	WQI	Catg.	WQI	Catg	WQI	Catg	WQI	Catg.
Bhivapur	65	GW	53	GW	61	GW	116	PW	--	--	**99**	**GW**
Hingna	53	GW	64	GW	51	GW	122	PW	--	--	**111**	**PW**
Kalmeshwar	283	VPW	313	UNS	129	PW	123	PW	--	--	**156**	**PW**
Kamptee	133	PW	110	PW	110	PW	92	GW	--	--	**97**	**GW**
Kuhi	49	EXL	40	EXL	--	--	115	PW	--	--	**98**	**GW**
Mouda	78	GW	65	GW	66	GW	103	PW	--	--	**89**	**GW**
Nagpur	89	GW	79	GW	92	GW	96	GW	--	--	**83**	**GW**
Narkhed	125	PW	86	GW	103	PW	107	PW	--	--	**103**	**PW**
Parseoni	83	GW	63	GW	70	GW	84	GW	--	--	**78**	**GW**
Ramtek	175	PW	169	PW	--	--	108	PW	--	--	**116**	**PW**
Saoner	116	PW	97	GW	85	GW	93	GW	--	--	**91**	**GW**
Umred	--	--	48	EXL	--	--	86	GW	--	--	**81**	**GW**
Nagpur Rural	--	--	--	--	--	--	70	GW	--	--	**70**	**GW**
Katol	--	--	--	--	--	--	94	GW	--	--	**94**	**GW**

UNS- Un-suitable; EXL – Excellent

Five years water quality of Nagpur district showed that good to excellent water quality at Umred and Rural Nagpur, Parseoni area. The other parts of the district showed mixed trend as initially at some place good impacted bad visa versa. Kalmeshwar, Kamptee and Ramtek are all the time poor WQI as indicator. The high concentration of TH, Mg^{2+} and nitrate along with fluoride exceedance in some part of this region indicated mineral deposition. The poor water quality could also be due to contaminated water from Wainganga, Wena and Wardha tributaries, which submerge with cities pollution load and impacted ground water recharge phenomenon. The proper precautionary measures and ground water recharge programme needs to be implemented.

19) Nanded District

Nanded District is located in the south eastern part of the state of Maharashtra, bordering Andhra Pradesh. The area has undulating topography with uneven hills, plateau, gentle slopes and valley planes. Physiographically, the district can be divided in to 2 major parts, the hilly region on the North and North East and low lying area on the banks of the rivers Godavari, Manjra, Manyad, Penganga etc. The main river in the district is Godavari which flows through the centre of the district.

General Information:
Geographical Area: 10,332 sq. km
Taluka-16: Ardhapur, Bhokar, Biloli, Deglur, Dharmabad, Hadgaon, Himayat nagar, Kinmat, Kandhar, Mahur, Mukhed, Mudkhed, Nanded, Naigaon, Loha andUmri
Villages: 1572, Population: 28,76,259
Soil Type:
Soils along the banks of rivers are deep and clayey. Except for the depth, the soils of the district do not show much variation in physical and chemical properties. Soils have light grey-brown to grey-brown colour on the surface, clayey texture and blocky structure. Soils are highly clayey with clay content varying from 45.5 to 69.5%. The high exchangeable capacity of the soil indicates high soil fertility.
Annual Rainfall: 953.8 mm
Geology: Recent- Soil and gravel, Cretaceous to Eocene- Deccan trap flows, Archaean: Peninsular granite complex-pink and grey granites and quartz veins. Banded haematite-quartzites and epidiorites of the Dharwar system

Ground Water Quality with Respect to BIS Standard and Water Quality Index

106 villages in 16 talukas were monitored by CGWB. The descriptive statistics of ground water monitoring carried out in the villages are given in **Annexure IX**. **Table 6.26 and Annexure X(19)** give the water quality index of ground water for five years at Nanded district.

Ardhapur, Bhokar, Biloli and Deglur : With Limited available data aall parameters are within permissible limit at ***Ardhapur*** taluka except pH. pH exceeded the permissible limit 67% of the time. Percent exceedances of pH, TH, and Nitrate are 33, 11 and 22% at Bhokar taluka. Poor water quality was reported at ***Bhokar*** village in 2007-08 and good water quality in 2011.All parameters are within permissible limit at ***Biloli***. Percent exceedances of pH, TH, and Fluoride are 36, and 29% at ***Deglur*** taluka.

Dharmabad, Hadgaon, Himayat nagar and Kinwat : Percent exceedances of pH and Flouride were 60 and 20% respectively at Dharmabad taluka. Villages of Yeoti, Dharmabad and Karegaon in ***Dharmabad*** taluka was found to be good from given data. Percent exceedances of pH, Flouride and nitrate were 29,24 and 6% respectively at ***Hadgaon*** taluka. pH, Flouride and Nitrate exceed by 40, 20 and 20% at Himayatnagar taluka. ***Himayat nagar*** village had poor water quality in 2007 but improved to good in 2011.pH and Flouride exceed by19, and 50% respectively at Kinwat taluka.Village of Bothroad and Islapur in ***Kinwat*** taluka had excellent water quality and other villages had good WQI.

Kandhar, Mahur, Mukhed, Mudkhed : Percent exceedances in ***Kandhar*** taluka are 42 and 17% for pH and Fluoride respectively. Kandhar village had poor WQI in 2007. Other villages including Bhadurpura, Bachoti, Banni, Osmanagarh, Pethwadaj, Warwant had good water quality. With limited data available for ***Mahur*** taluka, percent exceedances observed are 33% for both pH and Nitrate.Percent exceedances in Mukher taluka are 15, 10 and 33% for pH, Fluoride and nitrate respectively. Poor water quality was noticed in Sikarghat and Lahan in 2007-08 and Barhali had mixed trend. Excellent WQI was found at Malegaon (I) village in ***Mukhed*** taluka in 2009.25% exceedances of pH and Fluoride are observed in Mudkhed taluka. In ***Mudkhed*** taluka Mudkhed and Mugat had good WQI.

Nanded, Naigaon, Loha and Umri : Percent exceedances in Nanded taluka are 17 and 50% for pH and Nitrate respectively. At ***Nanded*** taluka villages namely Jamb Buzurg, Narwat, Markand and Adampur had poor WQI.Percent exceedances in ***Naigaon*** taluka are 14, 14, and 28% for pH, TH and Fluoride respectively.Percent exceedances in ***Loha*** taluka are 29, 43 and 14% for pH, Fluoride and Nitrate respectively. In ***Umri*** taluka, percent exceedances are 60 and 10% for pH and Fluoride respectively.

Average water quality of Nanded district varied between good to poor, intensive data collection is required to understand the ground water quality. Most of the time poor water quality was reported in Talukas Bhokar, Himayat Nagar and Loha. Higher values of pH, nitrate and fluoride are the major issues for this region.

Table 6.26: Water Quality Index of Groundwater of Nanded District

Talukas	2007		2008		2009		2010		2011		5 Yrs. WQI	
	WQI	Catg.	WQI	Catg	WQI	Catg.	WQI	Catg	WQI	Catg	WQI	Catg.
Bhokar	168	PW	136	PW	--	--	60	GW	71	GW	**84**	**GW**
Hadgaon	68	GW	148	PW	--	--	79	GW	72	GW	**76**	**GW**
HimayatNgr.	173	PW	--	--	--	--	--	--	79	GW	**94**	**GW**
Kinwat	61	GW	83	GW	--	--	--	--	66	GW	**65**	**GW**
Mahur	84	GW	--	--	--	--	--	---	49	EXL	**58**	**GW**
Mukhed	88	GW	95	GW	85	GW	94	GW	71	GW	**79**	**GW**
Nanded	85	GW	91	GW	94	GW	120	PW	82	GW	**82**	**GW**
Biloli	53	GW	73	GW	--	--	--	--	--	--	**56**	**GW**
Ardhapur	--	--	--	--	--	--	--	--	63	GW	**63**	**GW**
Mudkhed	--	--	--	--	--	--	76	GW	69	GW	**72**	**GW**
Naigaon	--	--	--	--	--	--	--	--	83	GW	**83**	**GW**
Deglur	--	--	--	--	--	--	79	GW	76	GW	**77**	**GW**
Dharmabad	--	--	--	--	--	--	66	GW	72	GW	**71**	**GW**
Kandhar	--	--	--	--	--	--	75	GW	74	GW	**74**	**GW**
Loha	--	--	--	--	--	--	114	PW	85	GW	**93**	**GW**
Umri	--	--	--	--	--	--	63	GW	82	GW	**73**	**GW**

UNS- Un-suitable; EXL – Excellent

20) Nandurbar District

Nandurbar district was part of Dhule district and made as a district on 1st July 1998. It is surrounded by Dhule district in the south and east, Gujarat State in the west and Madhya Pradesh State in the north. Agriculture is the main occupation of the people. The district forms part of Tapi and Narmada basins. The district can be broadly divided into following four distinct physiographic units i.e., Satpura Hilly Region, Tapi River Valley proper, Region of the dykes and residual hills of the Sahayadri Spurs. North of Tapi River, the whole length of the rich alluvial plain is bounded by the steep southern face of the Satpudas.

General Information:
Geographical Area: 5034 sq. km.
Taluka- 6: Akkalkuva, Dhadgaon, Nandurbar, Nawapur, Shahada and Taloda
Villages: 864, Population: 13,09,135

Soil Type:

Mainly three types of soils are observed in the district i.e., coarse shallow soils, medium deep soils and deep black soils. The northern part of the district has dark brown to yellowish brown coarse shallow to medium deep soils, with clayey loamy deep soils of Tapi River and Narmada River valley to its south and north respectively. Below the Tapi River valley comes the belt of medium deep soils mostly with interception of medium and shallow soils in scattered patches, depending on the local conditions.

Annual Rainfall: 650 mm to 1100 mm

Geology: Recent: Alluvium, Upper Cretaceous-Lower Eocene: Deccan Trap Basalt, Middle-Upper Cretaceous: Bagh Bed

Major Ground Water Problems and Issues

Almost entire Akkalkuwa taluka and parts of Akrani, Nawapur and Nandurbar talukas are categorized as 'drought area'. Deeper water levels are also observed in northern part of the district i.e., in almost entire Akrani taluka and northern parts of Akkalkuva, Taloda and Shahada talukas during both pre-monsoon and post monsoon seasons. Thus the deeper water levels are mostly confined to alluvial areas and hilly basaltic areas.

Ground Water Quality with Respect to BIS Standard and Water Quality Index

63 villages in 6 talukas were monitored by CGWB. The descriptive statistics of ground water monitoring carried out in the villages are given in **Annexure IX**. **Table 6.27 and Annexure X(20)** give the water quality index of ground water for five years at Nandurbar district.

Akkalkuva, Dhadgaon and Nandurbar: Exceedance of pH ranging from 13-35% and TH, magnesium and nitrate ranging from 2-10% was observed in given samples. Villages namely Akkalkuva, Kathi, Raisingpur, Moramba and Karanpada of ***Akkalkuva taluka*** and Chinalkuva, Mandvi Bk., Dhadgaon and Umarani Kh. of ***Dhadgaon taluka*** were observed to be excellent. Same status is observed for Kuntumwadi, Ranala, Vadkolambi and Nimboni villages of ***Nadurbar taluka***. Other villages had good WQI. Only Shanimandal village reported poor to very poor WQI. Bhadavad village (in 2007 and 2009) and also Wadali Shivar village (in 2007) of Nandurbar taluka showed poor water quality.

Nawapur, Shahada and Taloda: Nitrate exceedance of 7% in Navapur taluka and pH exceedance ranging from 12-25% was observed in Nawapur, Shahada and Taloda talukas. Most of the villages of ***Nawapur taluka*** had good WQI. Excellent water quality was observed in Kamod, Vadkhut, and Visarwadi and Sonkhamb villages of this taluka. Similarly Mandane, Sarangkheda and Sonwad in ***Shahada taluka*** and Rozwe, Umari and Gopalpur in ***Taloda taluka*** had excellent WQI. All other villages of these talukas showed

Table 6.27: Water Quality Index of Groundwater of Nadurbar District

Talukas	2007		2008		2009		2010		2011		5 Yrs. WQI	
	WQI	Catg.	WQI	Catg	WQI	Catg.	WQI	Catg	WQI	Catg	WQI	Catg.
Akkalkuva	58	GW	53	GW	60	GW	81	GW	47	EXL	**57**	**GW**
Nandurbar	77	GW	69	GW	77	GW	70	GW	90	GW	**74**	**GW**
Navapur	78	GW	79	GW	83	GW	54	GW	58	GW	**57**	**GW**
Taloda	72	GW	59	GW	64	GW	50	GW	52	GW	**53**	**GW**
Dhadgaon	--	--	--	--	--	--	55	GW	43	EXL	**46**	**EXL**
Shahada	--	--	--	--	--	--	59	GW	60	GW	**60**	**GW**

UNS- Un-suitable; EXL – Excellent

Five years trend for Nadurbar district shows good to excellent water quality index. Excellent water quality was observed in Kuntumwadi, Rajhava, and Vadkolambi and Rojwe villages of this district for all the years. Even though all locations showed good water quality, this region has the problem of low water level.

21) Nasik District

Nasik district is situated in north western part of Maharashtra. Nasik is one of the largest districts in Maharashtra in terms of area and population. The district forms part of Godavari basin (southern part) and Tapi basin (northern part). Godavari and Girna are the main rivers flowing through the district. The district forms part of Western Ghat and Deccan Plateau. Physiographically Nasik district comprises of varied topography. The main system of hills is Sahayadri and its offshoots viz., Satmala, Selbari and Dolbari hill ranges. These hill ranges along with eastern and southern plains and Godavari valley are the distinct physiographic units.

General Information:
Geographical Area: 15530 sq. km
Taluka–16 : Baglan, Chandwad, Deola, Dindori, Igatpuri, Kalwan, Malegaon, Nandgaon, Nasik, Niphad, Peinth, Satana, Sinnar, Surgana, Trimbakeshwar and Yeola
Villages: 1931 Population: 49,94,000
Soil Type:

The soils of the district are the weathering products of Basalt and have various shades from gray to black, red and pink color. The soils occurring in the district are classified in four categories namely lateritic black soil (Kali), reddish brown soil (Mal), coarse shallow reddish black soil (Koral), medium light brownish black soil (Barad). In general the soils are very fertile and suitable for growing cereals and pulses. The black soil contains high alumina and carbonates of calcium and magnesium with variable amounts of potash, low nitrogen and phosphorus. The red soil is less common and is suitable for cultivation under a heavy and consistent rainfall.

Annual Rainfall: 500 mm to 3400 mm
Geology: Recent: Alluvium, Upper Cretaceous-Lower Eocene: Deccan Trap Basalt

Major Ground Water Problems and Issues:

Major part of the district (about 75%) falling east of Western Ghats comprising almost entire Sinnar, Niphad, Surgana, Kalvan, Satana, Chandwad, Yeola talukas and parts of Dindori, Peint and Malegaon talukas is classified as ‘drought areas’. Major parts of the district show fall in water level during pre monsoon period.

Ground Water Quality with Respect to BIS Standard and Water Quality Index

174 villages in sixteen talukas were monitored by CGWB. The descriptive statistics of ground water monitoring carried out in the villages are given in **Annexure IX**. **Table 6.28**

and Annexure X(21) give the water quality index of ground water of Nasik district for five years

Baglan, Deola, Chandwad and Dindori: Exceedanace of pH at Baglan was 27%. Exceedances of TH, Mg^{2+}, F and NO_3^- were in the range of 2-6%.Exceedanaces of pH, SO_4^{2-} F and Nitrate were 33, 33, 17 and 17% respectively at Deola taluka. All parameters of Chandvad taluka were within the permissible limits except pH whose percent exceedance was 27%.Exceedanace of pH at Dindori was 16%. Exceedances of F and NO_3 in Dindori taluka were low and ranged between 3-6%. Villages viz. Satana, Deopurpada and Karanjad villages of ***Baglan taluka*** varied between poor to excellent WQI. Excellent WQI was observed at Sogras and Vadbare villages of ***Chandwad talka.*** From taluka ***Deola,*** Gunjalnagar village reported poor water quality. At ***Dindori taluka,*** most of the time water quality observed was good; and excellent water quality was observed at Nalegaon, Nanashi, Kona and Umrale Bk villages of Dindori Taluka.

Igatpuri, Kalwan, Malegaon and Nandgaon: Comparison with BIS standards shows that pH exceeded the permissible limit 16-46% of the time in these talukas. Only pH exceeded the standard at Igatpuri (26% exceedance). Nearly all the villages come under the category of good to excellent category at ***Igatpuri taluka***. Wadi, Varhe, Igatpuri and Take Deogaon villages of Igatpuri taluka had excellent water quality. TH, Ca^{2+}, Mg^{2+}, and SO_4^{2-} exceed the standards (4-11%) of the time in **Kalwan taluka**. Inshi, Pilakos and Sakore villages had poor water quality in Kalwan taluka. All other villages had good or excellent water quality. TDS, TH, Mg^{2+}, Fe, TA, SO_4^{2-}, F and NO_3^- exceeded the standards (3-13%) of the time at Malegaon. Jalgaon, Daregaon, Agar bk, Ravalgaon, Karanjagavan, Gilene, Ajande, Umarane, Saudane of ***Malegaon*** had poor WQI. Other villages had good WQI. At ***Nandgaon*** TDS, TH, Mg^{2+}, TA and F exceeded the standards (3-10%) of the time. Nandgaon, Bolthan, Jawalki, Khadgaon, Panewadi villages of Nandgaon taluka had poor WQI. Other villages had good water.

Nasik, Niphad, Peinth and Satana: Exceedance of TH (5-33%); Mg^{2+} (4-16%) and NO_3^- (8-33%) was reported for these three talukas except Peinth. The exceednace of pH was in the range of 14-28%. The water quality of ***Nasik taluka*** mainly varied between good to excellent, except at Jakhori, Botgaon Pimpri and Raslapur villages, where water quality was poor in 2007. Village Pimpalgaon Baswant in ***Niphad taluka*** had poor water quality for all the years. Savargaon village showed mixed trend; ***Satana*** village of Nasik taluka was observed to have poor, whereas at Nampur it varied between good and poor. Very limited data is available for this talukas; the probable reason for declining water quality could be the

high nitrate levels. The ***Peinth taluka*** was observed to have good to excellent water quality for these 5 years. Satna village of Satana taluka Taluka had poor water quality. Nampur village of Satana Taluka had good water quality.

Sinnar, Surgana, Trimbakeshwar and Yeola : pH, TDS, TH, Mg^{2+}, TA, F, NO_3^- exceeded the standards by 30, 5, 18, 10, 3, 3, and 10% respectively at Sinnar Taluka. At Surgana taluka all the parameters were within the standard except pH which exceeded the standard 50% of the time. At Trimbakeswar taluka all the parameters were within the standard. At Yeola taluka, pH, TDS, TH, F and NO_3^- exceeded the standards 53, 12, 12, 6 and 12 % of the time.WQI if Sinnar village of ***Sinnar*** taluka was reported as very poor in 2008-09, which improved in 2010, and villages Ujjani, Chondhi and Musalgaon was reported poor in 2010-11. At other sites most of the time water quality indices were good. Surgana and Chikadi villages of ***Surgana taluka*** were observed as excellent from a limited data available for analysis. Similarly Dahalewadi and Harsul villages of ***Trimbakeshwar taluka*** were reported to have excellent water quality. At ***Yeola taluka,*** villages namely Mukhed, Ankai and Nagarsal had WQI varying between from poor to excellent.

Table 6.28: Water Quality Index of Groundwater of Nasik District

Talukas	2007		2008		2009		2010		2011		5 Yrs. WQI	
	WQI	Catg.	WQI	Catg	WQI	Catg.	WQI	Catg	WQI	Catg	WQI	Catg.
Baglan	--	--	--	--	--	--	75	GW	73	GW	**74**	**GW**
Chandwad	--	--	38	EXL	--	--	68	GW	65	GW	**64**	**GW**
Deola	--	--	--	--	124	PW	65	GW	106	PW	**101**	**PW**
Dindori	60	GW	56	GW	80	GW	65	GW	60	GW	**60**	**GW**
Igatpuri	63	GW	71	GW	61	GW	48	EXL	47	EXL	**48**	**EXL**
Kalwan	60	GW	65	GW	68	GW	62	GW	73	GW	**68**	**GW**
Malegaon	116	PW	94	GW	90	GW	91	GW	97	GW	**93**	**GW**
Nandgaon	226	VPW	174	PW	--	--	75	GW	87	GW	**89**	**GW**
Nasik	84	GW	86	GW	95	GW	66	GW	61	GW	**68**	**GW**
Niphad	78	GW	145	PW	122	PW	104	PW	90	GW	**98**	**GW**
Peinth	--	--	77	GW	71	GW	40	EXL	43	EXL	**45**	**EXL**
Satana	182	PW	178	PW	80	GW	--	--	--	--	**131**	**PW**
Sinnar	--	--	233	VPW	257	VPW	81	GW	96	GW	**93**	**GW**
Surgana	--	--	--	--	--	--	49	EXL	57	GW	**53**	**GW**
Trimbakeshwar	38	EXL	51	GW	41	EXL	--	--	--	--	**40**	**EXL**
Yeola	61	GW	--	--	--	--	63	GW	85	GW	**75**	**GW**

UNS- Un-suitable; EXL – Excellent

From the overall ground water quality of Nasik district, it was observed that talukas namely Igatpuri Peinth and Trimbakeshwar had excellent water quality, whereas Dindori and Satana had poor water quality. Remaining taluka's had good water quality indices.

22) Osmanbad District

Osmanabad is one of the districts of Marathwada region of Maharashtra and famous for Tuljabhavani temple at Tuljapur. It is situated in the southern part of the State. The district forms part of Deccan Plateau, locally known as Balaghat Plateau, with slope towards southwest and south and has a varied topography consisting of hills, plains and undulating topography near riverbanks. The district forms a part of Godavari basin. Many of the tributaries to Godavari River originate from the Balaghat Plateau. Manjra River is the main river flowing through the district.

General Information:
Geographical Area: 7512 sq. km.
Taluka-7: Bhum, Kalambh, Lohara, Omerga, Osmanabad, Paranda and Tuljapur
Villages: 729 Population: 14,86,586
Soil Type:

The soil of the district is basically derived from Deccan Trap Basalt and the district broadly has three major soil types. Shallow Soils occur in small patches in western and northwestern parts of the district. These soils are light brown to dark grey in colour and loamy to clayey loamy in texture. Medium Soils are found in parts of Bhum, Kalambh and Osmanabad talukas. They are dark brown to dark grey in colour. Medium deep soils occur in patches in Tuljapur taluka. The colour of these soil varies from dark grey brown to very dark grey. They are clayey in texture.

Annual Rainfall: 600 mm to 850 mm
Geology: Upper Cretaceous-Lower Eocene: Deccan Trap Basalt

Major Ground Water Problems and Issues

In almost all talukas of Osmanabad district with some exceptions, the 'severe drought conditions' are experienced. It results in low water levels in major parts of the district, both during pre and post monsoon periods. The ground water quality in deeper aquifers is generally affected by fluoride and nitrate contamination in Osmanabad, Tuljapur and Omerga talukas and also some parts of urban areas.

Ground Water Quality with Respect to BIS Standard and Water Quality Index

Out of 7 talukas, 76 villages were monitored by CGWB. The descriptive statistics of ground water monitoring carried out in the villages are given in **Annexure IX**. **Table 6.29 and Annexure X(22)** give the water quality index for five years at Osmanabad district.

Bhum, Kalambh, Lohara and Omerga: At Bhum Taluka, pH and NO_3 exceeded the standards 25 and 8% of the time. The Bhum village of ***taluka Bhum*** had poor water quality in 2007 which improved to good quality in 2009 and 2010. Other villages had good to excellent water quality. At ***Kalambh Taluka***, pH, TH, Ca^{2+}, Mg^{2+} and NO_3^- exceed the standards 28, 14,7,7,7 % of the time. In Kalambh taluka**,** all the villages had good to

excellent water quality except village Pimpalwandi which had very poor water quality. Shiradhone, Lakhangaon and Stra had mostly excellent water quality. Very limited data is available for ***Lohara taluka.*** At ***Lohara Taluka*** all the parameters were within the standards except NO_3 which exceeded the standard 33% of the time. Percent exceedances for pH, Mg^{2+}, F and NO_3^- were 26, 5, 5 and 5% respectively at ***Omerga Taluka***. Gunjoti and Turori villages of Omerga taluka had unsuitable and poor water quality. Other villages had good to excellent water quality

Osmanabad, Paranda and Tuljapur: Nitrate exceedance of 18-20% at Osmanabad and Paranda talukas were observed. Fluoride and TH was also reported to exceed 5-13% of the time in these talukas.

Dhoki, Yedshi and Goverdhanwadi are some place where indices reported as poor; and Kanagara and Jagji noticed as excellent in ***Osmanabad taluka***. Most of the times water quality is good at ***Paranda taluka*** only at Wangi Kd. it was poor in 2011.

The overall villages of ***Tuljapur taluka*** showing good indices and excellent reported villages are Mangrul Naldurg and Kemwadi in 2011. The five year trend shows these talukas mainly influenced as good.

Table 6.29: Water Quality Index of Groundwater of Osmanbad District

Talukas	2007		2008		2009		2010		2011		5 Yrs. WQI	
	WQI	Catg.	WQI	Catg	WQI	Catg.	WQI	Catg	WQI	Catg	WQI	Catg.
Bhum	104	PW	104	PW	74	GW	58	GW	67	GW	**64**	**GW**
Kalambh	274	VPW	238	VPW	--	--	72	GW	67	GW	**79**	**GW**
Lohara	97	GW	80	GW	72	GW	--	--	--	--	**74**	**GW**
Osmanabad	80	GW	105	PW	90	GW	77	GW	83	GW	**83**	**GW**
Omerga	97	GW	115	PW	92	GW	112	PW	53	GW	**100**	**GW**
Paranda	85	GW	--	--	67	GW	65	GW	133	PW	**72**	**GW**
Tuljapur	--	--	68	GW	57	GW	80	GW	56	GW	**66**	**GW**

Osmanabad district comes under the drought area. The average rainfall is very less, which results into less recharging of ground water. Soil and geological nature play a significant role in affecting the water quality in-terms of high nitrate and fluoride. Five year data analysis showed that water quality in general good.

23) Parbhani District

Parbhani district is located in Marathawada region of Maharashtra State. Ajanta Hill ranges which passes through Jintur Tahsil is located on the north east. Balaghat Hill ranges are located on the southern side.

General Information:
Geographical Area: 6,14,064 sq. km
Taluka-9; Gangakhed, Jintur, Manwat, Palam, Parbhani, Pathari, Purna, Selu and Sonpeth
Villages: 852, Population: 15,27,715
Soil Type:

Most of the soil in Parbhani district is black cotton soil. The soil nearby Godavari River is deep and fertile. Middle part of the district viz. Selu, Pathri, Parbhani and Purna talukas and some of the part of Jintur taluka have medium and black soil. Gangakhed and Palam Talukas have light soils.

Annual Rainfall: 957.2 mm
Geology: Upper Cretaceous-Lower Eocene: Deccan Trap Basalt

Ground Water Quality with Respect to BIS Standard and Water Quality Index

Out of 9 talukas 68 villages are monitored by CGWB. The descriptive statistics of ground water quality are given in **Annexure IX**. **Table 6.30 and Annexure X(23)** give the water quality index of ground water for five years at Parbhani district.

Jintur, Manwat and Gangakhed: Percent exceedance of Fluoride was 22% in **Jintur taluka**. TH, Mg^{2+}, and NO_3^- also exceeded the standards by 13, 9 and 4% respectively**.** Overall water quality of the villages was poor for ***Jintur Taluka***. Limited data was available for analysis for ***Manwat taluka.*** Percent exceedance of Fluoride and Nitrate were as high as 33% in ***Manwat taluka***. Percent exceedance of Fluoride was 17% in **Gangakhed *taluka***. The overall water quality was good at Gangakhed taluka and excellent water quality was reported for Chukar village in 2011.

Palam, Parbhani and Pathari: Fluoride exceedances were reported to be in the range 14-20% in these talukas. Nitrate exceedances were reported to be 6-14%. Overall WQI was observed to be good for ***Palam taluka***. At Parbhani taluka most of the villages had good water quality except Singanapur, Todkalas, Asola, Zari, Tadlimla, Balas Kh, Parbhani village of ***Parbhani taluka.*** Very poor quality was noticed at Babulgaon in 2007.Poor quality was also observed at Banegaon, Pathri villages of ***Pathari taluka*** as nitrate levels were high.

Selu, Purna and Sonpeth: At selu and Sonpeth the exceedances of fluoride were in the range of 25-28%. In ***Selu taluka,*** the overall water quality was good except at Dhengali

pimpalgaon and Sindhe villages where it was observed to be poor in 2011. A very limited data was available for ***Sonpeth taluka*** which showed a mixed result of good and poor. In ***Purna Taluka*** all parameters complied with the standards and good water quality was observed in all the villages.

Table 6.30 : Water Quality Index of Groundwater of Parbhani District

Talukas	2007		2008		2009		2010		2011		5 Yrs. WQI	
	WQI	Catg.	WQI	Catg	WQI	Catg.	WQI	Catg	WQI	Catg	WQI	Catg.
Gangakhed	--	--	--	--	--	--	74	GW	70	GW	**72**	**GW**
Jintur	83	GW	52	GW	--	--	70	GW	118	PW	**90**	**GW**
Manwat	141	PW	--	--	139	PW	74	GW	71	GW	**90**	**GW**
Palam	75	GW	75	GW	--	--	109	PW	79	GW	**90**	**GW**
Parbhani	96	GW	87	GW	62	GW	88	GW	76	GW	**81**	**GW**
Pathari	222	VPW	--	--	74	GW	76	GW	82	GW	**85**	**GW**
Purna	--	--	--	--	--	--	64	GW	63	GW	**64**	**GW**
Selu	72	GW	81	GW	76	GW	71	GW	113	PW	**84**	**GW**
Sonpeth	--	--	--	--	--	--	99	GW	53	GW	**76**	**GW**

As per five year WQI the overall water quality of Parbhani district was good. At initial at Manwat and Pathari taluka showed poor quality in 2007, this improved in later years. Fluoride and Nitrate level exceedances are the issues in this district.

24) Pune District

Pune is the second largest district of Maharashtra State in respect of area. The district forms part of Western Ghat and Deccan Plateau. Physiographically, the district can be divided into three distinct belts, *western belt* cut by deep valleys, divided and crossed by hill ranges, *central belt* in which a series of small hills stretch in to valleys and *eastern belt* with the low hills sinking slowly into the plains with relatively broader valleys. The major rivers in this district are Bhima, Ghod, Mula, Mutha and Nira.

General Information:
Geographical Area: 15642 sq. km
Taluka – 14: Ambegaon, Baramati, Bhor, Daund, Pune Haveli, Indapur, Junnar, Mawal, Mulshi, Purandar, Rajgurnagar (Khed), Shirur, Wadgaon and Wehle
Villages: 1866 Population: 72,33,000
Soil Type: Two types of soils are found in this district: Medium Black and Deep Black soil
Annual Rainfall: 468 mm to 4659 mm
Geology: Recent: Alluvium, Upper Cretaceous-Lower Eocene: Deccan Trap Basalt

Major Ground Water Problems and Issues

Most of the parts of Pune district fall under rain shadow zone of Maharashtra State. Indapur, Baramati, Jujuri, Daund, Talegaon, Dhamdhare, Alandi, Shirur and Bhor covering around 50% area of the district are classified as drought areas. The ground water development in

Baramati, Ambegaon, Purandhar and Junnar talukas have already reached up to 100% and these talukas fall under "Semi-Critical" category. The ground water quality is mainly affected by localized nitrate contamination.

Ground Water Quality with Respect to BIS Standard and Water Quality Index

148 villages in 14 talukas were monitored by CGWB. The descriptive statistics of ground water quality are given in **Annexure IX**. **Table 6.31 and Annexure X(24)** give the water quality index of ground water for five years at Pune district.

Ambegaon, Baramati, Bhor and Daund: Nitrate concentrations were very high in these 4 talukas. **P**ercent exceedance of $NO3^-$ in ***Ambegaon Taluka*** was 47%. Exceedance of pH was 16%. At ***Ambegaon taluka*** village Kalamb had poor water quality and other villages had water quality varying between good and poor. Water quality was excellent in Chinchle Bk and Karanjv villages in 2008-09. In ***Baramati taluka***, percent exceedance of NO_3^- was 54%. Exceedances of pH, TDS, TH, Ca^{2+}, Mg^{2+}, Fe, Cl^-, and SO_4^{2-} were 19, 16, 22, 11, 24, 8, 8, and 14% respectively in ***Baramati taluka***. Loni Bhapkar, Morgaon, Medad, Ambi Bk and Karanje villages of ***Baramati taluka*** showed unsuitable water quality in 2010 and most of the other villages had poor water quality, some of them are Pandare, Sangvi and naira. With limited data available for ***Bhor Taluka*** it was observed that all parameters were within the standards except NO_3 which exceeded the standard 33% of the time. In ***Daund taluka*** exceedances of pH, TDS, TH, Ca^{2+}, Mg^{2+}, Cl^-, SO_4^{2-} and NO_3^- were 8, 5, 19, 14, 14, 5, 16 and 32% respectively. The maximum concentration of nitrate was 553.8 mg/l and 288.0 mg/l at Baratmati and Daund talukas respectively. the reported villages Nasarapur, Bholawade and Bhor showing good indices for 2010. The probable sources of contamination of ground water could be the over-application nitrate based fertilizers in farms, agricultural run-off, etc.

Pune Haveli, Indapur, Junnar, Mawal and Wadgaon: The nitrate concentration exceeded 39% of the time in ***Pune (Haveli)*** taluka. The exceedance of pH, TH, Mg^{2+}, SO_4^{2-}, F and NO_3^- were in the range 2-6%.Wagholi, Parne, Undavri Kade Pathar and Alandi Mhatobachi villages showed poor water quality; whereas Kasarwadi, Shivpur Khed and Bukum reported excellent water quality, other villages had mixed trend. In ***Indapuri taluka***, the exceedance of pH, SO_4^{2-} and $NO3^-$ were 36, 15 and 31% respectively. The exceedance of TDS, TH, $Mg^{2+}$and Fe, were in the range 5-10%.The nitrate concentration exceedance was 31 % in ***Junnar*** taluka. The maximum concentration of nitrate is in the range of 256- 531 mg/l at Pune Haveli, Indapur and Junnar talukas. The exceedance of pH, $Mg^{2+}$and Fe, were in the range 3-8%. All parameters complied with the standards at ***Mawal*** and ***Wadgaon Talukas.***

Mulshi, Purandar, Rajgurnagar (Khed), Shirur and Wehle: At ***Purander, Rajgurnagar (Khed), Shirur taluka***s the nitrate exceedance was about 39 to 51% of the samples. The maximum concentration of nitrate is in the range of 150- 310 mg/l at Purandar, Rajgurnagar (Khed) and Shirur talukas. At ***Purander taluka o***nly 2-7% of exceedance was observed for TH, Ca^{2+} and Mg^{2+}. At ***Shirur*** other parameters exceeded the standards by 2 to 10%. Excellent water quality was observed for almost all the samples of ***Mulshi taluka*** where all the parameters complied with the standards. With limited data available, the given samples of ***Wehel taluka*** showed excellent water quality with all the parameters complying with the standards.

Table 6.31: Water Quality Index of Groundwater of Pune District

Talukas	2007		2008		2009		2010		2011		5 Yrs. WQI	
	WQI	Catg.	WQI	Catg	WQI	Catg.	WQI	Catg	WQI	Catg	WQI	Catg.
Ambegaon	101	PW	93	GW	84	GW	72	GW	--	--	**77**	**GW**
Baramati	140	PW	137	PW	118	PW	153	PW	--	--	**144**	**PW**
Bhor	--	--	--	--	--	--	59	GW	--	--	**59**	**GW**
Daund	88	GW	75	GW	87	GW	84	GW	137	PW	**110**	**PW**
Pune (Haveli)	99	GW	96	GW	86	GW	87	GW	--	--	**85**	**GW**
Indapur	129	PW	108	PW	83	GW	111	PW	--	--	**109**	**PW**
Junnar	63	GW	87	GW	70	GW	70	GW	--	--	**68**	**GW**
Mawal	85	GW	73	GW	77	GW	42	EXL	--	--	**49**	**EXL**
Wadgaon (Maval)	--	--	40	EXL	32	EXL	--	--	--	--	**32**	**EXL**
Mulshi	36	EXL	34	EXL	33	EXL	43	EXL	--	--	**38**	**EXL**
Purandar	77	GW	58	GW	67	GW	109	PW	77	GW	**81**	**GW**
Rajgurnagar (Khed)	47	EXL	36	EXL	80	GW	78	GW	--	--	**72**	**GW**
Shirur	84	GW	81	GW	87	GW	109	PW	--	--	**100**	**GW**
Wehle	31	EXL	29	EXL	--	--	48	EXL			**31**	**EXL**

UNS- Un-suitable; EXL – Excellent

Five years water quality of Pune district showed excellent water quality at Mawal, Mulshi, Wadgaon (Maval), and Wehle; whereas poor quality was observed at Baramati, Daund and Indapur. In most of the region of Pune district ground water is mainly affected by excess concentration of nitrate along with other inorganic pollutant such as TDS, TH, Ca^{2+} and Mg^{2+}.

25) Raigad District

Raigad district is situated along the western coast of the State. It is bounded by Thane district in the north, Ratnagiri district in the south, Pune district in the east and Arabian Sea forms the western boundary having a length of about 250 km. The district has three physiographic divisions i.e. (i) Coastal zone in west covers about 20% percent of the district

(ii) Central zone covers about 1/3rd of the district, consisting of fertile land in low lying area (iii) Hilly zone in the eastern part highly uneven in altitude and covered with forests. Ulhas, Panvel and Patalganga are the three main rivers in northern part. Kundalika River is the main river in central part, whereas in the southern part Savitri is the main river.

General Information:
Geographical Area: 7152 sq. km
Taluka-16: Alibag, Karjat, Khalapur, Mahad, Mangaon, Mhasala, Murud, Panvel, Pen, Poladpur, Raigad, Roha, Sudhagad, Shrivardhan, Tala and Uran
Villages: 1919 Population: 22,08,000
Soil Type:

The soils in the district are formed from the Deccan Trap which is predominating rock formation with small crops of Laterite at a few places in the Poladpur taluka and Matheran hill. The soils are grouped as Forest, Varkas, Rice, Khar or Saline, Coastal Alluvium and Laterite as per the location and topographical situation.

Annual Rainfall: 2200 mm to 5000 mm
Geology: Pleistocene – Recent: Alluvium, Upper Cretaceous-Lower Eocene: Basalt (Deccan Traps)

Major Ground Water Problems and Issues

About 32000 ha of land in parts of Uran, Alibagh, Pen, Panvel, Murud, Roha, Mangaon, Mahad, Mhasala, Shrivardhan talukas along the coast and creek have been rendered saline due to breach in age old bunds. In affected areas, ground water quality has also become saline therefore rendering it unsuitable for irrigation. The prominent hill ranges, isolated hillocks, undulation etc., in the district give rise to higher runoff, rather than natural recharge. These aquifers then are drained naturally due to slopping and undulation topography. As a result, the dug wells become dry by the month of February onwards.

Ground Water Quality with Respect to BIS Standard and Water Quality Index

113 villages in 16 talukas were monitored by CGWB. The descriptive statistics of ground water are given in **Annexure IX**. **Table 6.32 and Annexure X(25)** give the water quality index of ground water for five years at Raigad district.

Khalapur, Poladpur, Murud, Panvel, Mangaon, Roha, Raigad, Sudhagad, Shrivardhan, Tala and Uran Talukas: All parameters in these talukas complied with the standards and WQI varied between good and excellent except Roha and Uran where the water quality was excellent. Data for 2010 and 11 were only available for Shrivardhan, Tala Uran and Murud talukas.

Alibag, Mhasala, Mahad and Karjat and Pen: Only pH exceeded the standard at ***Alibag*** and ***Mhasala taluka***. Other parameters were within the standards. The water quality of the

villages in Alibag and Mhasala varied between good to excellent. Only 5-8% exceedance of standards was observed for TDS, TH, Ca^{2+}, Mg^{2+}, Cl^- and SO_4^{2-}at ***Mahad Taluka***. All villages of Mahad taluka had good or excellent water quality except Dapoli which had very poor to unsuitable water. At ***Karjat taluka*** exceedance of TH and Mg was low and only 4% and water quality varied between good to excellent. Only 6-8% exceedance of standards was observed for TDS, TH, Ca^{2+}, $Mg^{2+}$and Cl^-at Mahad Taluka. All villages of ***Pen taluka*** had good or excellent water quality except Vadkhal village which had very poor water.

Table 6.32: Water Quality Index of Groundwater of Raigad District

Talukas	2007		2008		2009		2010		2011		5 Yrs. WQI	
	WQI	Catg.	WQI	Catg	WQI	Catg.	WQI	Catg	WQI	Catg	WQI	Catg.
Alibag	47	EXL	53	GW	54	GW	48	EXL	50	EXL	**48**	**EXL**
Karjat	46	EXL	47	EXL	49	EXL	51	GW	45	EXL	**46**	**EXL**
Khalapur	35	EXL	44	EXL	38	EXL	40	EXL	48	EXL	**40**	**EXL**
Mahad	142	PW	255	VPW	27	EXL	39	EXL	35	EXL	**61**	**GW**
Mangaon	30	EXL	37	EXL	39	EXL	45	EXL	43	EXL	**40**	**EXL**
Mhasala	26	EXL	24	EXL	16	EXL	42	EXL	40	EXL	**38**	**EXL**
Panvel	53	GW	28	EXL	57	GW	52	GW	56	GW	**52**	**GW**
Pen	50	EXL	241	VPW	122	PW	47	EXT	48	EXL	**58**	**GW**
Poladpur	54	GW	48	EXL	41	EXL	23	EXL	29	EXL	**36**	**EXL**
Raigad	51	GW	53	GW	65	GW	--	--	--	--	**48**	**EXL**
Roha	43	EXL	43	EXL	47	EXL	38	EXL	37	EXL	**38**	**EXL**
Sudhgad	52	GW	57	GW	29	EXL	38	EXL	--	--	**42**	**EXL**
Shrivardhan	--	--	--	--	--	--	35	EXL	58	GW	**45**	**EXL**
Tala	--	--	--	--	--	--	51	GW	59	GW	**55**	**GW**
Uran	--	--	--	--	--	--	41	EXL	43	EXL	**42**	**EXL**
Murud	--	--	--	--	--	--	41	EXL	43	EXL	**42**	**EXL**

UNS- Un-suitable; EXL – Excellent

As per five years, trend of Raigad taluka talukas namely Mahad, Panvel, Pen and Tala had good water and others had excellent water. Soil texture in this region changes from place to place i.e areas close to sea have saline soil, which affects the ground water quality of these areas. Sufficient annual rain fall in this district helps in recharging of ground water resources.

26) Ratnagiri District

Ratnagiri is one of the coastal districts of Maharashtra and forms part of the Konkan region. It is situated in between the Western Ghats and the Arabian Sea. Savitri, Vashisthi, Shastri, Ratnagiri, Jaitapur and Wagothan are the main rivers flowing through the district. About 45% of the area in Ratnagiri district is hilly. The physiography of the area has given rise to

five characteristic landforms: *Coastline, estuarine plains and river basins, lateritic plateaus, residual hills and scarp faces* of the Sahayadri.

General Information:
Geographical Area: 8326 sq. km.
Taluka-9: Chiplun, Dapoli, Guhagar, Khed, Lanja, Mandangarh, Rajapur, Ratnagiri, and Sangameshwar
Villages: 1543 Population: 16,97,000
Soil Type:

Based on the physical characteristics of the soils, they can be classified into five major groups viz. *Coarse Shallow Soil***:** They are reddish brown in colour and occur on the slopes of the hills and are partly eroded, poor in fertility, shallow in depth and coarse in texture. *Medium Deep Soil***:** These are reddish yellow in colour and have various names depending upon the place of occurrence. Those situated at higher elevations are known as *Mal*, while at slightly lower levels are known as *Kuyat.* Near water courses, which have a fair supply of water during Rabi season are known as *Panthal* or *Vaigan*. *Deep Soil***:** They are yellowish red to brown in colour. They are light, easily workable, well drained and fairly fertile. *Coastal Alluvial Soil***:** They are found along the coastal strip and consist of deep sandy loams suitable for Coconut and Areca nut. *Coastal Saline Soil***:** They are formed due to the inundation of the sea, whereby part of coastal soils becomes salty. They are found along coastal strip of Dapoli, Guhagar and Ratnagiri tehsils.

Annual Rainfall: 2658 mm to 3973 mm
Geology: Recent to sub-Recent: Alluvium, beach sand, Cretaceous to Eocene: Deccan Trap Basalt lava flows; Upper Pre-Cambrian Kaladgi Series: quartzite, sandstone, shale and associated limestone.

Major Ground Water Problems and Issues

Even though the district receives rainfall in excess of 3500 mm/year, many villages face water scarcity in the summer. There is a lack of effort to harness and harvest the rain water in the region.

Ground Water Quality with Respect to BIS Standard and Water Quality Index

133 villages in 9 talukas were monitored by CGWB. The descriptive statistics of ground water monitoring are given in **Annexure IX. Table 6.33 and Annexure X.26** give the water quality index of ground water for five years at Ratnagiri district.

Chiplun, Guhagar, Mandangarh, Sangameshwar and Lanja: All the parameters were within permissible limits in these talukas. The water quality indices reported for ***Guhagar, Mandangarh, Sangameshwar and Lanja*** talukas were excellent for all the years. At ***Chiplun taluka*** water quality was almost excellent in all villages.

Rajapur, Dapoli, Khed, and Ratnagiri: At ***Rajapur taluka*** the exceedances of 2% of the given samples for TDS, TH, Mg^{2+} and bicarbonate were observed. Almost all the villages in this taluka are reported to be excellent for given years except Jaitapur and Date which had poor water quality in 2008 and 2009 respectively. At ***Dapoli taluka,*** negligible exceedance of 2% for F was observed and the water quality indices varied between good and excellent. At ***Khed Taluka,*** pH and NO_3^- exceeded the standards by 8%. All villages had excellent water quality except Dabhil village which had very poor water quality in 2009. WQI at Awashi village varied between good and excellent. At ***Ratnagiri taluka*** the exceedances of pH and NO_3^- were very negligible around 5% of the given samples. Almost all the villages in this taluka had excellent water quality.

Table 6.33: Water Quality Index of Groundwater of Ratnagiri District

Talukas	2007		2008		2009		2010		2011		5 Yrs. WQI	
	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg
Chiplun	30	EXL	31	EXL	29	EXL	30	EXL	27	EXL	28	EXL
Dapoli	33	EXL	33	EXL	20	EXL	27	EXL	30	EXL	27	EXL
Guhagar	28	EXL	27	EXL	22	EXL	28	EXL	23	EXL	26	EXL
Khed	24	EXL	23	EXL	29	EXL	33	EXL	25	EXL	28	EXL
Mandangarh	25	EXL	25	EXL	27	EXL	25	EXL	32	EXL	27	EXL
Rajapur	22	EXL	20	EXL	21	EXL	43	EXL	30	EXL	33	EXL
Ratnagiri	22	EXL	21	EXL	28	EXL	35	EXL	29	EXL	28	EXL
Sangameshwar	34	EXL	26	EXL	21	EXL	27	EXL	27	EXL	26	EXL
Lanja	--	--	--	--	--	--	29	EXL	23	EXL	26	EXL

UNS- Un-suitable; EXL – Excellent

In Ratnagiri district, the five years ground water quality indices were excellent in all the talukas. Significant annual rainfall and well connecting river network with large constructed water reservoirs under hydrological projects on major rivers of this district helps in recharging the ground water resources.

27) Sangli District

Sangli district is located in the western part of Maharashtra. Sangli district is situated in the river basins of Warna and Krishna rivers. Land in this region is suitable for agriculture. The climate ranges from the wettest in the Chandoli (Shirala) region, which has an average annual rainfall of over 4000 mm, to the driest in Atpadi and Jath Taluka where the average annual rainfall is about 500 mm. The plant cover too varies from the typical monsoon forest in the western parts to scrub and poor grass in the eastern parts. Sangli district comes under Deccan plateau geographic region.

General information:
Geographical Area: 8577 sq. km
Taluka-11; Atpadi, Islampur, Jath, Kadegaon, Kavathemahankal, Khanapur, Miraj, Palus, Shirala, Tasgaon and Walwa, Villages: 731 Population: 25,81,835

Soil:

The district has three distinct climatic zones: 1) The western zone- receives very heavy rainfall, has lateritic soils on up-ghats and reddish brown soils on hill slopes the latter being developed on parent material of trap rock. The soils are poor in fertility. 2) The transition zone of Krishna valley- has deep black soils of alluvial origin. Soils are moderately alkaline and are moderate in contents of total soluble salts and calcium carbonate. Soils are fair in nitrogen and very poor in phosphate and potash contents. 3) The third is the eastern drier zone, which consists largely of granular black soils and poor shallow soils. Contents of total soluble salts and calcium carbonate are moderate. Soils show wide variations in total exchangeable capacity. Deep soils from the low rainfall areas, unless properly managed, develop saline-alkaline conditions.

Geology: Recent: Alluvium, Upper Cretaceous-Lower Eocene: Basalt (Deccan Traps)

Major Ground Water Problems and Issues

The rapid rate of industrialization, construction, and conversion of agricultural land for other developmental purposes has caused haphazard growth of Sangli city. There are no sufficient facilities for wastewater collection, treatment and disposal. In Sangli city sewage treatment plant is absent hence sewage from different parts of city is disposed off in Krishna River which may influence ground water resources.

Ground Water Quality with Respect to BIS Standard and Water Quality Index

148 villages in 11 talukas were monitored by CGWB. The descriptive statistics of ground water monitoring carried out in the villages are given in **Annexure IX**. **Table 6.34 and Annexure X(27)** give the water quality index of ground water for five years at Sangli district.

Atpadi, Islampur, Jath and Kadegaon: Percent exceedances of pH and NO_3^- at ***Atpadi taluka*** were 19 and 13% respectively. TH and SO_4^{2-} also showed negligible exceedance of 3% in this taluka. Ghanand village in 2010; Atpadi in 2008; Pimpri Kh in 2008; Shetphale in 2008 and 2011; Gomewadi in 2009 had poor water quality. Other villages had good water quality. In ***Islampur taluka*** data was available for 2008 and 2009 only. Nitrate exceedance in this taluka was as high as 50%. None other parameter exceeded the standards at Islampur taluka. Takari village had poor water quality in 2008 and 09. At ***Jath taluka*** nitrate exceedance was 30%. Total hardness, Ca and SO_4 exceeded the standards by 23, 13 and 15% respectively. Percent exceedances of pH, TDS, Mg and Cl were 2, 6, 9 and 4% respectively. The maximum concentration of TDS was 3283 mg/l. 1812 mg/l for TH and 290 mg/l for nitrate was observed at Jath taluka. Water quality indices mainly observed were mostly poor except few villages where it was good. Jadarbablad and Borgi bk. villages were reported to have very poor to unsuitable water. None of the parameters exceeded the standards at ***Kadegaon taluka*** except NO_3^- which exceeded by 22%. Data for 2007 for

Kadegaon taluka was not available. Kadepur village in this taluka in 2009 had poor water quality. Other villages had good or excellent water quality

Kavathemahankal, Khanapur, Miraj and Palus: Nitrate exceedances at Palus and Miraj talukas were as high as 50 and 48% respectively. At Kavathemahankal and Khanapur nitrate exceedances were 22 and 7% respectively. TDS, TH, Ca^{2+}, Mg^{2+}, Fe and SO_4^{2-} exceedances were in the range of 6-11%, 12-14%, 3-7%, 4-7%, 16% and 3-6% respectively in the given talukas. The maximum concentration for TDS, TH and nitrate were in the range of 1278-4012 mg/l; 1612- 1400 mg/l; and 110-256 mg/l respectively. Very poor to unsuitable water quality indices were reported at Kavathe mahankal and Haingangaon villages of ***Kavathemhankal taluka***. Other villages had good category of water. Excellent water quality was observed in Kokale, Salshinge, and Walkhed and Sulewadi villages of ***Khanapur taluka***. Mixed trend was observed at ***Miraj taluka*** where excellent water was reported at Kalambi and Kavathepiran; whereas Dhavali village had very poor water quality. A limited data was available for ***Palus taluka,*** where water quality varied between good and poor quality.

Shirala, Tasgaon, South Solapur and Walwa: Percent exceedances of pH, Fe and NO_3^- were low (all 9%) in ***Shirala Taluka***. Here overall good quality was noticed. At Chikhalwadi and Mandur villages excellent water quality was reported. Nitrate exceedance at ***Tasgaon taluka*** was as high as 42%. Here TDS, TH, Ca^{2+}, Mg^{2+} and Cl^- also exceeded the standards by 8, 17, 17, 17 and 8% respectively. At Tasgaon, maximum concentration of 2400 mg/l for TDS, 1625 mg/l for TH and 186 mg/l for nitrate were observed. Percent exceedances of Total hardness, Ca^{2+} and SO_4^{2-} were as high as 67, 33 and 67% respectively at ***S.Solapur***. At Walwa taluka, all parameters were within the standards except the negligible exceedance of NO_3^- by 4%. In ***Walwa taluka*** almost all villages had good water quality and villages viz. Wategaonm, Rethre, Walwa and Yellur had excellent water quality.

Table 6.34: Water Quality Index of Groundwater of Sangli District

Talukas	2007		2008		2009		2010		2011		5 Yrs. WQI	
	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg
Atpadi	69	GW	96	GW	94	GW	83	GW	73	GW	**78**	**GW**
Islampur	--	--	114	PW	103	PW	--	--	--	--	**97**	**GW**
Jath	155	PW	123	PW	134	PW	97	GW	125	PW	**114**	**PW**
Kadegaon	--	--	76	GW	102	PW	48	EXL	61	GW	**58**	**GW**
K.Mahankal	130	PW	101	PW	114	PW	127	PW	77	GW	**106**	**PW**
Khanapur	63	GW	58	GW	112	PW	64	GW	73	GW	**68**	**GW**
Miraj	--	--	56	GW	71	GW	117	PW	96	GW	**108**	**PW**
Palus	--	--	62	GW	93	GW	118	PW	--	--	**102**	**PW**
Shirala	--	--	48	EXL	--	--	65	GW	--	--	**63**	**GW**
Tasgaon	--	--	216	VPW	154	PW	91	GW	79	GW	**104**	**PW**
Walwa	59	GW	75	GW	81	GW	55	GW	--	--	**59**	**GW**

UNS- Un-suitable; EXL – Excellent

Sangli is one of the most important districts for its agricultural crops. The five years water quality of the district showed mixed trend. Atpadi, Kadegaon, Khanapur, Shirala and Walwa talukas had good water quality, whereas Jath, Islampur, K.Mahankal, Miraj, Palus and Tasgaon talukas were reported to have poor water quality. This may be due to contamination by human activity and agricultural runoff resulting in deterioration of ground water quality. Natural factors such as geology and soil texture of this region also affect the ground water.

28) Satara District

Satara district is one of the five districts of Western Maharashtra. Sahayadri hills of western ghat forms the western boundary, while Nira River forms the northern boundary of the district.The district forms part of Deccan Plateau of Sahayadri hill ranges. Physiographically the district can be broadly divided in four major units: (i) Hills and Ghats, (ii) Foothills zones, (iii) Plateaus and (iv)Plains. The major rivers of this district are Krishna, Nira and Man.

General Information:
Geographical Area: 10480 sq. km.
Taluka – 12; Javali, Karad, Khandala, Khatav, Koregaon, Mahabaleshwar, Man-dahivadi, Medha, Patan, Phaltan, Satara and Wai
Villages: 1739 Population: 28,09,000
Soil Type:

The whole of Satara district falls within the Deccan Traps area; the hills consist of trap intersected by strata of basalt and topped with laterite, while, of the different soils on the plains, the commonest is the black loamy clay containing carbonate of lime. This soil, when well watered, is capable of yielding heavy crops.

Annual Rainfall: 473 mm to 6209 mm
Geology: Recent: Alluvium, Upper Cretaceous-Lower Eocene: Deccan Trap (Basalt)

Major Ground Water Problems and Issues

Satara contains some important irrigation works, including the Krishna canal. In some of the western parts of the district the average annual rainfall exceeds 5 m.; but on the eastern side water is scanty, the rainfall varying from 1 m in Satara town to less than 30 cm in some places farther east. Deeper water levels are also seen in northern part around Mahabaleshwar, Khandala and Wai and in south eastern part of the district in parts of Man and Khatav talukas. Apart from this 5474 ha of land has been demarcated as water logged area by Irrigation Department, Govt. of Maharashtra in Nira canal command area.

Ground Water Quality with Respect to BIS Standard and Water Quality Index

146 villages in 12 talukas were monitored by CGWB. The descriptive statistics of ground water monitoring carried out in the villages are given in **Annexure IX**. **Table 6.35 and Annexure X(28)** give the water quality index of ground water for five years at Satara district.

Javali, Karad, Khandala and Khatav: As per BIS standards nitrate exceedance of 13-25% was noticed in these area. Around 25% of exceedance of pH was observed at Javali and Karad. At ***Javali taluka*** good to excellent water quality was observed. Malkapur village of ***Karad taluka*** had excellent water and almost all the villages in this taluka had good water quality. At ***Khandala taluka,*** the entire taluka was observed to have good to excellent water quality except few villages. Poor water quality was observed at Bhade and Shirwal Villages in 2009 and Surur village in 2007-08. Similar trend was observed for ***Khatav taluka.*** Only at Khatav, Katarkhatav and Pusegaon villages poor water quality was observed in 2008-09.

Koregaon, Mahabaleshwar, Man-dahivadi and Medha: Exceedance of Fe and Nitrate were observed as 7-11% and 26-38% respectively in these talukas. Mixed trend i.e. poor, good and excellent water quality was reported at ***Koregaon taluka***. Entire taluka of ***Mahabaleshwar*** was observed to have excellent water quality. Water quality indices of ***Man (Dahivadi) taluka*** were observed as poor to good. Pingli village in 2007-08 was observed as excellent, which slightly shifted towards good in 2009. With limited data availability, ***Medha taluka*** had good water quality.

Patan, Phaltan, Satara and Wai: As per BIS standards, nitrate exceedance was 6-34% and all other parameters viz. TDS, TH, Mg^{2+}, Ca^{2+} exceeded the standards around 10% of the time except at Wai taluka. Very poor water quality was noticed in Nimbore village of ***Patan taluka*** from2007-09; other villages had good to excellent water quality. A mixed trend was observed i.e. poor to good at ***Phaltan taluka***, As data is not available for 2010 in ***Satara taluka***, for given years Pimpalwadi and Udtara villages were observed to have poor to very poor water quality in 2008-09, otherwise all the villages had good to excellent water quality. Entire ***Wai taluka*** was observed to have good to excellent water quality, as many cannels and dam are set off in this region which recharges ground water.

The five years water quality of Satara district shows excellent water quality at Mahabaleswar and Medha talukas, whereas other talukas are reported to have good water quality. Places like Khatav, Patan and Phaltan showed poor water quality in 2009. Nitrate is the major contaminant responsible for deteriorating ground water.

Table 6.35 : Water Quality Index of Groundwater of Satara District

Talukas	2007		2008		2009		2010		2011		5 Yrs. WQI	
	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg
Javali	--	--	47	EXL	99	GW	--	--	73	GW	**69**	**GW**
Karad	56	GW	42	EXL	63	GW	--	--	67	GW	**61**	**GW**
Khandala	98	GW	97	GW	96	GW	--	--	54	GW	**64**	**GW**
Khatav	58	GW	71	GW	111	PW	--	--	60	GW	**64**	**GW**
Koregaon	60	GW	84	GW	94	GW	--	--	79	GW	**77**	**GW**
Mahabaleswar	25	EXL	25	EXL	27	EXL	--	--	51	GW	**33**	**EXL**
Man (Dahivadi)	49	EXL	56	GW	104	PW	--	--	100	GW	**91**	**GW**
Medha	42	EXL	38	EXL	55	GW	--	--	--	--	**38**	**EXL**
Satara	41	EXL	72	GW	67	GW	--	--	60	GW	**58**	**GW**
Patan	98	GW	98	GW	111	PW	--	--	69	GW	**82**	**GW**
Phaltan	78	GW	83	GW	108	PW	--	--	98	GW	**92**	**GW**
Wai	63	GW	69	GW	73	GW	--	--	72	GW	**69**	**GW**

UNS- Un-suitable; EXL – Excellent

29) Sindhudurg District

Sindhudurg district is located in the Konkan region of Maharashtra State and covers a geographical area of 5087 sq.km out of which about 390 sq. km. is covered by forest, whereas cultivable area is 2495 sq. km. and net sown area is 1354 sq. km. The district has three major physiographic divisions from east to west. The eastern part close to the Western Ghats is highly dissected with deep valleys. The middle part of the district is occupied by flat-topped hills with undulating plateau with elevations up to 300 meter above mean sea level covered by Laterite. The five major rivers flowing in the district are Gad, Karli, Terekhol, Tillari, Deogad and Wagothan. During monsoon the rivers carry heavy load of water having tremendous headword eroding capacity and ultimately drain in the Arabian Sea.

General Information:
Geographical Area: 5087 sq. km.
Taluka- 8: Devgad, Dodamarg, Kankavali, Kudal, Malvan, Sawantwadi, Vaibhavwadi, and Vengurla
Villages: 743, Population: 8,69,000
Soil Type:

Most of the soils are derived from Lateritic rocks. *Rice soil* also termed as *'Mali soils* 'found in higher levels, *'Karat soils'* in lower levels and *'Panthar or Vaigam'* situated near water courses. *Garden soil* is of mixed origin, yellow red to brown in color and is located in the valley portions. These soils are light, well drained and fairly fertile. *Varkas soil* is reddish brown to yellowish red in colour and is situated on hill slopes. These soils are poor in fertility, shallow in depth and coarse in texture. *Alluvial soil* is recent deposits found along the coastal tracts and constitutes deep loam. Due to inundation of sea, part of the coastal soils has become salty. In the Deogad, Malwan and Vengurla talukas practically entire strip is salty.

Annual Rainfall: 2300 mm to 3200 mm

Geology: Recent to sub-Recent: Alluvium, beach sand, Laterite, Deccan Trap Basalt lava flows Sandstone and associated limestone.

Major Ground Water Problems and Issues

Even though the district receives high rainfall in the range of 2300 to 3200 mm/year, water scarcity in the non-monsoon seasons is the major issue of concern and many villages faces water scarcity in the summer. The district has a coastline of 121 km and has 14 creeks, about 76900 ha of agricultural land is reported to be saline due to sea water ingress along the coast and creeks.

Ground Water Quality with Respect to BIS Standard and Water Quality Index

105 villages in 8 talukas were monitored by CGWB. The descriptive statistics of ground water monitoring carried out in the villages are given in **Annexure IX**. **Table 6.36 and Annexure X(29)** give the water quality index of ground water for five years at Sindhudurg district.

Devgad, Dodamarg, Kankavali and Kudal: In all these talukas of Sindhudurg district, the water quality was found to be excellent during all five years. As per BIS standard comparison, only small amount i.e. 2 to 5% of exceedance in pH, TH, Ca^{2+} and F were noticed. Almost all the villages are reported to have excellent water quality. In villages namely Harkul Kh., Kankavli and Nardave in ***Kankavali taluka,*** Zarap and Mangaon B. in ***Kudal taluka*** **had** good water quality indices. Poor quality was reported for village Awalegaon in ***Kudal taluka*** in 2009 and 2011.

Malvan, Sawantwadi, Vaibhavwadi and Vengurla: Percent exceedances of TH (4-6%) and Fe (11-14%) were observed in ***Vaibhavwadi and Vengurla taluka***; Only small amount i.e. 3 to 7% of exceedance in pH was noticed in ***Malvan and Sawantwadi talukas***. All other parameters were within permissible limits of BIS standards in reported talukas. Malwan in ***Malvan taluka*** and Mangavli in ***Vaibhavwadi taluka*** **had** good indices, whereas in ***Vengurla taluka*** villages namely Vajrat, Vengurla, Wargaon showed good and Redi had poor.

Sindhudurga district shows the excellent water quality but still salinity could be major source of contamination at coastal zone which affect the ground water as well as rice paddies to some extent. High temperature during summer and drying of river basine tends to declining in ground water level. Highly hilly region many part of the district has lagging in water restoration.

Table 6.36 : Water Quality Index of Groundwater of Sindhudurg District

Talukas	2007		2008		2009		2010		2011		5 Yrs. WQI	
	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg
Devgad	29	EXL	27	EXL	23	EXL	--	--	33	EXL	**31**	**EXL**
Dodamarg	22	EXL	23	EXL	25	EXL	26	EXL	32	EXL	**25**	**EXL**
Kankavli	27	EXL	26	EXL	27	EXL	24	EXL	34	EXL	**31**	**EXL**
Kudal	37	EXL	39	EXL	39	EXL	--	--	43	EXL	**39**	**EXL**
Malvan	32	EXL	31	EXL	33	EXL	--	--	33	EXL	**31**	**EXL**
Sawantwadi	25	EXL	35	EXL	24	EXL	21	EXL	29	EXL	**27**	**EXL**
Vaibhavwadi	31	EXL	--	--	49	EXL	45	EXL	49	EXL	**48**	**EXL**
Vengurla	26	EXL	26	EXL	24	EXL	--	--	33	EXL	**36**	**EXL**

UNS- Un-suitable; EXL – Excellent

30) Solapur District

The district is situated on the south east fringe of Maharashtra State and lies entirely in the Bhima and Seena basins. Whole of the district is drained either by Bhima River or its tributaries. Shrikshetra Pandharpur is considered as 'Southern Kashi' of India and Kuldaivat of Maharashtra State. There are also a few scattered hills in Karmala, Madha and Malshiras Talukas. The district in general has flat or undulating terrain. The low table land and small separate hills in Karmala and Madha Talukas act as a Watershed between Bhima and Sina rivers.

General Information:
Geographical Area: 14,844.6 sq. km
Taluka-12: Akkalkot, Barshi, Karmala, Madha, Malshiras, Mangalvedhe, Mohol, North Solapur, Pandharpur, Sangola, Solapur and South Solapur
Villages: 1150 Population: 38,49,543
Annula Rainfall: 545.4 mm

Soil Type:

The soils of the district can be classified into three types black, coarse gray and reddish *Eastern Zone* comprises of Barshi, North Solapur, South Solapur and Akkalkot Talukas. The soil is medium to deep black and of rich quality. *Central or Transitional Zone* comprises of Mohol, Mangalwedha, eastern part of Pandharpur and Madha Taluka. Like to moderate soil and uncertain rainfall marks this zone. *Western Zone* comprises of Karmala, Sangola and Malshiras Talukas and western parts of Pandharpur come under this zone. Shallow and poor type of soil, not retentive of moisture marks this part.

Geology: As in most of the Deccan, the general geological formation is trap, covered in most places with a shallow over-layer of very light soil, and in parts by a good depth of rich loam suited for cotton.

Ground Water Quality with Respect to BIS Standard and Water Quality Index

48 villages in all 12 talukas were monitored by CGWB. The descriptive statistics of ground water monitoring carried out in the villages are given in **Annexure IX**. **Table 6.37 and Annexure X(30)** give the water quality index of ground water for five years for Solapur district.

Akkalkot, Barshi, Karmala and Madha: Data for theses talukas is not available for 2010 and 2011. Nitrate exceedance in **Akkalkot, Barshi, Karmala and Madha** were 43, 67, 40 and 84% respectively. ***At Akkalkot taluka*** exceedances of Ca^{2+} and Mg^{2+} is 14%, and TH is 29%. At ***Barshi*** exceedances of TH and Mg^{2+} are 25 and 8% respectively. At ***Madha taluka*** exceedance of TH is 17%. At ***Akkalkot taluka*** villages Akkalkot; in ***Barshi taluka*** villages Rople, Manegaon and Nari; in ***Karmala taluka,*** Karmala village; in ***Madha taluka***, Tembhurni and Parite were reported to have poor water quality during 2007 to 2009. Nagansur in Akkalkot taluka had unsuitable Water quality in given years. Excellent WQI was observed for Dhanore village in Barshi.

Malshiras, Mangalvedhe, Mohol and North Solapur: Data for theses talukas is also not available for 2010 and 2011. Nitrate exceedance in **Malshiras, Mangalvedhe, Mohol and North Solapur** were 38, 40, 44, 25% respectively. At **Malshiras, Mangalvedhe, Mohol and North Solapur** exceedances of TH are 13, 20, 33 and 38% respectively. The water quality indices varied between poor and good. The villages namely Velapur and Malsiras in ***Malsiras taluka***; Mangalvedha and ***Mangalvedha taluka***; Sohole in ***Mohol taluka*** and Soregaon, Nannaj and Vadval in ***North Solapur taluka*** were reported to have poor WQI during 2007-2009.Poor water quality in these villages could be due to agricultural runoff, moderate soil texture and scanty rainfall.

Pandharpur, Sangola, Solapur and South Solapur: Hardness and nitrate were the major problems as they exceeded the permissible limit in around 33-100% of the samples resulting in poor water quality. In ***Pandharpur***, TDS, Ca^{2+} and Mg^{2+}exceedances were around 6 to 26% and SO_4^{2-} around 33%, which resulted into poor to very poor water quality indices.

Table 6.37 : Water Quality Index of Groundwater of Solapur District

Talukas	2007		2008		2009		2010		2011		5 Yrs. WQI	
	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg
Akkalkot	92	GW	152	PW	184	PW	--	--	--	--	**124**	**PW**
Barshi	195	PW	104	PW	100	PW	--	--	--	--	**98**	**GW**
Karmala	110	PW	98	GW	--	--	--	--	--	--	**92**	**GW**
Madha	130	PW	109	PW	109	PW	--	--	--	--	**100**	**GW**
Malshirs	107	PW	104	PW	115	PW	--	--	--	--	**96**	**GW**
Mangal-wedha	136	PW	145	PW	74	GW	--	--	--	--	**90**	**GW**
Mohol	141	PW	126	PW	122	PW	--	--	--	--	**116**	**PW**
N.Solapur	63	GW	119	PW	110	PW	--	--	--	--	**97**	**GW**
Pandharpur	64	GW	155	PW	152	PW	--	--	--	--	**131**	**PW**
Sangoola	73	GW	74	GW	100	GW	--	--	--	--	**75**	**GW**
Solapur	--	--	67	GW	105	PW	--	--	--	--	**80**	**GW**
South Solapur	166	PW	159	PW	67	GW	--	--	--	--	**115**	**PW**

UNS- Un-suitable; EXL – Excellent

Three years water quality of this district showed good to excellent water quality at Sangoola taluka. Most of the time, for these 3 years, WQI varied between poor and good. From given analysis, Akkalkot, Mohol, Pandharpur and South Solapur talukas need major attention. High concentrations of Total hardness and nitrate in ground water were observed in this district.

31) Thane District

Thane is the third-most industrialised district in Maharashtra. It comprises Ulhas basin on the south and hilly Vaitama valley on the north together with plateaus and slopes of Sahayadri. From the steep slopes of the Sahayadri in the east, the land falls through a succession of plateaus in the north and centre of the district to the Ulhas valley in the south. These lowlands are separated from the coast by a fairly well-defined narrow ridge of hills that runs north-south to the east of the Thane creek, parallel to the sea keeping a distance of about 6 to 10 km from the shores. The two main rivers flowing through the district are the Ulhas and the Vaitarna. On the basis of its topography, the district is divided into three parts viz. The *eastern portion* having Sahayadri ranges, which comprises mainly forest area. C*entral region* covers mainly paddy area. *Western parts* of the coastal area where horticultural plantation, fodder production and vegetable cultivation are being practiced.

General information:
Geographical Area: 9387 sq. km
Talukas-15: Ambernath, Bhiwandi, Dahanu, Jawhar, Kalyan, Mokhada, Murbad, Murud, Palghar, Shahapur, Thane, Talasari, Ulhasnagar, Vasai and Wada
Villages: 1748 Population: 81,31,849
Soil:

Black soil containing sand is mainly found at Dahanu, Palghar, Vasai and Thane tehsils. *Red soil* is found in eastern region, mostly on the slopes of Mokhada, Jawhar and Talasari tahsils. Whereas, *Brownish black soils* is mostly observed in the patches of valleys lying between the coastal plain and the hilly slopes of Bhivandi, Kalyan and Shahapur tahsils.

Average Rainfall: 2576 mm

Ground Water Quality with Respect to BIS Standard and Water Quality Index

137 villages in 15 talukas were monitored by CGWB. The descriptive statistics of ground water monitoring carried out in the villages are given in **Annexure IX**. **Table 6.38 and Annexure X(31)** give the water quality index of ground water for five years at Thane district.

Ambernath, Bhiwandi, Dahanu, Jawhar and Kalyan: As per BIS standards not significant amount of exceedance was observed. Exceedances of TH (2-8%), Mg^{2+} and

Fe (8%), F^- (2-6%) and nitrate (2-6%) were reported in given samples. All most all the villages in these talukas were observed to have good to excellent water quality indices. Only at some places i.e. Angaon (2008), Khoni (2010) villages in ***Bhiwanditaluka***; Bramhanwadi (2009) and Sariwali (2010) villages in ***Dahanu taluka*** were reported as poor.

Mokhada, Murbad, Murud, Palghar and Shahapur: Nitrate exceedance was 10% in ***Mokhade taluka***. In ***Murbad taluka***, pH and F exceedances were in the range of 3 to 6%. pH exceedance was reported as high as 83% in ***Murud taluka***. At ***Palghar*** all parameters were within the standards except TDS, F and NO_3^- which exceeded by 2% only. At ***Shahapur taluka*** pH exceedance was 16%. Tokwade village of ***Murbad taluka*** in 2009 was reported as poor, whereas Mahim in ***Palghar taluka*** in 2010 was observed as very poor. Other villages in these talukas had good to excellent WQI.

Thane, Talasari, Ulhasnagar, Vasai and Wada: At ***Thane Taluka,*** exceedances of 2-6% was observed for pH, TDS, TH, Ca^{2+}, Mg^{2+} and F^-. At ***Talasari taluka*** all parameters were within the standards. Exceedance of Fluoride was reported as 18% at ***Ulhasnagar taluka***, whereas at ***Vasai taluka*** percent exceedances of TH (9%), Mg^{2+} (13%) and pH (11%) were observed in given samples. The Khairne village in ***Thane taluka*** showed mixed trend i.e poor to good in 2010. Other villages of this taluka had good to excellent WQI. The Wasar village in ***Ulhasnagar taluka*** and Sandor and Agashi villages of ***Vasai taluka*** were reported to have poor water quality in 2007, which improved to good quality in later years. Villages of ***Wada and Talsari taluka*** were reported as good to excellent for given years.

Table 6.38 : Water Quality Index of Groundwater of Thane District

Talukas	2007		2008		2009		2010		2011		5 Yrs. WQI	
	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg
Bhiwandi	42	EXL	60	GW	51	GW	52	GW	60	GW	**52**	**GW**
Dahanu	62	GW	58	GW	67	GW	56	GW	33	EXL	**48**	**EXL**
Jawahar	66	GW	54	GW	52	GW	34	EXL	42	EXL	**42**	**EXL**
Mokhada	90	GW	95	GW	80	GW	39	EXL	36	EXL	**44**	**EXL**
Murbad	79	GW	48	EXL	57	GW	57	GW	39	EXL	**52**	**GW**
Palghar	57	GW	51	GW	51	GW	47	EXL	65	GW	**53**	**GW**
Shahapur	38	EXL	41	EXL	41	EXL	44	EXL	43	EXL	**43**	**EXL**
Thane	60	GW	50	EXL	51	GW	60	GW	63	GW	**56**	**GW**
Vasai	82	GW	72	GW	77	GW	57	GW	58	GW	**62**	**GW**
Wada	41	EXL	35	EXL	43	EXL	49	EXL	50	EXL	**48**	**EXL**
Ambernath	--	--	--	--	--	--	51	GW	63	GW	**58**	**GW**
Kalyan	--	--	--	--	--	--	47	EXL	46	EXL	**47**	**EXL**
Murud	--	--	--	--	--	--	--	--	30	EXL	**30**	**EXL**
Talasari	--	--	--	--	--	--	44	EXL	39	EXL	**42**	**EXL**
Ulhasnagar	--	--	--	--	--	--	65	GW	35	EXL	**63**	**GW**

UNS- Un-suitable; EXL – Excellent

From five years water quality of district, it was observed that water quality was excellent at Dahanu, Jawahar, Mokhada, Shahapur and Wada taluka; whereas, good at Bhiwandi, Murbad, Palghar, Thane, Jawahar, Mokhada, Palghar and Vasai talukas.

32) Wardha District

Wardha is one of the districts of Vidarbha region of Maharashtra. The district forms part of Godavari basin. Wardha River is the main river flowing through the district. The general slope is southwards and gentle towards Wardha River, but tends to become steeper in the northern uplands. The entire district is mainly drained by Wardha River and its tributaries viz., Yashoda, Wunna and Bakli.

General Information:
Geographical Area: 6310 sq. km.
Taluka-8; Arvi, Ashti, Deoli, Hinganghat, Karanja, Samudrapur, Seloo and Wardha
Villages: 1361 Population: 12,30,640
Soil Type:

The soil of the district is basically derived from Deccan Trap Basalt and almost entire district consists of black or dark brown soil over a sheet of Deccan Trap Basalt. The soil varies in depth from few centimeters to 3 meters with average thickness being about 0.75 meters. The soils of the district can be grouped under four main local categories viz., Kali, Morand, Khardi and Bardi, with major part of the district being occupied by Kali soil.

Annual Rainfall: 985 mm to 1100 mm
Geology: Recent: Alluvium, Upper Cretaceous-Lower Eocene: Basalt (Deccan Trap), Middle Cretaceous: Infra-trappean beds

Major Ground Water Problems and Issues

The moderate drought has been observed in the north western parts of the district i.e., in major parts of Ashti, Karanja and Arvi talukas. Ground water quality is mostly affected by nitrate contamination.

Ground Water Quality with Respect to BIS Standard and Water Quality Index

128 villages in all 8 talukas were monitored by CGWB. The descriptive statistics of ground water monitoring carried out in the villages are given in **Annexure IX**. **Table 6.39 and Annexure X(32)** give the water quality index of ground water for five years at Wardha district.

Arvi, Ashti and Deoli: Hardness and nitrate exceeded the permissible limit in around 12-25% and 50-65% respectively of the samples. Ca and Mg also exceeded the standards in 4-9% of the samples. At ***Arvi taluka*** village Alipur is reported to have very poor to unsuitable WQI during 2007 and 08, whereas Nandpur village was observed to have very poor WQI

during 2010. At ***Ashti taluka*** village Antora had very poor WQI in 2011. Giroli and Deoli villages of ***Deoli taluka*** also had poor/very poor water quality during 2008 and09. Other villages poor to good WQI.

Hinganghat, Karanja and Samudrapur: NO_3 exceedances in Hinganghat, Karanja and Samudrapur were as high as 77, 36 and 55% respectively. Exceedances were reported for hardness, Ca^{2+}, Mg^{2+} and F^- in the range 6-21%,2-7%, 9% and 4-13% respectively in the given samples. In ***Hinganghat taluka,*** villages' viz. Allipur, Wadner, Gadegaon, Kanchangaon, and Kangaon are reported to be very poor to unsuitable during 2008 or 2009.Daroda had excellent WQI during 2007. The other villages had mixed trend i.e from poor to good. In ***Karanja taluka*** village Junapani was reported as excellent. Nandori and Ajda villages of ***Samudrapur taluka*** were observed to have excellent WQI during 2007. Chikhli village was observed to have very poor water quality in 2010. In other village's water quality varied between poor and good.

Seloo and Wardha : Nitrate exceedance was 60-70%, as also hardness (17-28%), Mg^{2+}(17-21%), Ca^{2+} (2-10%), TDS (5-8%) and TA (5%) were observed in the given samples. Both the talukas Seloo and Wardha had poor water quality indices. The villages viz. Giroli, Kopra, Ramna, Chanki and Zadsi were reported to be very poor to unsuitable during 2007 to 2010 in ***Seloo taluka***, whereas Khandali and Barbadi villages in ***Wardha taluka*** were also reported to be very poor to unsuitable during 2007-08.The other villages had poor to good water quality.

Table 6.39 : Water Quality Index of Groundwater of Wardha District

Talukas	2007		2008		2009		2010		2011		5 Yrs. WQI	
	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg
Arvi	117	PW	172	PW	--	--	103	PW	106	PW	**110**	**PW**
Ashti	88	GW	81	GW	--	--	105	PW	156	PW	**109**	**PW**
Deoli	101	PW	120	PW	98	GW	115	PW	129	PW	**108**	**PW**
Hinganghat	64	GW	66	GW	65	GW	141	PW	150	PW	**127**	**PW**
Karanja	87	GW	50	GW	--	--	73	GW	132	PW	**80**	**GW**
Samudrapur	101	PW	83	GW	99	GW	109	PW	118	PW	**101**	**PW**
Wardha	126	PW	104	PW	93	GW	137	PW	189	PW	**124**	**PW**
Seloo	--	--	--	--	--	--	135	PW	136	PW	**132**	**PW**

The five year water quality of Wardha district was observed to be good only at Karanja taluka. For Arvi, Deoli and Seloo taluka's most of the year's WQI was poor. Significant exceedances with respect to nitrate and hardness resulted into deterioration of ground water quality.

33) Washim District

Washim is located in Vidarbha region and was carved out of Akola district recently. It is situated in the north eastern part of the State. The district forms part of Deccan Plateau with slope towards southeast from Sahayadri hills and has a varied topography consisting of hills, plains and undulating topography near riverbanks. The district forms a part of Godavari and Tapi basin. Many of the tributaries to Godavari and Tapi rivers originate from Balaghat Plateau. Penganga River is the main river flowing through the district. Other rivers are Adol, Aran, Kapsi and Nirguna.

General Information:
Geographical Area: 5196 sq. km.
Taluka-6: Karanja, Mangrulpir, Malegaon, Manora, Risod and Washim
Villages: 789 Population: 10,19,000
Soil Type:

The soil of the district is basically derived from Deccan Trap Basalt and major part of the district is occupied by medium black soil of 25-50 cm depth occurring in the plains in entire south western, north eastern and northern parts of the district. Shallow black soil of 7.5 to 25cm depth occurs in restricted hilly parts of the district in central elongated part and the northern peripheral part.

Annual Rainfall: 872 mm to 966 mm
Geology: Recent: Alluvium, Upper Cretaceous-Lower Eocene: Deccan Trap Basalt

Major Ground Water Problems and Issues

The western part of this district is affected by drought conditions. The normal annual rainfall is also less in the Rasod taluka during the period. Thus water conservation and artificial recharge structures in the district may be prioritized in this part of the district. Ground water quality is adversely affected by nitrate contamination. Continuous intake of high nitrate concentration water causes infant methaemoglobinamea, popularly known as Blue Babies disease.

Ground Water Quality with Respect to BIS Standard and Water Quality Index

67 villages in 6 talukas were monitored by CGWB and GSDA. CGWB data excluded Fe in ground water analysis. Due to this non uniformity in monitored data, WQI was estimated considering Fe weightage at respective monitoring stations. The descriptive statistics of ground water monitoring carried out in the villages are given in **Annexure IX**. **Table 6.40 and Annexure X(33)** give the water quality index of ground water for five years at Washim district.

Karanja, Mangrulpir and Malegaon : As per BIS standard comparsion,nitrateexceedance ranged between 40 to 50%. Exceedance of pH ranged between 10 to 18%, Mg^{2+} 3 to 20%.

Panvihir and Tuljapur villages of ***Karanja taluka*** were reported as excellent. For other villages, water quality was mostly good except a few villages. The villages Bitoda and Shelu Bazar of ***Mangrulpir taluka***had poor water quality indices during 2007, otherwise mixed trend was observed for the whole taluka. In ***Malegaon taluka***, village Medshi had excellent water quality. In other villages WQI varied between good and poor.

Manora, Risod and Washim : NO_3 exceedance in these talukas were also very high. Nitrate exceedance ranged between 44 to 63% . pH exceeded by 8-14%. TH, Flouride and magnisium also exceeded marginally. Excellent water quality was reported at Umari Bk. in ***Manora taluka***, Mohaja Bandi and Shelgaon in **Risod taluka** and Bitoda Teli, Kapase and Sawargaon in ***Washim taluka***. For all other villages, mixed trend was noticed i.e. from poor to good for given years. The exceedance of nitrate, fluoride, total hardness etc., could be due to weathering and circulation of water in rocks and soils as also from municipal and industrial discharges, excessive use of chemical fertilizers/ pesticides in farms.

Table 6.40 : Water Quality Index of Groundwater of Washim District

Talukas	2007		2008		2009		2010		2011		5 Yrs. WQI	
	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg
Karanja (*)	111	PW	93	GW	90	GW	--	--	--	--	**98**	**GW**
Karanja (+)	74	GW	54	GW	79	GW	93	GW	67	GW	**73**	**GW**
Malegaon (*)	91	GW	71	GW	49	EXL	--	--	--	--	**70**	**GW**
Malegaon (+)	81	GW	80	GW	86	GW	98	GW	80	GW	**86**	**GW**
Mangulpir (*)	117	PW	103	PW	97	GW	--	--	--	--	**106**	**PW**
Mangrulpir(+)	86	GW	79	GW	82	GW	78	GW	65	GW	**77**	**GW**
Manora (*)	79	GW	119	PW	--	--	--	--	--	--	**99**	**GW**
Manora (+)	70	GW	63	GW	76	GW	92	GW	82	GW	**78**	**GW**
Risod (*)	104	PW	98	GW	78	GW	--	--	--	--	**93**	**GW**
Risod (+)	85	GW	--	--	--	--	83	GW	76	GW	**84**	**GW**
Washim (*	94	GW	65	GW	76	GW	--	--	--	--	**78**	**GW**
Washim (+)	68	GW	64	GW	78	GW	76	GW	70	GW	**72**	**GW**

** Wt_Fe : Without Fe, + W_Fe : With Fe; UNST- Un-suitable; EXL – Excellent*

From the five years water quality analysis it was found that, water quality was poor at Karanja, Mangulpir, Manora and Risod talukas during initial years which was improved in 2010 and 2011. Nitrate is the major contaminant for deteriorating ground water of this district. The western part of this district is affected by drought conditions. Low rainfall also affects the recharging of ground water in this district.

34) Yavatmal District

Yavatmal district is one of the districts of Vidarbha region of Maharashtra. The northern fringe of the district is hilly and forms part of Satpura range. South of these hill ranges, covering almost entire north-central part constitute the alluvial plain. Southern part of the district is characterized by hilly rugged terrain as a part of Deccan Plateau. Purna is the main river flowing through the district. Wardha River forms the northeastern boundary of the district. The district is well drained by Wardha and Penganga rivers and their tributaries.

General Information:
Geographical Area 13582 sq. km
Taluka-16: Arni, Babhulgaon, Darwha, Digras, Ghatanji, Kalamb, Kelapur, Mahagaon, Maregaon, Ner, Pusad, Ralegaon, Umarkhed, Wani, Yavatmal and Zari Jamni
Villages: 2108 Population: 24,58,271
Soil Type:

Three types of soil are observed in the district. **The shallow coarse soil,** which is reddish brown and brownish in colour, occurs at higher elevations along the ridges and foothill zones of the major hills. The tributary drainage's and along the intermediate gradient area has **medium black soil**. Lower reaches of Wardha and Penganga river beds have **deep black soil**. They differ from medium black soil in depth and fertility. The soils in the district are slightly alkaline, clayey loamy in texture and contain calcium carbonate.

Annual Rainfall: 850 mm to 1150 mm
Geology: Recent: Alluvium, Upper Cretaceous-Lower Eocene: Deccan Trap Basalt

Major Ground Water Problems and Issues

Most parts of the district i.e., Kelapur, Maregaon and Wani talukas are affected by high fluoride concentrations in ground water. The villages like Dharna, Sakhra, Sonurli, Susuri, Wadhona (Bk.), Wadhona (Kh.), Runjha and Govarai have been found to be affected by Fluorosis. Mottled teeth, stiff joints and muscular pain are reported in these villages. Artificial recharge techniques can be used to dilute the fluoride concentration.

Ground Water Quality with Respect to BIS Standard and Water Quality Index

180 villages in all 16 talukas were monitored by CGWB and GSDA. CGWB data excluded Fe in ground water analysis. Due to this non uniformity in monitored data, WQI was estimated considering Fe weightage at respective monitoring stations. The descriptive statistics of ground water monitoring carried out in the villages are given in **Annexure IX**. **Table 6.41 and Annexure X(34)** give the water quality index of ground water for five years at Yavatmal district.

Arni, Babhulgaon, Darwha and Digras: Exceedance of nitrate 40-50%, magnesium 15-36% and total hardness 3-15% were observed in given samples. In ***Arni taluka,*** village's viz. Borgaon Punji and Malhiwara were reported to have poor water quality indices. Village Dabhadi had excellent WQI. Most of the villages had good water quality. A very poor water quality at Pahur and poor at Umarda, Shindi and Virkhed was observed in ***Bahulgaon taluka***. Village Talegaon in ***Darwha taluka*** had excellent water quality during 2007. Mangkinhi, Sangavi (Rly) and Mohatali are the places where water quality was poor. Most of the villages of these talukas showed water quality varying between poor and good. From give data, villages Digras, Harsul, Tiwari and Arambhi in ***Digras taluka*** were found to have poor water quality. Excellent water quality at Digras (Shankartaki) was observed in 2011.

Ghatanji, Kalamb, Kelapur and Mahagaon: Nitrate exceedance of 19-53% was observed in these talukas. Magnesium and fluoride exceedance of 3-6% was observed in **Ghatanji and Kelapur talukas**. Most of the villages had good water in ***Ghatanji taluka.*** Ghatanji and Yerandgaon villages had poor WQI. In Manoli village, poor water quality was observed in 2008 which improved to excellent during 2009. In ***Kalamb taluka,*** villages Kalamb, Kotha, Dongarkharda and Umari had poor water quality. Excellent water was observed in Chaparda village during 2007, which slightly declined to good during later years. In ***Kelapur (Pandharkawada) taluka,*** villages Pahapal, Mohada and Khairgaon Bk. had poor water quality, whereas Warha had excellent water quality. Similarly in ***Mahagaon taluka,*** village Mohgaon Kasba had poor and Kaurwadi had excellent water quality; other villages mostly had good quality in Kelapuur and Mahagaon talukas.

Maregaon, Ner, Pusad and Ralegaon: In ***Maregaon and Pusad talukas*** NO_3^- exceeded 25% of the time. In ***Ner and Ralegaon*** talukas Nitrate exceedance was as high as 60 and 53% respectively. In Ner and Ralegaon Taluka magnesium exceedance was 13-7% and TH exceedance was 7% of the time. In ***Maregaon taluka,*** Mardi and Maregaon villages were reported to have poor WQI; and Jalaka village had good water quality which improved to excellent in later years. At ***Ner taluka,*** Manekwada village mostly showed very poor water quality for all the years, whereas excellent WQI was observed for Yelgunda and Watfali villages. The other villages had poor to good water quality. Pusad and Marwadi Khurd villages of ***Pusad taluka*** had poor WQI and Chondhi and Warud villages had excellent water quality. In ***Ralegaon taluka also*** water quality mainly varied from poor to good.

Umarkhed, Wani, Yavatmal and Zari Jamni: The exceednace of nitrate 20-45%, fluoride 20-30%, magnesium and hardness 4-6% was observed at these talukas. At ***Umarkhed taluka*** village Marsal had excellent and Vidul and Thakani are reported to have poor WQI for given years. Poor water quality in ***Wani Taluka*** was observed at Kayar, Rasa and Wani

villages and mixed trend was observed in other villages. At ***Yavatmal taluka*** unsuitable and very poor quality at Vai (Lingi), Elbara and Savar were noticed during 2007 to 2009. Excellent WQI was observed at Sawargad village. With limited available data, at ***Zari Jamni taluka*** villages Sindhiwadhana and Katali Borgaon were found to have poor WQI.

Table 6.41 : Water Quality Index of Groundwater of Yavatmal District

Talukas	2007		2008		2009		2010		2011		5 Yrs. WQI	
	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg	WQI	Catg
Arni (*)	51	GW	62	GW	92	GW	--	--	--	--	**68**	**GW**
Arni (+)	77	GW	80	GW	72	GW	87	GW	95	GW	**82**	**GW**
Babhulgaon(*)	174	PW	167	PW	160	PW	--	--	--	--	**167**	**PW**
Babhulgaon(+)	68	GW	61	GW	70	GW	83	GW	86	GW	**84**	**GW**
Darwha(*)	79	GW	95	GW	81	GW	--	--	--	--	**85**	**GW**
Darwha(+)	81	GW	81	GW	82	GW	92	GW	89	GW	**84**	**GW**
Digras(*)	160	PW	147	PW	--	--	--	--	--	--	**154**	**PW**
Digras(+)	110	PW	106	PW	93	GW	122	PW	75	GW	**96**	**GW**
Ghatanji(*)	86	GW	112	PW	108	PW	--	--	--	--	**102**	**PW**
Ghatanji(+)	75	GW	80	GW	70	GW	74	GW	87	GW	**80**	**GW**
Kalamb(*)	116	PW	116	PW	97	GW	--	--	--	--	**110**	**PW**
Kalamb(+)	87	GW	76	GW	89	GW	78	GW	82	GW	**81**	**GW**
Kelapur(*) Pandharkawada	104	PW	108	PW	132	PW	--	--	--	--	**115**	**PW**
Kelapur(+) Pandharkawada	102	PW	68	GW	77	GW	62	GW	71	GW	**71**	**GW**
Mahagaon(*)	74	GW	85	GW	67	GW	--	--	--	--	**75**	**GW**
Mahagaon(+)	83	GW	83	GW	68	GW	72	GW	67	GW	**72**	**GW**
Maregaon(*)	146	PW	166	PW	--	--	--	--	--	--	**156**	**PW**
Maregaon(+)	61	GW	54	GW	56	GW	77	GW	105	PW	**69**	**GW**
Ner(*)	151	PW	155	PW	129	PW	--	--	--	--	**145**	**PW**
Ner (+)	81	GW	74	GW	84	GW	98	GW	87	GW	**84**	**GW**
Pusad(*)	94	GW	109	PW	123	PW	--	--	--	--	**109**	**PW**
Pusad(+)	82	GW	79	GW	66	GW	52	GW	68	GW	**68**	**GW**
Ralegaon(*)	82	GW	66	GW	73	GW	--	--	--	--	**74**	**GW**
Ralegaon(+)	86	GW	90	GW	101	PW	92	GW	83	GW	**86**	**GW**
Umarkhed(*)	91	GW	--	--	--	--	--	--	--	--	**91**	**GW**
Umarkhed(+)	72	GW	91	GW	79	GW	95	GW	77	GW	**81**	**GW**
Wani(*)	118	PW	134	PW	--	--	--	--	--	--	**126**	**PW**
Wani(+)	101	PW	107	PW	95	GW	88	GW	114	PW	**100**	**PW**
Yavatmal(*)	121	PW	137	PW	106	PW	--	--	--	--	**121**	**PW**
Yavatmal(+)	90	GW	79	GW	67	GW	79	GW	78	GW	**77**	**GW**
Zari Jamni(+)	60	GW	51	GW	74	GW	76	GW	--	--	**72**	**GW**

** Wt_Fe : Without Fe, + W_Fe : With Fe; UNST- Un-suitable; EXL – Excellent*

The five years water quality of Yavatmal district showed good water quality at Arni, Darwha, Mahagaon, Ralegaon, Umarkhed and Zari Jamni talukas. Some of the talukas viz. Babhulgaon, Digras, Ghatanji, Kalamb, Kelapur, Maregaon, Ner, Pusad and Yavatmal had water quality varying between good to poor. Mineral deposition and rock pattern affect the fluoride and nitrate contamination, deteriorating ground water of this district.

6.5 Ground Water Monitoring Status under MPCB

To observe the trends of groundwater quality changes occurring due to either natural causes or anthropogenic activities, MPCB has conducted groundwater quality monitoring programme in the various districts of Maharashtra state. It also involves confirmation and suitability study of groundwater for drinking purposes and identification of major pollutants. MPCB has 50 monitoring locations in different districts under SWMP and NWMP programs, which are listed in **Table 6.42**.

Table 6.42: District Wise Ground Water Monitoring Station under SWMP and NWMP

District	Taluka (No. of villages)	Villages (No. of stations monitored)	No. of Stations
Ahmednagar	Ahmednagar (1), Rahata (1), Sangamner (1)	Burudgaon (1), Chitali (1), Gunjalwadi (1)	3
Akola	Akot (1)	Anjangaon (1)	1
Amravati	Achalpur (1)	Paratwada (1)	1
Aurangabad	Gangapur (2), Paithan (2), Aurangabad (1)	Pandharpur (1), Ranjangaon (1), Katpur (1), Naregaon (1), Wahegaon (1)	5
Bhandra	Tumsar (1)	Dongri-Buzurg (1)	1
Chandrapur	Ballarpur (1), Chandrapur (1)	Durgapur (1), Visapur (1)	2
Gondia	Gondia (1)	Changera (1)	1
Kolhapur	Hatkanangale (2), Karvir (1), Shiroli (1), Chandgad (1)	Yadrav (1), Shiroli (2), Gokul Shirgaon (1), Khanjirenagar (1)	5
Nagpur	Kalmeshwar (1), Kamptee (1), Saoner (1), Hingna (1), Nagpur (1)	Brahmni (1), Koradi (1) Khaperkheda-Ward No.4 (1) Raipur (1), Bhandewadi (1)	5
Nasik	Dindori (1), Nasik (2)	Pathardi (1), Rasegaon (1), Shinde (1)	3
Pune	Baramati (1), Haweli (2), Shirur (1)	Ralegaon (1), Moshi (1), Sanaswadi (1), Malegaon (1)	4
Raigad	Panvel (1)	Karawla Taloja (1)	1
Ratnagiri	Guhagar (2), Khed (2)	Ghane Kunt (1), Anjanwel (2), Arketwadi (1)	4
Sangli	Miraj (2), Walwa (1)	Sambarwadi (1), Savali (1), Sakharali (1)	3
Solapur	Solapur (1), Mohol (1), North Solapur (1)	Tuljapur naka (1), Chincholi (1), Dahegaon (1)	3
Thane	Dahanu (1), Mira-Bhayander (1), Palghar (2), Vasai (1)	Motapada (1), Kashimira (1), Aliyali (1), MIDC-Tarapur (1), Gokhiware (1)	5
Yavatmal	Yavatmal (1)	M.C. Village (1)	1
Wardha	Wardha (2)	Bhugaon (1), Wardha city (1)	2

The details of monitoring locations are given below.

1. Bore well at M/s Tata Iron & Steel Co. Ltd, S-76 (1984/NWMP)
   - Station Details : Industrial Estate, Tarapur Village- MIDC Tarapur, Taluka- Palghar,Thane
   - Pollution sources: Percolated effluent from nallas in the MIDC area.
2. Dug well at 5 Star Industrial Estate (1985/NWMP)
   - Station Details : Village- Kashimira, Taluka- Mira-Bhayandar, District- Thane
   - Pollution sources: Nearby polluting industries. Leaching of effluent possible. Water is used only for industrial purposes.
3. Bore well at Motapada (1986/NWMP)
   - Station Details : Village- Motapada, Taluka- Dahanu, District- Thane
   - Pollution sources: Thermal Power plant nearby. Water is used for drinking.
4. Bore well at Vasai (1987/NWMP)
   - Station Details : Village- Gokhiware, Taluka- Vasai, District- Thane
   - Pollution sources: Nearby Industrial Estate, mainly engineering units. Water is used for drinking & industrial purposes.
5. Bore well at Gharatwadi, Palghar (1988/NWMP)
   - Station Details : Village- Aliyali, Taluka- Palghar, District- Thane
   - Pollution sources: Small scale industries nearby.
6. Bore well at MWML site, Taloja (1989)
   - Station Details : Village-Karawla, Taloja Taluka- Panvel District- Raigad
   - Pollution sources: Small scale industries nearby.
7. Bore well at BMW Site , Burudgaon (1990/NWMP)
   - Station Details: Village-Burudgaon , Taluka- Ahmednagar, District- Ahmednagar.
   - Pollution sources: Leaching of pollutants possible from nearby industry.
8. Bore well at MSW Site, Nasik (1991)
   - Station Details: Village-Pathardi , Taluka- Nasik, District- Nasik
   - Pollution sources: Leaching of pollutants possible from MSW site.
9. Dug well at MSW Site, owned by Shri. Dattu Kondiba Borate at Borate Vasthi and near MSW Site at Pimpri-Chinchwad.(1992/NWMP)
   - Station Details : Village-Moshi , Taluka- Haveli / Pimpri-Chinchwad, District- Pune
   - Pollution sources: Leaching or percolation of pollutants from MSW site. Water used for agriculture
10. Dug well at Pandarpur, Gangapur, Aurangabad (1993/NWMP)
    - Station Details : Village-Pandharpur , Taluka- Gangapur, District- Aurangabad
    - Pollution sources: Industrial and domestic pollution
11. Dug well at TPS-Durgapur, Chandrapur (1994)
    - Station Details : Village-Durgapur , Taluka- Chandrapur, District- Chandrapur
    - Pollution sources: Industrial and domestic pollution
12. Gram Panchayath Dug well , Near Balaji Gajbhiye House, Khaperkheda (1995/NWMP)
    - Station Details : Village-Khaperkheda (Ward No.4) , Taluka- Saoner, District- Nagpur
    - Pollution sources: Maharashtra State Power Generation Co. Ltd & Thermal Power Station. Water is used for drinking & other domestic uses.

13. Gram Panchayath Dug well , Near Jagadamba GMS Mandir Sahakari Sanstha,- Koradi (1996)
    - Station Details : Village-Koradi, Taluka- Kamptee, District- Nagpur
    - Pollution sources: Water is used for drinking & other domestic uses.
14. Bore well near Primary Health Centre. Raipur (1997)
    - Station Details : Bore well near Primary Health Centre. Village-Raipur, Taluka- Hingna, District- Nagpur
    - Pollution sources: Water is used for drinking & other domestic uses.
15. Gram Panchayat Dug well near Gram Panchayat Office, Brahmni (1998/NWMP)
    - Station Details : Village-Brahmni, Taluka- Kalmeshwar, District- Nagpur
    - Pollution sources: Wastes from MIDC Kalmeshwar & Municipal Council. Water is used for domestic purposes, except drinking.
16. Bore well Near Gram Panchayat, Changera. (1999/NWMP)
    - Station Details: Village-Changera, Taluka- Gondia, District- Gondia.
    - Pollution sources: Pollution due to human activities. Water used for domestic purposes
17. Dug well near Sarode Kirana Store. Bhandewadi (2000)
    - Station Details: Village-Bhandewadi, Taluka- Nagpur, District- Nagpur.
    - Pollution sources: Pollution due to human activities. Water used for domestic purposes
18. Tube well at water treatment plant of M.C.Achalpur near Post Office. (2001/NWMP)
    - Station Details : Village-Paratwada, Taluka- Achalpur, District- Amravati
    - Pollution sources: Habitation in the nearby Paratwada city. Water is used for domestic purposes.
19. Bore well Opp. Gajanan Maharaj Temple at Anjangaon road. (2002/NWMP)
    - Station Details : Village-Anjangaon, Taluka- Akot, District- Akola
    - Pollution sources: Habitation in the nearby Akot city. Water is used for domestic purposes.
20. Dug well at Plot No- 4, Street No. 49-C, at Nehru Bal Udyan Azad Maidan. (2003)
    - Station Details : Village- M.C. Village, Taluka- Yavatmal, District- Yavatmal
    - Pollution sources: Water is used for domestic purposes.
21. Bore well at Parvati Industrial Estate. Shirol, Kolhapur. (2004)
    - Station Details : Village-Yadrav, Taluka- Shirol, District- Kolhapur
    - Pollution sources: Industrial and domestic pollution.
22. Bore well at Khanjirenagar. Hatkanangale, Kolhapur. (2005)
    - Station Details : Village-Khanjirenagar, Taluka- Hatkanangale, District- Kolhapur
    - Pollution sources: Khanjire old industrial Estate Ichalkaranji and domestic purposes.
23. Bore well at MIDC, Shiroli, Kolhapur. (2006)
    - Station Details : Village-Shinoli, Taluka- Chandgad, District- Kolhapur
    - Pollution sources: MIDC industrial area and domestic purposes.
24. Bore well at Savali, near Gram Panchayat office. (2007/NWMP)
    - Station Details : Village-Savali, Taluka- Miraj, District- Sangli.
    - Pollution sources: Percolation of industrial effluent and domestic waste from nearby industrial area.

25. Dug well at Sambarwadi, owned by Shri. Kishan Hali Rajput. (2008/NWMP)
    - Station Details: Village- Sambarwadi, Taluka- Miraj, District- Sangli.
    - Pollution sources: Percolation of industrial effluent and domestic waste from nearby industrial area.
26. Bore well at Katpur, near Z.PSchool. (2200/SWMP)
    - Station Details : Village-Katpur, Taluka- Paithan, District-Aurangabad
    - Pollution sources: Industrial pollution
27. Dug well at Ranjangaon (2201/SWMP)
    - Station Details : Village-Ranjangaon, Taluka- Gangapur, District-Aurangabad
    - Pollution sources: Industrial and domestic pollution.
28. Dug well at Ghane Kunt, near Awashi, owned by Shri.Rajendra Amre., Ratnagiri (2202)
    - Station Details : Village- Ghane Kunt, Taluka- Khed, District- Ratnagiri
    - Pollution sources: Water is used for domestic purposes.
29. Hand Pump in the premises of Zilla Parishad Primary School, Bhugaon, Wardha. (2203)
    - Station Details : Village- Bhugaon, Taluka- Wardha, District- Wardha.
    - Pollution sources: Water is used for domestic purposes
30. Dug well at Gunjalwadi, Sangamner near Primary Health Care Center. (2204/SWMP)
    - Station Details : Village-Gunjalwadi, Taluka- Sangamner, District- Ahmadnagar
    - Pollution sources: Leaching of pollutants possible from nearby Industrial area
31. Bore well at MIDC Shiroli near M/s Pratibha Enterprises. (157/SWMP - 2829)
    - Station Details : Village- Shiroli,Taluka- Hatkanangale, District-Kolhapur
    - Pollution sources: Percolation of industrial effluents from nearby industrial area. Water is used for drinking.
32. Bore well at MIDC Gokul-Shirgaon. (158/SWMP -2830)
    - Station Details : Village-Gokul-Shirgaon, Taluka- Karvir, District-Kolhapur
    - Pollution sources: Percolation of industrial effluents from nearby industrial area.
33. Dug well at Sakharali, near MIDC Islampur near Krishna Milk Industry. (159/SWMP -2831)
    - Station Details : Village-Sakharali, Taluka- Walwa, District-Sangli
    - Pollution sources: Percolation of sewage from nearby Milk Industries.
34. Dug well No. 1 at Brahmanwadi-Anjanwel, owned by Shri. Vaidya. (160/SWMP-2832)
    - Station Details : Village-Anjanwel, Taluka- Guhagar, District-Ratnagiri
    - Pollution sources: Percolation of pollutants from nearby Gas & Power Company.
35. Dug well-No.-1 owned by Group Gram Panchayat Arketwadi, near Masjid (161/SWMP-2833)
    - Station Details : Village--Arketwadi, Taluka- Khed, District-Ratnagiri
    - Pollution sources: Percolation of industrial and domestic pollutants.
36. Dug well No.2 at Arketwadi (163/SWMP -2834)
    - Station Details : Village--Arketwadi, Taluka- Khed, District-Ratnagiri
    - Pollution sources: Percolation of sewage.

37. Dug well No. 2, owned by Group Gram Panchayat, Brahmanwadi- Anjanwel (164/SWMP-2835)
    - Station Details : Village-Anjanwel, Taluka- Guhagar, District-Ratnagiri.
    - Pollution sources: Percolation of pollutants from nearby Gas & Power Company
38. Dug well near Zilla Parishet Primary school, At Visapur (168/SWMP-2828)
    - Station Details : Village-Visapur, Taluka- Ballarpur, District-Chandrapur
    - Pollution sources: Domestic pollution due to human activities. Water used for domestic purposes
39. Dug well of Mr. Sampat Walunj, near M/s Mahajeet Clayton. (169/SWMP-2816)
    - Station Details : Village-Shinde village, Taluka- Nasik, District- Nasik
    - Pollution sources: M/s Mahajeet Clayton is closed. Leaching of pollutants possible
40. Bore well at Chitali near Wagh vasthi (171/SWMP-2817)
    - Station Details : Village-Chitali, Taluka- Rahata, District- Ahmadnagar
    - Pollution sources: Leaching of pollutants possible from nearby Chitali Distilleries.
41. Bore well at Spectron Ethers, Rasegaon near Siddeshwar Mahadev Mandir. (172/SWMP-2818)
    - Station Details : Village-Rasegaon, Taluka- . Dindori, District- Nasik
    - Pollution sources: Leaching of pollutants possible from Spectron Ether company
42. Dug well owned by Shri Deshmukh (173/SWMP-2819)
    - Station Details : Village-Malegaon, Taluka- Baramati, District- Pune
    - Pollution sources: Industrial pollution from Malegaon SSK.
43. Dug well owned by Shri Shivaji Baban Darekar (174/SWMP-2820)
    - Station Details : Village-Sanaswadi, Taluka- Shirur, District- Pune
    - Pollution sources: Effluents from nearby industries.
44. Bore well at Bale railway station premises owned by Shri. Digambar Joshi. (175/SWMP-2821)
    - Station Details : Village-Dahegaon ,Taluka- North Solapur, District-Solapur
    - Pollution sources: Leaching of pollutants possible. Water used for domestic purposes.
45. Bore well near Chincholi MIDC (176/SWMP-2822)
    - Station Details : Village-Chincholi, Taluka- Mohol, District-Solapur
    - Pollution sources: Industrial pollution from Chincholi MIDC. Water used for drinking purposes.
46. Bore well at Shete Vasti, near old Tuljapur road (177/SWMP-2823)
    - Station Details : Village- Shete vasthi, Tuljapur Naka,Taluka- Solapur, District-Solapur
    - Pollution sources: Domestic pollution.
47. Dug well at Naregaon. Aurangabad. (2824)
    - Station Details: Village- Naregaon, Taluka- Aurangabad, District- Aurangabad.
    - Pollution sources: Domestic pollution.
48. Bore well at Wahegaon, near Zilla Parishet School. Aurangabad. (2825)
    - Station Details: Village- Wahegaon, Taluka- Paithan, District- Aurangabad.
    - Pollution sources: Domestic pollution.

49. Dug well near Railway station, Cotton Market. Wardha city (2826)
    - Station Details: Village- Wardha city, Taluka- Wardha, District- Wardha.
    - Pollution sources: Market area discharges and domestic pollution.
50. Bore well Near Railway crossing at Dongri Buzurg. Bandara. (2827)
    - Station Details: Village- Dongri-Buzurg, Taluka- Tumsar, District- Bandara.
    - Pollution sources: Local discharges and domestic pollution.

MPCB has monitored ground water at 50 locations during the period 2007-2011. The concentrations of the water quality parameters are given in **Table 6.43**. MPCB has brought out quality standard "A–I" for the use as unfiltered Public water supply after approved disinfection and the same are considered for evaluation of water quality. The four parameters viz. pH, DO, BOD, TC, Ammonical Nitrogen and Nitrate are compared with MPCB Class A-I for five years. The values which do not comply with the MPCB Class AI standards have been highlighted in Gray colour.

Table 6.43: Annual Ground Water Quality of MPCB Monitored Stations

Year	Station No	Station Name	pH	DO	BOD	TC	Ammonical-N	Nitrate
2008	**1984**	Bore well at M/s Tata Steel Ltd. -76. MIDC, Tarapur.	7.5	--	4.0	8	0.2	3.9
2009			7.9	6.6	6.0	170	0.1	--
2010*			7.6	6.7	3.5	95	0.1	0.9
2011			7.8	7.0	3.0	275	1.0	0.9
2008	**1985**	Dug well at 5 Star Industrial Estate Kashimira, Mira Bhayandar	7.8	--	7.5	350	--	3.4
2009			8.4	6.0	7.0	20	0.3	1.4
2010*			8.0	5.0	12.0	70	0.8	1.8
2011*			8.1	7.0	5.4	67.5	0.3	1.3
2008	**1986**	Bore well at Dahanu Village Mota Pada, Dahanu	7.5	--	8.0	--	5.0	0.1
2009			8.1	6.5	6.0	35	0.1	0.1
2010*			7.4	6.3	3.3	29.5	0.1	2.1
2011*			7.5	7.1	3.9	92.5	0.1	0.3
2008	**1987**	Bore well Village-Gokhiware Taluka- Vasai District- Thane	7.6		7.5	2	--	0.2
2009			8.4	6.6	5.0	17	--	0.5
2010			8.2	6.9	4.0	70	0.0	16.0
2011*			7.6	7.0	4.1	60	0.1	0.9
2008	**1988**	Bore well at Gharatwadi, Village- Aliyali Taluka- Palghar, District- Thane	7.6		4.5	225	0.1	2.6
2009			7.9	6.6	5.0	25	0.1	3.1
2010*			7.8	6.3	4.0	67.5	0.5	1.8
2011*			8.0	7.2	3.5	297.5	0.2	0.5
2011	**1989**	Bore well at MWML site, Village-Karawla, Taloja Taluka-Panvel District- Raigad	8.2	7.2	5.0	130	0.6	0.9

Table 6.43 (Contd..) : Annual Ground Water Quality of MPCB Monitored Stations

Year	Station No	Station Name	pH	DO	BOD	TC	Ammonical-N	Nitrate
2007	**1990**	Bore well at BMW Site, Burdgaon Ahmednagar	8.5	6.4	8.8	22	--	1.7
2011*			7.5	5.4	9.0	--	2.8	50.0
2010	**1991**	Bore well at MSW Site, Village-Pathardi , Taluka- Nasik, District- Nasik	7.2	4.2	20.0	20	1.3	4.4
2011*			7.6	6.0	5.1	36	0.7	1.5
2009	**1992**	Dug Well Water at Borate vasti. Moshi at MSW Site, Pimpri-Chinchwad. - Moshi, Taluka-Haweli, Pune.	7.8	6.0	6.3	275	0.1	0.7
2010*			7.6	6.1	3.4	360	0.1	1.0
2011*			7.7	4.8	5.7	260	0.2	0.3
2008	**1993**	Dug well at Village, Pandharpur Taluka- Gangapur, District-Aurangabad	7.2	7.0	3.8	360	0.1	0.2
2009			7.9	4.2	4.4	280	5	11.7
2010*			8.7	--	3.0	80	0.2	31.0
2011*			7.9	6.7	4.9	85	0.2	23.5
2011	**1994**	Dug well at TPS-Durgapur Village-Durgapur Chandrapur	7.6	6.9	4.2	85	2.3	1.7
2009	**1995**	Gram Panchayath Dug well, Village-Khaperkheda, District-Nagpur	7.5	6.0	7.0	26	0.3	1.9
2010			8.2	4.4	9.8	30	1.2	4.1
2011			8.2	5.7	5.9	66.5	1.6	8.8
2010*	**1996**	Gram Panchayath Dug well, Koradi, Taluka- Kamptee, District- Nagpur	7.8	4.5	11.7	31	0.8	12.4
2011*			8.1	5.2	7.0	83	3.8	9.0
2010*	**1997**	Bore well near Primary Health Centre. Village-Raipur, Taluka-Hingna, District- Nagpur	7.9	4.9	8.3	81.5	0.4	2.1
2011*			7.9	6.3	22.6	120	3.1	2.2
2009	**1998**	Gram Panchayat Dug well near Gram Panchayat Office. Village-Brahmni, Taluka-Kalmeshwar, District- Nagpur	7.6	6.8	14.0	27	0.1	3.7
2010			7.7	6.3	8.0	21	1.1	0.8
2011*			8.3	5.6	6.5	55	2.4	3.4
2009	**1999**	Bore well Near Gram Panchayat office. Village-Changera, Taluka- Gondia, District-Gondia	7.5	6.2	6.0	22	0.2	3.1
2010*			7.8	5.5	6.2	25.5	0.7	2.4
2011*			8.1	6.4	6.5	38.5	2.2	2.3
2010*	**2000**	Dug well near Sarode Kirana Store. Village-Bhandewadi, Taluka- Nagpur, District-Nagpur	7.8	4.8	10.5	28	1.4	6.6
2011*			8.4	5.9	6.7	102	2.4	6.8
2009	**2001**	Tube well at water treatment plant of Achalpur, Amravati	7.8	5.2	7.2	60	0.8	5.7
2010			8.0	5.7	6.0	34	0.1	8.2
2011*			7.6	6.1	4.6	120	2.3	2.3

Table 6.43 (Contd..) : Annual Ground Water Quality of MPCB Monitored Stations

Year	Station No	Station Name	pH	DO	BOD	TC	Ammonical-N	Nitrate
2009	**2002**	Bore well at Anjangaon Road, Akola	8.4	5.3	6.0	26	0.1	9.7
2010			7.8	5.9	4.8	11	0.1	1.9
2011*			7.9	5.2	5.0	85	3.3	2.2
2010	**2003**	Dug well at Nehru Bal Udyan Azad Maidan, M.C. Village, Taluka- Yavatmal	8.7	5.8	7.0	22	0.5	9.6
2011*			7.5	6.1	3.9	76.5	1.7	1.4
2010	**2004**	Bore well at Parvati Industrial Estate. Village-Yadrav, Taluka-Shirol, District- Kolhapur	7.1	6.1	2.6	--	0.3	--
2011*			8.0	7.4	1.7	45.0	0.5	4.2
2010	**2005**	Bore well at Khanjirenagar. Village-Khanjirenagar, Taluka-Hatkanangale, District-Kolhapur	6.8	6.7	2.4	--	0.3	--
2011*			8.5	7.1	2.0	75	0.5	4.1
2010	**2006**	Bore well at MIDC, Shiroli. Village-Shinoli, Taluka-Chandgad, District- Kolhapur	7.0	6.9	2.2	--	0.3	--
2011*			8.1	7.0	3.1	70	0.5	4.0
2009	**2007**	Bore well at Savali, near Gram Panchayat office. Village-Savali, Taluka- Miraj, District- Sangli.	7.3	6.2	1.9	6	--	4.8
2010*			7.5	6.7	2.4	55	1.4	6.2
2011*			7.8	7.2	2.4	95	0.4	4.3
2009	**2008**	Dug well at Rusulwadi-Sambarwadi. Village-Sambarwadi, Taluka- Miraj, District- Sangli.	7.4	6.0	2.8	85	--	4.8
2010			8.2	7.2	2.4	80	0.3	2.9
2011*			8.0	6.7	2.2	105	0.4	9.4
2008	**2200**	Bore well at Katpur, near Z.PSchool. Village- Katpur, Taluka- Paithan, District- Aurangabad.	7.3	5.0	9.0	280	0.2	0.4
2009			8.0	5.0	2.0	240	3.4	4.8
2010*			8.4	--	3.0	130	0.7	30.3
2011*			8.4	6.6	4.2	95	0.4	6.0
2008	**2201**	Dug well at Ranjangaon. Village- Ranjangaon, Taluka-Gangapur, District- Aurangabad.	7.1	6.3	4.8	280	0.1	0.5
2009			7.9	4.0	5.2	220	5.6	12
2010*			8.0	5.8	3.7	90	0.3	13.2
2011*			7.6	6.1	4.2	85	0.1	13.3
2010	**2202**	Dug well at Ghane Kunt, near Awashi, owned by Shri.Rajendra Amre. Village- Ghane Kunt, Taluka- Khed, District-Ratnagiri.	7.3	7.3	2.0	80	0.5	3.9
2011			8.5	6.8	2.0	90	0.2	0.4
2010	**2003**	Hand Pump in the premises of Zilla Parishad Primary School. Village- Bhugaon, Taluka-Wardha, District- Wardha.	8.4	5.2	5.0	30	0.9	0.3
2011			8.0	6.4	5.3	--	6.0	2.3

Table 6.43 (Contd..) : Annual Ground Water Quality of MPCB Monitored Stations

Year	Station No	Station Name	pH	DO	BOD	TC	Ammonical-N	Nitrate
2007	**2004**	Dug well at Gunjalwadi, Sangamner near Primary Health Care Center. Sangamner, District- Ahmadnagar.	8.1	5.8	10.3	32.5	--	2.3
2010			8.1	6.2	5.0	-	0.4	2.7
2011*			7.5	5.1	9.8	--	1.4	7.1
2008	**157 (2829)**	Bore well water at MIDC Shiroli near Pratibha Enterprises, Kolhapur	8.0		1.8		0.8	4.8
2011*			8.6	7.0	2.6	50	0.5	4.4
2008	**158 (2830)**	Bore well water at MIDC near Gokul Shirgaon, Kolhapur	8.1		3.2		0.8	4.4
2011*			8.3	7.1	2.3	55	0.5	3.9
2008	**159 (2831)**	Dug well at Sakharali, near MIDC Islampur near Krishna Milk Industry.	6.5	6.3	1.6	--	0.4	3.5
2011*			7.9	7.0	2.2	110	0.4	1.2
2009	**160 (2832)**	Dug well at Brahmanwadi-Anjanwel, owned by Shri. Vaidya	7.8	6.8	2.0	27	0.7	1.6
2011*			7.4	7.4	2.3	65	0.4	1.8
2009	**161 (2833)**	Dug well owned by Group Gram Panchayat Arketwadi, near Masjid	8	6.6	2.2	28	0.5	1.6
2011*			7.7	7.0	2.2	80	0.4	1.2
2009	**163 (2834)**	Dug well No.2 at Arketwadi., Khed, Ratnagiri	7.4	5.2	2.3	27	0.5	1.2
2011			7.9	7.3	2.1	75	0.6	1.2
2009	**164 (2835)**	Dug well owned by Group Gram Panchayat, Brahmanwadi-Anjanwel	7.1	6.9	1.9	28	0.6	0.8
2011*			7.7	7.5	2.4	60	0.4	0.9
2008	**168 (2828)**	Dug well Zilla Parishad primary school Visapur	7.8	5.9	6.8	27	0.9	6.7
2011*			7.7	5.7	5.0	165	2.6	1.1
2007	**169 (2816)**	Well water near M/S Mahajit Claton Ltd., Nasik	7.9	7.7	10.0	14	2.8	4.8
2011*			7.7	6.0	4.5	--	0.1	6.1
2007	**171 (2817)**	Bore well at Chitali near Wagh Vasthi- Ahmadnagar	8.3	4.9	10.5	45	3.6	1.9
2011*			7.4	6.4	4.3	--	1.2	7.8
2007	**172 (2818)**	Well water at M/S Spectrum Ethers Ltd., Rasegaon, near Siddeshwar Mahadev Mandir	8.4	6.7	12.0		3.4	4.6
2011*			7.7	5.9	5.9	--	0.6	4.3
2007	**173 (2819)**	Dug Well Owned by Shri Deshmukh at Malegaon, Baramati	8.0	6.6	6.1	290	0.1	0.1
2008			7.9	6.3	5.6	80	0.2	0
2009			8.1	6.3	3.1	275	0.2	0.1
2011*			7.9	5.1	3.4	--	0.3	0.2
2007	**174 (2820)**	Dug well owned by Shri Shivaji Baban Darekar Village-Sanaswadi, Taluka- Shirur, District- Pune.	7.8	4.7	6.7	498	0.3	0.4
2008			8.2	6.4	6.1	275	0.3	0.4
2009			7.8	6.0	5.3	380	0.2	3
2011*			7.6	5.4	4.0	365	0.3	0.3

Table 6.43 (Contd..) : Annual Ground Water Quality of MPCB Monitored Stations

Year	Station No	Station Name	pH	DO	BOD	TC	Ammonical-N	Nitrate
2007	**175**	Bore Well Water at Bale Rly.	7.8	5.7	6.1	198	0.3	0.8
2008	**(2821)**	Station premises owned by	8.0	6.6	8.4	210	0.1	0.4
2009		Shri D. Joshi	7.2	5.9	4.3	250	0.7	0.5
2011			7.8	5.6	4.0	350	0.2	0.4
2007	**176**	Bore well near Chincholi.	7.9	5.8	5.7	283	0.5	0.7
2008	**(2822)**	Village- Chincholi, Taluka-	7.9	6.7	7.0	333	0.1	0.2
2009		Mohol, District- Solapur.	7.3	5.9	4.6	275	0.6	0.4
2011			7.5	5.9	3.5	350	0.4	0.3
2007	**177**	Bore well at Shete Vasti,	7.9	5.6	6.0	194	0.4	1
2008	**(2823)**	Near old Tuljapur road	8	6.6	10.0	238	0.2	0.1
2009			7.6	5.0	6.9	350	0.6	0.4
2011			7.9	5.1	5.0	350	0.2	0.3
2011	**2824**	Dug well at Naregaon. Village- Naregaon, Aurangabad.	8.1	6.2	3.8	140	0.0	5.2
2011	**2825**	Bore well at Wahegaon, near Zilla Parishet School- Wahegaon, Aurangabad.	8.6	6.5	4.2	47	0.3	10.7
2011	**2826**	Dug well near Railway station, Cotton Market. Wardha city	8.5	5.6	5.5		3.1	1.0
2011	**2827**	Bore well Near Dongri Buzurg. Tumsar, District- Bandara.	7.7	6.4	4.7	65	2.0	3.0

At most of the locations BOD did not comply with the standard. TC and Ammonical Nitrogen did not comply at few places.

Similar to river and ground water quality assessment, MPCB also monitored water quality of some of the discharge locations such as nallahs at various domestic and industrial locations. Yearly concentrations of some of the nallahs are mentioned in **Table 6.44**. Water Quality of Nallas monitored by MPCB was compared with the MPCB's General Standards for Discharge of Environmental Pollutants – Part A, Effluents (Public Sewers) **[Annexure IIa]**. Most of the results complied with the standards except pH not meeting at 2 nallas (Tarapur MIDC Nalla (Near Sump 1 and 3) and Ammonical Nitrogen at 1 nalla (near Sump 3) during 2010.

Table 6.44: Water Quality of Nallas Monitored by MPCB (2010-11)

Stn. Code	Nala Monitoring Station	Year	pH	DO	BOD	TC	Ammonical-N	Nitrate
2790	Pimpal-Paneri nalla at Ratnagiri near Finolex Industries at Yahganigaon	2010	6.1	7.3	2.4	155	0.6	0.4
		2011	7.1	6.4	2.6	126	0.6	2.7
2178	Chikhli Nalla Meets Godavari River, Nasik	2010	7.8	4.4	14.7	58	4.0	4.0
2786	Tarapur MIDC Nalla (Near Sump 1) Tarapur, Palghar, Thane	2010	4.0	BDL	220.0	1600	31.0	6.7
		2011	6.5	BDL	240.4	1273	12.1	2.1
2787	Tarapur MIDC Nala (Near Sump 2), Tarapur, Palghar, Thane	2010	6.1	BDL	170.0	1800	46.9	1.9
		2011	7.5	4.0	196.0	1100	31.5	2.4
2788	Tarapur MIDC Nala (Near Sump 3), Tarapur, Palghar, Thane	2010	4.0	BDL	315.0	1800	73.7	7.4
		2011	5.9	2.8	312.5	1050	36.3	3.8
2784	Sandoz Nala Sandoz baug, Thane	2010	7.5	BDL	59.0	1800	26.5	1.8
		2011	7.5	3.2	59.7	1490	6.9	2.7
2782	Rabodi nalla, Rabodi, Thane	2010	7.1	BDL	112.5	1800	25.2	2.4
		2011	7.2	2.6	85.3	1618	9.0	1.6
2783	Colour Chemical Nala, Village Majiwada, Thane	2010	7.2	2.3	26.0	1800	11.5	1.7
		2011	7.3	2.6	36.9	1632	5.1	1.6
2789	Nalla at D/s Alkai Mandir, Solapur, Village-Alkai, Tal: Malshiraj, Dist: Solapur	2010	7.6	2.5	8.5	1600	1.1	0.3
		2011	8.2	3.5	9.4	1389	1.9	0.8
2785	BPT Navapur (Discharge from MIDC Tarapur) Navapur, Palghar, Thane	2010	6.8	BDL	180.0	1800	56.4	3.5
		2011	7.2	BDL	319.5	1354	40.0	5.4
1094	Ulhas river at U/s of Badlapur water works. Village- Kulgaon, Taluka-Ambernath, Dist.- Thane	2011	8.0	7.2	3.4	114	0.2	0.4
1461	Bhatsa river at D/s of Pise Dam. Village- Pise, Taluka- Bhiwandi, District-Thane	2011	7.9	6.8	3.5	150	0.3	0.1

.

Extended Executive Summary

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Chapter 2

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Methodology for Data Interpretation

Chapter 4

Evaluation of River Water Quality

Chapter 5

Evaluation of Sea Water Quality

Chapter 6

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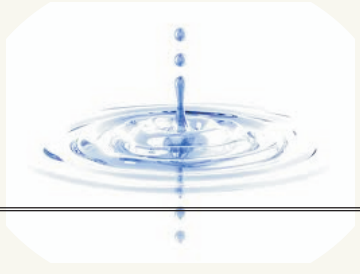

Annexures & Appendices

WATER QUALITY STATUS OF WATER BODIES OF MAHARASHTRA WITH RECOURSE TO ANALYTICAL/STATISTICAL TOOLS (2007-2011)

Maharashtra Pollution Control Board

Prepared By

Council of Scientific and Industrial Research
National Environmental Engineering
Research Institute

April, 2014

ANNEXURES & APPENDICES

Water Quality Status of Water Bodies of Maharashtra with Recourse to Analytical/Statistical Tools (2007-2011)

MPCB

Maharashtra Pollution Control Board (MPCB)

CSIR **NEERI**

CSIR- National Environmental Engineering Research Institute (NEERI)

April, 2014

LIST OF ANNEXURES

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Annexure I
Water Quality Criteria (CPCB)

Designated-Best-Use	Class of Water	Criteria
Drinking Water Source without conventional treatment but after disinfections	A	1. Total Coliforms Organisms MPN/100 ml shall be 50 or less 2. pH between 6.5 and 8.5 3. Dissolved oxygen 6 mg/l or more 4. Biochemical Oxygen Demand 5 days 20^0 C 2 mg/l or less
Outdoor bathing (Organized)	B	1. Total Coliforms Organisms MPN/100 ml shall be 500 or less 2. pH between 6.5 and 8.5 3. Dissolved oxygen 5 mg/l or more 4. Biochemical Oxygen Demand 5 days 20^0 C 3 mg/l or less
Drinking Water Source after conventional treatment and disinfection	C	1. Total Coliforms Organisms MPN/100 ml shall be 5000 or less 2. pH between 6 and 9 3. Dissolved oxygen 4 mg/l or more 4. Biochemical Oxygen Demand 5 days 20^0 C 3 mg/l or less
Propagation of Wild life and Fisheries	D	1. pH between 6.5 and 8.5 2. Dissolved oxygen 4 mg/l or more 3. Free Ammonia (as N) 1.2 mg/l or less
Irrigation, Industrial Cooling, Controlled Waste disposal	E	1. pH between 6.0 and 8.5 2. Electrical Conductivity at 25^0C micromhos/cm Max. 2250 3. Sodium absorption ration Max. 26 4. Boron Max. 2 mg/l
	Below-E	Not meeting A,B,C,D & E Criteria

Annexure II
Water Quality Standards for Best Designated Usage (MPCB)

Category of Fresh Water	**A – I**	**A – II**	**A – III**	**A - IV**
Best Usage	**Unfiltered Public water supply after approved disinfection**	**Public water supply with approved treatment equal to coagulation, sedimentation and disinfection**	**Not fit for human consumption, Fish & Wildlife Propagation**	**Fit for Agriculture, Industrial cooling & process water**
Chemical Qualities: Maximum allowable concentration				
1. Toxic Substances				
Arsenic (As)	0.3 mg/l	0.3 mg/l	1.0 mg/l	0.1 mg/l
Cadmium (Cd)	0.01 mg/l	0.01 mg/l	-	-
Chromium (Cr)	0.05 mg/l	0.05 mg/l	0.05 mg/l	0.2 mg/l
Cyanide (Cn)	0.05 mg/l	0.1 mg/l	0.05 mg/l	0.2 mg/l
Lead (Pb)	0.1 mg/l	0.1 mg/l	-	0.1 mg/l
Boron (B)	-	-	-	0.2 mg/l
Mercury (Hg)	0.001 mg/l	0.001 mg/l	0.001 mg/l	2.0 mg/l
Gross alpha activity	3 PCI/l	10-9 uc/ml	3 PCI/l	3 PCI/l
Gross Beta activity	30 PCI/l	10-8 uc/ml	30 PCI/l	30 PCI/l
2. Substances affecting health				
Fluoride (F)	1.5 mg/l	1.5 mg/l	-	1.0 mg/l
Nitrates(NO_3)	45 mg/l	45mg/l	-	-
3. Substances affecting the potability of water				
pH	6.5 to 8.5	6.0 to 8.5	6.5 to 9.0	6.5 to 9.0
TDS	-	-	-	-
Total Solids	1500 mg/l	1500 mg/l	-	-
Total Suspended Solids	25 mg/l	-	-	-
Total Hardness ($CaCO_3$)	50 mg/l	-	-	-
Total Residual Chlorine	-	-	-	-
Electrical conduct at 25^0C	-	-	1000 X 10^{-6} mhos	3000 X 10^{-6} mhos
Free Carbon Di Oxide	-	-	12 mg/l	-
Free Ammonical Nitrogen	-	-	1.2 mg/l	-

Water Quality Standards for Best Designated Usage (MPCB)

Category of Fresh Water	**A – I**	**A – II**	**A – III**	**A - IV**
Best Usage	Unfiltered Public water supply after approved disinfection	Public water supply with approved treatment equal to coagulation, sedimentation and disinfection	Not fit for human consumption, Fish & Wildlife Propagation	Fit for Agriculture, Industrial cooling & process water
pH	6.5 to 8.5	6.0 to 8.5	6.5 to 9.0	6.5 to 9.0
BOD (5 days 20^0C)	2.0 mg/l (monthly average of at least 10 samples)	5.0 (monthly average of at least 10 samples)	10 mg/l	30 mg/l
COD	-	-	-	150 mg/l
DO	Not less than 5 mg/l (monthly average of 100 samples)	4.0 mg/l	Not less than 3 mg/l	Not less than 2 mg/l
Bacteriological Standards: MPN/100 ml	Coliform Bacteria 250	Not greater than 5000		
Total Ammonical Nitogen	1.5 mg/l	1.5 mg/l	-	50 mg/l

Annexure II_a
General Standards for Discharge of Environmental Pollutants

Part – A: Effluents

Sl. No.	Parameter	Standards			
		Inland Surface Water	**Public Sewers**	**Land of Irrigation**	**Marine/ Coastal Areas**
1.	Colour and odour	Of Annexure-1	--	See 6 of Annexure -1	See 6 of Annexure -1
2.	Suspended solids mg/1, max.	100	600	200	a. For process wastewater 100 b. For cooling water effluent 10 per cent above total suspended mater of influent
3.	Particle size of suspended solids	Shall pass 850 micron IS Sieve	--	--	a. Floatable solids, solids max.3mm b. Settleable solids. Max 856 microns
4.	pH value	5.5 to 9.0	5.5 to 9.0	5.5 to 9.0	5.5 to 9.0
5.	Temperature	Shall not exceed 5°C above the receiving water temp.	--	--	Shall not exceed 5°C above the receiving water temperature
6.	Oil and grease, mg/1 max.	10	20	10	20
7.	Total residual chlorine, mg/1 max	1.0	--	--	1.0
8.	Ammonical nitrogen (as N), mg/l, max.	50	50	--	50
9.	Total nitrogen (as N), mg/l, max.	100	--	--	100
10.	Free ammonia (as NH_3), mg/l, max	5.0	--	--	5.0
11.	Biochemical oxygen demand (3 days at 27°C), mg/l, max	30	350	100	100
12.	Chemical oxygen demand, mg/l, max	250	--	--	250

General Standards for Discharge (Contd..)

Sl. No.	Parameter	Standards			
		Inland Surface Water	**Public Sewers**	**Land of Irrigation**	**Marine/ Coastal Areas**
13.	Arsenic (as As) mg/l, max	0.2	0.2	0.2	0.2
14.	Mercury (as Hg), mg/l, max	0.01	0.01	--	0.01
15.	Lead (as Pb), mg/l, max	0.1	0.1	--	2.0
16.	Cadmium (as Cd), mg/l, max	2.0	1.0	--	2.0
17.	Hexavalent chromium (as Cr^{+6}), mg/l, max	0.1	2.0	--	1.0
18.	Total chromium (as Cr), mg/l, max	2.0	2.0	--	2.0
19.	Copper (as Cu), mg/l, max	3.0	3.0	--	30
20.	Zinc (as Zn), mg/l, max	5.0	15	--	15
21.	Selenium (as Se), mg/l, max	0.05	0.05	--	0.05
22.	Nickel (as Ni), mg/l, max	3.0	3.0	--	50
23.	Cyanide (as CN), mg/l, max	0.2	0.2	0.2	0.2
24.	Fluoride (as F), mg/l, max	2.0	15	--	15
25.	Dissolved phosphates (as P), mg/l, max	5.0	--	--	--
26.	Sulphide (as S), mg/l, max	2.0	--	--	5.0
27.	Phenolic compounds (as C_6H_5OH), mg/l, max	1.0	5.0	--	5.0
28.	Radioactive materials				
	a. α emitters micro cure mg/l, max	10^{-7}	10^{-7}	10^{-8}	10^{-7}
	β emitters micro cure mg/l, max	10^{-6}	10^{-6}	10^{-7}	10^{-6}

General Standards for Discharge (Contd..)

Sl. No.	Parameter	Standards			
		Inland Surface Water	**Public Sewers**	**Land of Irrigation**	**Marine/ Coastal Areas**
29.	Bio-assay test	90 % survival of fish after 96 hours in 100 % effluent	90 % survival of fish after 96 hours in 100 % effluent	90 % survival of fish after 96 hours in 100 % effluent	90 % survival of fish after 96 hours in 100 % effluent
30.	Manganese (as Mn)	2 mg/l	2 mg/l	2 mg/l	2 mg/l
31.	Iron (as Fe)	3 mg/l	3 mg/l	3 mg/l	3 mg/l
32.	Vanadium (as V)	0.2 mg/l	0.2 mg/l	--	0.2 mg/l
33.	Nitrate Nitrogen	10 mg/l	--	--	20 mg/l

* These standards shall be applicable for industries, operations or processes other than those industries. Operations or process for which standards have been specified in Schedule of the Environment Protection Rules 1

Annexure III
Receiving Sea Water Standards for Different Categories, Applicable Parameters and Pertinent Issues

Categories	Major parameters	Rationale/Remarks	Issues
Salt pans, shell fish, ecologically sensitive zones (SW I)	pH-6.5-8.5, no colour and floating matter	General broad range, conductive for propagation of aquatic lives, is given. Value largely dependent upon soil-water interaction.	This category could also be applicable to the bathing water quality
	DO- 5.0 mg/l	Never less than 3.5 mg/l at any time of the year for protection of aquatic lives.	No value assigned to bacterial density
	Oil & Grease- 0.1 mg/l	Concentration should not exceed 0.1 mg/l as because it has effect on fish eggs and larvae.	
	Heavy metals- 0.01mg/l (Hg, Pb and Cd)	Value depends on : i. Concentration in salt, fish and shell fish. ii. Average per capita consumption per day. iii. Minimum ingestion rate that induces symptoms of resulting diseases.	
Commercial fishing, contact recreation, bathing water (SW II)	pH- 6.5-8.5	Range does not cause skin or eye irritation and is also conducive for propagation of aquatic lives.	Commercial fishing generally not undertaken near shore where bathing, recreational activities are common. Length (seaward) upto which bathing is undertaken should be also taken into consideration. Sampling schedule suggested (average 200/ 100ml not to exceed in 20 % of the sample and 3 consecutive samples in monsoon) may give varied results depending upon tide timings and location of sampling
	DO- 4.0 mg/l	Not less than 3.5 mg/l at anytime for protection of aquatic lives.	
	No noticeable colour, odour and floating matters	Specially caused by chemical compounds like creosols, phenols, naphtha, benzene, pyridine, toluene etc. causing visible colouration of water and tainting of and odour in fish flesh.	
	Turbidity	30 NTU (Nephelo Tur- bidity Unit) Measured at 0.9 depth	
	BOD_5 - 3 mg/l	Restricted for bathing (aesthetic quality of water). Also prescribed by IS:2296-1974.	
	Fecal Coliform - 100/100 ml	The average value not exceeding 200/100 ml in 20 percent of samples in the year and in 3 consecutive samples in monsoon months.	

Receiving Sea Water Standards for Different Categories, Applicable Parameters and Pertinent Issues (Contd..)

Categories	Major parameters	Rationale/Remarks	Issues
Industrial Cooling (SW III)	pH - 6.5-8.5	The range is conducive for propagation of aquatic species and restoring natural system.	The presence of fecal coliform for the industrial cooling is not very relevant
	DO - 3.0	To protect aquatic lives.	
	No noticeable colour and floating matter, odour	None in such concentration that would impair usages specifically assigned to this class.	
	Turbidity	30 NTU Reasonably clear water for Recreation, Aesthetic appreciation and Industrial cooling purposes	
	Fecal Coliform- 500/ 100 ml	Not exceeding 1000/100 ml in 20 percent of samples in the year and in 3 consecutive samples in monsoon months.	

Annexure IV: Drinking Water Quality Standards

Table 1: Organoleptic and Physical Parameters (Clause 4)

	BIS – 10500 (2004-2005)						CPHEEO (1998)		BIS-10500 (1991)		WHO Health based Guidelines		EU (1998) Para - metric Values	USEPA (June 2003)	Reasons for Inclusion Or Change	Sources of Contami-nation / Entry in Water body
Sr (1)	**Subst-ance Or Chara cteris-tics (2)**	**Require-ment (Desire-able limit) (3 ®)**	**Undesirable effect outside desirable limit (4)**	**Permissible limit in absence of alternate source (5♦)**	**Method of test (Ref to IS) (6)**	**Remarks (7)**	**Acceptable**	**Cause of Reject-ion**	**3®**	**5♦**	**1993**	**2006**				
1	Colour, Hazen Units, Max	5	Above 5, Consumer acceptance decreases	25	3025 (Part 4) *Visual Compari son Co-Pt scale	Extended to 25 only if toxic substances are not suspected, in absences of alternate sources	5.0	25	NC	NC	Desirable 15	NM	Acceptable to consumer and no abnormal change in appearance	15 (Color Units)	NA	Industrial Wastewater, Color organic matter, natural impurities, corrosion
2	Odor	Agreeable	-	Agreeable	3025 (Part 5) *Thresho ld Odor test *Olfacto -meter *Human sense	a) Test cold and when heated b) Test at several dilution	Unobject-ionable	Objectio nable	Unobject-ionable	NM	-	-	Acceptable to consumer and no abnormal change as far as smell (Olphact-rometrically)	3 Threshold Odor Number	Termino-logy changed as per Latest Convention	Sewage, Effluent, synthetic chemical, natural inorganic and organic contaminant and biological sources or processes.

® Changes in Revised BIS 10500 2004-2005

® ♦ Changes in Revised BIS 10500 2004-2005

	BIS – 10500 (2004-2005)						CPHEEO (1998)		BIS-10500 (1991)		WHO Health based Guidelines		EU (1998) Para - metric Values	USEPA (June 2003)		Reasons for Inclusion Or Change	Sources of Contami-nation / Entry in Water body
Sr (1)	**Subst-ance Or Chara cteris-tics (2)**	**Require-ment (Desire-able limit) (3 ®)**	**Undesirable effect outside desirable limit (4)**	**Permissible limit in absence of alternate source (5♦)**	**Method of test (Ref to IS) (6)**	**Remarks (7)**	**Acceptable**	**Cause of Reject-ion**	**3®**	**5♦**	**1993**	**2006**					
3	Taste	Agreeable	-	Agreeable	3025 (Part 7 & 8) Flavor Threshold test	Test to be conducted only after safety has been established	Unobject-ionable	Object-ionable	NC	NC	-	-	Acceptable to consumer and no abnormal change in taste	-		-	Synthetic chemical, natural inorganic and organic contaminant and biological sources or processes.
4	Turbi-dity, NTU	5	Above 5, consumer acceptance decreases	10	3025 (Part 10) Nephelo-metric	-	1.0	10	NC	NC	<5	NM	Acceptable to consumer and no change	MCLG NA	MCL or TT TT	May permit growth of disease causing organisms	Soil Runoff, Particulate matter, inadequate filtration, inorganic matter.
5	Dissolv ed Solids mg/l	500	Beyond this palatability decreases and may cause gastro intestinal irritations	2000	3025 (Part 16) Evapo-ration	-	500	2000	NC	NC	NG	NG	NM	500		Scaling in water pipelines, boilers, gastro intestinal irritation	Soil runoff and erosion

	BIS – 10500 (2004-2005)						CPHEEO (1998)		BIS-10500 (1991)		WHO Health based Guidelines		EU (1998) Para - metric Values	USEPA (June 2003)	Reasons for Inclusion Or Change	Sources of Contami-nation / Entry in Water body
Sr (1)	**Subst-ance Or Chara cteris-tics (2)**	**Require-ment (Desire-able limit) (3 ®)**	**Undesirable effect outside desirable limit (4)**	**Permissible limit in absence of alternate source (5♦)**	**Method of test (Ref to IS) (6)**	**Remarks (7)**	**Acceptable**	**Cause of Reject-ion**	**3®**	**5♦**	**1993**	**2006**				
6	pH Value	6.5-8.5	Beyond this range the water will affect the mucus membrane and/or water supply system	No relaxation	3025 (Part 11) Electro-metric By pH meter	-	7.0-8.5	<6.5 or >9.2	NC	NC	6.5-8.5	NG	>6.5 and <9.5	6.5-8.5	Corrosion of water pipes and household water systems [¤]	Change in pH due to accidental spillage,
7	Total hardnes s (as CaCO3) mg/l Max	300	Encrustation in water supply structure and adverse effects on domestic use	600	3025 (Part 21) EDTA	-	200	600	NC	NC	150-500	NG	NM	-	Scale deposition in pipelines, excessive soap consumpti on [¤]	Dissolution of Natural rock, erosion

Table 2 : General Parameters Concerning Substances Undesirable in Excessive Amounts (Clause 4)

	BIS – 10500 (2004-2005)						CPHEEO (1998)		BIS-10500 (1991)		WHO Health based Guidelines		EU (1998) Para - metric Values	USEPA (June 2003)		Reasons for Inclusion Or Change	Sources of Contami-nation / Entry in Water Body
Sr (1)	**Subst-ance Or Chara cteris-tics (2)**	**Require-ment (Desire-able limit) (3 ®)**	**Undesirable effect outside desirable limit (4)**	**Permissible limit in absence of alternate source (5♦)**	**Method of test (Ref to IS) (6)**	**Remarks (7)**	**Acceptable**	**Cause of Reject-ion**	**3®**	**5♦**	**1993**	**2006**					
1	Copper (as Cu) mg/l, Max	0.05	Astringent taste, discoloration and corrosion of pipes, fittings, and utensils will be caused beyond this	1.5	3025 (Part 42) *ICP *Colori-metric Neocu-proine	-	0.05	1.5	NC	NC	2	2	2	MC LG 1.3	MCL /TT TT 8 Action level = 1.3	Gastro intestinal distress, liver/ kidney damage	Corrosion, Erosion from copper pipes
2	Iron (as Fe) mg/l, Max	0.3	Beyond this limit taste/ appearance are affected, has adverse effect on domestic uses and water supply structures, and promotes iron bacteria	1.0	3025 (Part 53) * ICP *Colori-metric Phenan-throline		0.1	1.0	NC	NC	0.3	NG	0.2	0.3 mg/l		Promotes growth of iron bacteria, accumulation of deposits in distribution systems Ξ	Soil runoff, erosion, mine waste
3	Manga nese (as Mn) mg/l, Max		Beyond this limit taste/ appearance are affected, has adverse effect on domestic uses and water supply structures	0.3	35 of 3025 *ICP *Per-sulphate	-	0.05	0.5	NC	NC	0.5	0.4	0.05	0.05		Neurological effet, essential micro nutrient	Industrial wastes, steel alloys, Batteries

	BIS – 10500 (2004-2005)						CPHEEO (1998)		BIS-10500 (1991)		WHO Health based Guidelines		EU (1998) Para - metric Values	USEPA (June 2003)		Reasons for Inclusion Or Change	Sources of Contami-nation / Entry in Water Body
Sr (1)	**Subst-ance Or Chara cteris-tics (2)**	**Require-ment (Desire-able limit) (3 ®)**	**Undesirable effect outside desirable limit (4)**	**Permissible limit in absence of alternate source (5♦)**	**Method of test (Ref to IS) (6)**	**Remarks (7)**	**Acceptable**	**Cause of Reject-ion**	**3®**	**5♦**	**1993**	**2006**					
4	Nitrate (as NO3) mg/l, Max	45	Beyond this methaemoglobinemia take place/ may be indicative of pollution	No relaxation	3025 (Part 34) UV- *Spectro photometer *Phenol-Di-sulphonic acid	-	45	45	NC	100	50 Total nitrogen	50	50	Measured as nitrogen		Blue baby syndrome	Fertilizer runoff, erosions, leaching from sewage
														MCLG	MCL or TT		
														10	10		
5	Fluoride (as F) mg/l, Max	1.0	Fluoride may be kept as low as possible. High fluoride may cause fluorosis	1.5	23 of 3025 Θ *Ion selective electrode *SPDANS	-	1.0	1.5	NC	NC	1.5	1.5 l	1.5	2.0 mg/l	Fluorosis	Industrial wastes	

	BIS – 10500 (2004-2005)						CPHEEO (1998)		BIS-10500 (1991)		WHO Health based Guidelines		EU (1998) Para - metric Values	USEPA (June 2003)		Reasons for Inclusion Or Change	Sources of Contami-nation / Entry in Water Body
Sr (1)	**Subst-ance Or Chara cteris-tics (2)**	**Require-ment (Desire-able limit) (3 ®)**	**Undesirable effect outside desirable limit (4)**	**Permissible limit in absence of alternate source (5♦)**	**Method of test (Ref to IS) (6)**	**Remarks (7)**	**Acceptable**	**Cause of Reject-ion**	**3®**	**5♦**	**1993**	**2006**					
6	Zinc (as Zn) mg/l, Max	5	Beyond this limit it can cause astringent taste and an opalescence in water	15	3025 (Part 49) *Zincon	-	5.0	15	NC	NC	3.0	NG	NM	5.0		Astringent taste to water, develops a greasy film on boiling Ξ	Industrial waste
7	Alumin ium (as Al) mg/l, Max	0.03	Cumulative effect is reported to cause dementia	0.2	3025 (Part 49) *ICP *Erichro me Cyanine R	-	0.03	0.2	NC	NC	0.2	0.2	0.2	0.05-0.2		Dementia, Alzheimer disease ∂	Mining runoff, erosion from naturally occurring aluminum and aluminum salts
8	Chlorid es (as Cl) mg/l, Max	250	Beyond this limit, taste, corrosion and palatability are affected.	1000	3025 (Part 32) *Argen-tometric	-	200	1000	NC	NC	250	NG	250	250		Corrosion of metals in distribution systems	Sewage, industrial effluent runoff, natural sources
9	Seleniu m (as Se) mg/l, Max	0.01	Beyond this, the water become toxic	No relaxation	3025 (Part 56) *ICP *Colori-metric		0.01	0.01	NC	NC	0.01	0.01	0.01	MC LG	MCL or TT	Circulatory problems	discharge from Mine, petroleum refineries, erosion

	BIS – 10500 (2004-2005)						CPHEEO (1998)		BIS-10500 (1991)		WHO Health based Guidelines		EU (1998) Para - metric Values	USEPA (June 2003)	Reasons for Inclusion Or Change	Sources of Contami-nation / Entry in Water Body
Sr (1)	**Subst-ance Or Chara cteris-tics (2)**	**Require-ment (Desire-able limit) (3 ®)**	**Undesirable effect outside desirable limit (4)**	**Permissible limit in absence of alternate source (5♦)**	**Method of test (Ref to IS) (6)**	**Remarks (7)**	**Acceptable**	**Cause of Reject-ion**	**3®**	**5♦**	**1993**	**2006**				
10	Sulphat e (as SO4) mg/l, Max	200	Beyond this causes gastro intestinal irritation when Mg or Na are present	400 (see col 7)	3025 (Part 24) *Turbidi -metric	May be extended up to 400 provided that Mg does not exceed 30	200	400	NC	NC	500	NG	250	250	Gastro intestinal irritations, laxative effet	Leaching from sulphite ore, industrial wastes
11	Alkan-ility as CaCO3 , mg/l, Max	200	Beyond this limit taste becomes unpleasant	600	3025 (Part 23) *Titri-metric	-	200	600	NC	NC	-	-	-	-		
12	Calciu m (as Ca) mg/l, Max	75	Encrustation in water supply structure and adverse effect on domestic use	200	3025 (Part 40) ⊕ *AAS *ICP *EDTA titrimetri c	-	75	200	NC	NC	-	-	-	-	Corrosive	Leaching from Ca ores
13	Magne sium (as Mg) mg/l, Max	30	Encrustation in water supply structure and adverse effect on domestic use	100	3025 (Part 46) ⊕ *AAS *ICP *Gravi-metric	-	<=30	150	Newl y added -	-	-	-	-	Laxative if SO_4 is more	Leaching from Mg ores	

	BIS – 10500 (2004-2005)						CPHEEO (1998)		BIS-10500 (1991)		WHO Health based Guidelines		EU (1998) Para - metric Values	USEPA (June 2003)	Reasons for Inclusion Or Change	Sources of Contami-nation / Entry in Water Body
Sr (1)	**Subst-ance Or Chara cteris-tics (2)**	**Require-ment (Desire-able limit) (3 ®)**	**Undesirable effect outside desirable limit (4)**	**Permissible limit in absence of alternate source (5♦)**	**Method of test (Ref to IS) (6)**	**Remarks (7)**	**Acceptable**	**Cause of Reject-ion**	**3®**	**5♦**	**1993**	**2006**				
14	Residu al, free Chlorin e, mg/l, Min	0.2	-	1	3025 (Part 26) *Iodome tric *DPD	To be applicable only water is chlorinated. Tested at consumer end. When protection against viral infection is required, it should be minimum 0.5 mg/l	0.2	> 1.0	NC	NC	-	-	-	-	Harms growing plant. Alter taste	Leakage of salt water, industrial process
15	Phenoli c compo und (as C6H5 OH) mg/l, Max	0.001	Beyond this, it may cause objectionable taste and odour	0.002	3025 (Part 43) *Chlorof orm Extractio n Direct photomet ric	-	0.001	0.002	NC	NC	-	-	-	-	Odoriferrous Toxic	Industrial Waste, Oil and Grease waste
16	Minera l Oil mg/l, Max	0.01	Beyond this limit undesirable taste and odor after chlorination take place	0.03	APHA55 20 C and IS 3025 (Part 39) *Infrared partition	-	0.01	0.03	NC	NC	-	-	-	-	Sticky layer	

	BIS – 10500 (2004-2005)						CPHEEO (1998)		BIS-10500 (1991)		WHO Health based Guidelines		EU (1998) Para - metric Values	USEPA (June 2003)		Reasons for Inclusion Or Change	Sources of Contami-nation / Entry in Water Body
Sr (1)	**Subst-ance Or Chara cteris-tics (2)**	**Require-ment (Desire-able limit) (3 ®)**	**Undesirable effect outside desirable limit (4)**	**Permissible limit in absence of alternate source (5♦)**	**Method of test (Ref to IS) (6)**	**Remarks (7)**	**Accept -able**	**Cause of Reject-ion**	**3®**	**5♦**	**1993**	**2006**					
17	Anioni c deterge nts (as MBAS) mg/l, Max	0.2	Beyond this limit it can cause a light froth in water	1.0	Annex K IS 13428 Θ *Methyl ene Blue extractio n	-	0.2	1.0	NC	NC	-	-	-	-		Foam formation	Soap manufacturing laundering
18	Boron (as B) mg/l, Max	0.3	-	1.5	29 of 3025:196 4 Θ *Potenti o-metric	-	-	-	1	5	0.3	0.5	1	-		Affect Central Nervous System 'Borism'	Irrigation Water, soap, glass industries or sewage or rock runoff
19	Barium (as Ba) mg/l, Max	0.7	May lead to cardiovascula r problem	No relaxation	Annex F IS 13428*/I S 15302 ⊕ *AAS * ICP		-	-	Newly added	0.3	0.7	NM	MCLG	MCL / TT 2	Increase in BP, hyperten sion 2	Discharge drillinfg,Met al refineries, Erosion	
20	Molyb denum (as Mo) mg/l, Max	0.07	Beyond this it may cause otsteoporosis/ bone disorders	No relaxation	3025 (Part 2;2002) / ISO 11885:19 96 ⊕ *ICP *AAS		-	-	Newly added	0.7	0.7	NM	-	Essential element	Wastew ater, Drainag e water, steel tungsten and pigment industry contami nation		

	BIS – 10500 (2004-2005)						CPHEEO (1998)		BIS-10500 (1991)		WHO Health based Guidelines		EU (1998) Para - metric Values	USEPA (June 2003)	Reasons for Inclusion Or Change	Sources of Contami-nation / Entry in Water Body
Sr (1)	**Subst-ance Or Chara cteris-tics (2)**	**Require-ment (Desire-able limit) (3 ®)**	**Undesirable effect outside desirable limit (4)**	**Permissible limit in absence of alternate source (5♦)**	**Method of test (Ref to IS) (6)**	**Remarks (7)**	**Accept -able**	**Cause of Reject-ion**	**3®**	**5♦**	**1993**	**2006**				
21	Sulphide (as H_2S) mg/l, Max	0.05	Beyond this it may cause objectionable taste and odor	No relaxation	IS 325 (Part 29) *Methyl ene blue		-	-	Newly added	NG	NG	-	-	Odor nuisance, Toxic	Sewage, oxygen depletion leading to subsequent reduction of sulphate by bacterial activity	

Table 3 : Parameters Concerning Toxic Substances (Clause 4)

	BIS – 10500 (2004-2005)						CPHEEO (1998)		BIS-10500 (1991)		WHO Health based Guidelines		EU (1998) Para - metric Values	USEPA (June 2003)		Reasons for Inclusion Or Change	Sources of Contami-nation / Entry in Water Body
Sr (1)	**Subst-ance Or Chara cteris-tics (2)**	**Require-ment (Desire-able limit) (3 ®)**	**Undesirable effect outside desirable limit (4)**	**Permissible limit in absence of alternate source (5♦)**	**Method of test (Ref to IS) (6)**	**Remarks (7)**	**Accept -able**	**Cause of Reject-ion**	**3®**	**5♦**	**1993**	**2006**					
1	Mercury (as Hg) mg/l, Max	0.001	Beyond this, the water becomes toxic	No relaxation	3025 (Part 48) *Mercury analyzer *AAS *Dith-izone	To be tested when pollution is suspected	0.001	0.001	NC	NC	0.001	0.006	0.001	MCLG 0.002	MCL/TT 0.002	Kidney Damage, Minamata disease	Erosion, discharge from refineries, factories, landfill runoff
2	Cadmi um (as Cd) mg/l, Max	0.003	Beyond this the water becomes toxic	No relaxation	3025 (Part 41) *ICP *Dith-izone	To be tested when pollution is suspected	0.01	0.01	0.01	NC	0.003	0.003	0.005	0.005	0.005	Kidney damage	Erosion, corrosion, discharge from metal, steel and plastic industries, refineries
3	Arsenic (as As) mg/l, Max	0.01	Beyond this the water becomes toxic	No relaxation	3025 (Part 37)/ Θ * ICP *Silver-di - carbothio mate	To be tested when pollution is suspected	0.01	0.05	0.05	NR	0.01	0.01	0.01	0	0.010 as of 01/25/06	Risk of Cancer, Skin damage	Erosion, electronic production waste runoff, alloy industry
4	Cyanide (as CN) mg/l, Max	0.05	Beyond this the water becomes toxic	No relaxation	3025 (Part 27) Θ *Cyan-ide-selective electrode *Colori-metric method	To be tested when pollution is suspected	0.05	0.05	NC	NC	0.07	0.07	0.05	0.2 Free Cyanide	0.2	Nerve damage, Thyroid problem, Fatal in high concentr-ation	Discharge from steel, metal refineries, fertilizers

	BIS – 10500 (2004-2005)						CPHEEO (1998)		BIS-10500 (1991)		WHO Health based Guidelines		EU (1998) Para - metric Values	USEPA (June 2003)		Reasons for Inclusion Or Change	Sources of Contami-nation / Entry in Water Body
Sr (1)	**Subst-ance Or Charac-teristics (2)**	**Require -ment (Desire-able limit) (3 ®)**	**Undesirable effect outside desirable limit (4)**	**Permissible limit in absence of alternate source (5♦)**	**Method of test (Ref to IS) (6)**	**Remarks (7)**	**Accept -able**	**Cause of Reject-ion**	**3®**	**5♦**	**1993**	**2006**					
5	Lead (as Pb) mg/l, Max	0.01	Beyond this the water becomes toxic	No relaxation	3025 (Part 47) * ICP *Dithioz one	To be tested when pollution is suspected	0.05	0.05	0.05	NC	0.01	0.01	0.01	0	TT[8] action level= 0.015	Delay in physical and mental develop-ment , Bone damage	Corrosion, erosion, lead acid battery and alloy industry
6	Chro-mium (as Cr^{6+}) mg/l, Max	0.05	May be carcinogenic above this limit	No relaxation	3025 (Part 52) * ICP *Colori-metric	To be tested when pollution is suspected	0.05	0.05	NC	NC	0.05	0.05	0.05	0.1 Total Cr	0.1	Allergic dermatitis, Carcino-genic	Discharge from steel, pulp mill, erosion
7	Poly nuclear Aromatic Hydrocar bons (as PAH) mg/l, Max	0.0001	May be Carcinogenic	No relaxation	APHA 6440 *Liquid – Liquid Extraction chromato graphic	To be tested when pollution is suspected	0.2	0.2	NM	NM	0.7	NM	0.0001	0	0.0002	Cancer, reproductive difficulty	Leaching from coal tar coated pipeline

8. Pesticide (Refer Table 5)

9	Nickel (as Ni) mg/l, Max	0.02	Beyond this it may cause allergic reaction	No relaxation	3025 (Part 54) * ICP *AAS, *Dimeth yl-glyoxine		-	-	Newly added		0.02	0.07	0.02	-		Get absorbs into intestine, allergic	Leaching from electroplating, steel nickel alloy industries

	BIS – 10500 (2004-2005)						CPHEEO (1998)		BIS-10500 (1991)		WHO Health based Guidelines		EU (1998) Para - metric Values	USEPA (June 2003)		Reasons for Inclusion Or Change	Sources of Contami-nation / Entry in Water Body
Sr (1)	**Subst-ance Or Charac-teristics (2)**	**Require -ment (Desire-able limit) (3 ®)**	**Undesirable effect outside desirable limit (4)**	**Permissible limit in absence of alternate source (5♦)**	**Method of test (Ref to IS) (6)**	**Remarks (7)**	**Accept -able**	**Cause of Reject-ion**	**3®**	**5♦**	**1993**	**2006**					
10	Polychlori nated biphenyls (PCBs) mg/l, Max	0.0005	May be carcinogenic	No relaxation	ASTM 5175/ APHA 6630 *GC/MS *Liquid liquid extractio n GC	-	-	-	Newly added		-	-	-	MCLG 0	MCL or TT 0.0005	Cancer, immune deficiencies, nervous system difficulty	Landfill run off, waste chemical run off
11	Trihalome thane				*GC *GC/MS									MCLG	MCL or TT 0.1 0.08	Carcino-genic	Byproduct of chlorination of drinking water
A	Bromofor m mg/l, Max	0.1	May be carcinogenic above this limit	No relaxation	ASTM D 3973-85/ APHA	-	-	-	Newly added		-	-	-	-	0	Genotoxic	Byproduct of chlorination of drinking water
B	Dibromo chloro methane mg/l, Max	0.1	May be carcinogenic above this limit	No relaxation	ASTM D 3973-85/ APHA	-	-	-	Newly added		-	-	-	-	0	Genotoxic	Byproduct of chlorination of drinking water
C	Bromo dichlorom ethane mg/l, Max	0.06	May be carcinogenic above this limit	No relaxation	ASTM D 3973-85/ APHA	-	-	-	Newly added		-	-	-	-	0.06	Carcinogenic	Byproduct of chlorination of drinking water
D	Chlorofor m mg/l Max	0.2	May be carcinogenic above this limit	No relaxation	ASTM D 3973-85/ APHA	-	-	-	Newly added		-		-	-	No MCLG	Liver damage	Byproduct of chlorination of drinking water

Table 4: Parameters Concerning Radioactive Substances (Clause 4)

	BIS – 10500 (2004-2005)						CPHEEO (1998)		BIS-10500 (1991)		WHO Health based Guidelines		EU (1998) Para - metric Values	USEPA (June 2003)		Reasons for Inclusion Or Change	Sources of Contami-nation / Entry in Water Body
Sr (1)	**Subst-ance Or Charac-teristics (2)**	**Require -ment (Desire-able limit) (3 ®)**	**Undesirable effect outside desirable limit (4)**	**Permissible limit in absence of alternate source (5♦)**	**Method of test (Ref to IS) (6)**	**Remarks (7)**	**Accept -able**	**Cause of Reject-ion**	**3®**	**5♦**	**1993**	**2006**					
1 : Radioactive materials																	
a	Alpha emitters Bq/l, Max	0.1	May be carcinogenic above this limit	1.0	IS 14194 (Par2) *Counting	-	0.1	0.1	NM	0.1	-		-	MCLG 0	MCL or TT 15pci/l	Cancer	Erosion of radioactive mineral decay
b	Beta emitters Bq/l, Max	1.0	-	1.0	IS14194 (Pt 1) *Counting	-	1.0	1.0	NM	1.0	-		-	0	4 milli rans/yr	Cancer	Erosion of radioactive mineral decay

Table 5: Pesticide Residues Limits and Test Method

Sr. no	BIS – 10500 (2004-2005)			BIS-10500 (1991)	CPHEEO (1998)	WHO Health based Guidelines		EU (1998) Parametric values	USEPA (June 2003)		Reasons for Inclusion Or Change	Sources Of Contami-nation / Entry in Water Body
	Pesticides	Limit µg/l	Test method USEPA AOAC/ISO			1993 (µg/l)	2006 (µg/l)					
1	DDT (o,p and p, p-Isomers of DDT, DDE and DDD)	1	508 AOAC 990.06	NEWLY ADDED	-	2	1	-	-		Cell necrosis or mitogenic effect	Insecticide runoff
2	Gamma-HCH (Lindane)	2	508 AOAC 990.06		-	2	2	-	0.0002	0.0002	Kidney liver problem	Insecticide runoff
3	2,4D	3	515.1		-	3o	30	-	0.07	0.07	Kidney liver problem	Herbicide runoff
4	Isoproturon	9	532		-	-	-					
5	Alachor	20	525.2, 507		-	20 l	20	-	0	0.002	Cancer, Anemia	Herbicide runoff
6	Atrazine	2	525.2, 8141A		-	2	2	-	0.003	0.003	Cardiovascular and reproductive problems	Herbicide runoff
7	Aldrin/ Dieldrin	0.03	508		-	0.03	0.03	-				
8	Alpha HCH	0.01	508		-	-	-	-	-	-	-	-
9	Beta HCH	0.04	508		-	-	-	-	-	-	-	-
10	Delta HCH	0.04	508		-	-	-	-	-	-	-	-
11	Endosulfan (Alpha, beta and sulphate)	0.41	508 AOAC 990.06		-	-	-	-	-	-	ə	-
12	Monocrotophos	1	8141A		-	-	-	-	-	-	-	-
13	Ethion	3	1657 A		-	-	-	-	-	-	-	-
14	Chloropyriphos	30	525.2, 8141 A		-	-	-	-	-	-	-	-
15	Phorate	2	8141 a		-	-	-	-	-	-	-	-
16	Butachor	125	525.2, 8141A		-	-	-	-	-	-	ə	-
17	Methylparathion	0.3	8141A ISO 10695		-	-	-	-	-	-	-	-
18	Malathion	190	8141A		-	-	-	-	-	-	-	-

References:

- **DOC 1: Revised BIS 10500: 2004-05**
- DOC 2: BIS 10500:1991
- DOC 3: WHO Drinking water standard, 1993 (www.lenntech.com/who's-drinking-water-standards.htm)
- DOC 4: WHO Drinking water standard, 2006 (www.lenntech.com/who's-drinking-water-standards06.htm)
- DOC 5: EU Drinking water standard, 1998 (www.lenntech.com/EU's-drinking-water-standards.htm)
- DOC 6: USEPA Drinking water standard, June 2003 (www.epa.gov/safewater/contaminants/index.html)
- DOC 7: Guidelines for Drinking Water Quality, 3rd Edition, Volume 1 Recommendations, WHO, Geneva, 2004.
- CPHEEO
- APHA (American Public Health Association), 17th edition
- Guidance manual for Drinking water quality monitoring and assessment, 1st edition

Key:

NG:	No Guideline,	NM:	Not Mentioned
NR:	No Relaxation	NC:	No Change
NA:	Not Applicable	TT:	Treatment Technique
MCL: Maximum Contaminant Level		MCLG: Maximum Contaminant Level Goal	

Short form of Method:
AAS: Atomic Absorption Spectrophotometer
DPD: Diethyl-p-phenylene-diamine
PDA: Phenoldisulfonic Acid
ICP: Inductive Couple Plasma
GC/MS: Gas Chromatography and Mass Spectrophotometer

Symbol:
Θ BIS method No. not mentioned in Guidance book
⊕ Not included in Guidance book
Ξ Not of health concern at concentration normally observed in drinking water and taste and appearance of water affected below the health based value.
∂ Owing to limitation in the animal data as model for human and the uncertainty surrounding the human data, a health based guideline optimization of the coagulation process in the drinking water plants using aluminium based coagulants are derived: 0.1 mg/l or less in large water treatment facilities and 0.2 mg/l or less in small facilities.
ɜ Occurs in drinking water at concentration well below at which toxic effect may occur.
® Changes in Revised BIS 10500 2004-2005
♦ Changes in Revised BIS 10500 2004-2005

Notes:

- Should include ammonium (NH_3) standard as large amount of sewage is getting into raw water sources and no simple method of removal of ammonia is available.
- In addition, instead of indicating BIS number of test method, indicate the method like AAS, colorimeter, GC etc.

Parameters newly added in BIS 10500:2004 are:

- Magnesium
- Barium
- Molybdenum
- Sulphide
- Nickel
- Polychlorinated biphenyls
- Trihalomethane
- Pesticide residues

Parameter	BIS 10500:1991	BIS10500:2004	WHO		EU 1998	USEPA June 2003		Reason for change or inclusion	Source of contamination
			1993 (mg/l)	2006 (mg/l)		MRDLG (mg/l)	MRDL (mg/l)		
Ammonia (NH_3)	-	-	NG	NG	As NH4 0.5 mg/l	-	-	Toxicological effect about 200 mg per kg of body weight ɘ	Metabolic, agriculture, industrial processes, from disinfection with chloramine
Chloramines (as Cl_2)	-	-	3	NM	-	4.0	4.0	Eyes nose irritation, anemia, stomarch discomfort	Water additive used to control microbe

MRDLG: maximum residual disinfectant level goal.
MRDL: maximum residual disinfectant level.

Annexure V
Water Quality Indices of Rivers of Maharashtra

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Amba River												
Station No : HP_AM_1 Station Name : Pali												
2007	GE	GE	MG	GE	MG	GE	MG	MG	MG	GE	MG	MG
2008	GE	GE	MG	MG	MG	MG	GE	MG	MG	MG	MG	MG
2009	MG	MG	MG	MG	MG	MG	GE	MG	GE	MG	MG	MG
2010	--	--	--	--	--	GE	GE	--	GE	GE	--	--
Station No : 2651 Station Name : D/s of Waken bridge												
2008	--	--	--	GE	--	--		GE	--	GE	GE	GE
2009	--	--	GE	GE	GE	--	GE	--	--	--	GE	GE
WQI was not calculated due to un-availability of data [Stn.2651: 2007, 2010 & 2011; Stn. HP_AM_1 during 2011]												

Amravati River												
Station No : 2652 Station Name : D/s of Dhondaicha, Dhule												
2007	--	--	--	--	GE	--	--	--	--	MG	--	--
2008	MG	--	MG	--	--	--	MG	--	--	--	GE	--
WQI was not calculated due to un-availability of data for 2009 to 2011												

Bhatsa River												
Station No : 1461 Station Name : D/s of Pise Dam, Tal:Bhiwandi, Dist:Thane												
2007	GE	--	--	GE	--	--	GE	--	--	GE	--	--
2008	GE	--	--	GE	--	--	--	--	--	--	--	--
2009	GE	--	--	GE	--	--	GE	--	--	GE	--	--
WQI was not calculated due to un-availability of data for 2010 to 2011												
Station Code : 2653 Station Name : D/s of Liberty Oil Mills, Satnel, Shahapur, Thane												
2011	--	GE	GE	GE	GE	GE	GE	--	GE	--	GE	--
Station Code : 2654 Station Name : U/s of Liberty Oil Mills, Satnel, Shahapur, Thane												
2011	--	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	--
Stations 2653 & 2654 WQI was not calculated due to un-availability of data for 2007 to 2010												

Bhima River												
Station No : 28 Station Name : Takli Village Near Karnataka Border												
2007	GE	GE	GE	GE	MG	GE	GE	GE	MG	MG	MG	MG
2008	MG		MG	MG	GE	MG		MG	MG	MG	MG	
2009	MG		MG	Bad	Bad	MG	MG	MG	MG	MG		MG
WQI was not calculated due to un-availability of data for 2010 to 2011												
Station No : 1188 Station Name : Narsingpur Near Sangam Bridge After Confluence with Nira, District-Solapur												
2007	--	MG	GE	GE	MG	GE	GE	GE	GE	GE	GE	MG
2008	GE	Bad	MG	MG	MG	MG	--	MG	MG	MG	MG	MG
2009	MG	--	MG	--	Bad	MG	MG	Bad	MG	MG	MG	MG
2010	--	--	--	MG	MG	GE	GE	MG	MG	GE	MG	MG
2011	GE	GE	MG	MG	MG	MG	MG	MG	MG	MG	Bad	--

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Bhima River (Contd..)												
Station No : 1189 Station Name : U/s of Vithalwadi Near Sankar Mandir, Dist.-Pune												
2007	MG	--	--	MG	--	--	MG	--	--	MG	--	--
2008	Bad	--	--		--	--	MG	--	--	Bad	--	--
2009	Bad	--	--	VB	--	--	Bad	--	--	MG	--	--
2010	--	--	--	--	--	--	Bad	--	--	Bad	--	--
2011	Bad	--	--	Bad	MG	Bad	MG	MG	MG	Bad	Bad	
Station No : 1190 Station Name : D/s of Bundgarden, District-Pune												
2007	Bad	--	--	Bad	--	--	MG	--	--	VB	--	--
2008	Bad	--	--	--	--	--	MG	--	--	VB	--	--
2009	MG	--	--	--	--	--	VB	--	--	VB	--	--
2010	--	--	--	--	--	--	VB	--	--	VB	--	--
2011	VB	--	--	VB	Bad	VB	Bad	Bad	Bad	VB	VB	--
Station No : 1191 Station Name : After confluence with Mula-Mutha at Pargaon Near Vasant Bandara												
2007	GE	--	--	GE	--	--	GE	--	--	MG	--	--
2008	Bad	--	--	MG	--	--		--	--	MG	--	--
2009	MG	--	--	MG	--	--	MG	--	--	MG	--	--
2010	--	--	--	Bad	--	--	GE	--	--	--	--	--
2011	VB	--	--	VB	Bad	VB	MG	MG	MG	MG	Bad	--
Station No : 1192 Station Name : Near Mahadev Temple, Taluka-Daund, Dist. Pune												
2007	GE	--	--	--	--	--	GE	--	--	--	--	--
2008	--	--	--	MG	--	--	GE	--	--	GE	--	--
2009	MG	--	--	MG	--	--	GE	--	--	MG	--	--
2010	--	--	--	Bad	--	--	GE	--	--	MG	--	--
2011	Bad	--	--	--	Bad	Bad	MG	MG	MG	Bad	Bad	--
Station No : 2655 Station Name : At Koregaon Near Koregaon Bridge, District- Pune												
2007	GE	--	GE	GE	--	GE	--	GE	MG	GE	MG	MG
2008	MG	MG	MG	GE	MG	Bad	--	--	--	MG	--	--
2009	GE	--	--	--	--	--	--	--	--	--	--	MG
2010	--	--	Bad	MG	MG	GE	GE	GE	GE	MG	GE	MG
2011	VB	--	--	MG	GE	GE	MG	MG	GE	MG	Bad	--
Station No : 2656 Station Name : Backwater of Ujani Dam Near Raw Water Pump House, Indapur, District-Pune												
2007	GE	--	--	--	--	--	--	GE	MG		MG	MG
2008	MG	MG	MG	GE	MG	MG	MG	MG	MG	MG	GE	MG
2009	MG	MG	MG	--	--	--	--	--	--	--	--	GE
2010	--	--	MG	GE	GE	GE	GE	MG	MG	GE	GE	GE
2011	GE	GE	GE	MG	MG	GE	GE	GE	GE	GE	MG	--
Station Name : Narshinpur												
2010	--	--	--	--	--	--	--	MG	MG	MG	MG	MG
2011	MG	MG	MG	MG	--	--	--	--	--	--	--	--
Station Name : Sarati												
2010	--	--	--	--	--	--	--	MG	MG	MG	MG	MG
2011	MG	MG	--	MG	--	--	--	--	--	--	--	--
WQI was not calculated due to un-availability of data for 2007 to 2009												

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Bhima River (Contd..)												
Station Name : Near Intake Water Pump House, Dam at Paligaon, District-Beed												
2008	GE	GE	GE	GE	GE	MG	GE	GE	GE	GE	GE	GE
2009	--	--	--	--	--	--	--	--	--	GE	--	MG
WQI was not calculated due to un-availability of data for 2007, 2010 to 2011												

Bindusara River												
Station No : 2657 Station Name : Beed, near intake water pump house at Dam Kumbargaon, Taluka- Indapur, District- Pune												
2008	GE	GE	GE	GE	GE	MG	GE	--	GE	GE	GE	GE
2009	--	--	--	--	--	--	--	--	--	GE	--	MG
Stn. 2657 : WQI was not calculated due to un-availability of data for 2007, 2010 to 2011												

Bori River												
Station No : 2658 Station Name : D/S of Amalner, District- Jalgaon												
2007	--	--	--	MG	--	--	--	GE	Bad	MG	MG	--
2008	MG	MG	--	MG	--	GE	GE	--	--	--	GE	--
2009	--	--	--	--	--	--	--	--	--	--	--	MG
2010	--	--	--	--	--	MG	GE	GE	GE	--	--	MG
2011	GE	GE	GE	--	--	--	--	--	--	--	GE	GE

Burai River												
Station No : 2659 Station Name: Before Confluence to Tapi River at Mukudas Village, Taluka-Pandharpur, District-Solapur												
2007	--	--	--	--	GE	--	--	--	--	GE	--	--
2008	MG	GE	--	GE	--	GE	MG	--	--	--	--	--
2009	--	GE	--	--	--	--	--	--	--	--	--	MG
2010	--	--	--	--	--	--	--	GE	GE	--	--	GE
2011	GE	GE	GE	--	--	--	--	--	--	--	--	GE

Chandrabagha River												
Station No.: 1911 Station Name: U/s of Pandharpur Town, Pandharpur, Solapur												
2007	--	--	--	GE	--	--	GE	--	--	MG	--	--
2008	MG	--	--	MG	--	--	MG	--	--	GE	--	--
2009	MG	--	--	MG	--	--	MG	--	--	MG	--	--
2010	--	--	--	MG	--	--	GE	--	--	GE	--	--
2011	MG	--	--	MG	MG	MG	GE	MG	MG	MG	MG	--
Station No.: 1912 Station Name: D/s of Pandharpur Town, Pandharpur, Solapur												
2007	GE	--	--	GE	--	--	GE	--	--	MG	--	--
2008	MG	--	--	Bad	--	--	Bad	--	--	MG	--	--
2009	MG	--	--	MG	--	--	Bad	--	--	MG	--	--
2010	--	--	--	MG	--	--	MG	--	--	MG	--	--
2011	Bad	--	--	MG	MG	MG	GE	MG	MG	MG	Bad	--

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Daman Ganga River												
Station No : HP_DG_1 Station Name : Daman-Ganga River at Khadadi												
2007	--	--	--	--	--	MG	GE	GE	--	--	--	--
2008	--	--	--	--	--	MG	MG	MG	MG	MG	--	--
2009	--	--	--	--	--	--	--	MG	Bad	MG	--	--
2010	--	--	--	--	--	--	GE	GE	GE	GE	--	--
Stn. HP_DG_1 : WQI was not calculated due to un-availability of data for 2011												
Station No : HP_DG_2 Station Name : Daman-Ganga River at Khadadi												
2007	--	--	--	--	--	--	MG	MG	MG	--	--	--
2008	--	--	--	--	--	MG	MG	MG	Bad	MG	--	--
2009	--	--	--	--	--	MG	MG	MG	MG	MG	--	--
2010	--	--	--	--	--	--	GE	GE	GE	GE	GE	GE
2011	GE	GE	GE	GE	GE	--	--	--	--	--	--	--
Station No : HP_DG_3 Station Name : Daman-Ganga River at Shindayacha Pada												
2007	--	--	--	--	--	--	MG	MG	MG	--	--	--
2008	--	--	--	--	--	MG	MG	Bad	VB	MG	--	--
2009	--	--	--	--	--	MG	MG	GE	MG	GE	--	--
2010	--	--	--	--	--	--	GE	GE	GE	GE	--	--

Darna River												
Station No : 2660 Station Name : At Chehadi Pumping Station, District: Nasik												
2007	--	--	--	MG	--	--	--	GE	--	--	--	--
2008	--	--	--	MG	MG	GE	GE	--	--	--	GE	--
2010	--	--	GE	GE	GE	GE	--	GE	GE	--	GE	GE
2011	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE
Stn. 2660 : WQI was not calculated due to un-availability of data for 2009												
Station No : 2661 Station Name : At Aswali (Darna Dam), Igatpuri, District: Nasik												
2007	--	--	--	GE	--	--	--	GE	--	--	--	--
2008	--	--	--	GE	--	GE	GE	--	--	--	GE	--
2009	--	GE	--	--	--	--	--	--	--	--	--	--
2010	--	--	GE	GE	GE	GE	GE	GE	GE	--	GE	GE
2011	GE	--	GE	GE	GE	GE	GE	GE	GE	--	GE	GE
Station No : 2662 Station Name : MES Site Pumping Station, Bhagur, District: Nasik												
2007	--	--	GE	MG	--	--	--	MG	--	GE	MG	--
2008	GE	GE	GE	GE	GE	GE	GE	--	--	--	GE	--
2009	--	GE	--	--	--	--	--	--	--	--	--	--
2010	--	GE	GE	--	GE	GE	GE	GE	GE	MG	GE	GE
2011	MG	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE
Station No : 2663 Station Name : Bhagur, Pumping Station, Pandhurli Bridge, Nasik												
2007	--	--	GE	MG	--	--	--	GE	--	MG	MG	--
2008	GE	GE	GE	GE	GE	GE	GE	--	--	--	GE	--
2009	--	GE	--	--	--	--	--	--	--	--	--	GE
2010	--	--	GE	GE	GE	GE	GE	GE	GE		GE	--
2011	GE	GE	GE	--	GE	GE	GE	GE	GE	GE	GE	--
Station No : 2664 Station Name : At Sassari, District: Nasik												
2007	--	--	GE	MG	--	--	--	MG	--	MG	GE	--
2008	GE	MG	GE	GE	GE	MG	GE	--	--	--	GE	--
2009	--	GE	--	--	--	--	--	--	--	--	--	GE
2010	--	GE	GE	--	GE	GE	GE	GE	GE		MG	MG
2011	MG	--	GE	GE	GE	GE	GE	GE	GE	GE	GE	--

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Deoghar (Ghonsari) River												
Station No. HP_DH_2 Station Name : Deoghar River at Ghonsari Village												
2007	--	--	--	--	--	GE	MG	--	MG	--	GE	--
2008	GE	GE	GE	MG	--	GE	GE	GE	GE	--	GE	GE
2009	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE
2010	--	--	--	--	--	GE	GE	GE	GE	GE	GE	GE
2011	GE	GE	GE	GE	GE	--	--	--	--	--	--	--
Ghod River												
Station No. 2665 Station Name : Ghod River at Shirur												
2007	--	--	GE	Bad	--	MG	--	GE	MG	Bad	MG	Bad
2008	MG	Bad	VB	MG	MG	MG	--	--	--	VB	--	--
2009	GE	MG	--	--	--	--	--	--	--	--	--	MG
2010	--	--	Bad	MG	--	GE	GE	MG	MG	GE	MG	MG
2011	MG	MG	MG	Bad	MG	Bad	MG	MG	MG	Bad	MG	--
Girna River												
Station No : 1252 Station Name : At Intake of Girna Pump House, District-Jalgaon												
2007	GE	--	--	MG	--	--	MG	--	--	GE	--	--
2008	--	--	--	--	--	--	GE	--	--	GE	--	--
2009	GE	--	--	GE	--	--	MG	--	--	GE	--	--
2010	--	--	MG	--	--	--	--	--	--	--	--	--
2011	MG	GE	GE	--	GE	MG	--	--	--	--	GE	GE
Station No : 1253 Station Name : Malegaon at Malegaon Road Bridge, District-Nasik												
2007	GE	--	--	MG	--	--	MG	--	--		--	--
2008	GE	--	--		--	--	GE	--	--	GE	--	--
2009	GE	--	--	MG	--	--	GE	--	--	GE	--	--
2010	--	--	GE	--	--	--	MG	--	--	--	--	--
2011	GE	GE	--	--	--	--	--	GE	--	--	--	--
Godavari River												
Station No : HP_GD_2 Station Name : Dhalegaon, Tal.- Majalgaon; Dist.- Beed												
2007	--	--	--	--	--	--	GE	GE	GE	GE	--	--
2008	--	--	--	--	--	--	--	GE	GE	--	--	--
2009	--	--	--	--	GE	--	--	--	--	--	--	--
Stn. HP_GD_2 : WQI was not calculated due to un-availability of data for 2010 & 2011												
Station No : HP_GD_4 Station Name : Hirapur, Tal.- Georai; Dist.- Beed												
2008	--	--	--	--	--	--	--	GE	GE	--	--	--
2009	--	--	--	--	--	--	GE	--	--	--	--	--
2010	--	--	--	--	--	--	--	MG	GE	--	GE	GE
2011	GE	--	--	--	--	--	--	--	--	--	--	--
Stn. HP_GD_4 : WQI was not calculated due to un-availability of data for 2007												
Station No : HP_GD_5 Station Name : Kesrali, Tal.- Biloli; Dist.- Nanded												
2010	--	--	--	--	--	--	--	--	GE	--	--	--
Stn. HP_GD_5 : WQI was not calculated due to un-availability of data for 2007- 09 & 2011												

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Godavari River (Contd..)												
Station No : HP_GD_6 Station Name : Killari, Tal.- Georai; Dist.- Beed												
2007	--	--	--	--	--	--	--	--	--	GE	GE	--
2008	--	--	--	--	--	--	--	--	--	GE	GE	GE
2009	--	--	--	--	--	--	--	GE	GE	--	GE	GE
2010	--	--	--	--	--	--	GE	GE	GE	--	GE	GE
Stn. HP_GD_6 : WQI was not calculated due to un-availability of data for 2011												
Station No : HP_GD_14 Station Name : Pishor, Tal.- Kannad; Dist.- Aurangabad												
2007	--	--	--	--	--	--	--	GE	GE	GE	GE	--
2008	--	--	--	--	--	--	--	--	--	GE	GE	--
2009	--	--	--	--	--	--	--	GE	--	--	--	--
Stn. HP_GD_6 : WQI was not calculated due to un-availability of data for 2010 & 11												
Station No : HP_GD_15 Station Name : Prnabridge, Tal.- Nanded; Dist.- Nanded												
2007	--	--	--	--	--	--	--	GE	GE	GE	GE	--
2008	--	--	--	--	--	--	GE	GE	GE	GE	GE	--
2009	--	--	--	--	--	--	GE	--	--	GE	GE	--
2010	--	--	--	--	--	--	--	GE	GE	--	--	--
Stn. HP_GD_15 : WQI was not calculated due to un-availability of data for 2011												
Station No : HP_GD_20 Station Name : Takli, Tal.- Devni; Dist.- Latur												
2007	--	--	--	--	--	--	--	--		GE	--	--
2008	--	--	--	--	--	--	--	--	GE	GE	GE	--
2009	--	--	--	--	--	--	--	GE	--	--	--	--
2010	--	--	--	--	--	--	GE	GE	GE	--	GE	GE
Stn. HP_GD_20 : WQI was not calculated due to un-availability of data for 2011												
Station No : HP_GD_21 Station Name : Taklidhangar, Tal.- Nanded; Dist.- Nanded												
2007	--	--	--	GE	GE	GE	GE	--	--	--	--	--
2008	--	--	--	--	--	--	--	--	GE	GE	GE	--
2009	--	--	--	--	--	--	GE	--	--	GE	GE	--
2010	--	--	--	--	--	--	--	GE	GE	--	--	--
Stn. HP_GD_21 : WQI was not calculated due to un-availability of data for 2011												
Station No : HP_GD_22 Station Name : Toka, Tal.- Newasa; Dist.- Ahmednagar												
2007	--	--	--	--	--	--	GE	GE	GE	GE	GE	--
2008	--	--	--	--	--	GE	GE	GE	--	GE	GE	--
2009	--	--	--	--	--	--	GE	GE	--	GE	--	--
2010	--	--	--	--	--	--	GE	GE	GE	GE	GE	GE
Stn. HP_GD_22 : WQI was not calculated due to un-availability of data for 2011												
Station No : HP_GD_23 Station Name : Wadvali, Tal.- Paithan; Dist.- Aurangabad												
2007	--	--	--	--	--	--	--	GE	GE	GE	GE	--
2008	--	--	--	--	--	GE	GE	GE	GE	GE	GE	--
2009	--	--	--	--	--	GE	GE	--	--	GE	--	--
2010	--	--	--	--	--	--	--	GE	GE	GE	GE	GE
Stn. HP_GD_23 : WQI was not calculated due to un-availability of data for 2011												
Station No : HP_GD_24 Station Name : Yelli, Tal.- Nanded; Dist.- Nanded												
2007	--	--	--	--	--	--	GE	GE	GE	GE	GE	--
2008	--	--	--	--	--	--	--	--	GE	GE	GE	--
2009	--	--	--	--	--	--	GE	GE	--	GE	--	--
2010	--	--	--	--	--	--	GE	GE	--	GE	--	--
Stn. HP_GD_24 : WQI was not calculated due to un-availability of data for 2011												

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Godavari River (Contd..)												
Station No : HP_GD_25 Station Name : Zari, Tal.- Parbhani; Dist.- Parbhani												
2007	--	--	--	--	--	--	--	GE	GE	GE	--	--
2008	--	--	--	--	--	--	--	--	--	--	GE	--
2009	--	--	--	--	--	--	GE	--	--	GE	GE	--
Stn. HP_GD_25 : WQI was not calculated due to un-availability of data for 2010 & 11												
Station No : HP_GD_1 Station Name : Bhandardara, Tal.- Nanded; Dist.- Nanded												
2007	--	--	MG	--	--	--	GE	--	--	--	--	--
2008	--	--	--	--	--	--	MG	--	--	--	--	--
Stn. HP_GD_1 : WQI was not calculated due to un-availability of data for 2009 to 2011												
Station No : HP_GD_3 Station Name : Gangapur Dam, Tal.- Nasik ; Dist.- Nasik												
2007	--	--	MG	--	--	--	--	--	GE	--	--	--
2008	--	--	--	--	--	--	Bad	--	--	--	--	--
Stn. HP_GD_3 : WQI was not calculated due to un-availability of data for 2009 to 2011												
Station No : HP_GD_7 Station Name : Kopargaon, Tal.- Kopargaon; Dist.-Ahmednagar												
2008	--	--	--	--	--	--	--	MG	Bad	Bad	--	--
2010	--	--	--	--	--	--	--	VB	VB	Bad	--	--
Stn. HP_GD_7 : WQI was not calculated due to un-availability of data for 2009 & 2011												
Station No : HP_GD_26 Station Name : Anantwadi, Tal.- Mahagaon; Dist.- Yavatmal												
2007	--	--	--	--	--	GE	MG	--	GE	GE	GE	GE
2008	GE	GE	GE	GE	GE	--	GE	GE	GE	GE	GE	--
2009	GE	GE	GE	GE	MG	GE	--	MG	GE	--	--	--
2010	--	--	--	--	--	--	GE	MG	GE	GE	GE	GE
2011	GE	GE	GE	GE	--	--	--	--	--	--	--	--
Station No : HP_GD_27 Station Name : Damrencha, Tal.- Aheri; Dist.- Gadchiroli												
2007	--	--	--	--	GE	--	--	--	--	--	GE	--
2008	--	GE		--	GE	--	--	--	GE	--	--	--
2009	--	--	GE	--	--	GE			GE	--	--	--
2010	--	--	--	--	--	--	--	--	GE	--	--	GE
2011	--	--	GE	--	--	--	--	--		--	--	--
Station No : HP_GD_28 Station Name : Deori, Tal.- Gondia; Dist.- Gondia												
2007	--	--	--	--	GE	--	--	GE	--	--	GE	--
2008	--	GE	--	--	GE	--	--	--	GE	--	--	--
2009	--	--	GE	--	--	GE	--	--	GE	--	--	--
2010	--	--		--	--	--	--	--	GE	--	--	GE
Stn. HP_GD_28 : WQI was not calculated due to un-availability of data for 2011												
Station No : HP_GD_29 Station Name : Dhaba, Tal.- Gondpipri; Dist.- Chandrapur												
2007	--	--	--	--	MG	MG	MG	MG	GE	MG	GE	GE
2008	GE	GE	GE	GE	GE		MG	MG	MG	MG	MG	--
2009	MG	MG	MG	MG	--	MG	MG	MG	--	MG	MG	--
2010	--	--	--	--	--	MG	GE	GE	MG	GE	GE	GE
2011	GE	GE	GE	GE	GE	--	--	--	--	--	--	--
Station No : HP_GD_30 Station Name : Drugwada, Tal.- Ashti; Dist.- Wardha												
2008	--	--	--	--	--	--	--	GE	--	--	--	--
2009	--	GE	--	--	GE	--	--	--	--	--	--	--
2010	--	--	--	--	--	GE	--	--	--	--	--	GE
2011	--	--	GE	--	--	--	--	--	--	--	--	--
Stn. HP_GD_30 : WQI was not calculated due to un-availability of data for 2007												

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Godavari River (Contd..)												
Station No : HP_GD_31 Station Name : Kamtheekhairi, Tal.- Parseoni; Dist.- Nagpur												
2007	--	--	--	GE	--	--	--	--	--	--	--	--
2008	GE	--	--	GE	--	--	--	GE	--	--	--	--
2009	--	GE	--	--	GE	--	--	MG	--	--	--	--
2010	--	--	--	--	--	GE	--	--	GE	--	--	GE
2011	--	--	GE	--	--	--	--	--	--	--	--	--
Station No : HP_GD_32 Station Name : Kardha,Tal.- Bhandara; Dist.- Bhandara												
2007	--	--	--	GE	--	--	--	--	--	GE	--	--
2008	GE	--	--	GE	--	--	--	GE	--	--	--	--
2009	--	GE	--	--	GE			GE	--	--	--	--
2010	--	--	--	--	--	--	--	--	GE	--	--	GE
2011	--	--	GE	--	--	--	--	--	--	--	--	--
Station No : HP_GD_33 Station Name : Kolgaon,Tal.- Wani; Dist.- Yavathmal												
2007	--	--	--	--	MG	GE	MG	GE		GE	GE	GE
2008	GE	GE	MG	GE	GE	--	GE	MG	MG	GE	GE	--
2009	GE	GE	GE	GE	GE	MG	--	MG	GE	GE	GE	--
2010	--	--	--	--	--	--	MG	MG	GE	GE	GE	GE
2011	GE	GE	GE	GE	GE	--	--	--	--	--	--	--
Station No : HP_GD_34 Station Name : Mahagaon,Tal.- Aheri ; Dist.- Gadchiroli												
2007	--	--	--	GE	--	--	--	--	--	GE	--	--
2008	GE	--	--	GE	--	--	--	GE	--	--	--	--
2009	--	GE	--		--	--	--	--	--	--	--	--
Stn. HP_GD_34 : WQI was not calculated due to un-availability of data for 2010 & 2011												
Station No : HP_GD_35 Station Name : Mathani,Tal.- Mouda; Dist.- Nagpur												
2007	--	--	--	GE	--	--	--	--	--	GE	--	--
2008	GE		--	GE	--	--	--	GE	--	--	--	--
2009	--	GE	--	--	GE	--	--	MG	--	--	--	--
Stn. HP_GD_35 : WQI was not calculated due to un-availability of data for 2010 & 2011												
Station No : HP_GD_36 Station Name : Petta,Tal.- Ettapalli; Dist.- Gadchiroli												
2007	--	--	--	GE	--	--	--	GE	--	GE	--	--
2008	--	--	--	--	GE	--	--	--	--	--	GE	--
2009	--	MG	--	--	GE	--	--	--	--	--	--	--
Stn. HP_GD_36 : WQI was not calculated due to un-availability of data for 2010 & 2011												
Station No : HP_GD_37 Station Name : Saiphal,Tal.- Ghatanji; Dist.- Yavatmal												
2007	--	--	--	GE	--	--	GE	--	--	GE	--	--
2008	--	--	--	GE	--	--	GE	--	--	GE	--	--
2009	--	--	--	GE	--	--	--	MG	--	--	--	--
2010	--	--	--	--	--	--	--	--	--	--	--	GE
2011	--	--	GE	--	--	--	--	--	--	--	--	--
Station No : HP_GD_38 Station Name : Dindora,Tal.- Warora; Dist.- Chandrapur												
2007	--	--	--	--	GE	GE	MG	GE	MG	GE	GE	GE
2008	--	GE	GE	GE	GE	--	GE	MG	MG	GE	GE	--
2009	GE	GE	GE	MG	GE	MG	--	GE	GE	GE	GE	--
2010	--	--	--	--	--	MG	GE	--	MG	GE	--	GE
2011	GE	GE	GE	GE	GE	--	--	--	--	--	--	--

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Godavari River (Contd..)												
Station No : HP_GD_39 Station Name : Temburdoh,Tal.- Saoner; Dist.- Nagpur												
2007	--	--	--	GE	--	--	MG	--	--	GE	--	--
2008	GE	--	--	GE	--	--	--	GE	--	--	--	--
2009	--	GE	--	--	--	--	--	MG	--	--	--	--
2010	--	--	--	--	--	GE	--	--	MG	--	--	GE
2011	--	--	GE	--	--	--	--	--	--	--	--	--
Station No : HP_GD_40 Station Name : Chincholi,Tal.- Brahmapuri, Chandrapur												
2008	GE	--	--	GE	--	--	--	GE	--	--	--	--
2009	--	GE	--	--	GE	--	--	GE	--	--	--	--
2010	--	--	--	--	--	GE	--	--	--	--	--	GE
2011	--	--	GE	--	--	--	--	--	--	--	--	--
Stn. HP_GD_40: WQI was not calculated due to un-availability of data for 2007												
Station No : HP_GD_41 Station Name : WagholiButti, Tal.- Saoli; Dist.- Chandrapur												
2007	--	--	--	GE	--	--	--	--	--	GE	--	--
2008	GE	--	--	GE	--	--	--	GE	--	--	--	--
2009	--	GE	--	--	GE		--	GE	--	--	--	--
2010	--	--	--	--	--	GE	--	--	--	--	--	GE
2011	--	--	GE	--	--		--	--	--	--	--	--
Station No : HP_GD_42 Station Name : Warud Bagaji, Tal.- Tiwasa; Dist.- Amravati												
2007	--	--	--	--	GE	GE	GE	--	MG	GE	GE	MG
2008	GE	GE	GE	GE	GE	--	GE	GE	GE	GE	GE	--
2009	GE	GE	GE	GE	GE	GE	GE	GE	MG	GE	GE	--
2010	--	--	--	--	--	--	GE	--	GE	GE	--	GE
2011	GE	GE	GE	GE	GE	--	--	--	--	--	--	--
Station No : 12 Station Name : Dhalegaon, Tal.- Pathari; Dist.- Parbhani												
2007	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE
2008	GE	GE	GE	GE	--	--	--	GE	GE	GE	GE	GE
2009	--	--	GE	--	--	--	--	GE	GE	GE	GE	MG
2010	--	--	--	--	--	--	GE	GE	GE	--	GE	GE
2011	GE	--	GE	GE	--	--		GE	--	GE	GE	--
Station No : 1095 Station Name : U/S of Gangapur Dam, Tal.- Nasik; Dist.- Nasik												
2007	GE	GE	GE	GE	GE	GE	GE	--	--	GE	GE	GE
2008	GE	--	GE	GE	GE	--	GE	--	--	GE	GE	GE
2009	GE	--	GE	GE	--	GE	GE	GE	GE	GE	GE	GE
2010	--	--	GE	GE	GE	GE	GE	GE	GE	--	GE	GE
2011	GE	GE	GE	GE	GE	--	GE	GE	GE	GE	GE	--
Station No : 1096 Station Name : Panchavati at Ramkund, Tal.- Nasik; Dist.- Nasik												
2007	--	GE	GE	GE	GE	MG	MG	MG	MG	MG	GE	MG
2008	GE	--	GE	MG	MG	GE	GE	GE	GE	GE	GE	GE
2009	GE	--	GE	MG	MG	MG	MG	GE	MG	MG	GE	MG
2010	--	--	MG	MG	GE	MG	MG	MG	GE	Bad	MG	MG
2011	MG	MG	GE	MG	MG	MG	MG	MG	GE	GE	GE	--
Station No : 1209 Station Name : Raher, Tal.- Nayagaon; Dist.- Nanded												
2007	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE
2008	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE
2009	--	--	GE	GE	GE	--	GE	GE	GE	GE	GE	MG
2010	--	--	--	--	GE	--	GE	GE	GE	--	GE	GE
2011	--	GE	GE	MG	GE	GE	GE	GE	GE	GE	GE	--

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Godavari River (Contd..)												
Station No : 1210 Station Name : Intake Pump House, Tal.-Vishnupuri; Dist.- Nanded												
2007	--	--	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE
2008	GE	GE	GE	GE	--	--		GE	GE	GE	GE	GE
2009	--	--	--	GE	--	--	GE	--	--	--	--	--
2010	--	--	--	--	--	--	--	--	--	--	GE	GE
2011	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	--
Station No : 1211 Station Name : Nasik D/s Near Amardham, Tal.-Nashik; Nasik												
2007	--	MG	GE	MG	MG	MG	MG	MG		MG	MG	MG
2008	GE	--	GE	MG	MG	MG	MG	MG	GE	GE	GE	GE
2009	GE	--	MG	--	MG	GE	GE	GE	GE	MG	MG	MG
2010	--	--	GE	--	GE	MG	MG	MG	GE	Bad	MG	MG
2011	MG	MG	GE	Bad	MG	MG	MG	MG	GE	Bad	GE	--
Station No : 1312 Station Name : Jaikwadi Dam, Tal.- Paithan; Dist.- Aurangabad												
2007	--	--	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE
2008	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE
2009	--	--	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE
2010	--	--	--	--	GE	--	GE	GE	GE	--	GE	GE
2011	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	--
Station No : 2157 Station Name : Latur Water Intake, Tal.- Kalumb, Osmanabad												
2009	--	--	--	--	--	--	--	--	--	GE	GE	MG
2010	--	--	--	--	--	--	--	GE	--	--	GE	GE
2011	GE	GE	GE	GE	GE		GE	GE	GE	GE	GE	--
Stn.2157: WQI was not calculated due to un-availability of data for 2007 and 2008												
Station No : 2158 Station Name : Paithan Intake Pump House, Jayakwadi, Aurangabad												
2008	--	--	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE
2009	GE	--	GE	GE	GE	GE	GE	GE	GE	GE	GE	MG
2010	--	--	--	--	--	--	--	GE	GE	--	GE	GE
2011	GE	GE	GE	GE	GE	GE	GE	--	GE	GE	--	--
Stn.2158: WQI was not calculated due to un-availability of data for 2007												
Station No : 2159 Station Name : D/s of Paithan at Pathegaon Bridge, Aurangabad												
2008	--	--	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE
2009	GE	--	GE	GE	GE	GE	GE	GE	GE	GE	GE	MG
2010	--	--	--	--	--	--	--	GE	GE	--	GE	GE
2011	--	GE	GE	GE	GE	GE	--	GE	GE	GE	--	--
Stn.2159: WQI was not calculated due to un-availability of data for 2007												
Station No : 2160 Station Name : U/s of Aurangabad Reservoir, Kaigaon Deori Tal.- Gangapur; Dist.- Aurangabad												
2008	--	--	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE
2009	GE	--	GE	GE	GE	GE	GE	GE	GE	GE	GE	MG
2010	--	--	--	--	GE	--	--	GE	GE	GE	GE	MG
2011	GE	GE	GE	MG	GE	GE	GE	GE	GE	GE	--	--
Stn.2160: WQI was not calculated due to un-availability of data for 2007												

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Godavari (Contd..)												
Station No : 2161 Station Name : Jalana Intake Water Pump House, Shahabad Deori Tal.- Ambad ; Dist.- Jalana												
2008	--	--	GE	GE	GE	GE	GE	GE	GE	GE		GE
2009	GE	--	GE	GE	--	--	GE	GE	GE	GE	MG	MG
2010	--	--	--	--	--	--	GE	--	--	--	GE	GE
2011	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	--	--
Stn.2161: WQI was not calculated due to un-availability of data for 2007												
Station No : 2177 Station Name : Near Someshwar Temple, Tal.- Nasik; Dist.- Nasik												
2007	--	--	--	--	--	--	--	--	--	MG	--	--
2008	--	--	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE
2009	GE	--	MG	GE	GE	GE	GE	GE	GE	GE	GE	MG
2010	--	--	GE	GE	GE	MG	GE	GE	GE	--	GE	GE
2011	GE	GE	GE	GE	GE	GE		MG	GE	GE	GE	--
Station No : 2178 Station Name : Chikhali Nalla Meets, Godavari River, Nasik												
2008	--	--	GE	--	Bad	--	--	MG	Bad	Bad	--	MG
2009	MG	--	Bad	--	--	MG	MG	GE	GE	MG	MG	MG
Stn.2178: WQI was not calculated due to un-availability of data for 2007 and 2010 -2011												
Station No : 2179 Station Name : Hanuman Ghat, Nasik City, Nasik												
2008	--	GE	GE	--	Bad	Bad	Bad	MG	GE	GE	MG	GE
2009	GE	--	MG	--	GE	MG	GE	MG	GE	--	--	MG
Stn.2178: WQI was not calculated due to un-availability of data for 2007 and 2010 -2011												
Station No : 2180 Station Name : Near Tapovan.Village- Tapovan, Nasik												
2008	--	GE	MG	Bad	Bad	Bad	Bad	MG	GE	GE	GE	MG
2009	MG	--	MG	Bad	GE	MG	MG	GE	MG	MG	MG	Bad
2010	--	--	MG	MG	GE	MG	MG	MG	MG	Bad	MG	GE
2011	GE	GE	MG	Bad	MG	MG	--	Bad	GE	--	MG	--
Stn.2180: WQI was not calculated due to un-availability of data for 2007												
Station No : 2181 Station Name : Kapila-Godavari Confluence Point, Nasik												
2008	--	GE	MG	Bad	MG	Bad	Bad	MG	GE	GE	MG	MG
2009	GE	--	MG	Bad	GE	MG	MG	MG	MG	MG	MG	MG
2010	--	--	GE	MG	GE	GE	GE	GE	MG	MG	GE	GE
2011	GE	MG	GE	Bad	MG	MG	Bad	MG	GE	--	Bad	--
Stn.2181: WQI was not calculated due to un-availability of data for 2007												
Station No : 2182 Station Name : Saikheda, Tal.- Niphad; Dist.- Gondia												
2008	--	--	--	GE	GE	GE	GE	GE	GE	GE	--	--
2009	GE	--	GE	GE	GE	GE	GE	GE	GE	GE	GE	MG
2010	--	--	GE	GE	GE	GE	GE	GE	GE	MG	GE	GE
2011	GE	MG	GE	GE	GE	GE	GE	GE	GE	MG	--	--
Stn.2182: WQI was not calculated due to un-availability of data for 2007												
Station No : 2183 Station Name : Nandur-Madhmeshwar, Dam. Niphad, Gondia												
2008	--	--	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE
2009	GE	--	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE
2010	--	--	GE	GE	GE	GE	GE	GE	GE	--	GE	GE
2011	GE	GE	GE	GE	GE	GE	GE	GE	GE	--	--	--
Stn.2183: WQI was not calculated due to un-availability of data for 2007												

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Gomai River												
Station No : 2666 Station Name : D/s of Shahada, Tal.- Dhule, District- Dhule												
2007	--	--	--	--	MG	--	--	--	--	MG	MG	--
2008	MG	GE	GE	--	--	--	GE	--	--	--	GE	--
2009	--	--	--	--	--	--	--	--	--	--	--	MG
2010	--	--	GE	GE	--	--	--	--	--	--	--	MG
2011	MG	GE	GE	--	--	--	--	--	--	GE	GE	GE

Hiwara River												
Station No : 2667 Station Name : D/s of Pachora, Tal. Jalgaon, District- Jalgaon												
2007	--	--	--	--	--	GE	--	--	--	MG	MG	--
2008	--	MG	MG	MG	--	MG	GE	--	--	--	--	--
2010	--	--	--	--	--	--	--	--	--	GE	MG	--
2011	MG	GE	GE	--	--	--	--	--	--	--	GE	GE
Stn. 2667: WQI was not calculated due to un-availability of data for 2009												

Indrayani River												
Station No : 2197 Station Name : D/s of Alandigaon, Tal. Haweli, District - Pune												
2007	GE	--	MG	MG	--	MG	--	GE	MG	MG	GE	Bad
2008	Bad	Bad	--	Bad	VB	--	MG	Bad	GE	Bad	VB	MG
2009	MG	--	--	MG	Bad	Bad	MG	MG	MG	MG	MG	Bad
2010	--	--	MG	MG	MG	Bad	Bad	VB	MG	MG	MG	MG
2011	MG	--	MG	MG	MG	MG	MG	MG	MG	MG	MG	--
Station No : 2668 Station Name : D/s of Moshi village, Tal. Haveli, District - Pune												
2007	--	--	MG	Bad	--	GE	--	MG	MG	Bad	MG	Bad
2008	MG	Bad	MG	MG	Bad	Bad	MG	MG	MG	MG	MG	MG
2009	--	--	MG	--	--	--	--	--	--	--	--	Bad
2010	--	--	Bad	Bad	--	VB	Bad	MG	MG	MG	GE	MG
2011	Bad	--	MG	MG	Bad	MG	MG	MG	MG	Bad	Bad	--
Station No : 2669 Station Name : U/s of Moshigaon, Tal. Haveli, District - Pune												
2007	--	--	MG	MG	--	MG	--	GE	MG	MG	MG	Bad
2008	MG	MG		MG	VB	Bad	MG	MG	MG	MG	Bad	Bad
2009	GE	--	GE	--	--	--	--	--	--	--	--	MG
2010	GE	--	GE	--	--	--	--	--	--	--	--	MG
2011	--	--	MG	MG	--	VB	GE	MG	GE	MG	GE	GE

Kajvi River												
Station No : HP_KJ_1 Station Name : Anjanari, Tal. Lanja, District- Ratnagiri												
2007	--	GE	GE	GE	GE	GE	GE	MG	MG	GE	GE	--
2008	GE	GE	MG	MG	--	GE	GE	GE	GE	GE	GE	GE
2009	GE	GE	GE	GE	GE	GE	MG	GE	GE	GE	GE	GE
2010	--	--	--	--	--	GE	GE	GE	GE	GE	GE	GE
2011	GE	GE	GE	GE	GE	--	--	--	--	--	--	--
Station No : HP_KJ_2 Station Name : Pastewadi, Tal.-Sangmeshwar, District- Ratnagiri												
2007	--	GE	--	--	--	GE	MG	GE	--	GE	MG	--
2008	GE	GE	--	--	--	MG	GE	GE	GE	--	GE	GE
2009	GE	GE	--	--	--	GE	GE	GE	GE	GE	GE	GE
2010	--	--	--	--	--	GE	--	GE	GE	GE	GE	GE
2011	GE	GE	--	--	--	--	--	--	--	--	--	--

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Kalu River												
Station No : 1092 Station Name : Atale, Taluka- Kalyan, District- Thane												
2007	MG	--	--	MG	--	--	GE	--	--	GE	--	--
2008	GE	--	--	Bad	--	--	GE	--	--	MG	--	--
2009	GE	--	--	--	--	--	GE	--	--	GE	--	--
2011	--	--	--	GE	MG	MG	GE	GE	GE	GE	GE	--
Stn.1092: WQI was not calculated due to un-availability of data for 2010												

Kan River												
Station No : 2670 Station Name : Sakri Water Works, Tal. Dhule, District- Dhule												
2007	--	--	--	--	GE	--	--	--	--	MG	MG	--
2008	GE	GE	GE	GE	--	GE	GE	--	--	--	GE	--
2009	--	GE	--	--	--	--	--	--	--	--	--	GE
2010	--	--	--	--	--	--	--	GE	GE	--	--	MG
2011	MG	GE	GE	--	--	--	--	--	--	--	--	MG

Kanhan River												
Station No :1909 Station Name : D/s of Nagpur, Tal. Kuhi, District- Nagpur												
2007	MG	--	VB	GE	VB	VB	VB	VB	VB	MG	VB	VB
2008	MG	--	--	MG	--	--	--	--	--	--	--	--
2009	GE	--	--	GE	--	--	MG	--	--	--	--	--
2010	--	--	--	MG	--	--	MG	--	--	MG	--	--
2011	GE	--	MG	MG	Bad	MG	MG	GE	MG	GE	MG	--
Station No : 2170 Station Name : U/s of M/s Vidarbha Paper M., Tal. Parseoni, Nagpur												
2008	--	MG	GE	GE	GE	GE	GE	GE	--	GE	GE	--
2009	MG	--	GE	GE	MG	GE	MG	GE	--	--	--	GE
2010	--	--	MG	MG	GE	GE	--	GE	GE	GE	GE	MG
2011	GE	GE	MG	GE	GE	GE	MG	MG	MG	GE	GE	--
Stn.2170: WQI was not calculated due to un-availability of data for 2007												
Station No : 2171 Station Name : D/s of M/s Vidarbha Paper M., Tal. Parseoni, Nagpur												
2008	--	--	MG	GE	MG	MG	MG	MG	--	GE	--	--
2009	MG	--	GE	GE	MG	MG	MG	MG	--	--	MG	MG
2010	--	--	MG	MG	MG	MG	--	MG	MG	Bad	MG	MG
2011	MG	MG	MG	MG	MG	MG	MG	MG	MG	GE	MG	--
Stn.2171: WQI was not calculated due to un-availability of data for 2007												

Kodavali River												
Station No : HP_KV_1 Station Name : Rajpatan, Taluka-Rajapur, District- Ratnagiri												
2007	GE	GE	GE	GE	GE	MG	GE	MG	MG	MG	MG	--
2008	GE	GE	MG	GE	--	MG	MG	GE	GE	--	MG	GE
2009	GE	GE	GE	GE	GE	MG	MG	GE	MG	MG	GE	GE
2010	--	--	--	--	--	MG	GE	MG	GE	GE	GE	GE
2011	GE	GE	GE	GE	GE	--	--	--	--	--	--	--

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Kolar River												
Station No : 1908 Station Name : Before Confluence with Kanhan River at Waregaon Bridge, Taluka-Kamptee, District-Nagpur												
2007	MG	--	--	MG	--	--	MG	--	--	MG	--	--
2008	--	--	--	MG	--	--	MG	--	--	--	--	--
2009	GE	--	--	MG	--	--	MG	--	--	MG	--	--
2010	--	--	--	--	--	--	--	--	--	MG	--	--
2011	GE	--	MG	GE	MG	GE	GE	MG	MG	MG	MG	--

Koyna River												
Station No : 2189 Station Name : Village- Karad, Taluka- Karad, District- Satara												
2007	--	--	--	MG	--	GE	--	--	MG	MG	MG	MG
2008	MG	MG	MG	GE	--	MG	MG	MG	GE	GE	Bad	--
2009	MG	--	MG	MG	MG	MG	GE	MG	MG	MG	GE	MG
2010	--	--	MG	GE	GE	GE	GE	MG	MG	MG	GE	MG
2011	MG	--	MG	MG	MG	MG	GE	MG	MG	MG	Bad	--

Krishna River												
Station No : HP-KR_3 Station Name : Ambeghar-Karanje, Tal.-Bhor, Dist.- Pune												
2007	GE	MG	GE	GE	MG	--	--	--	--	--	--	--
2010	--	--	--	--	--	--	MG	MG	MG	MG	MG	MG
2011	MG	MG	MG	MG	MG	--	--	--	--	--	--	--
Stn.HP-KR_3 : WQI was not calculated due to un-availability of data for 2008 and 2009												
Station No : HP-KR_4 Station Name : Bandalgi, Tal.-Solapur, District-Solapur												
2007	--	MG	MG	--	--	GE	MG	GE	GE	GE	GE	MG
2008	--	--	--	--	--	--	--	Bad	MG	MG	MG	MG
2009	MG	MG	Bad	--	--	MG	--	--	MG	MG	MG	MG
2010	--	--	--	--	--	--	--	--	MG	MG	--	--
2011	MG	MG		--	--	--	--	--	--	--	--	--
Station No : HP-KR_5 Station Name : Barur-Takli, Tal.-Solapur, District-Solapur												
2007	GE	Bad	MG	--	--	MG	GE	MG	MG	Bad	MG	MG
2008	MG	MG	MG	MG	--	MG	GE	MG	MG	MG	MG	MG
2009	MG	Bad	MG	MG	MG	MG	MG	MG	MG	MG	--	--
2010	--	--	--	--	--	--	--	MG	MG	MG	--	--
2011	MG	--	--	--	--	--	--	--	--	--	--	--
Station No : HP-KR_7 Station Name : Bubnal, Tal.-Shirol, District- Kolhapur												
2007	--	GE	GE	GE	GE	GE	GE	MG	MG	MG	MG	--
2008	MG	GE	MG	MG	MG	MG	MG	MG	MG	--	MG	MG
2009	MG	MG	MG	GE	GE	GE	MG	MG	MG	MG	MG	MG
2010	--	--	--	--	--	MG	MG	MG	MG	MG	--	--
Stn.HP-KR_7 : WQI was not calculated due to un-availability of data for 2011												
Station No : HP-KR_8 Station Name : Bundgarden, Bridge, Tal.- Haweli, Dist.- Pune												
2007	--	Bad	MG	--	Bad	--		--	VB	MG	VB	--

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Krishna River (Contd..)												
Station No : HP-KR_9 Station Name : Chaskman, Tal.:-Khed, District- Pune												
2007	MG	MG	GE	GE	GE	--	GE	MG	MG	MG	MG	GE
2008	GE	MG	MG	MG	MG	MG	MG	MG	MG	--	--	MG
2009	MG	MG	MG	MG	MG	--	MG	MG	MG	MG	MG	MG
2010	--	--	--	--	--	--	--	MG	MG	MG	MG	MG
2011	MG	--	--	--	--	--	--	--	--	--	--	--
Station No : HP-KR_10 Station Name : Dattawadi, Tal.- Haweli, Dist.- Pune												
2007	VB	Bad	Bad	VB	--	--	MG	MG	GE	--	Bad	Bad
2008	VB	--	--	VB	--	Bad	MG	MG	MG	MG	Bad	Bad
2009	VB	VB	VB	--	--	VB	VB	VB	--	--	--	--
Stn.HP-KR_10 : WQI was not calculated due to un-availability of data for 2010 and 2011												
Station No : HP-KR_11 Station Name : Daund, Tal.-Daund, District-Pune												
2010	--	--	--	--	--	--	--	MG	MG	MG	MG	MG
2011	MG	MG	MG	--	--	--	--	--	--	--	--	--
Stn.HP-KR_11 : WQI was not calculated due to un-availability of data for 2007 to 2009												
Station No : HP-KR_13 Station Name : Kale Colony, Tal.-Maval, Dist.- Pune												
2007		GE	GE	MG	GE	MG	GE	MG	MG	MG	GE	GE
2008	GE	GE	MG	GE	GE	MG	MG	MG	MG	GE	MG	MG
2009	MG	MG	MG	GE	MG	MG	MG	MG	MG	MG	GE	MG
2010	--	--	--	--	--	--	--	GE	GE	MG	MG	MG
2011	MG	GE	GE	MG	--	--	--	--	--	--	--	--
Station No : HP-KR_14 Station Name : Kashti, Tal.-Shrigonda, District-Ahmednagar												
2007	--	--	--	--	--	--	--	MG	MG	--	--	--
2008	--	--	--	--	--	--	--	--	MG	MG	--	--
2009	--	--	--	--	--	--	MG	--	MG	MG	MG	MG
Stn.HP-KR_14 : WQI was not calculated due to un-availability of data for 2010 and 2011												
Station No : HP-KR_15 Station Name : Khamgaon, Tal.-Daund, District-Pune												
2010	--	--	--	--	--	--	--	--	MG	MG	MG	MG
2011	MG	MG	MG	MG	--	--	--	--	--	--	--	--
Stn.HP-KR_15 : WQI was not calculated due to un-availability of data for 2007 and 2009												
Station No : HP-KR_16 Station Name: Kurundwad-Wadi, Tal. Shirol, Kolhapur												
2007	GE	MG	MG	GE	--	GE	GE	GE	--	--	--	--
2008	MG	MG	MG	MG	MG	MG	MG	MG	MG	--	MG	GE
2009	MG	MG	GE	GE	GE	MG	MG	MG	--	MG	MG	Bad
2010	--	--	--	--	--	MG	MG	MG	MG	MG	--	--
Stn.HP-KR_16 : WQI was not calculated due to un-availability of data for 2011												
Station No : HP-KR_17 Station Name: Mhaisal, Tal.- Miraj, Dist.- Sangli												
2007	GE	GE	GE	GE	GE	GE	GE	GE	MG	MG	GE	--
2008	MG	GE	GE	GE	MG	MG	MG	GE	MG	--	GE	GE
2009	GE	MG	MG	MG	MG	MG	MG	GE	MG	MG	MG	MG
2010	--	--	--	--	--	MG	MG	MG	GE	MG	--	--
Stn.HP-KR_17 : WQI was not calculated due to un-availability of data for 2011												
Station No : HP-KR_19 Station Name: Nighoje, Tal.- Khed, Dist.- Pune												
2007	MG	GE	MG	GE	--	GE	GE	GE	GE	MG	MG	MG
2008	GE	MG	MG	GE	MG	MG	GE	GE	MG	MG	MG	MG
2009	MG	MG	MG	--	MG	MG	MG	MG	MG	MG	MG	MG
2010	--	--	--	--	--	--	MG	MG	MG	MG	MG	MG
2011	MG	GE	MG	--	--	--	--	--	--	--	--	--

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Krishna River (Contd..)												
Station No : HP-KR_20/ 25 Station Name: Shirur, Nimgaon, Karjat, Ahmednagar												
2007	--	--	--	--	--	--	--	--	--	GE	GE	--
2008	--	--	--	--	--	--	--	--	--	GE	--	--
2010	--	--	--	--	--	--	--	MG	MG	MG	MG	--
Stn.HP-KR_20/25 : WQI was not calculated due to un-availability of data for 2009 & 2011												
Station No : HP-KR_21 Station Name: Pandharpur, Dist.-Solapur												
2007	GE	MG	MG	MG	MG	--	--	--	--	--	--	--
Stn.HP-KR_20/25 : WQI was not calculated due to un-availability of data for 2008 to 2011												
Station No : HP-KR_23 Station Name: Paud, Tal.- Mulshi, Dist. - Pune												
2007	GE	GE	MG	GE	GE	MG	--	GE	GE	MG	MG	GE
2008	MG	MG	MG	MG	MG	MG	MG	GE	MG	MG	MG	MG
2009	MG	GE	MG	MG	MG	MG	MG	MG	MG	MG	MG	--
2010	--	--	--	--	--	--	--	MG	--	MG	MG	MG
2011	MG	MG	MG	--	--	--	--	--	--	--	--	--
Station No : HP-KR_24 Station Name: Pimpale Gurav, Tal.-Haweli, Distinct-Pune												
2007	VB	VB	VB	Bad	VB	VB	Bad	MG	MG	VB	Bad	--
2008	--	--	--	--	--	Bad	MG	MG	MG	MG	Bad	--
2009	--	--	--	--	VB	--	VB	VB	--	Bad	--	--
2010	--	--	--	--	--	--	--	VB	VB	--	--	--
2011	--	VB	--	--	--	--	--	--	--	--	--	--
Station No : HP-KR_25 Station Name: Rakshewadi, Tal.-Shirur, District-Pune												
2010	--	--	--	--	--	--	--	MG	MG	MG	MG	--
Stn.HP-KR_25 : WQI was not calculated due to un-availability of data for 2008 to 09 & 11												
Station No : 36 Station Name: Krishna bridge, Karad, Tal.- Karad, Dist.- Satara												
2007	GE	GE	GE	GE	GE	GE	GE	GE	GE	MG	GE	MG
2008	MG	MG	Bad	MG	GE	MG	GE	MG	MG	GE	MG	MG
2009	MG	--	MG	MG	GE	MG	MG	MG	MG	MG	MG	MG
2010	--	--	MG	MG	MG	MG	MG	MG	MG	MG	GE	Bad
2011	MG	MG	MG	MG	MG	MG	GE	MG	MG	GE	Bad	--
Station No : 37 Station Name: Maighat, Sangli, Tal.:- Miraj, Dist.-Sangli												
2007	GE	GE	GE	GE	--	--	GE	GE	GE	GE	GE	GE
2008	GE	GE	GE	GE	GE	GE		GE	GE	GE	GE	GE
2009	GE	--	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE
2010	--	--	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE
2011	GE	GE	GE	GE	--	GE	GE	GE	GE	GE	--	--
Station No : 1153 Station Name: Rajapur Weir, Tal.- Shirol, Dist.- Kolhapur												
2007	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE
2008	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE
2009	GE	--	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE
2010	--	--	GE	GE	--	--	GE	GE	GE	GE	GE	GE
2011	GE	GE	--	--	GE	GE	GE	GE	GE	GE	GE	--

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Krishna River (Contd..)												
Station No : 1194 Station Name: Dhom Dam, Tal.:- Mahabaleshwar, Dist.:-Satara												
2007	GE	GE	GE	GE	GE	GE	--	--	GE	GE	GE	GE
2008	GE	GE	GE	GE	--	GE	GE	GE	GE	GE	MG	GE
2009	GE	--	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE
2010	--	--	GE	GE	MG	GE	GE	GE	GE	GE	GE	GE
2011	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	--
Station No : 1310 Station Name: Kurundwad Near S. Ghorpade Ghat, Shirol, Kolhapur												
2007	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE
2008	GE	GE	GE	GE	GE	GE	--	GE	GE	GE	GE	GE
2009	GE	--	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE
2010	--	--	GE	--	GE	--	GE	GE	GE	GE	GE	GE
2011	GE	GE	MG	GE	GE	GE	GE	GE	GE	GE	--	--
Station No : 1906 Station Name: Walwa, D/s of Islampur Near Vithal T., Walwa, Sangli												
2007	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE
2008	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE
2009	GE	--	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE
2010	--	--	GE	--	GE	GE	GE	GE	GE	GE	GE	GE
2011	GE	GE	GE	GE	--	GE	GE	GE	GE	GE	--	--
Station No : 2187 Station Name: Kshetra Mahuli, Satara												
2007	GE	--	GE	MG	--	GE	--	MG	MG	MG	MG	MG
2008	MG	MG	MG	GE	MG	MG	MG	MG	MG	MG	MG	GE
2009	MG	--	MG	MG	MG	MG	MG	MG	MG	Bad	MG	MG
2010	--	--	MG	MG	MG	MG	MG	--	MG	GE	GE	MG
2011	GE	MG	MG	Bad	MG	GE	MG	MG	MG	MG	MG	--
Station No : 2188 Station Name: KrishnaVenna Sangam, Mahuli, Satara												
2007	GE	--	GE	MG	--	GE	--	MG	MG	MG	MG	MG
2008	MG	MG	MG	MG	Bad	Bad	MG	MG	MG	MG	MG	MG
2009	MG	--	GE	MG	MG	MG	GE	MG	MG	Bad	MG	MG
2010	--	--	MG	GE	MG	MG	GE	MG	MG	MG	GE	MG
2011	GE	MG	MG	MG	MG	MG	GE	MG	MG	MG	MG	--
Station No : 2190 Station Name: Villg.:- Wai, Tal.:- Wai, Dist.:- Satara												
2007	--	--	GE	MG	--	GE	MG	--	MG	MG	MG	MG
2008	MG	MG	--	MG	MG	MG	GE	MG	MG	MG	MG	MG
2009	MG	--	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG
2010	--	--	MG	MG	GE	GE	GE	MG	MG	MG	GE	GE
2011	MG	MG	MG	MG	MG	MG	GE	GE	MG	MG	MG	--

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Kundalika River												
Station No :HP_KD_1 Station Name: Varasgaon, Tal. Roha, District- Raigad												
2007	GE	GE	GE	GE	GE	GE	MG	MG	GE	GE	GE	MG
2008	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	MG	GE
2009	GE	--	MG	MG	GE	MG	GE	GE	MG	GE	MG	GE
Stn.HP-KD_1 : WQI was not calculated due to un-availability of data for 2010& 11(Missing)												
Station No :1152 Station Name: Roha Bridge, Tal. Roha, District- Raigad												
2007	GE	--	--	--	--	--	--	--	--	GE	--	--
2008	GE	--	--	--	--	--	--	--	--	--	--	--
2009	GE	--	--	GE	--	--	GE	--	--	GE	--	--
2010	--	--	--	GE	--	--	--	--	--	--	--	--
2011	GE	--	--	GE	GE	GE	--	GE	GE	GE	--	--
Station No : 2198 Station Name: AreKhurd, Tal. Roha, District-Raigad												
2008	--	--	Bad	Bad	--	Bad	GE	MG	MG	--	--	GE
2009	GE	--	GE	MG	Bad	MG	Bad	MG	Bad	--	GE	GE
2010	--	--	--	--	--	--	--	--	--	--	GE	MG
2011	MG	GE	MG	GE	MG	GE	MG	GE	GE	GE	--	--
Stn.2198 : WQI was not calculated due to un-availability of data for 2007												
Station No : 2671 Station Name: Salav bridge, Taluka-Roha, District-Raigad.												
2007	GE	--	MG	MG	--	GE	GE	MG	MG	--	--	GE
2008	--	--	Bad	Bad	--	Bad	GE	MG	MG	--	--	GE
2009	GE	--	GE	MG	Bad	MG	Bad	MG	Bad	--	GE	GE
2010	--	--	--	--	--	MG	--	--	GE	--	MG	GE
2011	GE	GE	GE	Bad	MG	GE	MG	GE	GE	MG	--	--
Station No : 2672 Station Name: Dhatav Jackwell, Taluka-Roha, District-Raigad.												
2007	GE	--	--	GE	--	GE	GE	GE	GE	GE	--	--
2008	--	GE	--	GE	--	--	--	--	--	--	--	--
2010	--	--	GE	GE	--	--	--	GE	GE		GE	GE
2011	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	--	--
Stn.2672 : WQI was not calculated due to un-availability of data for 2009												

Manjra River												
Station No : 2673 Station Name: D/s of Latur, near Latur- Nanded Bridge												
	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
2009	--	--	--	--	--	--	--	--	--	GE	MG	--
2010	--	--	--	--	--	--	--	--	--	--	--	GE
2011	GE	GE	MG	GE	--	--	--	GE	GE	GE	GE	--
Stn.2673 : WQI was not calculated due to un-availability of data for 2007 and 2008												

Mithi River												
Station No : 2168 Station Name: Near Road bridge, Taluka-Bandra, District-Mumbai												
	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
2008	--	--	--	--	VB	--	--	--	--	--	Bad	--
2009	--	--	MG	VB	Bad	--	Bad	--	Bad	VB	VB	--
2010	--	--	--	VB	--	--	--	VB	--	MG	--	--
2011	Bad	--	VB	--	VB	Bad	VB	Bad	MG	--	MG	--
Stn.2168 : WQI was not calculated due to un-availability of data for 2007												

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mor River												
Station No : 2674 Station Name: Padalashe village, Tal. Jalgaon, Dist. Jalgaon												
2007	--	--	--	--	--	--	--	GE	--	Bad	--	--
2008	--	--	--	--	--	--	--	--	--	--	GE	--
2009	--	--	--	--	--	--	--	--	--	--	--	MG
2011	--	--	--	--	--	--	--	--	--	--	GE	--
Stn.2674 : WQI was not calculated due to un-availability of data for 2010												

Morna River												
Station No : 2675 Station Name: D/s of Railway Bridge,Tal. Akola, District- Akola												
2007	--	--	--	--	--	--	--	GE	--	Bad	--	--
2008	--	--	--	--	--	--	--	--	--	--	Bad	--
2009	--	--	--	--	--	--	--	--	--	--	--	MG
2010	--	--	--	--	--	--	Bad	MG	Bad	MG	VB	VB
2011	--	--	--	--	--	--	--	MG	MG	GE	Bad	--

Muchkundi River												
Station No :HP_MU_1 Station Name: Pawarwadi, Tal. Lanja, District- Ratnagiri												
2007	GE	GE	GE	GE	GE	--	GE	GE	GE	GE	GE	--
2008	GE	GE	GE	GE	GE	MG	GE	GE	GE	--	GE	GE
2009	GE	GE	GE	GE	GE		GE	GE	GE	GE	GE	GE
2010	--	--	--	--	--	GE	GE	GE	GE	GE	GE	GE
2011	GE	GE	GE	GE	GE	--	--	--	--	--	--	--
Station No : 2676 Station Name: Near M/s Asahi Maharashtra Glass Ltd, Tal. Lanja, District- Ratnagiri												
2008	GE	--	--	--	GE	GE	--	GE	GE	GE	GE	--
2009	--	GE	GE	--	GE	GE	GE	GE	--	GE	GE	GE
2010	--	--	--	--	--	--	--	--	--	--	GE	GE
2011	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	--	GE
Stn.2676 : WQI was not calculated due to un-availability of data for 2007												

Mula-Mutha River												
Station No : 2191 Station Name: Sangam Bridge Near Ganapathy Ghat, Pune												
2007	--	--	--	--	--	--	--	--	Bad	--	--	--
2008	--	--	--	--	--	--	--	--	VB	--	VB	Bad
2009	Bad	--	--	--	--	--	Bad	--	--	--	VB	--
2010	--	--	--	--	--	VB	VB	VB	VB	VB	VB	VB
2011	--	--	--	VB	VB	VB	VB	VB	Bad	VB	--	--
Station No :2192 Station Name: Mundhawa Bridge, Tal. Haweli, District- Pune												
2007	--	--	Bad	--	--	--		VB	Bad	--	--	--
2008	--	VB	--	--	--	--	Bad	Bad	Bad	Bad	VB	MG
2009	MG	--	--	--	--	--	VB	--	VB	VB	VB	VB
2010	--	--	VB	--	VB	--	VB	VB	VB	VB	Bad	Bad
2011	VB	--	--	--	VB	Bad	Bad	Bad	MG	VB	VB	--

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mula-Mutha River (Contd..)												
Station No : 2193 Station Name:Aundh Bridge, Aundgaon, Haweli, Pune												
2007	GE	--	MG	Bad	--	GE	--	MG	MG	Bad	Bad	VB
2008	VB	--	--	MG	--	--	--	Bad	Bad	MG	VB	Bad
2009	MG	VB	--	--	--	--	Bad	Bad	Bad	Bad	Bad	Bad
2010	--	--	--	Bad	MG	VB	Bad	MG	MG	VB	Bad	Bad
2011	VB	Bad	VB	Bad	MG	Bad	Bad	--	MG	Bad	Bad	--
Station No :2194 Station Name: Harrison Bridge Near Mula-Pawana Sangam, Haweli, Pune.												
2007	--	--	Bad	Bad	--	--	--	MG	MG	Bad	VB	Bad
2008	VB	--	--	MG	--	--	Bad	Bad	Bad	Bad	VB	MG
2009	MG	--	--		--	--	VB	Bad	VB	VB	Bad	Bad
2010	--	--	--	Bad	--	VB	VB	Bad	Bad	VB	MG	VB
2011	VB	VB	VB	VB	Bad	Bad	VB	Bad	Bad	VB	VB	--
Station No : 2677 Station Name: D/s of Theur, Taluka- Haweli, District- Pune												
2007	MG	--	MG	MG	--	Bad	--	MG	MG	MG	Bad	VB
2008	MG	Bad	VB	--	Bad	MG	MG	--	--	VB	--	--
2009	GE	Bad	--	--	--	--	--	--	--	--	--	VB
2010	--	--	Bad	MG	Bad	VB	GE	GE	VB	GE	Bad	MG
2011	VB	VB	VB	VB	Bad	Bad	Bad	Bad	Bad	Bad	Bad	--
Station No : 2678 Station Name: N**ear Veer Savarkar Bhavan, Pune**												
2007	--	--	Bad	--	--	--	--	Bad	MG	--	--	--
2008	Bad	--	--	Bad	MG	--	--	--	VB	Bad	--	MG
2009	MG	--	VB	--	--	--	--	--	--	--	--	--
2010	--	--	--	--	VB	VB	VB	Bad	VB	VB	Bad	VB
2011	VB	VB	VB	VB	Bad	Bad	VB	GE	Bad	VB	VB	--
Station No : 2679 Station Name: Deccan Bridge, Pune												
2007	--	--	--	--	--	--	--	--	Bad	--	--	--
2008	--	--	Bad	--	Bad	--	--	Bad	VB	Bad	--	Bad
2010	--	--	MG	--	VB	VB	--	VB	VB	VB	VB	VB
2011	--	--	--	VB	VB	VB	--	Bad	Bad	VB	VB	--
Stn.2679 : WQI was not calculated due to un-availability of data for 2009												
Station No :2680 Station Name: Khadakvasla Dam, Tal. Haweli, District- Pune												
2007	GE	--	--	GE	--	--	--	--	--	GE	GE	GE
2008	GE	GE	GE	--	GE	GE	GE	GE	GE	GE	GE	--
2009	GE	GE	GE	--	--	--	--	--	--	--	--	GE
2010	--	--	--	GE	GE	GE	GE	--	--	MG	GE	GE
2011	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	--

Nira River												
Station No :1463 Station Name: Sarola bridge, Tal. Bhor, District- Pune												
2007	GE	GE	GE	GE	GE	GE	GE	GE	GE	MG	GE	MG
2008	GE	MG	GE	MG	MG	Bad	--	GE	GE	MG	MG	MG
2009	MG	--	MG	GE	MG	MG	MG	MG	MG	MG	MG	--
2010	--	--	--	GE	--	--	GE	MG	GE	Bad	GE	MG
2011	MG	GE	MG	MG	Bad	GE	GE	GE	MG	MG	MG	--

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Nira River (Contd..)												
Station No : 2195 Station Name: D/s of Jubilant Organosis, Tal. Baramati, Pune												
2007	--	--	VB	MG	--	MG	--	GE	MG	MG	Bad	--
2008	MG	MG	--	VB	VB	MG	MG	Bad	MG	MG	VB	VB
2009	MG	--	Bad	MG	MG	MG	MG	MG	MG	MG	MG	MG
2010	--	--	Bad	MG	MG	GE	--	MG	MG	Bad	MG	Bad
2011	MG	MG	Bad	VB	VB	MG	MG	MG	MG	MG	--	--
Station No : 2681 Station Name: at Sungari, Tal. Phaltan, District- Satara												
2007	--	--	GE	GE	--	GE		GE	MG	GE	MG	MG
2008	MG	MG	GE	GE	GE	Bad	MG	MG	MG	MG	GE	--
2009	MG	--	MG	GE	--	--	--	--	--	--	--	Bad
2010	--	--	Bad	MG	MG	VB	Bad	MG	GE	MG	GE	MG
2011	Bad	--	Bad	Bad	Bad	MG	Bad	MG	MG	Bad	MG	--
Station No : 2682 Station Name: U/s of Jubilant Organosis, Tal. Baramati, Pune												
2007	MG	--	MG	MG		GE		MG	MG	MG	Bad	Bad
2008	MG	MG	--	MG	GE	MG	MG	MG	MG	MG	MG	MG
2009	MG	MG	Bad	--	--	--	--	--	--	--	--	MG
2010	--	--	MG	GE	MG	GE	GE	MG	MG	Bad	GE	MG
2011	GE	GE	MG	MG	MG	GE	MG	MG	MG	MG	MG	--
Station No : 2683 Station Name: Shirwal, Satara, Tal. Khandala, District- Satara												
2007	GE	--	GE	GE	--	GE	--	MG	MG	GE	--	MG
2008	MG	MG	GE	GE	GE	MG	MG	MG	MG	GE	MG	GE
2009	GE	MG	--	--	--	--	--	--	--	--	--	MG
2010	--	--	Bad	GE	MG	Bad	Bad	MG	--	GE	GE	GE
2011	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	--

Penganga River												
Station No : 2697 Station Name: N**ear Water Supply Scheme of Umarkhed M.C, Tal. Umarkhed, District- Yavatmal**												
2008	GE	GE	MG	--	MG	--	--	--	GE	GE	GE	--
2010	--	--	--	--	--	--	GE	--	GE	--	GE	--
Station No : 2698 Station Name: D/s of Isapur Dam, Tal. Pusad, District- Yavatmal												
2008	--	GE	GE	--	MG	--	MG	GE	GE	GE	GE	--
2010	--	--	--	--	--	--	--	MG	MG	--	GE	--
Stn.2697 & 2698 : WQI was not calculated due to un-availability of data for 2007, 09 and 11												

Panchganga River												
Station No : 1311 Station Name: Ichalkaranji Near MIDC Intake Well, Hatkanangale												
2007	GE	--	--	MG	--	--	GE	--	--	GE	--	--
2008	GE	--	--	GE	--	--	GE	--	--	GE	--	--
2009	GE	--	--	GE	--	--	GE	--	--	GE	--	--
2010	--	--	--	--	--	--	GE	--	--	--	--	--
2011	GE	--	--	GE	GE	GE	GE	GE	GE	GE	GE	GE

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Panchganga River (Contd..)												
Station No : 1904 Station Name: U/s of Kolhapur Town Near Balinga Pumping Station, Karvir, Kolhapur												
2007	GE	--	GE	GE	--	--	GE	GE	GE	GE	GE	GE
2008	GE	GE	GE	--	GE	GE	--	GE	GE	GE	GE	GE
2009	GE	--	GE	--	GE	GE	GE	GE	GE	GE	GE	GE
2010	--	--	--	GE	GE	--	GE	GE	GE	GE	GE	GE
2011	GE	GE	GE	GE	GE	GE	--	GE	GE	GE	GE	GE
Station No : 1905 Station Name: D/s of Kolhapur Town at Gandhi Nagar Near NH-4, Bridge and MIDC Intake Well, Kolhapur												
2007	MG	--	GE	GE	MG	--	GE	GE	GE	GE	GE	GE
2008	GE	GE	GE	GE	GE	GE	--	GE	GE	GE	GE	GE
2009	GE	--	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE
2010	--	--	--	MG	GE	--	GE	GE	GE	GE	GE	GE
2011	GE	GE	Bad	GE	GE	GE	GE	GE	GE	GE	GE	GE
Station No : 2163 Station Name: Shirol Intake well, Shirol, Kolhapur												
2008	--	GE	GE	--	GE	GE	GE	GE	MG	GE	GE	GE
2009	GE	--	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE
2010	--	--	GE	GE	--	GE	GE	GE	GE	GE	GE	GE
2011	GE	GE	MG	GE	GE	GE	--	GE	GE	GE	GE	GE
Stn.2163 : WQI was not calculated due to un-availability of data for 2007												
Station Name: Wadange, Kolhapur												
2010	--	--	--	--	--	GE	MG	GE	GE	GE	MG	VB
2011	--	--	MG	MG	--	--	--	--	--	--	--	--
Stn.__: WQI was not calculated due to un-availability of data for 2007 to 2009												

Panzara River												
Station No :2684 Station Name: N**ear Panzarakan SSK. Ltd**												
2007	--	--	--	--	MG	--	--	--	--	MG	MG	--
2008	GE	--	GE	GE	--	MG	MG	--	--	--	GE	--
2009	--	GE	--	--	--	--	--	--	--	--	--	MG
Stn.2684 : WQI was not calculated due to un-availability of data for 2010to 2011												

Patalganga River												
Station No :HP_PG_1Station Name: Turade, Tal. Panvel, District- Raigad												
2007	GE	GE	GE	GE	MG	GE	MG	GE	GE	GE	--	MG
2008	GE	MG	MG	GE	MG	MG	GE	GE	GE	MG	MG	MG
2009	MG	MG	MG	MG	MG	MG	GE	MG	MG	MG	GE	MG
2010	--	--	--	--	--	GE	GE	--	GE	GE	GE	GE
2011	GE	GE	GE	GE	GE	--	--	--	--	--	--	--
Station No :1151 Station Name: Shilphata bridge, Tal. Khalapur, District- Raigad												
2007	GE	GE	GE	GE	MG	GE	GE	GE	GE	MG	GE	GE
2008	GE	GE	GE	GE	--	GE	GE	GE	GE	GE	GE	GE
2009	GE	--	GE	GE	GE	GE	GE	GE	GE	GE	GE	--
2010	--	--	GE	GE	GE	GE	GE	MG	MG	--	--	GE
2011	GE	GE	GE	GE	GE	MG	GE	GE	GE	GE	GE	--

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Patalganga River (Contd..)												
Station No : 1462 Station Name: Near Intake of MIDC Waterworks (Turade w/w)												
2007	GE	GE		GE	GE	GE	GE	GE	GE	GE	GE	GE
2008	GE	--	GE	GE	--	MG	GE	GE	GE	--	GE	GE
2009	GE	--	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE
2010	--	--	GE	GE	GE	GE	--	--	GE	GE	--	GE
2011	GE	--	--	GE	--	GE	GE	GE	GE	GE	GE	--
Station No :2685 Station Name: D/s of Kharpada bridge, Tal. Khalapur, Raigad												
2008	GE	MG	--	--	GE	GE	GE	GE	GE	GE	GE	--
2009	GE	--	GE	GE	GE	--	--	--	GE	--	--	GE
2010	--	--	MG	GE	GE	GE	--	GE	GE	--	--	--
2011	--	MG	MG	MG	GE	GE	GE	GE	GE	GE	GE	--
Stn. 2685: WQI was not calculated due to un-availability of data for 2007												
Station No :2686 Station Name: Vyal Pump House, Tal. Khalapur, District-Raigad												
2008	GE	GE	--	GE	GE	GE	GE	GE	GE	GE	GE	GE
2009	--	--	GE	GE	GE	--	--	--	GE	--	--	GE
2010	--	--	GE	GE	GE	GE	--	GE	--	GE	--	GE
2011	**GE**	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	--
Stn. 2686: WQI was not calculated due to un-availability of data for 2007												
Station No : 2687 Station Name: Khalapur Pumping Station, Khalapur, Raigad												
2008	GE	GE	GE	--	GE	GE	GE	GE	GE	GE	--	GE
2009	--	--	GE	GE	GE	--	--	--	GE	--	--	GE
2010	--	--	GE	GE	GE	GE	--	GE	GE	--	--	GE
2011	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	--
Stn. 2687: WQI was not calculated due to un-availability of data for 2007												
Station No :2688 Station Name: Savroli bridge, Tal. Khalapur, Distinct-Raigad												
2008	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	MG	GE
2009	--	--	GE	GE	GE	--	--	--	GE	--	--	GE
2010	--	--	GE	GE	GE	GE	--	GE	GE	GE	--	GE
2011	GE	GE	MG	GE	GE	--	GE	GE	GE	GE	GE	--
Stn. 2688: WQI was not calculated due to un-availability of data for 2007												
Station No : 2689 Station Name: Gagangiri Maharaj Temple, Khalapur, Raigad												
2008	GE	--	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE
2009	--	--	GE	GE	GE	--	--	--	--	--	--	GE
2010	--	--	GE	GE	GE	GE		GE	GE	GE	--	GE
2011	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	--
Stn. 2689: WQI was not calculated due to un-availability of data for 2007												

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Pawana River												
Station No :2196 Station Name: Sangavigaon, Tal. Haweli, District- Pune												
2008	--	--	--	VB	--	VB	--	VB	Bad	Bad	VB	MG
2009	MG	--	Bad	Bad	--	--	VB	VB	--	VB	VB	--
2010	--	--	VB	Bad	--	--	Bad	Bad	Bad	Bad	Bad	MG
2011	--	VB	VB	Bad	Bad	VB	Bad	Bad	Bad	VB	VB	--
Stn. 2196: WQI was not calculated due to un-availability of data for 2007												

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Pawana River (Contd..)												
Station No : 2690 Station Name: Kasarwadi, Tal. Haweli, District- Pune												
2007	Bad	--	Bad	GE	--	Bad	--	MG	Bad	Bad	Bad	VB
2008	VB	VB	Bad	VB	--	MG	--	MG	Bad	MG	Bad	GE
2009	GE	MG	VB	--	--	--	--	--	--	--	--	--
2010	--	--	VB	VB	MG	VB	Bad	VB	Bad	VB	VB	MG
2011	VB	VB	VB	Bad	Bad	Bad	VB	Bad	Bad	VB	VB	--
Station No : 2691 Station Name: Dapodi bridge, at Pawana- MullaSangam, Pune												
2007	Bad	--	VB	Bad	--	--	--	MG	Bad	Bad	Bad	Bad
2008	VB	--	Bad	--	--	Bad	Bad	MG	MG	Bad	VB	MG
2009	MG	Bad	--	--	--	--	--	--	--	--	--	--
2010	--	--	VB	VB	--	VB	VB	Bad	Bad	VB	VB	Bad
2011	VB	--	VB	Bad	Bad	Bad	VB	Bad	Bad	Bad	VB	
Station No : 2692 Station Name: Ravet Weir, Pune, Tal. Haweli, District- Pune												
2007	GE	--	GE	GE	--	GE	--	GE	MG	GE	MG	GE
2008	GE	GE	GE	GE	GE	--	MG	MG	MG	Bad	GE	MG
2009	GE	--	GE	--	--	--	--	--	--	--	--	MG
2010	--	--	MG	GE	GE	GE	GE	GE	GE	GE	GE	GE
2011	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	--
Station No : 2693 Station Name: Chinchwadgaon, Tal. Haweli, District- Pune												
2007	GE	--	Bad	GE	--	MG	--	--	MG	Bad	Bad	MG
2008	Bad	Bad	MG	MG	Bad	MG	Bad	MG	MG	MG	GE	GE
2009	GE	Bad	VB	--	--	--	--	--	--	--	--	Bad
2010	--	--	Bad	MG	--	Bad	Bad	MG	MG	MG	MG	MG
2011	VB		Bad	MG	Bad	MG	VB	MG	MG	Bad	Bad	--
Station No : 2694 Station Name: Pimprigaon, Tal. Haweli, District- Pune												
2007	--	--	--	Bad	--	--	--	--	MG	Bad	Bad	Bad
2008	VB	--	--	VB	--	MG	--	MG	Bad	Bad	MG	GE
2009	GE	Bad	VB		--	--	--	--	--	--	--	--
2010	--	--	VB	Bad	Bad	VB	VB	Bad	Bad	Bad	Bad	Bad
2011	--	VB	Bad	VB	Bad	VB	VB	VB	Bad	Bad	VB	--
Station No :100 Station Name: Sangavigaon, Tal. Haweli, District- Pune												
2007	--	--	--	Bad	--	Bad	--	--	Bad	Bad	VB	--
Stn. 100: WQI was not calculated due to un-availability of data for 2008 to 2011												

Pedhi River												
Station No : 2695 Station Name: Near Road Bridge at Dadhi- Pedhi Village, Amravati												
2008	--	--	GE	--	Bad	--	Bad	--	Bad	VB	Bad	MG
2009	MG	GE	--	--	--	--	--	--	--	--	--	--
2010	--	--	Bad	Bad	Bad	--	--	Bad	MG	Bad	VB	VB
2011	GE	--	Bad	MG	Bad	MG	Bad	MG	Bad	GE	MG	--
Stn.2695: WQI was not calculated due to un-availability of data for 2007												

Pehlar River												
Station No : 2696 Station Name: Inlet of Waterworks, Tal.-Vasai, District-Thane												
2008	GE	GE	--	GE	--	GE	GE	GE	GE	GE	GE	GE
2009	--	--	GE	GE	GE	GE	--	--	--	--	--	GE
2010	--	--	GE	GE	--	GE	--	GE	GE	--	GE	GE
2011	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	--
Stn.2696: WQI was not calculated due to un-availability of data for 2007												

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Purna River												
Station No : 1913 Station Name: Dhupeshwar at U/s of Malkapur Waterworks, Akola												
2007	GE	--	--	MG	--	--	MG	--	--	MG	--	--
2008	MG	--	--	MG	--	--		--	--	--	--	--
2009	--	--	--	MG	--	--	MG	--	--	Bad	--	--
2010	--	--	--	MG	--	--	Bad	--	--	GE	--	--
2011	--	GE	MG	GE	MG	--	MG	Bad	GE	GE	MG	--
Station No : 2155 Station: D/s of Confluence of Morna & Purna, AnduraVil., Akola												
2008	--	MG	GE	Bad	Bad	--	--	--	--	--	MG	GE
2009	--	--	MG	--	--	--	--	--	--	--	--	--
2010	--	--	--	--	--	--	--	--	VB	Bad	Bad	MG
2011	MG	Bad	--	MG	MG	MG	Bad	--	Bad	MG	MG	--
Stn.2155: WQI was not calculated due to un-availability of data for 2007												
Station No : 2700 Station Name: Near Achalpur- Amravati Road Bridge, Asegaon												
2008	Bad	--	--	--	--	Bad	--	--	--	Bad	Bad	--
2010	--	--	--	--	--	--	--	Bad	MG	MG	Bad	MG
2011	MG	--	--	--	--	--	--	GE	MG	GE	GE	--
Stn.2700: WQI was not calculated due to un-availability of data for 2007 and 2009												

Rangavali River												
Station No : 1907 Station Name: D/s of Navapur Near Rangavali Bridge, Navapur, Nandurbar												
2007	GE	--	--	MG	--	--	MG	--	--	--	--	--
2008	GE	--	--	--	--	--	GE	--	--	GE	--	--
2009	GE	--	--	MG	--	--	MG	--	--	--	--	--
Stn.2700: WQI was not calculated due to un-availability of data for 2010 and 2011												

Savitri River												
Station No :HP_SV_1 Station Name: Goregaon, Tal. Mahad, District- Raigad												
2007	GE	GE	MG	GE	GE	MG	MG	MG	GE	GE	MG	GE
2008	GE	GE	MG	GE	MG	GE	GE	MG	GE	MG	GE	GE
2009	MG	MG	MG	MG	--	--	MG	MG	GE	MG	GE	GE
2010	--	--	--	--	--	MG	GE	GE	GE	GE	--	--
Stn. HP_SV_1: WQI was not calculated due to un-availability of data for 2011												
Station No : HP_SV_2 Station Name: Kangule, Tal. Poladpur, District- Raigad												
2007	GE	GE	GE	GE	MG	--	GE		MG	GE	GE	MG
2008	GE	GE	MG	MG	MG	GE	GE	MG	MG	MG	GE	GE
2009	MG	MG	MG	MG	MG	MG	GE	MG	GE	MG	MG	MG
2010	--	--	--	--	--	--	GE	GE	GE	GE	--	--
Stn. HP_SV_2: WQI was not calculated due to un-availability of data for 2011												
Station No : 2199 Station Name: Ovale, Tal. Mahad, District-Raigad.												
2008	--	--	--	--	--	GE	GE	GE	GE	GE	GE	GE
2009	GE	--	GE	--	GE	GE	GE	GE	GE	GE	GE	GE
2010	--	--	GE	MG	GE	GE	GE	--	GE	GE	GE	GE
2011	GE	GE	--	--	GE	--	GE	GE	GE	GE	GE	GE
Stn.2199 : WQI was not calculated due to un-availability of data for 2007												

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Savitri River (Contd..)												
Station No : 2701 Station Name: Jack Well at Upsa Kendre, Tal. Mahad, District-Raigad												
2008	--		GE	GE	--	--	GE	GE	GE	GE	GE	GE
2009	--	GE	GE	--	GE	GE	GE	GE	GE	GE	GE	GE
2010	--	--	--	--	--	--	--	--	--	--	GE	GE
2011	GE	GE	--	--	GE	--	GE	GE	GE	GE	GE	GE
Stn. 2701 : WQI was not calculated due to un-availability of data for 2007												
Station No : 2702 Station Name: Shedav Dov, Tal. -Mahad, District-Raigad												
2008	--	--	GE	GE	--	GE	GE	GE	GE	GE	GE	GE
2009	GE	GE	GE	GE	GE	GE	GE	GE	--	GE	GE	GE
2010	--	--	--	--	--	--	--	--	--	--	GE	GE
2011	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE
Stn. 2702 : WQI was not calculated due to un-availability of data for 2007												
Station No : 2703 Station Name: Dadli Road Bridge, Tal. Mahad, District-Raigad												
2008	--	--	GE	GE	GE	GE	GE	GE	GE	GE	GE	--
2009	GE	--	GE	GE	GE	GE	GE	GE	--	GE	--	GE
2010	--	--	--	--	--	--	--	--	--	--	GE	GE
2011	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE
Stn. 2703 : WQI was not calculated due to un-availability of data for 2007												
Station No : 2704 Station Name: Muthavali, Tal. Mahad, District -Raigad												
2008	--	--	--	--	GE	GE	GE	--	GE	GE	--	--
2009	--	GE	GE	GE	GE	GE	GE	GE	--	GE	GE	GE
2010	--	--	--	--	--	--	--	--	--	--	GE	GE
2011	GE	GE	--	GE	GE	GE	GE	GE	GE	GE	GE	GE
Stn. 2704 : WQI was not calculated due to un-availability of data for 2007												

Sina River												
Station No : 2705 Station Name: Near Laboti Toll Naka, Solapur, Mohal, Solapur												
2007	GE	--	GE	GE	--	GE	--	MG	MG	MG	--	MG
2008	MG	MG	MG	MG	--	MG	MG	--	--	--	--	--
2009	--	--	--	--	--	--	--	--	--	--	--	MG
2010	--	--	MG	MG	MG	MG	GE	GE	--	MG	MG	MG
2011	MG	Bad	Bad	MG	MG	MG	GE	MG	MG	Bad	MG	--

Shastri River												
Station No : HP_SH_1 Station Name: Kumbharkhani Village, Chiplun, Ratnagiri												
2007	--	GE	GE	--	--	GE	MG	GE	MG	GE	MG	--
2008	GE	MG	--	--	--	MG	GE	MG	GE	--	GE	GE
2009	MG	MG	--	--	--	GE	MG	GE	GE	GE	MG	GE
2010	--	--	--	--	--	MG	GE	GE	GE	GE	GE	GE
2011	GE	GE	GE	GE	--	--	--	--	--	--	--	--

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Surya River												
Station No :2706 Station Name: U/S of Surya Dam, Tal. Vikramgad, District -Thane												
2008	GE	--	--	--	--	--	--	--	GE	GE	--	GE
2009	--	--	GE	GE	GE	GE	GE	--	--	--	--	--
2010	--	--	GE	GE	GE	--	--	GE	GE	MG	--	GE
2011	GE	GE	GE	GE	GE	GE	GE	GE	GE	--	--	--
Stn. 2706 : WQI was not calculated due to un-availability of data for 2007												
Station No : 2707 Station Name: MIDC Pumping Station, Garvshet, Palghar, Thane												
2008	GE	--	--	--	--	--	--	--	GE	GE	--	GE
2009	--	GE	GE	GE	GE	--	--	GE	--	--	--	--
2010	--	--	GE	--	GE	--	--	GE	GE	GE	--	GE
2011	GE	GE	GE	GE	GE	GE	--	GE	GE	GE	--	--
Stn. 2707 : WQI was not calculated due to un-availability of data for 2007												
Station No : 2708 Station Name: Intake of Vasai-Virar w/s Scheme, Masvan, Palghar												
2008	GE	--	--	--	--	--	--	--	GE	GE	GE	GE
2009	--	GE	GE	GE	GE	--	--	--	--	--	GE	GE
2010	--	--	GE	GE	GE	--	--	GE	GE	GE	--	GE
2011	GE	GE	GE	GE	GE	GE	--	GE	GE	GE	--	--
Stn. 2708 : WQI was not calculated due to un-availability of data for 2007												

Tansa River												
Station No : 2709 Station Name: Dakewali village road bridge, Tal. Wada, Thane												
2011	--	GE	GE	MG	GE	GE	GE	GE	GE	GE	--	GE
Stn. 2709 : WQI was not calculated due to un-availability of data for 2007 to 2010												

Tapi River												
Station No : HP_TP-1 Station Name: Akkalpada, Tal. Sakri, District- Dhule												
2007	--	--	--	--	--	--	--	--	VB	--	--	--
2008	--	--	--	--	--	--	--	MG	MG	MG	Bad	--
2009	--	--	--	--	--	--	Bad	--	--	--	--	--
2010	--	--	--	--	--	--	--	Bad	VB	Bad	Bad	VB
Stn.HP_TP-1 : WQI was not calculated due to un-availability of data for 2011												
Station No : HP_TP-2 Station Name: Bhusawal, Tal. Bhusawal, District- Jalgaon												
2007	--	--	--	--	--	--	GE	GE	GE	GE	GE	--
2008	--	--	--	--	--	--	--	GE	GE	GE	GE	--
2009	--	--	--	--	--	GE	GE	--	--	--	GE	--
2010	--	--	--	--	--	--	GE	GE	--	--	--	--
Stn.HP_TP-2 : WQI was not calculated due to un-availability of data for 2011												
Station No : HP_TP-3 Station Name: Daryapur, Tal. Daryapur, District- Amravati												
2007	--	--	--	--	MG	MG	MG	--	--	GE	GE	Bad
2008	MG	GE	--	--	--	--	GE	GE	MG	MG	GE	--
2010	--	--	--	--	--	--	GE	MG	GE	--	--	--
Stn.HP_TP-3 : WQI was not calculated due to un-availability of data for 2009 and 2011												
Station No : HP_TP-4 Station Name: Dhule, Tal. Dhule, District- Dhule												
2008	--	--	--	--	--	--	--	Bad	Bad	MG	MG	MG
Stn.HP_TP-4 : WQI was not calculated due to un-availability of data for 2007, 2009 to 2011												

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Tapi River (Contd..)												
Station No : HP_TP-5 Station Name: Hingona, Tal. Yawal, District- Jalgaon												
2007	--	--	--	--	--	--	--	--	--	--	GE	--
2008	--	--	--	--	--	--	--	GE	GE	GE	--	--
2009	--	--	--	--	--	--	GE	--	--	--	--	--
2010	--	--	--	--	--	--		GE	--	--	--	--
Stn.HP_TP-5 : WQI was not calculated due to un-availability of data for 2011												
Station No : HP_TP-6 Station Name: Kawtha, Tal. Balapur, District- Akola												
2007	--	--	--	--	--	--	--	--	GE	GE	GE	GE
2008	GE	GE	--	--	--	--	GE	GE	GE	GE	GE	--
2009	GE	GE	GE	GE	--	--	GE	GE	GE	--	--	--
Stn.HP_TP-6 : WQI was not calculated due to un-availability of data for 2010 and 2011												
Station No : HP_TP-7 Station Name: Khariya, Tal. Dharni, District- Amravati												
2007	--	--	--	--	GE	--	--	MG	--	--	GE	--
2008	--	GE	--	--	GE	--	--	--	GE	--	--	--
2009	--	--	GE	--	--	GE	--	--	--	--	--	--
2010	--	--	--	--	--	GE	--	--	MG	--	--	GE
2011	--	--	GE	--	--	--	--	--	--	--	--	--
Station No : HP_TP-8 Station Name: Lakhpuri, Tal. Murtizapur, District- Akola												
2007	--	--	--	--	GE	GE	GE	--	MG	GE	GE	GE
2008	--	GE	--	GE	GE	--	GE	GE	GE	GE	GE	--
2009	GE	GE	GE	GE	GE	GE	GE	GE	--	GE	GE	--
Stn.HP_TP-8 : WQI was not calculated due to un-availability of data for 2010 and 2011												
Station No : HP_TP-9 Station Name: Malegaon Mosam, Ta. Malegaon, District- Nasik												
2007	--	--	--	--	--	MG	MG	MG	--	--	--	--
2008	--	--	--	--	--	--	--	MG	Bad	MG	MG	MG
2009	--	--	--	--	--	--	Bad	Bad	--	--	--	--
2010	--	--	--	--	--	--	--	Bad	Bad	Bad	Bad	Bad
Stn.HP_TP-8 : WQI was not calculated due to un-availability of data for 2011												
Station No : HP_TP-10 Station Name: Manasgaon, Tal. Shehgaon, District- Buldhana												
2007	--	--	--	--	GE	GE	GE	--	MG	GE	GE	GE
2008	--	GE	GE	GE	GE	--	GE	GE	GE	MG	GE	--
2009	GE	GE	GE	GE	GE	GE	--	GE	GE	GE	GE	--
2010	--	--	--	--	--	--	MG	MG	MG	GE	GE	GE
2011	GE	GE	GE	--	--	--	--	--	--	--	--	--
Station No : HP_TP-11 Station Name: Padalse, Tal. Amalner, District- Jalgaon												
2007	--	--	--	--	--	--	--	--	GE	--	--	--
2008	--	--	--	--	--	--	--	GE	GE	GE	--	--
2009	--	--	--	--	--	--	GE	GE	--	GE	--	--
2010	--	--	--	--	--	--	GE	GE	--	--	--	--
Stn.HP_TP-11: WQI was not calculated due to un-availability of data for 2011												
Station No : HP_TP-12 Station Name: Sarangkheda, Tal. Shahadai, District- Nandurbar												
2007	--	--	--	--	--	Bad	MG	MG	--	--	--	--
2008	--	--	--	--	--	--		Bad	VB	VB	MG	MG
2009	--	--	--	--	--	--	MG	MG	MG	Bad	MG	--
Stn.HP_TP-12: WQI was not calculated due to un-availability of data for 2010 and 2011												

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Tapi River (Contd..)												
Station No : HP_TP-13 Station Name: Sawkheda, Tal. Mahuli, District- Satara												
2008	--	--	--	--	--	--	--	--	GE	GE	GE	--
2009	--	--	--	--	--	--	--	GE	--	GE	--	--
2010	--	--	--	--	--	--	GE	GE	--	--	--	--
Stn.HP_TP-13: WQI was not calculated due to un-availability of data for 2007 and 2011												
Station No : HP_TP-14 Station Name: Sukwad, Tal. Shirpur, District- Dhule												
2007	--	--	--	--	--	MG	--	--	MG	--	--	--
2008	--	--	--	--	--	--	--	MG	Bad	Bad	MG	Bad
2009	--	--	--	--	--	--	GE	Bad	MG	Bad	MG	--
2010	--	--	--	--	--	--	--	Bad	Bad	Bad	VB	Bad
Stn.HP_TP-14: WQI was not calculated due to un-availability of data for 2011												
Station No : HP_TP-15 Station Name: Suple, Tal. Kalwan, District- Nasik												
2007	--	--	--	--	--	MG	--	--	Bad	--	--	--
2008	--	--	--	--	--	MG	MG	MG	MG	MG	GE	MG
2009	--	--	--	--	--	--	Bad	MG	Bad	MG	MG	--
2010	--	--	--	--	--	--	Bad	Bad	Bad	Bad	MG	Bad
Stn.HP_TP-15: WQI was not calculated due to un-availability of data for 2011												
Station No : HP_TP-16 Station Name: TakliKhetri, Tal. Patur, District- Akola												
2007	--	--	--	--	GE	GE	GE	--	MG	GE	GE	GE
2008	GE	GE	GE	GE	GE	--	GE	GE	GE	GE	GE	--
2009	GE	GE	GE	GE	GE	GE	GE	GE		GE	GE	--
2010	--	--	--	--	--	--	--	--	MG	GE	GE	GE
2011	GE	--	GE	--	--	--	--	--	--	--	--	--
Station No : HP_TP-17 Station Name: Vishroli, Tal. Chandurbazar, District- Amravati												
2007	--	--	--	--	GE	GE	GE	MG	MG	GE	GE	GE
2008	GE	GE	GE	GE	GE		GE	GE	GE	GE	GE	--
2009	GE	GE	GE	GE	GE	GE	GE	GE	--	--	MG	--
2010	--	--	GE	--	--	--	--	--	MG	GE	GE	GE
2011	GE	GE	GE	--	--	--	--	--	--	--	--	--
Station No : HP_TP-18 Station Name: Warkhed, Tal. Telhara District- Akola												
2007	--	--	--	--	GE	GE	GE	--	GE	GE	GE	GE
2008	GE	GE	GE	GE	GE	--	GE	GE	GE	GE	GE	--
2009	GE	GE	GE	GE	GE	GE	--	MG	GE	GE	MG	--
Stn.HP_TP-18: WQI was not calculated due to un-availability of data for 2010 and 2011												
Station No : 1251 Station Name: Bhusawal, Tal. Bhusawal, District- Jalgaon												
2007	GE	MG	MG	MG	Bad	GE	MG	MG	GE	GE	MG	GE
2008	GE	--	Bad	--	MG	GE	GE	GE	GE	GE	GE	GE
2009	GE	--	GE	GE	GE	GE	MG	GE	GE	GE	GE	MG
2010	--	--	GE	GE	GE	MG	MG	GE	GE	--	--	MG
2011	GE	GE	GE	--	GE	--	--	--	--	--	--	--

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Tapi River (Contd..)												
Station No : 1313 Station Name: Ajnad Village, Tal. Raver, District- Jalgaon												
2007	GE	MG	MG	GE	Bad	GE	MG	--	MG	MG	MG	GE
2008	MG	GE	Bad	--	MG	GE	GE	GE	GE	GE	GE	GE
2009	GE	--	GE	GE	GE	GE	MG	GE	GE	GE	MG	MG
2010	--	--	GE	GE	GE	MG	MG	MG	GE	MG	--	MG
2011	GE	GE	GE	--	GE	MG	--	--	--	GE	--	--
Station No : 1314 Station Name: UbadVill. Near Gujarat Border, Shahada, Nandurbar												
2007	GE	GE	MG	GE	MG	MG	Bad	--	MG	GE	Bad	GE
2008	GE	GE	GE	--	MG	GE	GE	GE	GE	GE	GE	GE
2009	GE	--	GE	--	GE	GE	GE	GE	GE	GE	GE	MG
2010	--	--	GE	GE	GE	MG	MG	GE	GE	--	--	MG
2011	MG	GE	GE	--	GE	MG	--	--	--	GE	--	--

Titur River												
Station No : 2710 Station Name: D/s of Chalisgaon, Tal. Jalgaon, District-Jalgaon												
2007	--	--	--	--	--	GE	--	--	Bad	GE	MG	--
2008	MG	MG	GE	GE	--	MG	MG	--	--	--	GE	--
2009	--	GE	--	--	--	--	--	--	--	--	--	MG
2010	--	--	--	--	GE	GE	GE	GE	GE	--	--	MG
2011	MG	GE	GE	--	--	--	--	--	--	--	GE	GE

Ulhas River												
Station No : HP_UH_1 Station Name: Near Kambe, Village Kambe, District- Thane												
2010	--	--	--	--	--	--	MG	GE	GE	GE	GE	GE
2011	GE	GE	GE	GE	--	--	--	--	--	--	--	--
Stn.HP_UH-1: WQI was not calculated due to un-availability of data for 2007 to 2009												
Station No : HP_UH_2 Station Name: Near Khapari, Village Khapari, District- Thane												
2007	--	--	--	--	--	MG	--	MG	--	--	--	--
2008	--	--	--	--	MG	MG	GE	GE	GE	--	--	--
2009	--	--	--	--	MG	MG	MG	Bad	Bad	--	--	--
2010	--	--	--	--	--	GE	GE	GE	GE	--	--	--
Stn.HP_UH-1: WQI was not calculated due to un-availability of data for 2011												
Station No : HP_UH_3 Station Name: Near Manda, Village Manda, District- Thane												
2007	--	--	--	--	MG	--	MG	Bad	VB	--	--	--
2008	--	--	--	--	--	--	VB	Bad	VB	VB	VB	--
2009	--	--	--	--	--	--	--	VB	--	--	VB	--
2010	--	--	--	--	--	VB	MG	GE	Bad	Bad	VB	--
2011	--	--	--	VB	--	--	--	--	--	--	--	--
Station No : 1093 Station Name: U/s of NRC Bunder Mohane Village, Kalyan, Thane												
2007	GE	VB	MG	GE	GE	GE	GE	GE	GE	GE	GE	GE
2008	GE	--	--	GE	GE	GE	GE	--	GE	--	GE	GE
2009	GE	--	GE	GE	GE	GE	GE	GE	GE	--	GE	--
2010	--	--	GE	GE	GE	GE	--	--	MG	--	MG	MG
2011	MG	MG	MG	GE	GE	GE	GE	GE	GE	GE	GE	--

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ulhas River (Contd..)												
Station No: 1094 Station Name: U/S of Badalapur Waterworks, Kulgaon, Ambernath, Thane												
2007	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE
2008	GE	--	GE	GE	GE	GE	--	GE	GE	--	--	GE
2009	GE	--	GE	GE	GE	GE	GE	GE	GE	--	GE	--
2010	--	--	GE	GE	GE	GE	--	GE	MG	GE	GE	GE
2011	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	--
Station No: 2162 Station Name: Jambhul Waterworks, Ambernath, Thane												
2008	--	--	--	--	GE	GE	--	GE	--	--	GE	GE
2009	GE	--	GE	GE	GE	GE	GE	GE	GE	--	GE	--
2010	--	--	GE	GE	GE	--	--	GE	GE	GE	GE	GE
2011	GE	GE	GE	GE	GE	GE	GE	--	GE	GE	GE	--
Stn.2162: WQI was not calculated due to un-availability of data for 2007												

Urmodi River												
Station No: 2711 Station Name: Near Nagothane Village, Satara												
2007	--	--	GE	GE		MG	GE	--	MG	MG	MG	MG
2008	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG
2009	MG	Bad	MG	--	--	--	--	--	--	--	--	MG
2010	--	--	MG	GE	GE	MG	--	--	MG	GE	GE	GE
2011	MG	MG	MG	MG	MG	GE	GE	MG	GE	GE	MG	--

Vaitarna River												
Station No: HP_VN_1 Station Name: Near Alman Village, Tal. Wada, District-Thane												
2007	--	--	--	--	--	MG	GE	--	MG	--	--	--
2008	--	--	--	--	--	--	MG	MG	Bad	Bad	--	--
2009	--	--	--	--	--	--	MG	Bad	MG	--	--	--
2010	--	--	--	--	--	--	--	GE	GE	GE	--	--
Stn.HP_VN_1: WQI was not calculated due to un-availability of data for 2011												
Station No: HP_VN_2 Station Name: Near Alman Village, Tal. Wada, District-Thane												
2007	--	--	--	--	--	--	MG	--	Bad	--	--	--
2008	--	--	--	--	--	Bad	MG	MG	MG	MG	--	--
2009	--	--	--	--	--	Bad	MG	MG	MG	--	--	--
2010	--	--	--	--	--	GE	GE	GE	GE	GE	--	--
Stn.HP_VN_2: WQI was not calculated due to un-availability of data for 2011												
Station No: HP_VN_3 Station Name: Near Kasa, Tal. Wada, District-Thane												
2007	--	--	--	--	--	Bad	--	--	--	--	--	--
2008	--	--	--	--	--	MG	Bad	Bad	Bad	Bad	--	--
2009	--	--	--	--	--	MG	MG	MG	MG	MG	--	--
2010	--	--	--	--	--	GE	GE	GE	GE	GE	--	--
Stn.HP_VN_3: WQI was not calculated due to un-availability of data for 2011												

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Vaitarna River (Contd..)												
Station No: HP_VN_4 Station Name: Near Waghivali, Tal. Wada, District-Thane												
2007	--	--	--	--	--	--	MG	Bad	MG	--	--	--
2008	--	--	--	--	--	MG	MG	MG	Bad	Bad	--	--
2009	--	--	--	--	--	--	MG	Bad	Bad	MG	--	--
2010	--	--	--	--	--	GE	GE	GE	GE	GE	--	--
Stn.HP_VN_4: WQI was not calculated due to un-availability of data for 2011												
Station No: 2712 Station Name: Near Gandhare, Tal. Wada, District-Thane												
2011	--	GE	GE	MG	GE	--	--	GE	GE	GE	GE	GE
Stn.HP_VN_4: WQI was not calculated due to un-availability of data for 2007 to 2010												

Vashishti River												
Station No: 2164 Station Name: U/s of Three M Paper Mills Near M/s Multifilms Plastic Pvt. Ltd. Tal. Chiplun, District- Ratnagiri												
2008	--	--	GE	--	--	GE	GE	GE	--	GE	--	GE
2009	GE	--	GE	--	GE	GE	GE	GE	GE	--	GE	GE
2010	--	--	GE	--	GE	GE	GE	GE	GE	GE	GE	GE
2011	GE	GE	GE	GE	GE	GE	--	GE	GE	GE	GE	GE
Station No: 2713 Station Name: D/s of Three M Paper Mills Near M/s Multifilms Plastic Pvt. Ltd. Tal. Chiplun, District- Ratnagiri												
2008	--	GE	--	--	GE	GE	GE	--	GE	--	--	GE
2009	--	GE	GE	GE	GE	GE	GE	GE	--	GE	GE	GE
2010	--	--	GE	--	GE	GE	GE	GE	GE	GE	GE	GE
2011	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE
Station No: 2714 Station Name: U/s of Pophali Near Konphansawane Bridge Tal. Chiplun, District- Ratnagiri												
2008	--	--	--	--	--	--	GE	GE	GE	GE	GE	--
2009	--	--	GE	--	GE	--	GE	GE	--	GE	GE	GE
2010	--	--	GE	GE	GE	GE	GE	GE	GE	GE	GE	GE
2011	GE	GE	GE	--	GE	GE	GE	GE	GE	GE	GE	GE
Stn.2164, 2713 and 2714: WQI was not calculated due to un-availability of data for 2007												
Station No: HP_VA_2 Station Name: Vashshti River Near Pimpali Village, Tal. Chiplun, District- Ratnagiri												
2007	GE	VB	GE	GE	GE	GE	GE	GE	MG	GE	MG	GE
2008	MG	MG	MG	GE	GE	MG	MG	GE	MG	GE	MG	MG
2009	GE	MG	GE	GE	MG	GE	GE	GE	GE	GE	--	--
2010	--	--	--	--	--	GE	GE	GE	GE	GE	GE	GE
2011	GE	GE	GE	MG	MG	--	--	--	--	--	--	--

Vel River												
Station No: 2715 Station Name: Near Shikrapur Village, Tal. Shirur, District- Pune												
2007	GE	--		MG	--	--	--	MG	MG	MG	MG	--
2008	MG	--	MG	MG	--	--	--	--	--	MG	--	--
2009	--	--	--	--	--	--	--	--	--	--	--	MG
2010	--	--	MG	--	MG	GE	GE	MG	MG	GE	GE	MG
2011	--	--	MG	MG	MG	MG	--	--	GE	Bad	Bad	--

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Venna River												
Station No: 2186 Station Name: Near Varye Village, Tal. Satara, District- Satara												
2007	--	--	MG	GE	--	--	GE	--	MG	GE	MG	MG
2008	MG	MG	GE	MG	--	MG	GE	GE	MG	MG	MG	GE
2009	GE	--	MG	MG	MG	--	GE	MG	GE	MG	GE	MG
2010	--	--	MG	MG	MG	GE	MG	MG	GE	GE	GE	MG
2011	GE	MG	MG	Bad	MG	MG	GE	MG	MG	MG	MG	--
Station No: 2716 Station Name: Near Mahabaleshwar, Satara												
2007	GE	--	GE	GE	--	GE	GE		MG	GE	MG	GE
2008	GE	GE	GE	GE	--	GE	GE	GE	GE	MG	MG	MG
2009	MG	MG	--	--	--	--	--	--	--	--	--	--
2010	--	--	MG	GE	GE	GE	GE	--	GE	GE	GE	GE
2011	GE	GE	--	MG	GE	GE	GE	GE	GE	GE	GE	--
Station No: 2717 Station Name: Near Mahuli, Satara												
2007	GE	--	GE	MG	--	GE	--	MG	MG	MG	Bad	MG
2008	MG	MG	GE	GE	Bad	MG	--	MG	MG	MG	Bad	MG
2009	MG	MG	MG	--	--	--	--	--	--	--	--	MG
2010	--	--	MG	Bad	MG	GE	GE	MG	MG	GE	GE	MG
2011	MG	MG	MG	MG	MG	GE	MG	GE	MG	--	MG	--

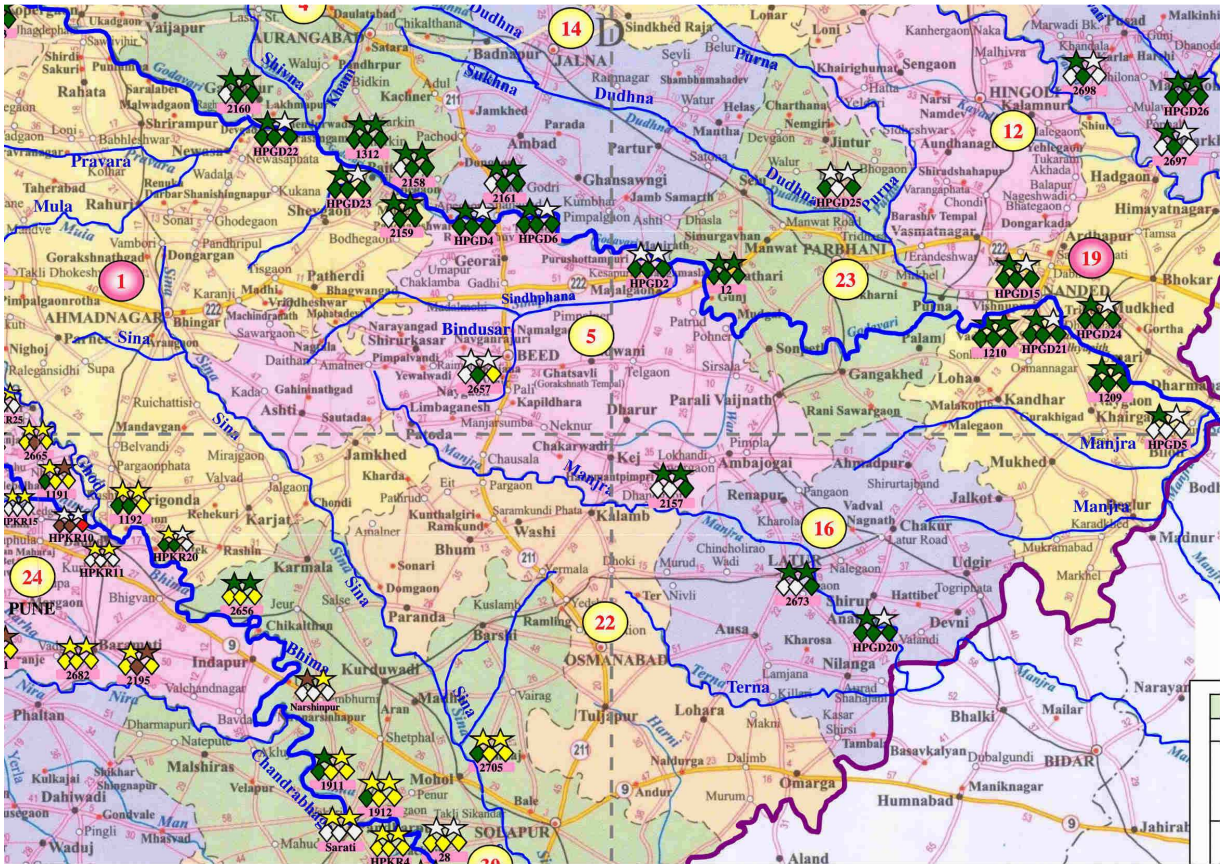
Waghur River												
Station No: 2718 Station Name: Sakegaon Before, Confluence with Tapi River Tal.-Bhusaval, District- Jalgaon												
2007	--	--	--	--	--	--	--	GE	MG	--	MG	--
2008	MG	GE	GE	GE	--	GE	GE	--	--	--	GE	--
2009	--	GE	--	--	--	--	--	--	--	--	--	--
2010	--	--	--	--	--	GE	GE	GE	GE	GE	--	GE
2011	MG	GE	GE	--	--	MG	--	--	--	--	MG	GE

Wardha River												
Station No: 1212 Station Name: Rajura bridge, Tal. Chandrapur, District-Chandrapur												
2007	GE	--	--	MG	--	--	GE	--	--	GE	--	--
2008	--	--	--	MG	--	--	--	--	--	--	--	--
2009	GE	--	--	MG	--	--	--	--	--	--	--	--
2010	--	--	--	--	--	--	Bad	--	--	GE	--	--
2011	MG	--	--	GE	GE	MG	MG	MG	GE	GE	MG	--
Station No: 1315 Station Name: Pulgaon Railway Bridge, Tal. Wardha, Wardha												
2007	MG	MG	MG	MG	MG	MG	GE	MG	MG	MG	MG	MG
2008	MG	MG	GE	--	Bad	Bad	Bad	MG	GE	GE	MG	GE
2009	--	--	MG	GE	MG	GE	GE	GE	GE	GE	MG	--
2010	--	--	GE	MG	MG	MG	MG	MG	MG	MG	GE	MG
2011	GE	GE	MG	GE	MG	MG	MG	GE	MG	GE	MG	--

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Wardha River (Contd..)												
Station No: 2156 Station Name: Confluence Point of Penganga &Wardha, Taluka-Wani, District-Yavatmal												
2008	--	--	MG		--	MG	MG	GE	GE	GE	GE	--
2009	MG	--	--	MG	--	GE	GE	--	GE	--	--	--
2010	--	--	--	MG	--	--	--	GE	GE	--	MG	GE
2011	GE	GE	MG	GE	MG	Bad	MG	MG	GE	GE	MG	--
Stn.2156: WQI was not calculated due to un-availability of data for 2007												
Station No: 2174 Station Name: D/S of ACC Ghuggus, Chandrapur												
2008	--	MG	MG	--	MG	MG	MG	GE	MG	MG	--	GE
2009	--	--	MG	--	MG	MG	--	GE	--	--	--	GE
2010	--	--		--	--	--	--	--	MG	--	Bad	MG
2011	MG	GE	MG	GE	GE	MG	MG	MG	GE	GE	MG	--
Stn.2174 : WQI was not calculated due to un-availability of data for 2007												
Stn No: 2719 Station Name: D/s of Erai River at Hadasti near ArunEngg. Works., Chandrapur												
2008	MG	GE	GE	Bad	MG	--	--	--	MG	--	--	--
2009	MG	--	--	--	--	--	--	--	--	--	--	GE
2010	--	--	--	--	--	--	--	MG	GE	GE	MG	Bad
2011	MG	GE	MG	GE	MG	--	MG	MG	GE	GE	GE	--
Stn.2719 : WQI was not calculated due to un-availability of data for 2007												
Station No: 2720 Station Name: U/s of Erai River, Hadasti, Chandrapur												
2008	--	GE	MG	MG	GE	GE	MG	--	MG	--	--	--
2009	--	--	--	--	--	--	--	--	MG	--	--	--
2010	--	--	--	--	--	--	--	GE	GE	GE	MG	GE
2011	GE	GE	GE	GE	GE	--	MG	GE	GE	GE	GE	--
Stn.2720 : WQI was not calculated due to un-availability of data for 2007												
Station No: 2721 Station Name: U/s of ACC Ghuggus, Chandrapur												
2008	--	MG	MG	MG	GE	GE	MG	GE	MG	--	--	GE
2009	--	--	--	--	--	GE	--	--	--	--	--	GE
2010	--	--	--	--	--	--	--	GE	GE	GE	MG	GE
2011	GE	GE	GE	GE	GE	MG	GE	MG	GE	GE	--	--
Stn.2721 : WQI was not calculated due to un-availability of data for 2007												

Wena River												
Station No: 2722 Station Name: U/s of Mohata Mills, Near Railway Bridge, Wardha												
2007	--	--	GE	--	--	GE	MG	--	--	MG	--	--
2008	GE	--		MG	--	--	GE	--	GE	--	GE	GE
2009	--	--	MG	--	--	GE	GE	--	--	GE	MG	GE
2010	--	--	--	--	MG	MG	GE	MG	GE	GE	GE	MG
2011	MG	GE	MG	GE	GE	MG	MG	GE	GE	GE	GE	MG
Station No: 2723 Station Name: D/s.Mohata Mills, Near Road Bridge on Hinganghat, Wadner Road												
2007	--	--	MG	--	--	MG	MG	--	--	--	MG	--
2008	--	--	--	--	--	--	MG	--	MG	--	MG	MG
2009	--	--	--	MG	--	MG	--	MG	--	--	MG	--
2010	--	--	MG	Bad	MG	MG	MG	MG	MG	MG	MG	Bad
2011	--	GE	Bad	MG	MG	MG	MG	MG	MG	GE	MG	MG

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Wainganga River												
Station No: 11 Station Name: Ashti Bridge, Tal. Gondpipri, District-Chandrapur												
2007	GE	MG	GE	MG	MG	MG	MG	MG	MG	GE	MG	MG
2008	MG	GE	GE	MG	MG	Bad	Bad	GE	GE	GE	GE	GE
2009	MG	--	GE	MG	GE	MG	MG	MG	MG	MG	MG	GE
2010	--	--	GE	MG	MG	MG	Bad	GE	GE	GE	MG	GE
2011	GE	GE	MG	GE	GE	MG	GE	MG	GE	GE	MG	--
Station No: 1910 Station Name: After Confluence with Kanhan, Tal. Kuhi, District- Nagpur												
2007	MG	--	--	GE	--	--	MG	--	--	GE	--	--
2008	MG	--	--	MG	--	--	--	--	--	--	--	--
2009	GE	--	--	GE	--	--	--	--	--	--	--	--
2010	--	--	--	Bad	--	--	MG	--	--	MG	--	--
2011	GE	--	GE	GE	GE	MG	GE	GE	MG	GE	MG	--
Station No: 2172 Station Name: D/s of Ellora Paper Mill, Tal. Tumsar, District-Bhandara												
2008	--	MG	GE	MG	MG	--	--	GE	MG	GE	MG	MG
2009	MG	--	GE	MG	Bad	MG	MG	MG	MG	--	MG	MG
2010	--	--	MG	MG	MG	MG	--	Bad	MG	MG	Bad	MG
2011	Bad	GE	MG	GE	MG	MG	MG	GE	MG	GE	GE	--
Stn.2172 : WQI was not calculated due to un-availability of data for 2007												
Station No: 2173 Station Name: U/s of Ellora Paper Mill, Tal. Tumsar, District-Bhandara												
2008	--	MG	GE	--	MG	MG	MG	MG	--	GE	GE	MG
2009	GE	--	GE	GE	MG	MG	MG	MG	GE	GE	GE	GE
2010	--	--	GE	MG	--	MG	--	MG	GE	MG	MG	GE
2011	GE	GE	MG	GE	GE	MG	GE	MG	MG	GE	GE	--
Stn.2173 : WQI was not calculated due to un-availability of data for 2007												
Station No: 2175 Station Name: U/s of Gaurav Paper Mill, Tal.-Chandrapur, Dist.-Bhandara												
2008	--	MG	GE	--	--	MG	MG	--	GE	GE	--	MG
2009	--	--	--	GE	MG	MG	--	--	GE	--	--	GE
2010	--	--	--	--	--	--	--	MG	GE	--	GE	MG
2011	GE	GE	MG	GE	MG	GE	MG	MG	GE	GE	GE	--
Stn.2175 : WQI was not calculated due to un-availability of data for 2007												
Station No: 2176 Station Name: D/s of Gaurav Paper Mill, Tal.-Chandrapur, Dist.-Bhandara												
2010	--	--	--	--	--	--	--	MG	MG	--	MG	Bad
2011	MG	GE	MG	GE	MG	MG	MG	MG	GE	GE	MG	--
Stn.2176 : WQI was not calculated due to un-availability of data for 2007 to 2009												


AURANGABAD
JALNA
PARBHANI
HINGOLI
NANDED
AHMADNAGAR
BEED
LATUR
OSMANABAD
SOLAPUR
BIDAR
PUNE
Dudhna
Purna
Sindphana
Manjra
Sina
Bhima
Terna
Mula
Pravara
Godavari
Shivna
Sukhna
Khan
Kayadhu
Tirthna
Harni
Chandrabhaga
Man
Yerla
Nira
Ghod
Mukhed
Kandhar
Dharur
Parali Vaijnath
Ambajogai
Kalamnuri
Basavkalyan
Humnabad
Omarga
Udgir
Jalkot
Devni
Bhalki
Ausa
Nilanga
Lohara
Tuljapur
Paranda
Barshi
Karmala
Jamkhed
Bindusar
Shirurkasar
Georai
Patherdi
Ashti
Shrirampur
Rahata
Rahuri
Sangamner
Kopargaon
Shirdi
Vaijapur
Gangapur
Kannad
Soygaon
Sillod
Phulambri
Paithan
Gangakhed
Sonpeth
Manwat
Pathri
Sailu
Jintur
Aundhanagaon
Vasmatnagar
Purna
Palam
Pathri
Sengaon
Khairigumat
Loni
Sonpeth
Ghansawngi
Partur
Ambad
Mantha
Jafrabad
Badnapur
Rajnagar
Sindkhed Raja
Lonar
Malkapur
Chikhli
Buldhana
Khamgaon
Shegaon
Akola
Washim
Mangrulpir
Risod
Karanja
Murtizapur
Akot
Telhara
Balapur
Patur
Mehkar
Sindkhed
Lonar
Deulgaon Raja
Chikhli
Dhad
Jalna
Ambad
Partur
Ghansawngi
Georai
Bindusar
Shirurkasar
Patoda
Ashti
Dharur
Parali Vaijnath
Ambajogai
Kalamb
Washi
Bhum
Paranda
Barshi
Osmanabad
Tuljapur
Lohara
Terna
Ausa
Nilanga
Udgir
Jalkot
Devni
Bhalki
Basavkalyan
Humnabad
Omarga
Naldurga
Andur
Mohol
Malshiras
Indapur
Baramati
Daund
Karjat
Rashin
Rehekuri
Shrigonda
Pargaonphata
Mandavgan
Belvandi
Ruichattisi
Ghatsavli
Kapildhara
Limbaganesh
Manjarsumba
Neknur
Chakarwadi
Kej
Chausala
Lokhandi
Pimpla
Renapur
Vadval
Nagnath
Chakur
Latur Road
Shirur
Hattibet
Togriphata
Nalegaon
Lamjana
Kharosa
Vatandi
Anandwadi
Shirsi
Tambal
Kasar
Bhogaon
Varangaphata
Shiradshahapur
Barshiv Tempal
Erandeshwar
Dongarkada
Ardhapur
Tamsa
Himayatnagar
Hadgaon
Mahur
Kinwat
Pusad
Umarkhed
Digras
Darwha
Pusad
Yavatmal
Wani
Ghatanji
Pandharkawada
Kelapur
Ralegaon
Yavatmal
Darwha
Digras
Umarkhed
Pusad
Mahur
Kinwat
Hadgaon
Himayatnagar
Bhokar
Mukhed
Kandhar
Dharmabad
Naigaon
Gangakhed
Loha
Osmannagar
Malkapur
Malegaon
Rani Sawargaon
Pangaon
Shirurtajband
Ahmadpur
Jalkot
Udgir
Nilanga
Ausa
Devni
Bhalki
Mailar
Dubalgundi
Maniknagar
Humnabad
Omarga
Naldurga
Andur
Tuljapur
Lohara
Terna
Osmanabad
Barshi
Paranda
Bhum
Washi
Kalamb
Dharur
Parali Vaijnath
Ambajogai
Kej
Chakarwadi
Manjarsumba
Neknur
Kapildhara
Ghatsavli
Limbaganesh
Patoda
Ashti
Sautada
Gahininathgad
Kada
Ruichattisi
Mandavgan
Belvandi
Pargaonphata
Shrigonda
Rehekuri
Karjat
Rashin
Karmala
Sonari
Domgaon
Jeur
Salsa
Kuslamb
Ramling
Vairag
Aran
Shetphal
Malshiras
Velapur
Mohol
Penur
Bale
Andur
Solapur
Sarati
Mahud
Waduj
Pingli
Mhasvad
Gondvale
Dahiwadi
Shrigonda
Daund
Indapur
Baramati
Phaltan
Dharmapuri
Natepute
Bavda
Narshinpur
Narsinhapur
Kurduwadi
Malshiras
Chikalthan
Bhigvan
Jeur
Bhigvan
Pune
Haveli
Khed
Junnar
Ambegaon
Shirur
Daund
Indapur
Baramati
Phaltan
Malshiras
Karmala
Karjat
Rashin
Rehekuri
Shrigonda
Pargaonphata
Mandavgan
Belvandi
Ruichattisi
Ghatsavli
Kapildhara
Limbaganesh
Manjarsumba
Neknur
Chakarwadi
Kej
Chausala
Lokhandi
Pimpla
Renapur
Vadval
Nagnath
Chakur
Latur Road
Shirur
Hattibet
Togriphata
Nalegaon
Lamjana
Kharosa
Vatandi
Anandwadi
Shirsi
Tambal
Kasar
Bhogaon
Varangaphata
Shiradshahapur
Barshiv Tempal
Erandeshwar
Dongarkada
Ardhapur
Tamsa
Himayatnagar
Hadgaon
Mahur
Kinwat
Pusad
Umarkhed
Digras
Darwha

Annexure VIa

List of Municipal Corporation / Councils
Wastewater Discharges into Rivers Stream /Bassin

Sr.	Municipal Corporations /Councils	Population Census 2001	Wastewater Discharges (MLD)	Domestic Wastewater Discharge (MLD)	River Stream /Bassin
1	Waijapur	37064	3.5	2.5	U/S Godavari
2	Kanad	34408	2.8	2	U/S Godavari
3	Pathadi	22,835	1.9	1.5	U/S Godavari
4	Devlali Pravra	30,334	1.05	0.6	U/S Godavari
5	Shrirampur	81,270	3.3	2	U/S Godavari
6	Rahuri	34,465	2.2	1.7	U/S Godavari
7	Rahata	19,019	1.4	1	U/S Godavari
8	Shrigonda	26,324	1.25	0.6	U/S Godavari
9	Sangamner	61,958	6.7	4	U/S Godavari
10	Salod	43867	2	1.6	D/S Godavari
11	Khuldabad	12704	0.5	0.38	D/S Godavari
12	Jalna	235625	23	18.5	D/S Godavari
13	Partur	28941	2.4	2.32	D/S Godavari
14	Ambad	26,096	2.9	2.5	D/S Godavari
15	Bokhardan	16950	0.8	0.7	D/S Godavari
16	Beed	138091	14	11	D/S Godavari
17	Ambejogai	69227	5.5	5	D/S Godavari
18	Parli Vaijanath	38,510	5	4	D/S Godavari
19	Dharoor	11350	1.8	1.45	D/S Godavari
20	Latur	299985	24.5	21	D/S Godavari
21	Ahmedapur	35786	24	18	D/S Godavari
22	Udgir	100000	67	54.2	D/S Godavari
23	Nilanga	31660	21.5	17.5	D/S Godavari
24	Osa	30876	2	1.8	D/S Godavari
25	Kalamb	23016	1.85	1.5	D/S Godavari
26	Kandhar	20,678	1.4	1.2	D/S Godavari
27	Hadgaon	23,328	2	1.6	D/S Godavari
28	Loha	20135	1.3	1.04	D/S Godavari
29	Kinwat	24,868	1	0.8	D/S Godavari
30	Dharmabad	29,952	1.5	1.2	D/S Godavari
31	Umeri	11151	0.55	0.44	D/S Godavari
32	Deglur	48,024	4	3.2	D/S Godavari
33	Kundalwadi	14,355	1.2	0.96	D/S Godavari
34	Biloi	13,330	0.52	0.4	D/S Godavari
35	Mukhed	18,700	1	0.8	D/S Godavari
36	Mudkhed	25,936	1.5	1.2	D/S Godavari
37	Purna	39,854	5	4	D/S Godavari
38	Pathari	29,218	3	2.4	D/S Godavari
39	Jitur	40,428	5	4	D/S Godavari
40	Seloo	33,225	4	3.2	D/S Godavari
41	Gagankhed	38,111	5	4	D/S Godavari
42	Manwat	31,997	4	3.2	D/S Godavari
43	Parbhani	2,59,171	30	24	D/S Godavari
44	Hingoli	69,442	7	5.5	D/S Godavari
45	Wasmatnagar	57,360	6	4.5	D/S Godavari
46	Kalamnoori	20,632	2.5	2	D/S Godavari
47	Deulgaon Raja	24372	2.4	1.9	D/S Godavari
48	Sindhkhed Raja	14000	1.3	1	D/S Godavari
49	Lonar	20000	2	1.6	D/S Godavari
50	Sinnar	31,724	4.5	3.15	D/S Godavari

Contd..

Sr.	Municipal Corporations /Councils	Population Census 2001	Wastewater Discharges (MLD)	Domestic Wastewater Discharge (MLD)	River Stream /Bassin
51	Bhugar	12,457	1.3	0.87	D/S Godavari
52	Yevala	43,207	3.5	2.6	D/S Godavari
53	Igatpuri	31,539	6	4.2	U/S Godavari
54	Gangapur	22325	1.2	0.9	U/S Godavari
55	Paithan	34518	5	2	D/S Godavari
56	Gevrai	23665	3.014	2.2	D/S Godavari
57	Kopargaon	59,970	11	7	U/S Godavari
58	Trimbkeshwar	9,804	1	0.07	U/S Godavari
59	Majalgaon	44442	3.5	2.8	D/S Godavari
60	Sonpeth	30,222	4	3	D/S Godavari
61	Pusad	67152	4.7	3.7	Penganga
62	Digras	39169	2	1.4	Penganga
63	Darwa	23306	4.7	2.8	Penganga
64	Wani	52814	5	4	Penganga
65	Yavatmal	120763	16	13	Penganga
66	Pandharwada	26567	2	1.6	Penganga
67	Umerkhed	34084	2.5	2	Penganga
68	Ghataji	19347	1.5	1	Penganga
69	Washim	62967	5	4	Penganga
70	Rasod	27000	2	1.6	Penganga
71	Karanja	60152	3.5	2	Penganga
72	Mangruleer	27686	3	2.4	Penganga
73	Buldhana	63000	6.2	4.9	Penganga
74	Mahekar	37716	3.7	3	Penganga
75	Chikhali	48414	4.8	3.8	Penganga
76	Mowada	8,735	0.6	0.34	Penganga, Wardha and Wainganga
77	Savner	26,631	1.4	0.79	Penganga, Wardha and Wainganga
78	Mohapa	7,066	0.4	0.28	Penganga, Wardha and Wainganga
79	Katol	37,744	1.8	0.94	Penganga, Wardha and Wainganga
80	Narkhed	19,423	1.1	0.77	Penganga, Wardha and Wainganga
81	Kalmeshwar	17,241	0.9	0.65	Penganga, Wardha and Wainganga
82	Khapa	14,972	0.8	0.45	Penganga, Wardha and Wainganga
83	Ramtek	22,000	1.035	0.55	Penganga, Wardha and Wainganga
84	Wardha	129,700	9	5.18	Penganga, Wardha and Wainganga
85	Sindhi	15,000	0.675	0.38	Penganga, Wardha and Wainganga
86	Hinganghat	78,715	7.87	5.12	Penganga, Wardha and Wainganga
87	Arvi	32,000	1.4	0.8	Penganga, Wardha and Wainganga
88	Devli	13,734	0.961	0.55	Penganga, Wardha and Wainganga

Contd..

Sr.	Municipal Corporations /Councils	Population Census 2001	Wastewater Discharges (MLD)	Domestic Wastewater Discharge (MLD)	River Stream /Bassin
89	Phulgaon	36,296	3.9	2.54	Penganga, Wardha and Wainganga
90	Umred	43,578	45	2.83	Penganga, Wardha and Wainganga
91	Bhandara	90,000	8	4.5	Penganga, Wardha and Wainganga
92	Tumsar	42,018	4	2.3	Penganga, Wardha and Wainganga
93	Gondiya	1,20,878	8.44	4.83	Penganga, Wardha and Wainganga
94	Tirora	22,527	1.8	0.68	Penganga, Wardha and Wainganga
95	Chandrapur	2,97,000	86	29.7	Penganga, Wardha and Wainganga
96	Balarpur	89,995	6.3	3.6	Penganga, Wardha and Wainganga
97	Bhadravati	56,679	5	2.6	Penganga, Wardha and Wainganga
98	Varora	41,966	7.135	4.2	Penganga, Wardha and Wainganga
99	Vadsa	28,000	2.8	1.68	Penganga, Wardha and Wainganga
100	Gadchiroli	42,464	6.5	3.82	Penganga, Wardha and Wainganga
101	Kamthi	22,517	1.3	0.72	Penganga, Wardha and Wainganga
102	Pauni	22,583	0.95	0.56	Penganga, Wardha and Wainganga
103	Mul	22,256	1.02	0.56	Penganga, Wardha and Wainganga
104	Bhrampuri	31,200	2	0.94	Penganga, Wardha and Wainganga
105	Savner	26,631	1	1	Penganga, Wardha and Wainganga
106	Khapa	14,972	1	0	Penganga, Wardha and Wainganga
107	Murum	17232	1.5	1.2	D/S Bhima
108	Umraga	40000	2.8	2.4	D/S Bhima
109	Naldurga	17600	1.4	1.2	D/S Bhima
110	Tuljapur	31714	2.2	1.9	D/S Bhima
111	Usmanabad	80612	6.3	5.3	D/S Bhima
112	Paranda	16987	1.2	1	D/S Bhima
113	Bhoom	17509	1.5	1.3	D/S Bhima
114	Shirur	26,999	2.4	1.6	D/S Bhima
115	Bhor	17,882	1.3	0.9	D/S Bhima
116	Jejuri	12,000	0.5	0.2	D/S Bhima
117	Saswad	26,689	1.5	1.2	D/S Bhima
118	Baramati	51,342	5	3.5	D/S Bhima
119	Talegaon Dabhde	40,344	7	6	D/S Bhima
120	Alandhi	17,564	1	0.9	D/S Bhima
121	Phaltan	50,798	5.08	4.06	D/S Bhima
122	Mahaswad	20,494	0.3	0.2	D/S Bhima
123	Akalkot	33,295	0.5	0.4	D/S Bhima
124	Medarangi	12,483	0.9	0.77	D/S Bhima
125	Kudrudwadi	22,773	1.8	1.4	D/S Bhima

Contd..

Sr.	Municipal Corporations /Councils	Population Census 2001	Wastewater Discharges (MLD)	Domestic Wastewater Discharge (MLD)	River Stream /Bassin
126	Sagola	28,103	2.3	1.8	D/S Bhima
127	Barshi	1,04,786	8.4	6.7	D/S Bhima
128	Dhudhani	13,890	0.9	0.75	D/S Bhima
129	Karmala	22,670	1.75	1.4	D/S Bhima
130	Idapur	21584	1	0.8	Neera
131	Junar	24,760	3	2	U/S Bhima
132	Pandharpur	91,318	13	10	D/S Bhima
133	Daund	41,907	0.7	0.4	D/S Bhima
134	Mangalveda	24,853	1.57	1.25	D/S Bhima
135	Mahabaleshwar	12,736	2	1	D/S Bhima
136	Lonaval	55,650	20	15	U/S Bhima
137	Achalpur	107304	10	8.5	U/S Tapi/ Purna
138	Ajangaon Surji	51163	2.85	2.28	U/S Tapi/ Purna
139	Chandur Rly	17720	3.3	3.2	U/S Tapi/ Purna
140	Chikhaldara	4718	0.5	0.4	U/S Tapi/ Purna
141	Dhamangaon	21430	1.9	1.5	U/S Tapi/ Purna
142	Daryapur	34398	1.9	1.5	U/S Tapi/ Purna
143	Shendurjana Ghat	21080	1	0.8	U/S Tapi/ Purna
144	Warud	41005	1	0.8	U/S Tapi/ Purna
145	Morshi	33607	4.1	3.2	U/S Tapi/ Purna
146	Chandur Bazar	17635	1.4	0.8	U/S Tapi/ Purna
147	Malkapur	61015	6.1	4.8	U/S Tapi/ Purna
148	Nandura	45000	4.5	3.6	U/S Tapi/ Purna
149	Jalgaon	26000	2.6	2	U/S Tapi/ Purna
150	Khamgaon	88670	8.8	7.08	U/S Tapi/ Purna
151	Shegaon	52000	5.2	4.1	U/S Tapi/ Purna
152	Akot	80000	8	6.4	U/S Tapi/ Purna
153	Telhara	18906	1.8	1.4	U/S Tapi/ Purna
154	Balapur	39000	3.9	2.3	U/S Tapi/ Purna
155	Patur	23000	2.2	1.7	U/S Tapi/ Purna
156	Murtizapur	38851	3.8	3.1	U/S Tapi/ Purna
157	Shirpur	61,248	4	3.2	U/S Tapi/ Purna
158	Nadurbar	94,365	5.5	4.5	U/S Tapi/ Purna
159	Navapur	29,974	1.2	1	U/S Tapi/ Purna
160	Shahada	40,000	1.5	1.2	U/S Tapi/ Purna
161	Satana Corp. Nashik	32,551	2.1	1.47	U/S Tapi/ Purna
162	Nandgaon	23,195	1.5	1.2	U/S Tapi/ Purna
163	Manmad	72,401	6.5	6	U/S Tapi/ Purna
164	Erandol	30,120	1.3	0.91	U/S Tapi /Purna
165	Parola	34,800	6.66	3.49	U/S Tapi /Purna
166	Savada	19,332	0.7	0.57	U/S Tapi /Purna
167	Raveer	25,993	1.3	1.1	U/S Tapi /Purna
168	Faizapur	23,690	2.1	0.7	U/S Tapi /Purna
169	Yaval	31806	0.364	0.28	U/S Tapi /Purna
170	Chopada	60,465	4	3.2	U/S Tapi /Purna
171	Jamner	36,098	13	11	U/S Tapi /Purna
172	Bhusawal	1,72,384	40	11.4	D/S Tapi
173	Pachora	31,350	4	3.2	D/S Tapi
174	Dandocha	44,000	2	1	D/S Tapi
175	Dharangaon	33,618	12	8.4	D/S Tapi
176	Amalner	91,426	10.5	3.15	D/S Tapi

Contd..

Sr.	Municipal Corporations /Councils	Population Census 2001	Wastewater Discharges (MLD)	Domestic Wastewater Discharge (MLD)	River Stream /Bassin
177	Chalisgaon	91,110	8	7.21	D/S Tapi
178	Taloda	20,000	2	1	D/S Tapi
179	Kundarwad	21,325	1	0.8	Krishna
180	Kagal	23,775	3	2.4	Krishna
181	Gadhinglaj	25,536	3	2.4	Krishna
182	Murgud	10,285	0.8	0.64	Krishna
183	Malkapur	10280	0.3	0.2	Krishna
184	Islampur	58303	4.4	4	Krishna
185	Wita	41797	5	3.25	Krishna
186	Tasgaon	33435	7.6	6.08	Krishna
187	Satara	108,043	13	11	Krishna
188	Karad	56,819	14	11.2	Krishna
189	Wai	31,090	4.3	3.4	Krishna
190	Panahala	5040	0.45	0.36	Krishna
191	Wadgaon	22,754	1.2	0.9	Krishna
192	Jaisinghpur	43055	5.8	4.64	Krishna
193	Ashti	33000	1.2	0.96	Krishna
194	Ichalkaranji	2,70,000	50	37	Krishna
195	Murgud	10,285	1	1	Krishna
196	Rahitpur	16,539	2	1	Krishna
197	Panchgani	13,280	3.4	2.7	Krishna
198	Kulgaon - Badalapur	1,03,000	23	18	Ulhas
199	Karjat	25,544	3	2	Ulhas
200	Matheran	5,132	2	1	Ulhas
201	Khopoli	58,657	8	6	Ulhas
202	Uran	24000	3.1	2.1	Patalgaga

Annexure VII

Percent Exceedance Monitoring Locations of River Water

Table AVII.1: List of Monitoring Stations where Percent Exceedance of any of Parameters is more than 50%

Sr.	Station No.	River	pH	DO	BOD	TC	Ammonical-N	Nitrate
1	HP_AM_1	Amba	5	0	0	63	0	0
2	2652	Amravati	20	0	67	0	82	0
3	1190	Bhima	4	77	100	0	71	0
4	1189		0	64	100	0	44	0
5	1191		0	29	88	0	50	0
6	1192		0	25	83	0	61	0
7	1188		14	2	75	0	9	0
8	2655		16	7	68	0	11	0
9	2656		17	0	57	0	5	0
10	No Stn.Num.	Bindusara	7	14	62	0	10	0
11	2658	Bori	14	4	62	0	29	0
12	2659	Burai	10	4	52	0	37	0
13	1912	Chandrabhaga	25	0	75	0	30	0
14	1911		13	0	58	0	13	0
15	HP_DG_3	Daman Ganga	6	6	78	0	0	0
16	HP_DG_1		6	0	73	0	0	0
17	HP_DG_2		0	0	54	0	0	0
18	2660	Darna	0	9	52	0	30	0
19	2665	Ghod	14	14	79	0	12	0
20	1253	Girna	11	0	59	0	7	0
21	1252		17	0	57	0	0	0
22	HP_GD_3	Godavari	33	33	100	0	0	0
23	HP_GD_1		0	0	100	0	0	0
24	2180		9	23	93	0	28	0
25	2178		18	41	91	0	65	0
26	1211		3	6	91	0	3	0
27	2181		9	26	91	0	23	0
28	1096		4	0	86	0	2	0
29	2179		6	16	84	0	18	0
30	HP_GD_7		0	0	63	50	0	0
31	2182		5	3	60	0	8	0
32	2177		4	0	57	0	19	0
33	HP_GD_5		67	0	0	50	100	0
34	2666	Gomai	10	0	62	0	32	0
35	2667	Hiwara	23	0	66	0	32	0
36	2668	Indrayani	9	25	93	0	7	0
37	2197		2	19	87	0	19	0
38	2669		5	12	84	0	7	0
39	1092	Kalu	0	33	50	0	4	0
40	2670	Kan	16	0	53	0	63	0

Table AVII.1 (Contd..) : Percent Exceedance50%

Sr.	Station No.	River	pH	DO	BOD	TC	Ammonical-N	Nitrate
41	2171	Kanhan	13	5	92	0	13	0
42	1909		0	4	87	0	32	0
43	2170		18	0	63	0	8	0
44	1908	Kolar	4	0	83	0	17	0
45	2189	Koyna	9	2	77	0	6	0
46	HP_KR_8	Krishna	0		100		100	20
47	2188		11	0	81	0	2	0
48	36		4	0	80	0	0	0
49	2187		2	0	77	0	2	0
50	HP_KR_24		0	93	77	91	21	0
51	2190		6	2	75	0	2	0
52	HP_KR_10		0	77	71	98	18	0
53	HP_KR_15		0	0	67	100	0	0
54	HP_KR_11		0	0	56	100	0	0
55	1194		5	0	51	0	0	0
56	HP_KR_21		60	0	0	0	0	0
57	HP_KR_14		17	0	8	100	0	0
58	HP_KR_23		0	0	0	78	0	0
59	HP_KR_19		11	0	0	67	0	0
60	HP_KR_3		0	0	0	63	0	0
61	HP_KR_13		2	0	0	61	0	0
62	HP_KR_5		12	0	3	50	0	0
63	2671	Kundalika	0	6	61	0	0	0
64	2198		0	21	54	0	30	0
65	2168	Mithi	0	75	95	0	44	0
66	No Stn.Num.	Morna	13	23	93	0	21	0
67	2192	MulaMutha	2	87	100	0	90	0
68	2194		2	77	100	0	85	0
69	2193		2	60	100	0	82	0
70	2678		0	82	100	0	76	0
71	2679		2	84	100	0	73	0
72	2191		0	100	98	0	87	0
73	2677		11	49	91	0	38	0
74	2195	Nira	8	24	96	0	29	0
75	2681		19	21	87	0	4	0
76	2683		9	4	73	0	5	0
77	1463		7	2	70	0	23	0
78	2682		9	4	67	0	7	0
79	No Stn.Num.	Panchaganga	0	25	25	75	0	0
80	No Stn.Num.	Panzara	19	8	87	0	62	0
81	HP_PG_1	Patalganga	0	0	0	53	0	
82	100	Pawana	0	86	100	0	89	0
83	2690		9	71	100	0	76	0
84	2196		0	83	100	0	71	0
85	2691		4	88	100	0	71	0
86	2694		0	76	100	0	66	0
87	2693		0	44	93	0	50	0

Table AVII.1 (Contd..) : Percent Exceedance50%

Sr.	Station No.	River	pH	DO	BOD	TC	Ammonical-N	Nitrate
88	2695	Pedhi	26	32	90	0	19	0
89	2697	Penganga	0	0	73	0	100	0
90	2698		0	0	67	0	92	0
91	1913	Purna	14	5	91	0	27	0
92	2155		9	14	86	0	24	0
93	No Stn.Num.		33	7	73	0	29	0
94	1907	Rangavali	10	0	80	0	0	0
95	HP_SV_1	Savitri	3	0	0	51	0	0
96	2705	Sina	2	7	74	0	21	0
97	HP_TP_14	Tapi	0	13	100	89	0	0
98	HP_TP_15		13	0	100	43	0	0
99	HP_TP_9		9	0	100	27	0	0
100	HP_TP_12		0	7	100	8	0	0
101	HP_TP_14		7	7	100	7	0	0
102	HP_TP_1		29	0	100	0	0	0
103	1251		11	4	74	0	0	0
104	1313		11	6	69	0	0	0
105	1314		6	4	59	0	0	0
106	2710	Titur	42	21	84	0	0	0
107	HP_UH_3	Ulhas	0	77	100	80	0	0
108	HP_UH_2		7	0	100	15	0	0
109	2711	Urmodi	2	0	74	0	4	0
110	HP_VN_3	Vaitarna	0	0	100	8	0	0
111	HP_VN_1		0	0	100	0	0	0
112	HP_VN_2		0	0	100	0	0	0
113	HP_VN_4		0	0	71	6	0	0
114	2715	Vel	9	3	72	0	19	0
115	2717	Venna	2	0	80	0	11	0
116	2186		2	0	77	0	2	0
117	2716		4	0	56	0	2	0
118	2718	Waghur	19	3	61	0	26	0
119	2172	Wainganga	5	5	91	0	12	2
120	1910		13	0	82	0	27	0
121	2176		7	0	73	0	7	0
122	2173		5	2	71	0	10	7
123	11		13	0	70	0	9	0
124	2175		10	0	59	0	7	0
125	2174	Wardha	11	3	85	0	23	0
126	2719		13	7	83	0	24	0
127	1315		14	0	82	0	25	0
128	1212		9	0	77	0	9	0
129	2156		10	0	77	0	10	0
130	2721		6	0	73	0	24	0
131	2720		13	3	71	0	20	0
132	2723	Wena	14	6	92	0	36	0
133	2722		18	0	71	0	24	0

Table AVII.2: List of Monitoring Stations where Percent Exceedance of any of Parameters is more than 75%

Sr.	Station No.	River	pH	DO	BOD	TC	Ammonical-N	Nitrate
1	2652	Amravati	20	0	67	0	82	0
2	1190	Bhima	4.2	77.3	100	0	70.8	0
3	1189		0	63.6	100	0	43.5	0
4	1191		0	29.2	87.5	0	50	0
5	1192		0	25	82.6	0	60.9	0
6	1912	Chandrabhaga	25	0	75	0	30.4	0
7	HP_DG_3	Daman Ganga	5.6	5.6	77.8	0	0	0
8	2665	Ghod	14	14.3	78.6	0	11.6	0
9	HP_GD_3	Godavari	33.3	33.3	100	0	0	0
10	HP_GD_1		0	0	100	0	0	0
11	2180		9.3	23.3	93	0	28.2	0
12	2178		18.2	40.9	90.9	0	65	0
13	1211		2.9	5.9	90.9	0	3.1	0
14	2181		9.3	25.6	90.7	0	22.9	0
15	1096		3.6	0	85.7	0	1.9	0
16	2179		5.6	15.8	84.2	0	17.6	0
17	HP_GD_5		66.7	0	0	50	100	0
18	2668	Indrayani	8.9	25	93.2	0	6.8	0
19	2197		1.9	19.2	86.5	0	19.2	0
20	2669		4.8	11.6	83.7	0	7.1	0
21	2171	Kanhan	12.8	5.1	92.1	0	12.8	0
22	1909		0	4.3	87	0	31.8	0
23	1908	Kolar	4.2	0	82.6	0	16.7	0
24	2189	Koyna	9.4	1.9	76.9	0	5.8	0
25	HP_KR_8	Krishna	0		100		100	20
26	2188		11.3	0	80.8	0	2	0
27	36		3.6	0	80.4	0	0	0
28	2187		1.9	0	77.4	0	2	0
29	HP_KR_24		0	92.6	76.7	90.7	20.9	0
30	2190		5.7	1.9	75	0	1.9	0
31	HP_KR_15		0	0	66.7	100	0	0
32	HP_KR_11		0	0	55.6	100	0	0
33	HP_KR_14		17	0	8	100	0	0
34	HP_KR_10		0	76.9	71.1	97.7	18.2	0
35	HP_KR_23		0	0	0	78.4	0	0
36	2168	Mithi	0	75	94.7	0	44.1	0
37	No Stn.Num.	Morna	13.3	23.1	92.9	0	21.4	0
38	2192	MulaMutha	1.9	86.8	100	0	90.4	0
39	2194		1.9	77.4	100	0	84.6	0
40	2193		1.9	59.6	100	0	82.4	0
41	2678		0	82.2	100	0	75.6	0
42	2679		2.2	84.4	100	0	73.3	0
43	2191		0	100	98.1	0	86.5	0
44	2677		10.9	48.9	91.3	0	37.8	0

Table AVII.2 (Contd..) : Percent Exceedance75%

Sr.	Station No.	River	pH	DO	BOD	TC	Ammonical-N	Nitrate
45	2195	Nira	7.7	24	96.1	0	29.4	0
46	2681		19.1	21.3	87	0	4.3	0
47	No Stn.Num.	Panchaganga	0	25	25	75	0	0
48	No Stn.Num.	Panzara	19	8	87	0	62	0
49	100	Pawana	0	86	100	0	89	0
50	2690		8.7	71.1	100	0	75.6	0
51	2196		0	82.9	100	0	71.4	0
52	2691		4.4	88.1	100	0	70.5	0
53	2694		0	75.7	100	0	65.9	0
54	2693		0	44.4	93.3	0	50	0
55	2695	Pedhi	25.8	32.3	90	0	19.4	0
56	2697	Penganga	0	0	72.7	0	100	0
57	2698	Penganga	0	0	66.7	0	91.7	0
58	1913	Purna	13.6	4.5	90.5	0	27.3	0
59	2155		8.7	13.6	86.4	0	23.8	0
60	1907	Rangavali	10	0	80	0	0	0
61	HP_TP_14	Tapi	0	12.5	100	88.9	0	0
62	HP_TP_15		12.5	0	100	42.9	0	0
63	HP_TP_9		9.1	0	100	27.3	0	0
64	HP_TP_12		0	0.8	100	7.7	0	0
65	HP_TP_14		7.1	7.1	100	7.1	0	0
66	HP_TP_1		28.6	0	100	0	0	0
67	2710	Titur	41.9	20.7	83.9	0	0	0
68	HP_UH_3	Ulhas	0	76.9	100	80	0	0
69	HP_UH_2		7.1	0	100	15.4	0	0
70	HP_VN_3	Vaitarna	0	0	100	8	0	0
71	HP_VN_1		0	0	100	0	0	0
72	HP_VN_2		0	0	100	0	0	0
73	2717	Venna	2.2	0	80	0	11.1	0
74	2186		1.9	0	76.9	0	1.9	0
75	2172	Wainganga	4.7	4.7	90.5	0	11.9	2.4
76	1910		13	0	81.8	0	27.3	0
77	2174	Wardha	11.4	2.9	85.3	0	22.9	0
78	2719		13.3	6.9	82.8	0	24.1	0
79	1315		14.3	0	81.8	0	25	0
80	1212		8.7	0	77.3	0	9.1	0
81	2156		10	0	76.7	0	10.3	0
82	2723	Wena	13.9	5.6	91.7	0	36.1	0

Annexure VIII
Water Quality Indices for Sea Water

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Station No : 2805 Station Name :Arnala Sea												
2008	Bad	Bad	MG	MG	MG	GE	MG	MG	MG	MG	MG	--
2009	--	--	MG	Bad	Bad	--	--	--	--	--	Bad	--
2010	MG	--	--	--	--	--	--	--	MG	--	--	--
2011	--	--	--	Bad	--	MG	MG	MG	Bad	MG	--	--
At stations 2805, WQI was not calculated due to un-availability of data for 2007												

Station No : 1316 Station Name : Bassein creek at Vasai Fort, Thane												
2007	Bad	--	--	--	--	--	MG	--	--	MG	--	--
2008	MG	--	--	GE	--	--	MG	--	--	0	--	--
2009	GE	--	--	Bad	--	--	GE	--	--	MG	--	--
2010	--	--	--	--	--	--	--	--	--	--	--	Bad
2011	--	Bad	--	MG	--	Bad	--	MG	Bad	MG	MG	--

Station Number: 2814 Station Name: Bhagwati Bunder, Ratnagiri												
2008	MG	MG	--	GE	GE	GE	GE	GE	GE	GE	GE	GE
2009	GE	MG	GE	GE	GE	GE	GE	GE	--	GE	GE	GE
2010	GE	--	--	--	--	--	--	--	--	GE	--	--
2011	--	--	GE	GE	GE	--	GE	--	--	--	GE	--
At stations 2814, WQI was not calculated due to un-availability of data for 2007												

Station Number: 2797 Station Name: Bhayandar Creek at D/s of Railway Bridge												
2008	MG	Bad	VB	VB	MG	Bad	--	MG	MG	MG	MG	MG
2009	--	--	MG	MG	Bad	Bad	--	--	--	--	--	--
2010	--	--	--	--	--	--	--	--	--	MG	--	--
2011	--	--	Bad	Bad	--	MG	MG	MG	--	--	--	--
At stations 2797, WQI was not calculated due to un-availability of data for 2007												

Station Number:2166 Station Name: Charni Road Chowpathy. Mumbai												
2008	--	--	--	Bad	MG	MG	Bad	--	Bad	--	Bad	GE
2009	--	--	MG	Bad	Bad	MG	Bad	MG	MG	Bad	MG	VB
2010	--	--	MG	Bad	MG	MG	--	--	MG	--	--	--
2011	--	--	MG	--	Bad	--	Bad	MG	MG	--	--	--
At stations 2166, WQI was not calculated due to un-availability of data for 2007												

Station Number: 2811 Station Name: Shivaji Park (Dadar Chowpatty)												
2008	--	--	--	--	Bad	MG	Bad	--	Bad	Bad	MG	--
2009	Bad	MG	MG	Bad	Bad	--	--	MG	--	Bad	--	--
2010	--	Bad	--	--	--	--	--	--	MG	--	--	--
2011	--	--	--	--	VB	MG	Bad	MG	Bad	--	--	--
At stations 2811, WQI was not calculated due to un-availability of data for 2007												

Station Number:2802 Station Name: Dahanu Creek at Dahanu Fort												
2008	MG	--	--	--	--	--	--	--	MG	Bad	MG	MG
2009	--	MG	MG	Bad	Bad	--	--	Bad	--	--	--	--
2010	--	--	GE	--	--	--	--	--	--	--	--	--
2011	--	--	--	--	Bad	--	MG	--	Bad	Bad	--	MG
At stations 2802, WQI was not calculated due to un-availability of data for 2007												

Station Number:2799 Station Name: Dandi Creek												
2008	Bad	VB	--	--	VB	Bad	Bad	--	--	--	--	--
2010	--	--	GE	--	--	--	--	--	--	--	--	--
2011	Bad	--	Bad	MG	GE	GE	--	Bad	--	--	--	--
At stations 2799, WQI was not calculated due to un-availability of data for 2007 and 2009												

Station Number: 2813 Station Name: Ganapatipule, Ratnagiri												
2008	GE	GE	--	GE	--	GE	GE	GE	GE	GE	GE	GE
2009	GE	--	GE	GE	GE	--	GE	GE	--	GE	GE	
2010	GE	--	--	--	--	--	--	--	--	--	--	--
2011	GE	--	GE	--	--	--	GE	--	--	GE	--	--
At stations 2813, WQI was not calculated due to un-availability of data for 2007												

Station Number: 2165 Station Name: Gateway of India												
2008	--	--	--	MG	Bad	MG	MG	--	Bad	MG	Bad	MG
2009	MG	--	MG	Bad	Bad	Bad	Bad	MG	MG	Bad	Bad	VB
2010	--	--	MG	Bad	Bad	MG	--	Bad	MG	--	--	--
2011	--	--	Bad	VB	Bad	--	MG	MG	--	--	--	--
At stations 2165, WQI was not calculated due to un-availability of data for 2007												

Station Number: 2810 Station Name: Haji Ali, Mumbai												
2008	--	--	--	Bad	Bad	MG	MG	--	Bad	Bad	MG	--
2009	MG	MG	MG	VB	Bad	--	--	MG	--	Bad	--	--
2010	--	--	--	--	--	--	--	--	Bad	--	--	--
2011	--	--	Bad	VB	Bad	MG	MG	MG	--	--	--	--
At stations 2810, WQI was not calculated due to un-availability of data for 2007												

Station Number: 2812 Station Name: Juhu Beach, Mumbai												
2008	--	MG	--	MG	MG	GE	MG	Bad	--	Bad	MG	Bad
2009	Bad	--	Bad	Bad	--	--	--	--	Bad	Bad	--	--
2010	--	--	--	--	--	Bad	--	--	--	--	--	--
2011	--	--	Bad	Bad	Bad	--	Bad	Bad	MG	--	--	--
At stations 2812, WQI was not calculated due to un-availability of data for 2007												

Station Number: 2798 Station Name: Kharekuran Murbe Creek												
2010	--	--	MG	--	--	--	--	--	--	--	--	--
2011	--	--	MG	GE	MG	MG	MG	Bad	--	--	--	--
At stations 2798, WQI was not calculated due to un-availability of data for 2007 to 2009												

Station Number:2793 Station Name: Kalwa Creek												
2008	MG	Bad	--	--	MG	Bad	Bad	MG	--	MG	MG	GE
2009	--	--	MG	Bad	--	--	--	--	--	--	--	--
2010	--	--	MG	--	--	--	--	MG	--	--	--	--
2011	--	--	--	--	MG	MG	MG	--	Bad	MG	--	--
At stations 2793, WQI was not calculated due to un-availability of data for 2007												

Station Number: 2804 Station Name: Karambhane Creek, Chiplun												
2008	--	--	--	--	--	--	--	GE	--	GE	--	GE
2009	--	--	--	GE	GE	GE	GE	GE	--	GE	GE	--
2010	--	--	--	--	--	--	--	--	--	--	--	GE
2011	GE	GE	--	--	GE		GE	GE	--	GE	GE	--
At stations 2804, WQI was not calculated due to un-availability of data for 2007												

Station Number:1318 Station Name: Mahim Bay, Mumbai												
2007	Bad	--	--	VB	--	--	Bad	--	--	MG	--	--
2008	MG	--	--	MG	--	--	Bad	--	--	--	--	--
2009	VB	--	--	MG	--	--	--	--	--	--	--	--
2010	--	--	--		--	--	--	--	Bad	--	--	--
2011	--	--	--	Bad	VB	VB	--	MG	MG	MG	--	--

Station Number:2809 Station Name: Malabar Hill												
2008	Bad	VB	Bad	Bad	Bad	Bad	MG	--	Bad	Bad	MG	--
2009	MG	MG	Bad	Bad	Bad	--	--	Bad	--	Bad	--	--
2010	--	--	--	--	--	--	--	--	Bad	--	--	--
2011	--	--	Bad	VB	Bad	MG	Bad	MG	Bad	--	--	--
At stations 2809, WQI was not calculated due to un-availability of data for 2007												

Station Number: 2815 Station Name: Mandavi Bunder												
2008	GE	GE		GE	GE	GE	GE	GE	GE	GE	GE	GE
2009	--	--	GE	GE	GE	GE	GE	GE	--	GE	GE	GE
2010	GE	--	--	--	--	--	--	--	--	--	--	--
2011	--	--	GE	GE	GE	--	GE	--	GE	--	GE	--
At stations 2815, WQI was not calculated due to un-availability of data for 2007												

Station Number: 2808 Station Name: Nariman Point												
2008	--	--	--	VB	Bad	MG	MG	--	--	Bad	Bad	--
2009	MG	MG	MG	Bad	Bad	--	--	MG	--	Bad	--	--
2010	--	--	--	--	--	--	--	--	MG	--	--	--
2011	--	--	MG	VB	Bad	Bad	MG	MG	--	--	--	--
At stations 2808, WQI was not calculated due to un-availability of data for 2007												

Station Number: 2807 Station Name: Navapur Sea												
2010	--	--	MG	--	--	--	--	--	MG	--	--	--
2011	--	Bad	MG	MG	MG	MG	--	Bad	--	--	--	--
At stations 2807, WQI was not calculated due to un-availability of data for 2007 to 2009												

Station Number : 2803 Station Name: Panvel Creek, Kopra												
2011	--	--	MG	MG	Bad	Bad	--	MG	MG	--	--	--
At stations 2803, WQI was not calculated due to un-availability of data for 2007 to 2010												

Station Number:2800 Station Name: Sarvali Creek												
2010	--	--	MG	--	--	--	--	--	--	--	--	--
2011	Bad	Bad	MG	VB	GE	Bad	--	MG	--	--	--	--
At stations 2800, WQI was not calculated due to un-availability of data for 2007 to 2009												

Station Number: 2801 Station Name: Savta Creek												
2008	MG	--	--	--	--	--	--	--	GE	MG	MG	GE
2009	--	MG	MG	MG	Bad	--	--	Bad		--	--	--
2010	--	--	MG	--	--	--	--	--	GE	--	--	--
2011	--	--	--	MG	--	GE	MG	--	--	Bad	GE	--
At stations 2801, WQI was not calculated due to un-availability of data for 2007												

Station Number: 1317 Station Name: Thane Creek at Elephanta Island, Mumbai												
2010	--	--	--	--	--	--	--	--	Bad	Bad	--	--
2011	--	--	--	MG	--	Bad	--	Bad	MG	Bad	--	--
At stations 1317, WQI was not calculated due to un-availability of data for 2007 to 2009												

St. No:2791 Station: Ulhas Creek at Reti Bunder, D/S of Kalyan Bhiwandi Bridge												
2011	Bad	--	Bad	--	MG	--	VB	--	--	--	--	--
At stations 2791, WQI was not calculated due to un-availability of data for 2007 to 2010												

Station Number: 2792 Station Name: Ulhas Creek at Mumbra Reti bunder												
2008	--	Bad	--	--	Bad	MG	MG	MG	GE	GE	MG	GE
2009	--	--	MG	--	Bad	Bad	--	--	--	--	--	--
2010	--	--	MG	--	--	--	--	MG	--	--	--	--
2011	--	--	--	MG	MG	Bad	MG	Bad	MG	MG	--	--
At stations 2792, WQI was not calculated due to un-availability of data for 2007												

Station Number: 2794 Station Name: Ulhas Creek at Kosher Reti bunder												
2008	--	Bad	--	--	GE	Bad	MG	MG	MG	MG	MG	MG
2009	MG	--	MG	MG	--	Bad	--	--	--	--	--	--
2010	--	--	MG	--	--	--	--	MG	--	--	--	--
2011	--	--	--	Bad	MG	MG	Bad	Bad	Bad	Bad	--	--
At stations 2794, WQI was not calculated due to un-availability of data for 2007												

Station Number: 2795 Station Name: Ulhas Creek at Gaimukh at Nagla Bunder												
2008	--	VB	--	--	MG	VB	MG	MG	MG	MG	MG	GE
2009	--	--	MG	GE	--	Bad	--	--	--	--	--	--
2010	--	--	Bad	--	--	--	--	MG	--	--	--	--
2011	--	--	--	MG	MG	Bad	Bad	MG	MG	MG	--	--
At stations 2795, WQI was not calculated due to un-availability of data for 2007												

Station Number:2796 Station Name: Ulhas Creek at Versova Bridge												
2008	MG	--	--	--	MG	--	Bad	MG	GE	MG	MG	MG
2009	--	--	MG	Bad	Bad	Bad	--	--	--	--	--	--
2010	--	--	--	--	--	--	--	--	MG	Bad	--	--
2011	--	--	VB	Bad	--	Bad	MG	MG	GE	--	--	--
At stations 2796, WQI was not calculated due to un-availability of data for 2007												

Station Number: 2806 Station Name: Uttan Sea, Thane												
2008	MG	MG	--	--	MG	MG	MG	--	MG	MG	MG	MG
2009	--	--	MG	Bad	Bad	Bad	--	--	--	--	--	--
2010	MG	--	--	--	--	--	--	--	MG	--	--	--
2011	--	--	--	MG	--	--	Bad	--	Bad	--	--	--
At stations 2806, WQI was not calculated due to un-availability of data for 2007												

Station Number: 2184 Station Name: Vashi Creek at Airoli Bridge, Thane												
2008	--	--	MG	--	MG	--	--	GE	GE	MG	Bad	Bad
2009	MG	--	MG	Bad	Bad	MG	Bad	MG	MG	MG	MG	MG
2010	--	--	--	--	--	MG	--	--	GE	--	--	--
2011	--	--	Bad	--	--	Bad	MG	Bad	Bad	--	--	--
At stations 2184, WQI was not calculated due to un-availability of data for 2007												

Station Number: 2185 Station Name: Vashi Creek at Airoli Bridge, Thane												
2008	--	--	Bad	--	MG	--	MG	Bad	MG	Bad	MG	MG
2009	MG	--	MG	--	Bad	MG	Bad	MG	MG	MG	MG	Bad
2010	--	--	--	--	MG	--	--	--	MG	--	--	--
2011	--	--	--	MG	--	Bad	--	Bad	Bad	--	--	--
At stations 2185, WQI was not calculated due to un-availability of data for 2007												

Station Number: 2169 Station Name: Versova, Andheri, Mumbai												
2008	--	--	--	MG	--	Bad	MG	Bad	Bad	--	MG	--
2009	MG	--	MG	Bad	Bad	MG	Bad	MG	MG	MG	MG	Bad
2010	MG	MG	--	MG	--	Bad	Bad	Bad	--	--	--	--
2011	--	--	Bad	VB	VB	VB	VB	Bad	Bad	--	--	--
At stations 2169, WQI was not calculated due to un-availability of data for 2007												

Station Number:2167 Station Name: Worli Sea face												
2008	--	--	--	Bad	Bad	MG	Bad	--	MG		MG	GE
2009	MG	--	MG	Bad	Bad	MG	Bad	MG	MG	MG	MG	Bad
2010	--	--	MG	MG	--	--	MG	MG	MG	--	--	--
2011	--	--	MG	Bad	MG	Bad	Bad	Bad	MG	--	--	--
At stations 2167, WQI was not calculated due to un-availability of data for 2007												

.

Annexure IX

Five Years Descriptive Statistics of Ground Water Quality

1. AHMEDNAGAR

Taluka : Ahmednagar (Ambilwadi, Arangaon, Bhitkewadi, Bolhegaon, Burudgaon, Chinchandi Patil, Dehre, Hatwalan, Jakhangaon, Jeur, Kamargaon, Mandve, Manjur, Mehekari, Nandgaon, Nepti, Pargaonmaulla, Ruichhattishi, Shiradhon, Takalikazi, Wakodi)												
	'pH	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.3	115.0	84.0	16.0	2.9	0.0	48.0	42.4	16.0	5.8	0.1	0.2
Max	9.2	5382.0	2492.0	563.2	335.3	0.3	636.0	775.9	2180.0	1359.0	1.4	606.4
Average	7.9	1314.1	649.0	108.6	91.7	0.1	286.2	346.1	343.8	182.6	0.7	36.5
Stdev	0.4	1129.8	546.8	110.8	78.3	0.1	143.9	178.6	408.3	256.5	0.3	83.0
% < Des	0.0	12.3	21.1	59.6	17.5	98.2	24.6	0.0	59.6	78.9	89.5	84.2
% P	94.7	73.7	43.9	26.3	49.1	1.8	70.2	0.0	29.8	12.3	10.5	0.0
% > Ex P	5.3	14.0	35.1	14.0	33.3	0.0	5.3	0.0	10.5	8.8	0.0	15.8

Taluka : Akole (Kalas kh., Kotul, Maveshi, Parakadpur, Rajur, Tahakali, Takali, Tambhol, Unch khadak, Vadegaon Madhe, Waki)												
Min	7.5	134.0	76.0	6.4	7.8	0.0	56.0	52.6	22.0	1.0	0.2	0.1
Max	8.8	2220.3	1630.6	520.0	144.8	0.2	312.0	380.6	340.0	1445.0	1.1	67.0
Average	8.0	823.5	519.1	123.6	51.1	0.0	169.9	197.4	119.8	253.6	0.5	22.9
Stdev	0.4	608.2	474.9	167.2	36.7	0.1	67.0	86.0	100.8	451.4	0.3	24.4
% < Des	0.0	37.5	43.8	62.5	43.8	100.0	62.5	0.0	81.3	81.3	87.5	75.0
% P	93.8	56.3	31.3	18.8	43.8	0.0	37.5	0.0	18.8	0.0	12.5	0.0
% > Ex P	6.3	6.3	25.0	18.8	12.5	0.0	0.0	0.0	0.0	18.8	0.0	25.0

Taluka : Jamkhed (Jamkhed, Arangaon, Nanaj, Jamkhed)												
Min	7.3	375.1	244.0	12.8	25.3	0.0	116.0	141.5	60.0	35.0	0.1	2.0
Max	8.5	1683.0	860.0	131.2	139.0	0.3	338.0	412.4	370.0	270.0	1.7	103.0
Average	8.0	707.4	368.2	52.9	57.3	0.1	247.8	285.6	165.1	93.6	0.7	20.4
Stdev	0.3	383.1	186.3	36.9	29.7	0.1	77.3	96.0	102.5	71.9	0.5	29.3
% < Des	0.0	36.4	45.5	81.8	9.1	90.9	27.3	0.0	81.8	90.9	72.7	90.9
% P	90.9	63.6	45.5	18.2	81.8	9.1	72.7	0.0	18.2	9.1	18.2	0.0
% > Ex P	9.1	0.0	9.1	0.0	9.1	0.0	0.0	0.0	0.0	0.0	9.1	9.1

Taluka : Karjat (Babulgaon khalasa, Baradgaon sudrik, Chichondi kaldat, Dombalwadi, Jalalpur, Kolwadi, Mahi jalgaon, Nimgaondaku, Pategaon, Rashin)												
Min	7.2	346.0	60.0	16.0	4.9	0.0	108.0	131.8	26.0	37.9	0.3	0.9
Max	8.5	2387.9	1235.0	396.0	144.8	2.6	372.0	453.8	692.3	311.5	1.6	509.0
Average	7.9	959.5	490.3	99.7	58.6	0.1	212.5	255.0	251.3	124.2	0.7	64.3
Stdev	0.3	538.1	300.1	94.3	30.5	0.5	72.6	89.3	198.3	76.6	0.3	118.8
% < Des	0.0	13.0	17.4	52.2	8.7	95.7	52.2	0.0	60.9	87.0	82.6	73.9
% P	100.0	78.3	60.9	34.8	82.6	0.0	47.8	0.0	39.1	13.0	13.0	0.0
% > Ex P	0.0	8.7	21.7	13.0	8.7	4.3	0.0	0.0	0.0	0.0	4.3	26.1

Taluka : Kopargaon (Apegaon, Chas, Dahigaon bolka, Derde korhale, Dhamori, Kolpewadi, Kopargaon Mahegaon deshmukh, Pohegaon, Puntamba, Rahata, Ranjangaon deshmukh, Shahajapur, Shinganapur, Takali, Talegaon male)												
	'pH	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.4	218.0	76.0	8.0	13.6	0.0	88.0	104.0	26.0	11.0	0.1	0.2
Max	9.0	3725.0	2100.0	209.6	418.0	1.0	600.0	732.0	1540.0	580.0	1.9	126.0
Average	8.1	1115.9	512.7	68.2	83.2	0.1	300.2	357.1	337.0	142.1	0.7	27.9
Stdev	0.3	911.9	404.0	44.3	84.3	0.2	133.5	168.5	413.1	143.7	0.4	33.4
% < Des	0.0	30.3	36.4	66.7	27.3	97.0	21.2	0.0	66.7	75.8	75.8	81.8
% P	87.9	57.6	39.4	30.3	42.4	3.0	78.8	0.0	24.2	15.2	21.2	0.0
% > Ex P	12.1	12.1	24.2	3.0	30.3	0.0	0.0	0.0	9.1	9.1	3.0	18.2

Taluka : Newasa (Babulwedhe, Bambori, Belpandhari, Belpimpalgaon, Bhende, Galnimb, Gidegaon, Karegaon, Khadka, Kukana, Newasa kh, Shirasgaon, Sonai, Suregaon dahigaon, Telkudgaon, Vadala, Bhairoba, Watapur)												
Min	7.4	308.0	168.0	16.0	10.7	0.0	90.0	109.8	39.1	16.0	0.1	1.5
Max	8.8	4326.0	1800.0	308.8	352.8	1.9	1043.0	1272.5	1228.0	1250.0	1.1	360.2
Average	8.0	1121.2	607.7	105.3	83.7	0.2	291.6	353.0	282.3	191.9	0.5	44.4
Stdev	0.3	904.6	434.5	69.1	77.9	0.4	167.7	206.7	282.8	231.8	0.3	72.1
% < Des	0.0	21.3	25.5	46.8	12.8	80.9	27.7	0.0	57.4	68.1	95.7	76.6
% P	91.5	66.0	36.2	42.6	63.8	10.6	68.1	0.0	38.3	21.3	4.3	0.0
% > Ex P	8.5	12.8	38.3	10.6	23.4	8.5	4.3	0.0	4.3	10.6	0.0	23.4

Taluka : Parner (Alkuti, Chambut, Deswade, Devibhoire, Dhavalpuri, Mandve kh, Nijhoj, Supe, Tas, Vadzire, Wadegavan)												
Min	7.2	171.0	92.0	19.2	10.7	0.0	92.0	112.2	28.0	14.0	0.2	0.3
Max	8.5	2770.6	1495.0	312.0	174.0	0.1	448.0	546.6	592.0	795.0	1.6	159.0
Average	8.0	882.9	431.8	63.8	66.2	0.0	260.8	308.6	186.7	128.8	0.8	21.9
Stdev	0.3	533.5	262.8	61.1	35.0	0.0	99.5	124.8	129.0	166.6	0.4	32.4
% < Des	0.0	21.7	13.0	82.6	13.0	100.0	30.4	0.0	73.9	87.0	60.9	95.7
% P	100.0	73.9	78.3	13.0	69.6	0.0	69.6	0.0	26.1	8.7	34.8	0.0
% > Ex P	0.0	4.3	8.7	4.3	17.4	0.0	0.0	0.0	0.0	4.3	4.3	4.3

Taluka : Pathardi (Kasar Pimpalgaon)												
Min	7.2	600.0	424.0	36.8	64.2	0.0	240.0	292.8	108.0	89.0	0.1	3.0
Max	8.0	1238.0	524.0	64.0	105.0	0.1	328.0	400.2	144.0	280.0	0.9	5.0
Average	7.6	919.0	474.0	50.4	84.6	0.1	284.0	346.5	126.0	184.5	0.5	4.0
Stdev	0.6	451.1	70.7	19.2	28.9	0.1	62.2	75.9	25.5	135.1	0.6	1.4
% < Des	0.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0	100.0	50.0	100.0	100.0
% P	100.0	100.0	100.0	0.0	50.0	0.0	100.0	0.0	0.0	50.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Rahuri (Deolali, Digras, Guha, Kanghar bk, Kendal kh, Kolhar kh, Malharwadi, Rahuri, Rahuri bk Songaon/anapwadi, Tambhere, Umbare, Wambori, Warshinde, Warvandi)												
Min	7.2	140.0	76.0	8.0	7.8	0.0	40.0	48.8	20.0	8.0	0.1	0.3
Max	9.2	4218.0	1800.0	289.6	296.5	1.1	640.0	780.8	1350.0	715.0	1.3	218.9
Average	8.2	1344.7	580.7	77.0	94.4	0.1	272.4	320.7	373.7	185.6	0.5	32.0
Stdev	0.4	1167.5	454.9	66.5	84.9	0.2	132.6	168.2	401.2	217.3	0.3	49.6
% < Des	0.0	31.9	38.3	72.3	29.8	93.6	34.0	0.0	53.2	72.3	91.5	78.7
% P	80.9	44.7	29.8	19.1	31.9	4.3	63.8	0.0	34.0	8.5	8.5	0.0
% > Ex P	19.1	23.4	31.9	8.5	38.3	2.1	2.1	0.0	12.8	19.1	0.0	21.3

Taluka : Rahata (Rahata)												
	'pH	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	8.0	1334.1	665.0	34.0	119.1	0.0	200.0	244.0	358.0	88.8	0.3	189.1
Max	8.1	1888.5	1058.8	70.0	233.0	0.0	345.0	420.9	819.0	274.0	0.6	205.0
Average	8.0	1527.4	812.9	48.0	168.4	0.0	266.6	325.3	534.3	170.3	0.5	195.0
Stdev	0.1	312.9	214.4	19.3	58.5	0.0	73.2	89.3	248.9	94.6	0.2	8.7
% < Des	0.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0	0.0	66.7	100.0	0.0
% P	100.0	100.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	33.3	0.0	0.0
% > Ex P	0.0	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0

Taluka : Sangamner (Ambikhalsa, Bota, Chandanapuri, Chikhali, Ghulewadi, Gunjalwadi, Hangewadi, Karhe, Karjule pathar, Kasare, Maldad, Nimgaon paga bk., Nimgaonjali, Raitewadi, Sangamner, Sarola pathar)												
Min	7.5	235.3	115.0	8.0	18.5	0.0	135.0	164.7	30.0	6.2	0.2	1.7
Max	8.8	5402.0	2500.0	600.0	311.0	0.6	708.0	863.8	2440.0	440.0	1.0	65.0
Average	7.9	1250.6	637.7	106.5	90.3	0.1	287.7	345.0	389.4	127.3	0.6	17.6
Stdev	0.3	1150.0	576.5	116.5	76.7	0.1	108.9	138.4	544.6	124.6	0.2	15.1
% < Des	0.0	25.6	34.9	58.1	11.6	90.7	14.0	0.0	62.8	74.4	97.7	95.3
% P	93.0	51.2	34.9	20.9	55.8	9.3	83.7	0.0	25.6	18.6	2.3	0.0
% > Ex P	7.0	23.3	30.2	20.9	32.6	0.0	2.3	0.0	11.6	7.0	0.0	4.7

Taluka : Shevgaon (Antrawali bk., Antre, Bodhegaon, Dahigaon, Ghotan, Hingangaon, Jeur, Karjat kh. Khanapur, Kokona, Rakshi)												
Min	7.4	227.3	72.0	16.0	6.8	0.0	60.0	73.0	17.8	9.0	0.1	2.0
Max	8.4	2762.9	1465.0	326.0	176.9	0.4	860.0	1048.7	762.0	944.2	0.9	651.0
Average	7.9	1107.3	554.6	103.1	72.2	0.1	262.3	312.2	235.6	195.4	0.5	72.4
Stdev	0.2	768.6	371.5	95.6	49.9	0.1	158.9	194.5	193.9	220.4	0.3	131.8
% < Des	0.0	24.1	27.6	65.5	24.1	93.1	37.9	0.0	58.6	69.0	100.0	69.0
% P	100.0	62.1	37.9	13.8	51.7	6.9	58.6	0.0	41.4	13.8	0.0	0.0
% > Ex P	0.0	13.8	34.5	20.7	24.1	0.0	3.4	0.0	0.0	17.2	0.0	31.0

Taluka : Shrigonda (Babhuleshwar, Banpimpri, Bori, Chikhale, Chimbale, Deodaithan, Ghargaon, Kokangaon, Koregavhan, Rajapur, Shedgaon, Shrigonda, Takle-Kazi, Walvad)												
Min	7.3	385.0	192.0	16.0	21.4	0.0	130.0	158.6	48.0	18.7	0.4	0.7
Max	8.6	2149.1	1449.7	282.0	232.0	0.8	452.0	551.4	901.0	540.0	1.4	481.0
Average	7.9	1035.7	560.6	88.3	82.6	0.0	247.9	299.5	274.6	160.1	0.8	73.3
Stdev	0.3	510.4	325.5	66.0	48.2	0.1	86.1	106.6	204.3	118.0	0.3	106.5
% < Des	0.0	13.5	16.2	54.1	5.4	97.3	27.0	0.0	59.5	78.4	83.8	62.2
% P	94.6	81.1	54.1	40.5	67.6	2.7	73.0	0.0	40.5	16.2	16.2	0.0
% > Ex P	5.4	5.4	29.7	5.4	27.0	0.0	0.0	0.0	0.0	5.4	0.0	37.8

Taluka : Shrirampur (Babhaleshwar bk., Belapur bk, Bote, Chitali, Eklahare, Khirdi, Khokar, Loni kh Rajankhol, Rampur, Shrirampur, Takalibhan, Takalibhan, Undirgaon, Wadala mahadeo)												
Min	7.0	97.6	60.0	16.0	2.9	0.0	59.8	57.7	14.0	2.4	0.1	0.1
Max	9.0	4448.0	2100.0	328.0	311.0	0.3	680.0	829.6	2120.0	625.0	1.4	45.0
Average	8.2	810.1	447.8	87.8	55.5	0.1	245.3	286.4	223.4	115.8	0.6	9.6
Stdev	0.3	779.6	363.9	73.9	54.3	0.1	119.3	147.3	326.5	125.3	0.3	9.5
% < Des	0.0	38.8	30.6	61.2	26.5	98.0	42.9	0.0	77.6	81.6	89.8	98.0
% P	85.7	55.1	51.0	28.6	61.2	2.0	55.1	0.0	20.4	14.3	10.2	0.0
% > Ex P	14.3	6.1	18.4	10.2	12.2	0.0	2.0	0.0	2.0	4.1	0.0	2.0

2. AKOLA

Taluka : Akola (Agar, Akola, Akola Camp, Apatapa, Babhulgaon, Badalpur, Chikhalgaon, Dhamana Hingana Tamas, Hingana Tawadi, Javala Bk., Kanshivani, Kapileshwar, Kati, Katyar, Mhaisang Mhaispur, Palsodbade, Rohana, Sangavi, Shivani, Shivar, Shivni, Ugwa, Wadad, Wanirambhapur)												
	'pH	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	6.7	268.0	124.0	11.8	9.6	0.0	36.0	24.4	34.0	7.0	0.1	3.0
Max	9.4	6441.0	2000.0	320.0	414.1	0.3	848.0	937.0	4554.0	1230.0	2.0	268.0
Average	7.6	1227.2	552.1	79.0	85.9	0.1	135.3	131.3	396.9	88.3	0.5	55.8
Stdev	0.6	922.5	443.2	68.0	90.4	0.1	139.7	140.5	587.7	148.6	0.3	39.0
% < Des	0.0	10.6	30.9	63.8	27.7	95.7	77.7	0.0	58.5	86.2	88.3	44.7
% P	87.2	73.4	43.6	30.9	47.9	4.3	21.3	0.0	35.1	12.8	10.6	0.0
% > Ex P	12.8	16.0	25.5	5.3	24.5	0.0	1.1	0.0	6.4	1.1	1.1	55.3

Taluka : Akot (Akolkhed, Akot, Chhota Bz., Deori, Devarda, Devari, Girijapur, Hilalabad, Keliveli, Kinkhed, Kutasa, Mundgaon, Nakhegaon, Palsad, Palsod, Parala, Pastul, Popatkhed, Ruikhed, Sawara, Shahanur, Takli Bk, Wadalisatvai)												
Min	6.7	129.0	84.0	6.4	1.9	0.1	32.0	9.8	20.0	5.0	0.1	1.0
Max	8.7	6680.0	2000.0	364.8	413.1	0.4	726.0	885.7	3800.0	1285.0	2.2	385.0
Average	7.7	1513.1	574.8	80.0	91.6	0.2	155.0	165.0	528.2	104.1	0.7	59.2
Stdev	0.5	1447.6	440.1	83.7	92.0	0.1	164.5	185.7	686.5	195.4	0.4	59.1
% < Des	0.0	21.8	36.8	71.3	31.0	90.8	74.7	0.0	46.0	88.5	79.3	52.9
% P	96.6	55.2	25.3	18.4	39.1	9.2	21.8	0.0	40.2	4.6	18.4	0.0
% > Ex P	3.4	23.0	37.9	10.3	29.9	0.0	3.4	0.0	13.8	6.9	2.3	47.1

Taluka : Balapur (Balapur, Batwadi, Gaigaon, Kazikhed, Kolasa, Lohara, Nakashi, Paras, Wadegaon)												
Min	6.9	320.0	88.0	8.8	5.8	0.1	32.0	32.0	42.0	9.0	0.1	1.0
Max	8.7	5070.0	1496.0	169.6	278.0	0.8	1350.0	1549.4	1500.0	220.0	1.2	275.0
Average	7.6	864.4	412.6	63.9	61.8	0.1	156.2	168.1	230.7	41.6	0.5	54.3
Stdev	0.5	743.0	223.1	39.3	50.4	0.1	227.1	259.3	223.5	38.1	0.2	53.0
% < Des	0.0	24.4	24.4	65.9	26.8	92.7	75.6	0.0	73.2	97.6	92.7	51.2
% P	90.2	73.2	68.3	34.1	56.1	7.3	22.0	0.0	24.4	2.4	7.3	0.0
% > Ex P	9.8	2.4	7.3	0.0	17.1	0.0	2.4	0.0	2.4	0.0	0.0	48.8

Taluka : Barshitakli (Dhaba, Gorwa, Hatola, Kajaleshwar, Kasarkhed, Pinjar, Rahit, Yeranda)												
Min	6.9	174.0	156.0	11.2	17.3	0.1	32.0	32.0	44.0	8.0	0.1	9.0
Max	8.8	2170.0	2000.0	315.2	470.4	0.2	308.0	375.8	1384.0	170.0	0.9	600.0
Average	7.6	623.6	507.1	61.6	83.9	0.1	88.7	96.0	231.3	45.4	0.4	75.7
Stdev	0.5	480.0	404.2	66.9	94.7	0.0	66.4	79.6	276.3	41.5	0.2	102.8
% < Des	0.0	57.1	25.7	74.3	17.1	100.0	94.3	0.0	80.0	100.0	100.0	48.6
% P	94.3	40.0	57.1	20.0	68.6	0.0	5.7	0.0	17.1	0.0	0.0	0.0
% > Ex P	5.7	2.9	17.1	5.7	14.3	0.0	0.0	0.0	2.9	0.0	0.0	51.4

Taluka : Murtizapur (Dapura, Kawatha, Kinkhed, Kolsara, Madhapuri, Mana, Murtijapur, Shelu Bazar, Sirso, Sonari Bopari, Yendli)												
	'pH	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	6.7	212.0	124.0	8.4	2.9	0.0	20.0	20.0	34.0	9.0	0.1	8.0
Max	9.2	8490.0	2000.0	408.0	454.7	0.5	600.0	732.0	2090.0	1149.0	2.0	682.0
Average	7.6	1247.4	541.7	78.3	83.9	0.1	128.1	134.2	325.7	99.1	0.6	78.5
Stdev	0.5	1349.3	489.7	78.2	95.2	0.1	123.5	140.2	424.8	179.6	0.4	94.5
% < Des	0.0	11.1	37.0	63.0	25.9	92.6	79.6	0.0	61.1	88.9	85.2	42.6
% P	94.4	79.6	44.4	31.5	46.3	7.4	20.4	0.0	31.5	5.6	13.0	0.0
% > Ex P	5.6	9.3	18.5	5.6	27.8	0.0	0.0	0.0	7.4	5.6	1.9	57.4

Taluka : Patur (Chatari, Chikhalgaon, Chikhalwal, Digras Kh, Khetri, Lavkhed, Patur, Pimpalkhuta Sawargaon, Sawarkhed, Umra)												
Min	7.1	163.0	128.0	7.6	10.6	0.1	12.0	12.0	30.0	6.0	0.1	1.0
Max	8.9	932.0	488.0	120.0	96.5	0.3	364.0	385.5	252.0	131.0	1.5	112.0
Average	7.6	427.4	271.3	40.7	41.1	0.1	97.6	100.5	120.9	26.7	0.6	40.3
Stdev	0.5	188.3	89.0	25.1	24.8	0.1	91.4	99.8	51.0	27.8	0.3	30.0
% < Des	0.0	69.6	60.9	93.5	45.7	93.5	84.8	0.0	97.8	100.0	82.6	60.9
% P	89.1	30.4	39.1	6.5	54.3	6.5	15.2	0.0	2.2	0.0	17.4	0.0
% > Ex P	10.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	39.1

Taluka : Telhara (Adsul, Danapur, Hingani Bk., Panchagavan, Shahanur, Tahr, Wadi Adampur, Wangargaon, Wari Warkhed)												
Min	6.9	188.0	76.0	8.4	5.8	0.1	0.0	0.0	36.0	6.0	0.1	3.0
Max	8.9	5410.0	1340.0	296.0	310.1	0.5	488.0	595.4	2110.0	440.0	1.1	530.0
Average	7.6	1088.6	357.7	48.2	57.4	0.2	117.1	117.4	297.4	62.3	0.4	62.6
Stdev	0.5	1151.7	262.1	48.7	62.3	0.1	129.6	140.4	380.4	93.6	0.3	89.7
% < Des	0.0	50.0	55.6	86.1	41.7	83.3	75.0	0.0	61.1	88.9	94.4	52.8
% P	91.7	25.0	30.6	11.1	38.9	16.7	25.0	0.0	36.1	8.3	5.6	0.0
% > Ex P	8.3	25.0	13.9	2.8	19.4	0.0	0.0	0.0	2.8	2.8	0.0	47.2

3. AMRAVATI

Taluka : Achalpur (Chausala, Pathrot)												
	'pH	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^-**	**SO_4^{-2}**	**F^-**	**NO_3^-**
Min	6.8	663.0	256.0	67.2	17.0	0.1	32.0	32.0	170.0	28.0	0.1	43.0
Max	7.6	2052.1	932.0	214.4	155.0	0.2	186.0	226.9	508.0	151.0	1.0	99.0
Average	7.3	1117.1	528.0	101.9	67.4	0.1	76.4	84.6	270.7	75.2	0.6	61.2
Stdev	0.4	583.4	322.9	63.0	58.6	0.0	67.0	84.1	147.7	52.2	0.4	25.7
% < Des	0.0	0.0	40.0	40.0	40.0	100.0	100.0	0.0	60.0	100.0	80.0	60.0
% P	100.0	80.0	20.0	40.0	40.0	0.0	0.0	0.0	40.0	0.0	20.0	0.0
% > Ex P	0.0	20.0	40.0	20.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	40.0

Taluka : Amravati (Navsari, Amla, Badnera, Mardi, Mogra, Nandgaonpeth, Pimpalvihir, Pohara, Revasa, Vdali, Wagholi)												
Min	6.9	362.0	164.0	16.0	4.0	0.1	32.0	32.0	38.0	1.0	0.1	2.0
Max	8.9	1931.0	768.0	296.0	103.0	0.2	340.0	414.8	570.0	74.0	1.7	114.0
Average	7.6	779.6	359.3	91.4	32.2	0.1	88.6	91.0	199.9	33.2	0.7	54.2
Stdev	0.6	406.1	188.8	74.0	26.9	0.0	84.7	92.7	152.9	20.7	0.5	34.3
% < Des	0.0	31.0	58.6	48.3	62.1	100.0	86.2	0.0	72.4	100.0	65.5	41.4
% P	86.2	69.0	24.1	41.4	34.5	0.0	13.8	0.0	27.6	0.0	27.6	0.0
% > Ex P	13.8	0.0	17.2	10.3	3.4	0.0	0.0	0.0	0.0	0.0	6.9	58.6

Taluka : Anjangaon (Anjangaon Surji, Bhandaraj, Karla, Samsherpur Kh.)												
Min	6.9	384.0	144.0	8.8	28.9	0.0	44.0	43.9	76.0	5.0	0.1	7.0
Max	9.4	2158.7	520.0	78.4	105.0	0.2	1348.0	912.6	346.0	69.0	1.2	85.0
Average	7.8	1151.9	337.3	34.2	61.8	0.1	276.9	236.0	233.1	34.6	0.3	42.2
Stdev	7.8	1151.9	337.3	34.2	61.8	0.1	276.9	236.0	233.1	34.6	0.3	42.2
% < Des	0.0	33.3	66.7	77.8	22.2	77.8	77.8	0.0	55.6	77.8	66.7	66.7
% P	66.7	44.4	33.3	22.2	55.6	0.0	11.1	0.0	44.4	22.2	11.1	0.0
% > Ex P	33.3	22.2	0.0	0.0	22.2	22.2	11.1	0.0	0.0	0.0	22.2	33.3

Taluka : Bhatkuli (Afjalpur Rama, Asegaon, Bhatkuli, Daryabad, Deori, Gannori, Gaurkheda, Jalka Hirapur, Khar Talegaon, Kholapur, Nimbha, Nimbhora Bk., Sayat, Shinganapur, Takarkheda, Sambhu, Wasewadi)												
Min	6.9	360.0	128.0	3.2	3.0	0.0	40.0	40.0	30.0	3.0	0.1	3.0
Max	9.3	4210.0	1720.0	302.4	323.9	0.3	661.5	683.2	1448.0	310.0	1.9	200.0
Average	7.8	1596.3	565.5	65.5	98.1	0.1	226.3	207.7	385.1	103.3	0.6	58.5
Stdev	0.7	791.5	320.8	64.2	74.7	0.1	190.6	158.5	271.6	76.7	0.5	51.8
% < Des	0.0	6.1	18.4	75.5	14.3	98.0	61.2	0.0	38.8	89.8	79.6	46.9
% P	79.6	75.5	44.9	20.4	49.0	2.0	30.6	0.0	57.1	10.2	18.4	0.0
% > Ex P	20.4	18.4	36.7	4.1	36.7	0.0	8.2	0.0	4.1	0.0	2.0	53.1

Taluka : Chandur Bazar (Amla Vishweshwar, Baggi, Borgaon Moh., Chn. Rly., Ghatladki, Rajura Shirsgaonkasba, Surali, Vishroli)												
Min	6.7	298.0	32.0	3.2	5.8	0.1	32.0	32.0	24.0	4.0	0.1	2.0
Max	9.0	2240.0	900.0	163.2	126.4	0.2	268.0	258.1	602.0	220.0	1.5	114.0
Average	7.6	772.2	285.0	66.8	29.0	0.1	90.5	90.7	169.3	49.7	0.8	52.7
Stdev	0.7	531.8	186.9	45.7	26.7	0.0	73.4	70.8	150.0	55.6	0.3	34.9
% < Des	0.0	36.4	72.7	59.1	59.1	100.0	86.4	0.0	81.8	95.5	68.2	50.0
% P	81.8	54.5	18.2	40.9	36.4	0.0	13.6	0.0	18.2	4.5	31.8	0.0
% > Ex P	18.2	9.1	9.1	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	50.0

Taluka : Chandur Railway (Amla (V), Amla Vishveshwar, Asegaon, Baggi, Borgaon, Chandur Railway Kavatha Kadu, Kharabi, Kirjawla, Shendurjana Kh.)												
	'pH	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	6.8	202.0	120.0	16.0	8.0	0.0	36.0	36.0	24.0	7.0	0.2	4.0
Max	8.7	2070.0	908.0	186.8	156.5	0.2	351.0	428.2	475.0	311.0	1.5	108.0
Average	7.6	690.4	373.7	65.8	51.2	0.1	120.2	131.3	172.3	48.4	0.7	48.7
Stdev	0.5	429.1	189.7	40.8	38.3	0.0	85.8	105.9	108.9	64.3	0.3	30.8
% < Des	0.0	44.4	37.0	59.3	40.7	100.0	81.5	0.0	85.2	96.3	77.8	37.0
% P	96.3	51.9	51.9	40.7	48.1	0.0	18.5	0.0	14.8	3.7	22.2	0.0
% > Ex P	3.7	3.7	11.1	0.0	11.1	0.0	0.0	0.0	0.0	0.0	0.0	63.0

Taluka : Chikhaldara (Adhav, Bartanda, Barukheda, Barukheda, Biba, Borala, Charni, Chunkhadi, Churni, Dhargad, Doma, Ghular Gh., Kelapani, Makhla, Semadoh)												
Min	6.0	142.0	80.0	4.0	4.0	0.1	20.0	20.0	10.0	3.0	0.2	3.0
Max	8.3	1160.0	640.0	160.0	132.2	0.5	272.0	317.2	250.0	125.0	1.6	140.0
Average	7.4	353.5	215.3	38.4	29.3	0.1	74.9	76.8	89.7	31.4	0.6	33.6
Stdev	0.4	173.3	114.3	26.6	20.1	0.1	58.5	63.0	49.2	23.4	0.3	26.3
% < Des	2.1	89.6	91.7	93.8	56.3	89.6	91.7	0.0	97.9	100.0	87.5	79.2
% P	97.9	10.4	4.2	6.3	41.7	10.4	8.3	0.0	2.1	0.0	10.4	0.0
% > Ex P	0.0	0.0	4.2	0.0	2.1	0.0	0.0	0.0	0.0	0.0	2.1	20.8

Taluka : Daryapur (Ahmadapur, Alampur Borala, Amla, Chndicapur, Daryapur, Itki, Mahimpur, Nachona Nalwada, Shinganapur, Shivar BK., Shiwar Kh, Takali, Thillori, Tongalabad, Wadnergangai, Yewada)												
Min	7.2	130.0	120.0	3.2	9.7	0.1	40.0	0.0	38.0	24.0	0.1	4.0
Max	9.9	4524.0	1836.0	350.4	332.4	0.2	734.0	629.5	1046.0	245.0	1.4	360.0
Average	8.3	1370.8	556.0	53.8	104.3	0.1	210.3	141.7	319.0	82.6	0.4	69.6
Stdev	0.7	981.2	416.6	86.1	78.5	0.0	151.3	130.5	284.2	56.5	0.3	63.3
% < Des	0.0	3.1	31.3	87.5	15.6	100.0	53.1	0.0	62.5	90.6	93.8	31.3
% P	65.6	81.3	37.5	3.1	43.8	0.0	43.8	0.0	34.4	9.4	6.3	0.0
% > Ex P	34.4	15.6	31.3	9.4	40.6	0.0	3.1	0.0	3.1	0.0	0.0	68.8

Taluka : Dhamangaon Railway (Asegaon, Bhatkuli, Borgaon Dhan., Degaon, Gavhanipani, Mangruli Dasti, Shendurjana Gh., Shendurjana Kh., Titamba)												
Min	6.9	170.0	134.0	13.6	6.0	0.1	40.0	40.0	61.0	4.0	0.2	2.0
Max	9.1	1680.0	496.0	115.2	93.3	0.2	670.0	653.9	342.0	156.0	1.9	97.0
Average	7.6	851.1	278.1	57.0	33.4	0.1	153.0	146.0	167.6	38.9	0.8	52.4
Stdev	0.6	444.4	110.6	30.5	25.4	0.0	197.9	173.1	76.9	50.1	0.5	33.6
% < Des	0.0	18.8	56.3	75.0	50.0	100.0	87.5	0.0	81.3	100.0	68.8	43.8
% P	87.5	81.3	43.8	25.0	50.0	0.0	0.0	0.0	18.8	0.0	25.0	0.0
% > Ex P	12.5	0.0	0.0	0.0	0.0	0.0	12.5	0.0	0.0	0.0	6.3	56.3

Taluka : Dharni (Baru, Bhandum, Bhokarbardi, Bhondhilava, Bod, Cahuryakund, Chakarda, Chandpur Chinchghat, Dharni, Dhulghat Railway, Dhulghat Road, Diya, Gangarkhed, Gobarkhau, Harisal, Khongda, Kutanga, Malkapur, Patia, Patiya, Rangubeli, Ranpisa, Sawalikheda, Sonarbardi, Susrda, Tarubanda, Wairgad)												
Min	6.7	70.4	60.0	3.6	5.0	0.1	28.0	28.0	20.0	6.0	0.2	1.0
Max	8.4	1228.0	860.0	138.0	124.7	0.2	279.0	340.4	394.0	83.0	1.8	108.0
Average	7.5	397.4	246.7	44.7	33.2	0.1	75.8	77.3	111.8	32.7	0.6	37.8
Stdev	0.3	214.8	134.8	29.9	22.7	0.0	58.8	63.9	75.0	19.7	0.3	25.7
% < Des	0.0	73.6	75.0	87.5	52.8	100.0	93.1	0.0	94.4	100.0	90.3	70.8
% P	100.0	26.4	22.2	12.5	45.8	0.0	6.9	0.0	5.6	0.0	6.9	0.0
% > Ex P	0.0	0.0	2.8	0.0	1.4	0.0	0.0	0.0	0.0	0.0	2.8	29.2

Taluka : Morshi (Chikhal Sawangi, Chincholi Gavali, Chincholi Kawali, Churni, Dapori, Dhanora, Hiwarkhed, Kamalpur, Khanapur, Khanapur, Morshi, Nashirpur, Nershipur, Pada, Pardi, Pimpalkhuta, Riddhapur, Umarkhed, Vadali Sat, Vishnora, Yerla)												
	'pH	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	6.8	204.0	104.0	6.4	1.0	0.1	32.0	32.0	26.0	4.0	0.1	1.0
Max	8.8	3400.0	1990.0	290.8	306.9	0.6	400.0	488.0	893.0	449.0	1.4	137.0
Average	7.6	869.5	425.3	70.0	61.2	0.2	112.8	115.6	204.0	69.5	0.7	53.6
Stdev	0.5	557.4	307.7	53.2	57.3	0.1	82.5	91.4	163.7	70.1	0.3	37.8
% < Des	0.0	31.4	42.9	62.9	31.4	88.6	84.3	0.0	71.4	95.7	84.3	48.6
% P	95.7	67.1	35.7	35.7	52.9	11.4	15.7	0.0	28.6	2.9	15.7	0.0
% > Ex P	4.3	1.4	21.4	1.4	15.7	0.0	0.0	0.0	0.0	1.4	0.0	51.4

Taluka : Nandgaon Khandeshwar (Dhamak, Hivara Bk., Hivara Murade, Hiwara, Hiwaramurade, Jalu, Khandala Kh., Mahuli Chor, Nandgaon KH., Onkarkheda, Pimpalgaon Ipani, Pimpri Nipani, Sangrampur Shelunatwa, Shirpur, Shivani Ra., Wadhona, Yewati)												
Min	6.5	178.8	84.0	16.0	4.0	0.1	36.0	36.0	24.0	4.0	0.1	7.0
Max	8.4	2631.0	1120.0	180.8	223.6	0.2	640.0	630.5	446.0	218.0	1.5	380.0
Average	7.5	829.8	385.7	74.5	48.9	0.1	98.2	108.2	206.7	51.6	0.6	68.7
Stdev	0.4	451.5	171.4	40.3	42.3	0.0	101.0	111.7	108.1	43.7	0.3	55.5
% < Des	0.0	16.4	30.9	49.1	47.3	100.0	89.1	0.0	67.3	98.2	89.1	36.4
% P	100.0	80.0	58.2	50.9	41.8	0.0	9.1	0.0	32.7	1.8	10.9	0.0
% > Ex P	0.0	3.6	10.9	0.0	10.9	0.0	1.8	0.0	0.0	0.0	0.0	63.6

Taluka : Tiwasa (Anjangaon Singhi, Bharwadi, Mangarul Dastgir, Tiwasa)												
Min	7.0	333.0	124.0	10.4	3.0	0.1	48.0	48.0	30.0	5.0	0.3	5.0
Max	8.9	1570.0	840.0	178.0	141.2	0.2	296.0	278.2	380.0	455.0	1.2	109.0
Average	7.6	844.2	409.1	76.4	53.2	0.1	112.4	121.9	199.3	73.1	0.7	57.2
Stdev	0.5	334.2	207.0	51.4	39.1	0.0	70.4	76.0	99.1	102.3	0.3	30.1
% < Des	0.0	10.5	31.6	47.4	31.6	100.0	89.5	0.0	68.4	94.7	78.9	31.6
% P	94.7	89.5	52.6	52.6	57.9	0.0	10.5	0.0	31.6	0.0	21.1	0.0
% > Ex P	5.3	0.0	15.8	0.0	10.5	0.0	0.0	0.0	0.0	5.3	0.0	68.4

Taluka : Warud (Aamner, Amdapur, Amner, Benoda, Dhaga, Dhanora, Ekaladara, Ekdara, Jamgaon, Jarud, Karajgaon, Karvat, Karwar, Mahendri, Manakapur, Mangruli, Mankapur, Musalkheda, Pandhari Pusala, Rajegaon, Satnur, Shedurjana Gh., Shendurjnaghat, Surali, Tembhurkheda, Tiwasa Gh., Wadgaon Warud, Wathoda)												
Min	6.6	170.0	120.0	10.6	1.0	0.0	20.0	16.0	28.0	3.0	0.3	5.0
Max	8.6	1345.0	648.0	148.8	95.3	0.3	300.0	366.0	356.0	175.0	1.8	123.0
Average	7.5	578.2	308.2	61.0	38.3	0.1	90.9	91.8	151.7	38.5	0.7	51.5
Stdev	0.5	251.1	105.1	35.4	23.2	0.0	59.5	63.6	79.1	25.8	0.3	30.7
% < Des	0.0	47.4	44.7	67.1	38.2	97.4	93.4	0.0	88.2	100.0	84.2	50.0
% P	98.7	52.6	53.9	32.9	61.8	2.6	6.6	0.0	11.8	0.0	14.5	0.0
% > Ex P	1.3	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	50.0

4. AURANGABAD

Taluka : Aurangabad (Kinnal, Walur Tanda, Shendra K., Kolghar)												
	'pH	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^-**	**SO_4^{-2}**	**F^-**	**NO_3^-**
Min	7.0	80.0	84.0	16.0	10.7	0.0	0.0	20.1	32.0	12.0	0.0	0.3
Max	9.2	1996.0	980.0	238.4	120.0	1.7	460.0	561.2	526.0	352.0	2.0	207.0
Average	8.0	802.9	402.2	76.9	50.5	0.3	112.3	245.9	160.0	84.5	0.9	38.0
Stdev	0.5	406.0	182.9	51.3	26.9	0.3	127.9	127.0	108.6	63.9	0.4	52.9
% < Des	0.0	24.0	28.0	56.0	24.0	68.0	74.0	0.0	82.0	96.0	36.0	78.0
% P	86.0	76.0	60.0	40.0	70.0	30.0	26.0	0.0	18.0	4.0	56.0	0.0
% > Ex P	14.0	0.0	12.0	4.0	6.0	2.0	0.0	0.0	0.0	0.0	8.0	22.0

Taluka : Kannad (Digar Pishore, Hatnur, Kannad, Hingni)												
Min	6.8	190.0	116.0	12.8	2.9	0.0	0.0	12.2	32.0	9.9	0.7	0.3
Max	9.4	4290.0	1172.0	240.0	139.0	0.6	375.4	459.9	982.0	241.0	1.6	149.0
Average	8.0	774.2	351.5	73.8	40.6	0.2	118.4	241.1	135.3	55.7	1.0	27.6
Stdev	0.5	648.2	183.1	50.3	26.8	0.1	123.1	121.3	150.1	42.4	0.2	35.6
% < Des	0.0	29.5	40.9	63.6	40.9	84.1	68.2	0.0	93.2	97.7	50.0	81.8
% P	84.1	68.2	52.3	34.1	54.5	15.9	31.8	0.0	6.8	2.3	43.2	0.0
% > Ex P	15.9	2.3	6.8	2.3	4.5	0.0	0.0	0.0	0.0	0.0	6.8	18.2

Taluka : Khultabad (Khultabad, Mhaismal, Golegaon)												
Min	7.2	290.0	138.0	11.2	15.1	0.0	0.0	59.8	20.0	12.0	0.0	0.6
Max	9.6	1154.0	548.0	107.2	82.6	1.0	340.2	415.0	276.0	219.8	1.6	45.9
Average	8.0	594.7	310.3	47.8	46.4	0.2	94.1	249.9	83.7	48.5	0.8	14.3
Stdev	0.6	204.8	101.0	25.6	19.0	0.2	126.1	104.0	58.3	43.5	0.4	12.5
% < Des	0.0	36.4	40.9	81.8	22.7	68.2	72.7	0.0	95.5	95.5	54.5	95.5
% P	86.4	63.6	59.1	18.2	77.3	27.3	27.3	0.0	4.5	4.5	40.9	0.0
% > Ex P	13.6	0.0	0.0	0.0	0.0	4.5	0.0	0.0	0.0	0.0	4.5	4.5

Taluka : Paithan (Adul, Wahegaon, Warwandi kh.)												
Min	6.4	130.0	88.0	12.8	0.0	0.0	0.0	22.9	22.0	3.0	0.3	0.2
Max	9.5	7046.0	2150.0	800.0	287.0	1.8	1485.0	1811.7	2400.0	778.0	2.0	1126.0
Average	7.9	1494.2	617.6	130.1	71.1	0.4	160.1	334.7	353.8	114.2	1.1	46.4
Stdev	0.6	1409.7	464.4	151.2	62.1	0.5	235.1	333.4	432.0	118.1	0.4	145.4
% < Des	1.4	13.0	21.7	43.5	23.2	69.6	71.0	0.0	65.2	79.7	36.2	81.2
% P	79.7	62.3	50.7	43.5	56.5	15.9	24.6	0.0	27.5	18.8	43.5	0.0
% > Ex P	18.8	24.6	27.5	13.0	20.3	14.5	4.3	0.0	7.2	1.4	20.3	18.8

Taluka : Phulambri (Chauka, Pathri, Ranjangaon, Waghalgaon)												
Min	7.0	207.0	104.0	14.4	5.8	0.0	0.0	24.5	14.0	1.0	0.0	0.8
Max	9.1	1534.0	800.0	264.0	89.0	2.5	280.3	342.0	464.0	246.0	1.6	177.9
Average	7.8	687.4	363.3	76.6	41.7	0.3	89.8	206.9	133.0	88.5	0.9	30.0
Stdev	0.5	320.2	151.3	50.0	20.7	0.5	102.8	93.5	90.3	69.7	0.4	45.0
% < Des	0.0	33.3	30.0	53.3	30.0	73.3	80.0	0.0	90.0	90.0	43.3	86.7
% P	90.0	66.7	66.7	43.3	70.0	23.3	20.0	0.0	10.0	10.0	53.3	0.0
% > Ex P	10.0	0.0	3.3	3.3	0.0	3.3	0.0	0.0	0.0	0.0	3.3	13.3

Taluka : Sillod (Ajanta, Wadala, Jamthi)												
	'pH	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.2	203.0	94.0	12.8	4.4	0.0	0.0	8.5	34.0	11.0	0.3	0.6
Max	9.5	1437.0	660.0	169.6	89.4	1.9	390.2	476.0	312.0	200.0	3.0	107.0
Average	7.9	623.7	340.8	72.1	39.0	0.2	115.7	207.3	116.9	60.1	1.4	21.4
Stdev	0.6	255.1	144.8	39.7	21.3	0.3	119.7	105.5	74.7	39.8	1.2	19.9
% < Des	0.0	36.4	43.2	59.1	34.1	86.4	75.0	0.0	95.5	97.7	54.5	88.6
% P	84.1	63.6	54.5	40.9	65.9	11.4	25.0	0.0	4.5	2.3	43.2	0.0
% > Ex P	15.9	0.0	2.3	0.0	0.0	2.3	0.0	0.0	0.0	0.0	2.3	11.4

Taluka : Soygaon (Fardapur, Jarandi, Palaskheda, Jamthi[ts)												
Min	6.7	283.0	104.0	16.0	6.8	0.0	0.0	39.6	7.1	13.0	0.0	0.4
Max	9.3	1183.0	744.0	150.4	92.3	0.5	410.0	500.2	312.0	576.0	1.6	77.5
Average	7.9	632.4	380.8	80.9	43.4	0.2	110.5	225.1	118.6	80.2	0.8	19.6
Stdev	0.6	260.2	160.0	39.6	22.5	0.1	126.3	96.9	87.1	101.1	0.3	16.9
% < Des	0.0	37.9	31.0	41.4	34.5	79.3	72.4	0.0	86.2	96.6	62.1	93.1
% P	82.8	62.1	58.6	58.6	65.5	20.7	27.6	0.0	13.8	0.0	34.5	0.0
% > Ex P	17.2	0.0	10.3	0.0	0.0	0.0	0.0	0.0	0.0	3.4	3.4	6.9

Taluka : Vaijapur (Rotegaon, Vajapur, Nagamthan), Parsoda												
Min	6.8	278.0	88.0	16.0	8.8	0.0	0.0	18.3	26.0	16.0	0.0	0.7
Max	9.4	2873.0	1280.0	166.4	210.0	2.0	432.0	591.7	930.1	388.8	2.0	548.1
Average	8.1	1046.3	478.7	77.6	69.2	0.4	128.7	248.1	241.8	112.1	0.9	40.8
Stdev	0.5	721.6	285.5	39.1	55.6	0.5	133.4	123.5	230.9	94.9	0.4	110.6
% < Des	0.0	19.0	26.2	50.0	26.2	61.9	64.3	0.0	66.7	83.3	52.4	95.2
% P	85.7	64.3	57.1	50.0	47.6	23.8	35.7	0.0	33.3	16.7	40.5	0.0
% > Ex P	14.3	16.7	16.7	0.0	26.2	14.3	0.0	0.0	0.0	0.0	7.1	4.8

Taluka : Gangapur (Agathan, Derda, Jamgaon, Babargaon)												
Min	7.1	277.0	96.0	19.2	0.0	0.1	0.0	0.0	20.0	10.0	0.0	0.9
Max	9.2	5168.0	1200.0	296.0	219.7	0.9	428.0	1037.0	1224.0	600.0	2.0	54.5
Average	7.9	958.6	421.2	87.3	49.3	0.3	102.9	230.6	198.7	103.6	1.0	11.6
Stdev	0.5	964.9	313.5	65.9	50.3	0.2	114.2	165.1	259.5	115.9	0.3	10.2
% < Des	0.0	37.5	47.9	56.3	54.2	66.7	81.3	0.0	81.3	83.3	41.7	97.9
% P	87.5	43.8	33.3	35.4	33.3	33.3	18.8	0.0	16.7	14.6	54.2	0.0
% > Ex P	12.5	18.8	18.8	8.3	12.5	0.0	0.0	0.0	2.1	2.1	4.2	2.1

5. BEED

Taluka : Ambejogai (Ambajogai, Bhauthana, Chanai, Kumbhephal, Patoda, Sonawala, Talni)												
	'pH	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.4	161.0	94.0	12.8	7.3	0.0	80.0	78.4	22.0	0.5	0.1	0.1
Max	9.0	1437.0	600.0	116.0	94.3	0.2	235.1	286.8	336.0	149.0	1.1	216.0
Average	8.2	486.2	265.4	47.6	35.6	0.1	166.2	186.2	94.6	43.3	0.5	30.6
Stdev	0.5	345.6	146.9	28.9	24.9	0.1	49.6	68.5	82.8	38.0	0.3	50.5
% < Des	0.0	70.0	60.0	80.0	55.0	100.0	60.0	0.0	95.0	100.0	95.0	85.0
% P	75.0	30.0	40.0	20.0	45.0	0.0	40.0	0.0	5.0	0.0	5.0	0.0
% > Ex P	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.0

Taluka : Ashti (Ashta, Chinchpur, Dhanora, Doithana, Dongargaon, Hatola, Kinni, Kuntephal, Loni, Nimgaon choba, Pimpri Ghumri)												
Min	7.3	334.0	104.0	20.8	1.9	0.0	40.0	21.4	44.0	0.3	0.4	0.6
Max	9.9	2132.0	980.0	212.0	116.6	1.9	464.8	567.0	426.0	308.0	1.4	46.0
Average	8.3	700.4	343.5	63.6	44.9	0.2	201.8	224.5	138.6	70.6	0.9	14.3
Stdev	0.7	443.0	210.2	47.7	28.9	0.4	116.2	152.0	100.9	69.2	0.3	10.7
% < Des	0.0	41.7	50.0	79.2	25.0	95.8	54.2	0.0	87.5	95.8	58.3	95.8
% P	70.8	54.2	37.5	16.7	66.7	0.0	45.8	0.0	12.5	4.2	41.7	0.0
% > Ex P	29.2	4.2	12.5	4.2	8.3	4.2	0.0	0.0	0.0	0.0	0.0	4.2

Taluka : Beed (Ambajogai, Beed, Bhend Takli, Dharur, Neknoor, Pali, Pithi)												
Min	7.3	246.0	168.0	20.0	22.4	0.0	120.0	100.2	17.7	5.0	0.2	0.3
Max	9.3	1352.0	528.0	90.0	94.3	0.2	359.8	439.0	310.0	131.0	1.2	153.0
Average	8.1	520.7	296.6	45.8	44.3	0.1	214.3	241.0	84.2	45.1	0.6	19.8
Stdev	0.5	332.7	94.7	17.4	22.5	0.1	67.7	95.7	92.2	37.0	0.3	37.3
% < Des	0.0	75.0	62.5	93.8	31.3	100.0	50.0	0.0	87.5	100.0	87.5	93.8
% P	81.3	25.0	37.5	6.3	68.8	0.0	50.0	0.0	12.5	0.0	12.5	0.0
% > Ex P	18.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3

Taluka : Dharur (Dharur, Kari. Pimpalwandi)												
Min	7.4	332.0	92.0	18.0	0.2	0.0	1.7	88.0	24.8	1.8	0.5	4.0
Max	8.1	1286.4	830.0	172.0	162.0	0.1	440.1	537.0	326.0	169.0	1.7	178.0
Average	7.8	653.3	414.3	66.7	64.6	0.0	262.4	332.4	137.2	58.5	1.0	40.3
Stdev	0.3	365.9	263.8	51.8	52.4	0.0	135.0	138.1	123.2	58.0	0.5	62.6
% < Des	0.0	57.1	42.9	71.4	14.3	100.0	14.3	0.0	71.4	100.0	71.4	71.4
% P	100.0	42.9	28.6	28.6	71.4	0.0	85.7	0.0	28.6	0.0	0.0	0.0
% > Ex P	0.0	0.0	28.6	0.0	14.3	0.0	0.0	0.0	0.0	0.0	28.6	28.6

Taluka : Gewrai (Bhend Takli, Georai, Hirapur, Hiwarwadi, Mahar takli, Padalsinghi, Patrud, Tagadgaon Talwada, Umapur)												
Min	7.5	274.0	92.0	12.8	6.8	0.0	44.0	16.0	34.0	9.0	0.3	0.6
Max	9.1	2327.0	820.0	166.4	162.3	0.4	354.0	431.9	650.0	210.0	1.5	132.0
Average	8.2	804.6	341.5	62.4	45.1	0.2	164.7	183.5	191.0	79.7	0.8	20.6
Stdev	0.4	582.0	205.3	43.3	37.6	0.1	93.3	123.7	158.3	60.1	0.4	28.6
% < Des	0.0	47.8	56.5	65.2	39.1	87.0	69.6	0.0	60.9	95.7	56.5	91.3
% P	87.0	43.5	26.1	34.8	47.8	13.0	30.4	0.0	39.1	4.3	43.5	0.0
% > Ex P	13.0	8.7	17.4	0.0	13.0	0.0	0.0	0.0	0.0	0.0	0.0	8.7

Taluka : Kej (Bansarola, Kej, Malegaon)												
	'pH	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.7	413.0	236.0	24.0	41.8	0.0	89.0	108.6	96.0	26.0	0.2	0.9
Max	8.9	760.0	525.0	132.0	51.3	0.2	304.9	372.0	154.0	89.5	1.0	125.0
Average	8.1	555.8	329.0	55.4	46.2	0.1	195.1	213.5	129.5	57.6	0.7	35.2
Stdev	0.5	147.4	132.2	51.6	4.0	0.1	90.1	114.0	25.1	26.5	0.4	60.2
% < Des	0.0	25.0	75.0	75.0	0.0	100.0	50.0	0.0	100.0	100.0	75.0	75.0
% P	75.0	75.0	25.0	25.0	100.0	0.0	50.0	0.0	0.0	0.0	25.0	0.0
% > Ex P	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0

Taluka : Parli (Dharmapuri, Pimpri bk, Sangam, Sirsala, Wadgaon)												
Min	7.5	218.0	108.0	16.0	16.5	0.0	59.0	72.0	28.0	16.0	0.2	0.2
Max	8.8	1454.5	830.0	208.0	100.0	0.2	645.1	787.0	390.0	184.0	1.5	232.0
Average	7.9	833.8	381.9	65.5	53.0	0.1	271.1	325.4	191.6	68.6	0.6	73.5
Stdev	0.4	495.0	237.7	62.8	30.0	0.1	186.4	233.3	137.1	53.4	0.4	91.7
% < Des	0.0	33.3	44.4	66.7	33.3	100.0	33.3	0.0	55.6	100.0	88.9	55.6
% P	88.9	66.7	33.3	22.2	66.7	0.0	55.6	0.0	44.4	0.0	0.0	0.0
% > Ex P	11.1	0.0	22.2	11.1	0.0	0.0	11.1	0.0	0.0	0.0	11.1	44.4

Taluka : Patoda (Amalner, Daskhed, Naigaon, Patoda, Shirapur ghat, Suppa, Vidyakinhi)												
Min	7.4	290.0	184.0	25.6	17.0	0.0	127.9	92.0	26.0	0.2	0.2	0.9
Max	8.7	1664.0	692.0	148.0	90.4	0.3	470.2	573.6	530.0	161.0	1.1	76.0
Average	8.0	585.5	322.7	59.9	42.0	0.1	224.9	250.1	124.3	52.7	0.5	26.5
Stdev	0.4	379.5	157.7	40.6	24.0	0.1	95.1	133.0	133.9	51.1	0.3	26.2
% < Des	0.0	61.5	61.5	76.9	38.5	92.3	53.8	0.0	92.3	100.0	84.6	69.2
% P	76.9	38.5	30.8	23.1	61.5	7.7	46.2	0.0	7.7	0.0	15.4	0.0
% > Ex P	23.1	0.0	7.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.8

Taluka : Shiruru Kasar (Dhanora, Manur, Shirur kasar)												
Min	7.4	678.0	130.0	27.2	6.0	0.0	195.1	238.0	135.0	82.0	0.5	18.3
Max	8.1	1591.9	900.0	152.0	126.5	0.1	302.0	368.4	425.4	206.0	0.9	343.0
Average	7.8	1180.6	491.7	68.6	77.8	0.0	262.5	320.2	271.3	126.6	0.8	160.1
Stdev	0.3	426.9	284.9	54.0	56.8	0.0	41.2	50.3	127.9	46.7	0.1	140.5
% < Des	0.0	0.0	20.0	60.0	40.0	100.0	20.0	0.0	40.0	80.0	100.0	20.0
% P	100.0	100.0	60.0	40.0	0.0	0.0	80.0	0.0	60.0	20.0	0.0	0.0
% > Ex P	0.0	0.0	20.0	0.0	60.0	0.0	0.0	0.0	0.0	0.0	0.0	80.0

Taluka : Wadwani (Telgaon, Wadwani)												
	'pH	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.4	644.2	438.3	42.0	24.3	0.0	220.1	268.5	131.2	31.0	0.5	12.0
Max	8.2	1858.0	995.0	196.0	123.0	0.0	585.2	714.0	517.6	203.0	0.7	198.0
Average	7.7	1230.2	645.3	124.4	81.3	0.0	426.1	519.8	304.7	139.4	0.5	93.6
Stdev	0.3	512.0	262.5	63.9	39.9	0.0	172.1	209.9	186.1	68.2	0.1	87.7
% < Des	0.0	0.0	0.0	40.0	20.0	100.0	0.0	0.0	60.0	80.0	100.0	40.0
% P	100.0	100.0	60.0	60.0	40.0	0.0	100.0	0.0	40.0	20.0	0.0	0.0
% > Ex P	0.0	0.0	40.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	60.0

Taluka : Majalgaon (Bavi, Hivra bk., Khamgaon, Longaon Camp, Majalgaon, Roshanpuri, Telgaon bk.,Waghora)												
Min	7.7	176.0	120.0	11.2	15.6	0.1	84.0	80.5	16.0	19.0	0.3	0.6
Max	8.6	702.0	376.0	56.0	57.3	0.2	233.0	284.3	116.0	67.0	0.7	11.9
Average	8.1	340.6	203.6	38.6	26.0	0.1	152.6	156.5	50.4	35.2	0.5	4.8
Stdev	0.3	167.9	81.6	15.1	13.0	0.0	48.8	61.7	35.1	18.9	0.1	3.6
% < Des	0.0	88.9	88.9	100.0	77.8	100.0	77.8	0.0	100.0	100.0	100.0	100.0
% P	88.9	11.1	11.1	0.0	22.2	0.0	22.2	0.0	0.0	0.0	0.0	0.0
% > Ex P	11.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

6. BHANDARA

Taluka : Bhandara (Bhandara, Dhargaon, Koka (Kokha), Kondhi, Maudi, Pahela, Palari, Sakra, Saori/ Parsodi, Shahapur/ Fulmogra, Varti, Mujbi, Pahela)												
	'pH	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.4	207.7	168.0	12.8	9.7	0.2	50.0	61.0	17.8	0.5	0.1	1.0
Max	8.7	2082.4	1320.0	390.0	122.5	0.4	364.0	336.7	1132.5	196.0	2.7	127.7
Average	8.0	683.8	463.1	102.2	50.5	0.3	193.0	214.7	222.4	64.3	0.8	26.3
Stdev	0.3	488.6	297.2	87.1	29.7	0.1	76.5	77.7	253.0	58.2	0.6	31.5
% < Des	0.0	55.6	37.0	55.6	25.9	123.5	59.3	0.0	74.1	100.0	70.4	81.5
% P	92.6	40.7	40.7	37.0	63.0	35.3	40.7	0.0	22.2	0.0	14.8	0.0
% > Ex P	7.4	3.7	22.2	7.4	11.1	0.0	0.0	0.0	3.7	0.0	14.8	18.5

Taluka : Lakhandur (Bhagadi. Dighori, Lakhandur, Palandur, Soni)												
Min	7.4	335.0	240.0	34.0	20.4	0.2	90.0	109.8	82.0	10.0	0.6	1.0
Max	8.3	1104.0	714.0	151.2	81.6	0.6	384.0	468.5	348.0	115.0	3.1	65.1
Average	7.9	726.5	390.1	73.8	49.9	0.4	238.8	279.0	199.9	60.5	1.3	25.7
Stdev	0.3	224.4	137.2	33.1	20.7	0.1	89.0	105.4	72.7	31.9	0.7	21.5
% < Des	0.0	7.7	30.8	53.8	15.4	60.0	30.8	0.0	84.6	100.0	38.5	76.9
% P	100.0	92.3	61.5	46.2	84.6	70.0	69.2	0.0	15.4	0.0	38.5	0.0
% > Ex P	0.0	0.0	7.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.1	23.1

Taluka : Lakhani (Lakhani, Palandur)												
Min	7.8	341.6	120.0	34.0	8.5	0.0	110.0	134.2	50.0	1.0	0.5	5.0
Max	8.2	541.4	370.0	74.0	58.3	0.0	335.2	409.0	213.0	54.0	1.2	63.2
Average	7.9	455.8	273.0	53.2	34.0	0.0	198.1	241.7	126.4	18.5	0.8	30.2
Stdev	0.2	84.5	101.1	14.6	22.1	0.0	91.0	111.0	69.8	21.1	0.3	25.4
% < Des	0.0	60.0	60.0	100.0	40.0	100.0	60.0	0.0	100.0	100.0	60.0	60.0
% P	100.0	40.0	40.0	0.0	60.0	0.0	40.0	0.0	0.0	0.0	40.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40.0

Taluka : Mohadi (Chicholi, Dahegaon, Dewhada Bk.(narsingtola), Jamb, Kharbi, Koka, Mohadi, Satona, Usarra, Warthi, Wasera)												
Min	7.4	281.6	145.0	16.0	12.2	0.0	45.0	54.9	40.0	18.7	0.2	1.0
Max	8.7	1747.0	725.0	220.0	118.0	0.6	640.0	693.0	600.0	168.0	3.4	215.1
Average	8.0	813.4	414.2	77.1	53.8	0.1	247.6	279.7	222.9	77.6	0.9	55.3
Stdev	0.3	384.8	156.0	51.2	29.8	0.2	138.1	144.2	153.8	45.1	1.2	74.0
% < Des	0.0	24.0	24.0	60.0	20.0	88.0	32.0	0.0	60.0	100.0	68.0	76.0
% P	96.0	76.0	56.0	36.0	68.0	12.0	60.0	0.0	40.0	0.0	28.0	0.0
% > Ex P	4.0	0.0	20.0	4.0	12.0	0.0	8.0	0.0	0.0	0.0	4.0	24.0

Taluka : Pauni (Adyal, Bhavad, Chandi, Chichal, Dhamni, Gosi Bk., Kanhalgaon (somnala), Kondha, Nilaj (Amgaon), Pauni, Sindpuri, Wahi)												
Min	7.7	198.0	135.0	10.0	3.9	0.0	88.0	107.4	24.0	0.5	0.1	1.0
Max	8.6	1243.0	832.0	147.2	144.8	0.5	364.0	405.0	442.0	127.0	3.5	69.0
Average	8.1	549.9	353.9	66.8	45.4	0.2	238.2	264.7	133.6	34.0	2.5	13.5
Stdev	0.3	341.2	195.3	35.6	38.1	0.1	68.3	84.7	128.3	35.4	3.5	16.4
% < Des	0.0	54.2	54.2	66.7	50.0	83.3	25.0	0.0	75.0	100.0	58.3	91.7
% P	91.7	45.8	33.3	33.3	37.5	16.7	75.0	0.0	25.0	0.0	16.7	0.0
% > Ex P	8.3	0.0	12.5	0.0	12.5	0.0	0.0	0.0	0.0	0.0	25.0	8.3

Taluka : Sakoli (Bampewada, Dongargaon (Niharwani), Ekodi, Kaneri (dagdi), Kesalwada, Khandala, Kumbhli. Mundipar, Parsodi, Pitezari, Sakoli, Salebhatta)												
	'pH	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.6	78.0	65.0	8.0	1.2	0.0	54.9	67.0	14.0	5.0	0.1	0.1
Max	8.7	1799.0	952.0	219.2	98.2	0.9	312.0	380.6	658.0	247.0	1.6	160.0
Average	8.1	487.3	317.7	75.4	31.4	0.2	164.6	186.5	133.7	35.5	0.7	20.2
Stdev	0.3	336.0	183.3	46.3	22.2	0.2	67.3	79.4	128.9	46.4	0.4	36.1
% < Des	0.0	55.6	55.6	55.6	55.6	74.1	63.0	0.0	92.6	96.3	74.1	88.9
% P	88.9	44.4	40.7	40.7	44.4	25.9	37.0	0.0	7.4	3.7	22.2	0.0
% > Ex P	11.1	0.0	3.7	3.7	0.0	0.0	0.0	0.0	0.0	0.0	3.7	11.1

Taluka : Tumsar (Ajgaon, Bagheda, Chargaon, Chikhli (kamkasur), Daodipar Khapa, Khapa (Tumsar), Lendezari, Madgi, Mangli (Tudka), Nilaj, Rajapur, Sihora, Tumsar Khapa)												
Min	7.5	289.0	168.0	22.0	13.6	0.0	60.0	73.2	60.0	7.0	0.3	2.0
Max	9.1	2464.0	1076.0	260.8	103.0	0.6	400.0	488.0	716.0	181.0	3.6	137.0
Average	7.9	635.5	382.7	75.6	47.1	0.1	194.0	226.8	169.9	62.2	1.2	38.3
Stdev	0.3	386.8	156.8	47.2	22.4	0.2	76.4	86.6	120.8	36.1	1.3	35.3
% < Des	0.0	36.4	21.2	45.5	12.1	81.8	57.6	0.0	78.8	100.0	66.7	72.7
% P	93.9	60.6	75.8	51.5	81.8	18.2	42.4	0.0	21.2	0.0	24.2	0.0
% > Ex P	6.1	3.0	3.0	3.0	6.1	0.0	0.0	0.0	0.0	0.0	9.1	27.3

7. BULDHANA

Taluka : Buldhana (Birsingpur, Buldana, Dattapur, Dhad, Jamathi, Mhasala BK, Mondhala, Nandra Koli, Sagwan, Wadrud)												
	'pH	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^-**	**SO_4^{-2}**	**F^-**	**NO_3^-**
Min	6.9	308.4	100.0	12.8	1.0	0.1	24.0	24.0	46.0	10.0	0.2	6.0
Max	8.9	1771.3	732.0	496.0	121.5	0.3	188.0	229.4	628.0	135.0	1.7	220.0
Average	7.6	903.0	387.0	189.9	40.7	0.1	79.6	83.0	222.5	51.5	1.0	64.2
Stdev	0.5	420.5	182.6	159.8	31.7	0.1	53.9	61.5	155.9	37.6	0.3	40.0
% < Des	0.0	22.6	32.3	38.7	45.2	96.8	100.0	0.0	67.7	100.0	35.5	32.3
% P	90.3	77.4	51.6	22.6	48.4	3.2	0.0	0.0	32.3	0.0	61.3	0.0
% > Ex P	9.7	0.0	16.1	38.7	6.5	0.0	0.0	0.0	0.0	0.0	3.2	67.7

Taluka : Chikhali (Borgaon Kakade, Borgaon Wasu, Chikhali, Harani, Hatani, Karwand, Khor, Palaskhed, Sawana, Selodi, Shelodi, Undri)												
Min	6.8	308.8	68.0	10.0	1.9	0.0	48.0	48.0	34.0	6.0	0.2	16.0
Max	7.8	1296.8	592.0	424.0	108.6	0.2	108.0	112.2	388.0	114.0	2.1	145.0
Average	7.4	685.5	209.7	110.1	20.3	0.1	75.6	80.5	126.9	36.8	0.7	43.9
Stdev	0.3	314.7	169.4	121.3	25.2	0.0	15.0	20.4	108.5	27.6	0.5	31.2
% < Des	0.0	42.1	68.4	52.6	84.2	100.0	100.0	0.0	78.9	100.0	78.9	78.9
% P	100.0	57.9	31.6	26.3	10.5	0.0	0.0	0.0	21.1	0.0	15.8	0.0
% > Ex P	0.0	0.0	0.0	21.1	5.3	0.0	0.0	0.0	0.0	0.0	5.3	21.1

Taluka : Jalgaon Jamod (Chalthana, Jalgaon Jamod, Kuwardeo, Raipur, Umapur)												
Min	6.9	250.0	108.0	16.0	5.8	0.1	44.0	44.0	30.0	5.0	0.5	22.0
Max	7.7	1752.0	416.0	184.0	91.2	0.2	100.0	99.8	306.0	49.0	1.2	79.0
Average	7.4	684.1	221.0	106.7	26.7	0.1	61.5	61.5	132.9	21.0	0.9	55.4
Stdev	0.2	481.8	80.7	56.2	21.4	0.0	15.0	14.9	77.1	13.4	0.2	18.8
% < Des	0.0	62.5	87.5	31.3	75.0	100.0	100.0	0.0	93.8	100.0	68.8	25.0
% P	100.0	37.5	12.5	68.8	25.0	0.0	0.0	0.0	6.3	0.0	31.3	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	75.0

Taluka : Khamgaon (Awar, Borjawala, Bothkaji, Divthana, Hiwarkhed, Jaipur Land, Jalka Bhadag, Jyapur Lande, Khamgaon, Kokta, Lakhanwada, Nimkawada, Nipana, Palashi kh, Palshi, Sutala, Tandulwadi)												
Min	6.6	306.0	40.0	4.0	1.0	0.1	28.0	28.0	51.0	1.0	0.4	5.0
Max	8.6	1986.0	853.0	404.0	159.4	0.2	508.0	571.0	446.0	234.0	2.2	100.0
Average	7.5	927.8	346.3	202.5	32.3	0.1	90.8	92.9	201.2	46.0	1.0	66.1
Stdev	0.4	385.3	178.4	119.0	42.5	0.0	99.6	105.0	104.4	58.5	0.3	21.8
% < Des	0.0	7.9	42.1	18.4	76.3	100.0	86.8	0.0	63.2	94.7	50.0	15.8
% P	97.4	92.1	47.4	28.9	13.2	0.0	13.2	0.0	36.8	5.3	44.7	0.0
% > Ex P	2.6	0.0	10.5	52.6	10.5	0.0	0.0	0.0	0.0	0.0	5.3	84.2

Taluka : Lonar (Bhumrala, Bibi, Bibkhed, Borkhedi, Dhaifal, Dhayaphal, Kingaon Urdu, Lonar, Pimplner, Sawaegaon Teli, Shara, Sultanpur, Wadhav)												
Min	7.7	225.0	88.0	5.6	16.0	0.1	48.0	48.0	60.0	18.0	0.1	3.0
Max	9.1	1327.0	710.0	352.0	164.3	0.3	340.0	409.9	390.0	144.0	1.2	135.0
Average	8.3	684.7	392.9	118.0	63.8	0.2	133.7	135.2	181.9	66.8	0.7	64.4
Stdev	0.4	307.7	175.8	108.0	45.3	0.1	98.4	103.3	92.1	39.3	0.3	37.5
% < Des	0.0	22.2	27.8	44.4	16.7	61.1	72.2	0.0	77.8	100.0	77.8	44.4
% P	72.2	77.8	61.1	33.3	61.1	38.9	27.8	0.0	22.2	0.0	22.2	0.0
% > Ex P	27.8	0.0	11.1	22.2	22.2	0.0	0.0	0.0	0.0	0.0	0.0	55.6

Taluka : Malkapur (Belad, Dasarkhed, Hingana Kazi, Hingna Kaji, Morkhed BK, Umali, Waghul, Wagola)												
	'pH	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	6.7	364.8	80.0	11.6	1.9	0.1	40.0	40.0	50.0	4.0	0.8	7.0
Max	8.6	4409.6	1990.0	512.0	332.9	0.3	221.0	215.8	1170.0	574.0	1.4	96.0
Average	7.7	1681.2	610.4	217.4	84.8	0.1	92.4	91.1	384.1	93.6	1.1	67.6
Stdev	0.6	1530.7	535.1	172.5	93.8	0.1	60.0	61.5	369.7	148.0	0.2	27.7
% < Des	0.0	28.6	28.6	14.3	42.9	85.7	92.9	0.0	50.0	92.9	21.4	21.4
% P	92.9	42.9	35.7	35.7	14.3	14.3	7.1	0.0	42.9	0.0	78.6	0.0
% > Ex P	7.1	28.6	35.7	50.0	42.9	0.0	0.0	0.0	7.1	7.1	0.0	78.6

Taluka : Mehkar (Anjani Bk, Chinchala, Deulgaon Sakarsh, Dongaon, Fardapur, Gajarkhed, Khamkhed Khandala, Mehkar, Naigaon Dattapur, Tembhurkhed, Virvi, Wishvi)												
Min	7.1	366.0	80.0	4.0	12.5	0.1	44.0	44.0	44.0	11.0	0.1	21.0
Max	9.2	1062.0	592.0	340.0	120.3	0.3	236.0	283.0	252.0	114.0	1.1	125.0
Average	7.8	716.0	309.4	103.0	45.5	0.2	114.3	122.6	146.5	55.2	0.6	55.6
Stdev	0.5	230.6	130.3	100.6	30.4	0.1	69.2	82.7	71.0	30.9	0.3	30.2
% < Des	0.0	27.3	50.0	54.5	31.8	77.3	81.8	0.0	95.5	100.0	86.4	45.5
% P	95.5	72.7	50.0	27.3	59.1	22.7	18.2	0.0	4.5	0.0	13.6	0.0
% > Ex P	4.5	0.0	0.0	18.2	9.1	0.0	0.0	0.0	0.0	0.0	0.0	54.5

Taluka : Motala (Dhamangaon Bade, Hanvatkhed, Liha, Motala, Nimkhed, Pimplgaon devi, Rjur, Rohinkhed, Sarola Maroti, Shlelapur, Ubalkhed)												
Min	6.9	411.0	104.0	14.8	1.0	0.1	40.0	40.0	5.0	5.0	0.5	4.0
Max	8.0	1388.4	568.0	484.0	66.3	0.2	100.0	122.0	382.0	112.0	1.4	160.0
Average	7.3	774.5	290.0	172.7	25.4	0.1	65.7	68.3	166.7	32.7	0.9	74.6
Stdev	0.3	250.4	132.1	139.8	17.9	0.0	14.8	18.6	102.9	24.9	0.2	25.4
% < Des	0.0	11.5	53.8	34.6	69.2	100.0	100.0	0.0	76.9	100.0	61.5	7.7
% P	100.0	88.5	46.2	26.9	30.8	0.0	0.0	0.0	23.1	0.0	38.5	0.0
% > Ex P	0.0	0.0	0.0	38.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	92.3

Taluka : Nandura (Alampur, Chandur Bisawa, Fuli, Isabpur, Kharkundi, Kokalwadi, Mahalungi, Nadura, Naigaon, Nandura, Nimgaon, Shembha)												
Min	7.1	271.2	40.0	3.2	1.9	0.0	40.0	24.0	16.0	1.0	0.5	2.0
Max	9.2	1782.0	1033.0	420.0	178.8	0.2	668.0	815.0	634.0	425.0	3.8	100.0
Average	7.7	784.8	309.6	116.7	43.0	0.1	129.2	130.0	150.9	49.3	1.2	53.7
Stdev	0.5	376.9	230.1	96.3	48.7	0.0	157.3	163.1	118.5	81.5	0.6	27.2
% < Des	0.0	19.4	63.9	33.3	58.3	100.0	83.3	0.0	88.9	97.2	47.2	33.3
% P	88.9	80.6	25.0	58.3	25.0	0.0	11.1	0.0	11.1	0.0	41.7	0.0
% > Ex P	11.1	0.0	11.1	8.3	16.7	0.0	5.6	0.0	0.0	2.8	11.1	66.7

Taluka : Sangrampur (Alewadi, Amba barwa, Awar, Durga Dait, Durgadaitya, Khiroda, Kodri, Patorda Bk, Paturda, Takli, Takli Panchagavan, Tunki BK)												
Min	7.2	291.0	40.0	3.2	1.9	0.1	12.0	12.0	26.0	8.0	0.3	4.0
Max	9.7	1455.0	738.0	336.0	168.2	0.3	768.0	673.4	240.0	203.0	3.1	85.0
Average	8.1	566.5	228.9	73.9	34.8	0.1	161.8	147.9	84.9	57.8	0.9	33.0
Stdev	0.7	332.3	167.2	74.1	40.9	0.1	191.7	166.8	61.5	59.4	0.6	27.5
% < Des	0.0	61.9	66.7	57.1	57.1	95.2	66.7	0.0	100.0	95.2	66.7	66.7
% P	76.2	38.1	28.6	38.1	38.1	4.8	28.6	0.0	0.0	4.8	28.6	0.0
% > Ex P	23.8	0.0	4.8	4.8	4.8	0.0	4.8	0.0	0.0	0.0	4.8	33.3

Taluka : Shegaon (Alsana, Amsari, Bhongaon, Jalamb, Jawala BK, Kalkhed, Lanjud, Manasgaon, Matargaon Bk., Matergaon, Nagzari Bk., Nimbhi, Pahoorjira, Pahurpurna, Poorjira, Shegaon)												
	'pH	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^-**	**SO_4^{-2}**	**F^-**	**NO_3^-**
Min	7.0	384.0	48.0	17.2	1.9	0.1	28.0	28.0	24.0	5.0	0.5	5.0
Max	9.8	2670.0	1088.0	740.0	145.9	0.3	928.0	819.8	904.0	392.0	3.6	105.0
Average	7.8	1043.9	390.1	154.4	54.5	0.1	164.5	151.9	238.3	82.3	1.1	53.1
Stdev	0.8	576.1	232.1	160.1	41.6	0.1	251.7	217.7	208.5	111.9	0.6	28.5
% < Des	0.0	15.4	34.6	34.6	38.5	96.2	76.9	0.0	57.7	84.6	53.8	34.6
% P	84.6	80.8	53.8	26.9	46.2	3.8	15.4	0.0	42.3	15.4	38.5	0.0
% > Ex P	15.4	3.8	11.5	38.5	15.4	0.0	7.7	0.0	0.0	0.0	7.7	65.4

Taluka : Sindkhed Raja (Adgaon Raja, Changephal, Dusrabid, Kingaon Raja, Malkapur Pangara, Nashirabad, Palaskhed Chakka, Shendurjana, Sindkhed raja, Waghora)												
Min	7.2	164.5	125.0	34.0	5.8	0.0	40.0	40.0	7.0	14.4	0.0	2.0
Max	8.1	1950.1	975.0	162.0	186.0	0.4	304.9	372.0	479.0	744.0	1.2	453.0
Average	7.7	638.5	319.5	106.4	41.2	0.1	94.2	108.9	112.6	116.2	0.5	97.9
Stdev	0.3	577.8	300.7	43.9	58.5	0.1	74.7	95.4	148.1	184.9	0.3	153.7
% < Des	0.0	60.0	80.0	26.7	80.0	80.0	93.3	0.0	86.7	86.7	93.3	80.0
% P	100.0	40.0	0.0	73.3	0.0	20.0	6.7	0.0	13.3	6.7	6.7	0.0
% > Ex P	0.0	0.0	20.0	0.0	20.0	0.0	0.0	0.0	0.0	6.7	0.0	20.0

Taluka : Deolgaon Raja (Bharosa, De. Mahi, Deolgaon Raja, Gunjala, Mehuna, Mendgaon, Pimpalner, Yeota)												
Min	7.1	227.5	88.0	28.0	3.8	0.0	40.0	40.0	62.0	14.0	0.2	15.0
Max	7.9	1381.3	520.0	412.0	92.0	0.2	229.5	280.0	326.0	175.0	0.7	178.0
Average	7.5	763.1	341.3	194.2	29.8	0.1	81.0	90.1	188.1	65.2	0.5	65.9
Stdev	0.3	338.6	148.7	137.8	29.2	0.1	58.0	75.1	91.6	40.6	0.2	60.7
% < Des	0.0	25.0	33.3	25.0	66.7	100.0	91.7	0.0	66.7	100.0	100.0	66.7
% P	100.0	75.0	66.7	33.3	33.3	0.0	8.3	0.0	33.3	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	41.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3

8. CHANDRAPUR

Taluka : Ballarpur (Chora, Kalmana, Kothari)												
	'pH	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^-**	**SO_4^{-2}**	**F^-**	**NO_3^-**
Min	7.6	527.5	195.0	16.0	23.0	0.0	175.4	214.0	74.0	43.2	0.1	18.0
Max	8.1	2801.7	575.0	96.0	95.0	0.0	380.3	464.0	823.0	754.0	1.9	166.0
Average	7.9	971.0	335.9	55.3	48.1	0.0	261.7	319.3	244.5	167.0	0.8	62.2
Stdev	0.2	899.4	134.7	30.0	31.4	0.0	75.6	92.2	285.5	287.6	0.7	56.4
% < Des	0.0	0.0	33.3	83.3	33.3	100.0	16.7	0.0	83.3	83.3	50.0	50.0
% P	100.0	83.3	66.7	16.7	66.7	0.0	83.3	0.0	16.7	0.0	33.3	0.0
% > Ex P	0.0	16.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.7	16.7	50.0

Taluka : Bhadrawati (Bhadrawati, Chora, Khatoda, Masal visapur, Moharli, Ralegaon, Sindewahi)												
Min	7.4	228.0	144.0	26.0	1.0	0.0	160.0	158.5	40.0	7.0	0.0	1.0
Max	8.4	873.0	510.0	129.6	71.9	0.4	500.0	580.7	250.0	180.0	1.9	21.0
Average	8.0	661.1	254.8	51.5	30.7	0.3	335.1	390.7	131.8	81.4	1.0	10.5
Stdev	0.3	219.1	141.5	33.5	21.3	0.2	123.5	161.7	63.0	55.9	0.7	6.7
% < Des	0.0	25.0	75.0	87.5	62.5	50.0	25.0	0.0	87.5	100.0	50.0	100.0
% P	100.0	75.0	25.0	12.5	37.5	50.0	75.0	0.0	12.5	0.0	25.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0

Taluka : Brahmapuri (Aksapur, Brahmapuri, Delanwadi, Gangalwadi, Mangli, Mendaki, Surbodi)												
Min	7.2	334.0	180.0	18.0	3.9	0.0	75.4	92.0	64.0	10.0	0.3	1.0
Max	8.5	1486.2	719.9	204.0	100.0	0.6	590.2	720.0	440.2	216.0	1.1	280.0
Average	7.8	841.8	396.5	82.9	46.0	0.1	263.1	309.1	233.9	79.6	0.6	61.8
Stdev	0.3	389.6	176.9	51.2	26.7	0.2	134.4	170.6	119.2	65.8	0.2	87.2
% < Des	0.0	25.0	31.3	62.5	31.3	87.5	37.5	0.0	50.0	93.8	87.5	75.0
% P	100.0	75.0	50.0	31.3	68.8	12.5	62.5	0.0	50.0	6.3	12.5	0.0
% > Ex P	0.0	0.0	18.8	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0

Taluka : Chandrapur (Agadzari, Ballarpur, Chak Borda, Chandrapur, Chichpalli, Dabha, Durgapur, Ghuggus, Kothari, Lohara, Mul, Nandegur, Padmapur, Padoli, Pandharkawda, Shergaon Khurd, Tadali, Wadgaon, Wihar Khurd)												
Min	7.0	125.1	90.6	16.0	5.0	0.0	69.7	85.0	14.0	2.4	0.0	1.0
Max	8.2	1411.5	809.6	230.0	81.6	0.4	600.0	732.0	468.0	292.8	1.7	183.0
Average	7.7	698.7	347.1	70.1	41.8	0.1	266.3	322.0	145.6	75.5	0.8	44.3
Stdev	0.3	312.4	177.1	48.8	20.5	0.1	115.4	143.5	121.4	68.8	0.4	50.2
% < Des	0.0	27.8	41.7	66.7	36.1	88.9	22.2	0.0	86.1	94.4	66.7	66.7
% P	100.0	72.2	47.2	30.6	63.9	11.1	77.8	0.0	13.9	5.6	27.8	0.0
% > Ex P	0.0	0.0	11.1	2.8	0.0	0.0	0.0	0.0	0.0	0.0	5.6	33.3

Taluka : Chimur (Bothali, Brahmangaon, Chimur, Jambhulghat, Kawadsi, Khadsangi, Motegaon, Neri, Sawargaon, Shankarpur, Shedgaon, Tadoba, Wadala, Wahangaon)												
Min	7.3	153.9	95.0	24.0	6.0	0.0	69.7	85.0	25.0	0.4	0.0	1.0
Max	8.4	3206.0	1304.0	121.6	243.0	0.5	695.1	848.0	508.0	196.0	2.3	102.0
Average	7.9	742.6	364.1	56.2	54.3	0.1	328.3	398.2	107.9	56.2	0.9	22.4
Stdev	0.3	567.4	215.1	27.5	43.7	0.2	160.7	198.0	96.3	50.4	0.6	30.4
% < Des	0.0	38.5	38.5	84.6	19.2	88.5	26.9	0.0	96.2	100.0	57.7	84.6
% P	100.0	57.7	57.7	15.4	76.9	11.5	69.2	0.0	3.8	0.0	23.1	0.0
% > Ex P	0.0	3.8	3.8	0.0	3.8	0.0	3.8	0.0	0.0	0.0	19.2	15.4

Taluka : Jiwati (Ballarsha)												
	'pH	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.3	412.1	280.0	86.0	15.8	0.0	150.0	183.0	64.0	61.0	0.2	13.0
Max	7.8	450.0	299.1	90.0	18.0	0.0	204.9	250.0	88.8	90.0	0.3	32.9
Average	7.6	431.1	289.5	88.0	16.9	0.0	177.5	216.5	76.4	75.5	0.2	22.9
Stdev	0.4	26.8	13.5	2.8	1.6	0.0	38.8	47.4	17.5	20.5	0.0	14.0
% < Des	0.0	100.0	100.0	0.0	100.0	100.0	50.0	0.0	100.0	100.0	100.0	100.0
% P	100.0	0.0	0.0	100.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Mul (Borchandali, Chandapur, Chiroli, Mahadwadi, Mul, Navegaon bhujala, Pardi kh., Rajoli, Tukkum, Susi dabgaon, Vyahad kh., Wagholi butti)												
Min	7.7	362.0	212.0	12.8	29.2	0.0	180.0	175.7	36.0	23.0	0.3	1.0
Max	8.9	1617.2	725.6	120.0	119.6	0.5	428.0	522.2	769.0	87.0	1.8	19.0
Average	8.1	869.2	505.8	69.8	80.5	0.3	319.3	379.0	256.0	53.6	0.9	9.9
Stdev	0.3	354.3	153.5	32.4	24.5	0.2	74.5	104.0	209.9	19.2	0.4	6.8
% < Des	0.0	14.3	14.3	42.9	7.1	42.9	7.1	0.0	57.1	100.0	64.3	100.0
% P	92.9	85.7	64.3	57.1	71.4	57.1	92.9	0.0	42.9	0.0	21.4	0.0
% > Ex P	7.1	0.0	21.4	0.0	21.4	0.0	0.0	0.0	0.0	0.0	14.3	0.0

Taluka : Nagbhid (Balapur bk., Chikalgaon, Kirmiti mendha, Kordha, Mohadi Mokasa, Nagbhid, Nagbhir, Talodhi, Vaijapur)												
Min	7.2	288.0	192.0	25.6	12.6	0.0	90.2	110.0	46.0	11.0	0.2	2.0
Max	8.6	1716.0	710.0	172.0	94.8	0.4	520.0	634.4	560.0	157.0	2.2	221.0
Average	7.8	847.6	492.8	88.4	66.1	0.2	224.4	266.6	256.8	73.8	0.8	70.3
Stdev	0.3	345.9	146.7	38.9	20.9	0.2	109.9	135.9	122.5	40.6	0.5	74.2
% < Des	0.0	14.3	14.3	28.6	7.1	50.0	42.9	0.0	42.9	100.0	78.6	50.0
% P	92.9	85.7	57.1	71.4	92.9	50.0	57.1	0.0	57.1	0.0	14.3	0.0
% > Ex P	7.1	0.0	28.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.1	50.0

Taluka : Pombhurna (Bhimni)												
Min	7.8	377.9	210.0	12.0	44.0	0.0	254.9	311.0	28.0	26.0	1.5	34.0
Max	8.0	493.7	315.2	52.0	45.0	0.0	375.4	458.0	35.0	34.0	1.5	36.0
Average	7.9	435.8	262.6	32.0	44.5	0.0	315.2	384.5	31.5	30.0	1.5	35.0
Stdev	0.1	81.9	74.4	28.3	0.7	0.0	85.2	103.9	4.9	5.7	0.0	1.4
% < Des	0.0	100.0	50.0	100.0	0.0	100.0	0.0	0.0	100.0	100.0	0.0	100.0
% P	100.0	0.0	50.0	0.0	100.0	0.0	100.0	0.0	0.0	0.0	50.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0

Taluka : Rajura (Arvi Chandur(gadchandur), Dabgaon, Gadegaon, Mahurli, Palezari, Patan, Rajura, Rampur, Saoli, Sasti (census town), Sondo, Tembhurwahi, Wirur)												
Min	7.2	348.0	100.0	14.0	12.0	0.0	85.2	104.0	30.0	8.0	0.4	1.0
Max	9.0	1258.0	612.0	122.0	105.9	0.7	512.0	571.0	320.0	160.0	1.8	131.0
Average	7.8	694.2	347.6	63.3	46.0	0.2	290.5	337.5	138.3	67.3	0.9	44.1
Stdev	0.4	247.5	139.4	25.3	26.6	0.2	121.8	141.0	79.6	35.6	0.4	47.7
% < Des	0.0	15.0	35.0	80.0	35.0	70.0	30.0	0.0	90.0	100.0	65.0	60.0
% P	95.0	85.0	60.0	20.0	60.0	30.0	70.0	0.0	10.0	0.0	25.0	0.0
% > Ex P	5.0	0.0	5.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	10.0	40.0

Taluka : Sawali (Sawali)												
	'pH	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.4	584.0	200.0	20.0	36.0	0.0	290.2	354.0	106.0	49.0	2.1	40.0
Max	8.1	692.6	318.4	50.0	47.4	0.0	390.2	476.0	138.5	56.6	2.9	54.0
Average	7.8	651.9	267.8	35.3	43.5	0.0	345.1	421.0	118.2	53.2	2.5	48.3
Stdev	0.4	59.2	61.1	15.0	6.5	0.0	50.7	61.9	17.7	3.9	0.4	7.3
% < Des	0.0	0.0	66.7	100.0	0.0	100.0	0.0	0.0	100.0	100.0	0.0	33.3
% P	100.0	100.0	33.3	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	66.7

Taluka : Sindewahi (Alesur, Bhanapur, Gadbori, Gadmaushi chak, Kukadheti, Meha bk., Niphandra, Palasgaon, Jat, Purkepar, Ratnapur, Sawargata chak, Sindewahi, Sindewahi, Wasera)												
Min	7.5	190.9	124.0	12.8	13.0	0.0	80.3	98.0	11.0	2.4	0.3	1.0
Max	9.1	1445.4	848.9	180.8	103.0	0.3	488.0	525.0	489.0	141.0	3.7	216.0
Average	7.9	732.2	413.5	82.4	50.4	0.2	267.9	309.9	191.9	41.6	1.4	32.5
Stdev	0.4	370.0	198.2	50.5	28.9	0.1	109.6	119.6	137.0	39.7	1.8	63.1
% < Des	0.0	26.3	31.6	42.1	42.1	94.7	36.8	0.0	68.4	100.0	57.9	89.5
% P	94.7	73.7	52.6	57.9	52.6	5.3	63.2	0.0	31.6	0.0	26.3	0.0
% > Ex P	5.3	0.0	15.8	0.0	5.3	0.0	0.0	0.0	0.0	0.0	15.8	10.5

Taluka : Waroda (Bhandak, Bhatala, Chargaon, Chikni, Dongargaon, Salori, Shegaon bk.)												
Min	7.4	333.1	175.0	18.0	24.3	0.0	128.0	156.2	18.0	4.8	0.2	4.0
Max	8.5	1632.0	696.0	104.0	140.0	0.4	414.8	506.0	440.0	160.0	3.3	150.0
Average	7.9	717.3	317.8	50.4	46.6	0.1	287.3	350.5	130.8	68.8	2.6	44.5
Stdev	0.3	355.3	144.1	26.1	32.0	0.2	91.4	111.5	122.2	52.7	2.7	40.6
% < Des	0.0	27.3	63.6	81.8	18.2	81.8	18.2	0.0	90.9	100.0	18.2	54.5
% P	100.0	72.7	27.3	18.2	72.7	18.2	81.8	0.0	9.1	0.0	27.3	0.0
% > Ex P	0.0	0.0	9.1	0.0	9.1	0.0	0.0	0.0	0.0	0.0	54.5	45.5

Taluka : Gondipipri (Bamhni Chak(katoli), Bhangaram talodhi, Bhimni, Dudharpeth, Ganpur, Pombhurna, Wadholi)												
Min	7.5	431.0	282.0	40.0	41.8	0.1	184.0	224.5	86.0	16.0	0.8	3.0
Max	8.0	1298.0	832.0	128.0	124.4	0.4	400.0	488.0	392.0	109.0	1.5	81.0
Average	7.8	708.1	480.3	83.1	66.2	0.2	285.4	338.8	160.0	53.6	1.1	23.3
Stdev	0.2	280.5	168.6	30.4	28.0	0.1	85.5	106.9	105.1	31.6	0.3	26.8
% < Des	0.0	14.3	14.3	42.9	0.0	71.4	28.6	0.0	85.7	100.0	42.9	85.7
% P	100.0	85.7	71.4	57.1	85.7	28.6	71.4	0.0	14.3	0.0	42.9	0.0
% > Ex P	0.0	0.0	14.3	0.0	14.3	0.0	0.0	0.0	0.0	0.0	14.3	14.3

Taluka : Korapna (Gadchandur, Jioti)												
Min	8.0	355.0	220.0	40.0	29.2	0.2	204.0	200.9	52.0	18.0	0.8	6.0
Max	8.2	701.0	408.0	60.8	62.2	0.3	324.0	395.3	152.0	42.0	1.0	11.0
Average	8.1	528.0	314.0	50.4	45.7	0.3	264.0	298.1	102.0	30.0	0.9	8.5
Stdev	0.1	244.7	132.9	14.7	23.4	0.0	84.9	137.4	70.7	17.0	0.1	3.5
% < Des	0.0	50.0	50.0	100.0	50.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0
% P	100.0	50.0	50.0	0.0	50.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

9. DHULE

Taluka : Dhule (Ajanale, Avdhan, Bendrapada, Borhivir, Burdi Pada, Deobhane, Dhamanar, Dhule, Hisala, Japi, Khordad, Kusumba, Laling, Mehergaon, Mukti, Nandre, Narwhal, Ner, Nimdale, Purmepada, Sadgaon, Sarwad, Songir, Talwada, Velahan, Vishwanath, Walwadi)												
	'pH	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.2	174.1	108.0	4.8	5.8	0.0	49.0	58.3	11.0	4.8	0.1	0.1
Max	9.9	1866.9	1005.0	288.0	151.0	1.2	735.0	896.7	497.0	338.0	3.0	228.2
Average	8.2	629.7	292.1	51.0	39.5	0.1	225.3	258.8	134.3	59.4	0.7	32.2
Stdev	0.6	388.7	175.8	45.9	22.8	0.2	136.2	171.2	113.9	63.0	0.4	50.6
% < Des	0.0	46.7	61.3	81.3	37.3	97.3	52.0	0.0	86.7	96.0	86.7	82.7
% P	77.3	53.3	33.3	16.0	60.0	1.3	44.0	0.0	13.3	4.0	9.3	0.0
% > Ex P	22.7	0.0	5.3	2.7	2.7	1.3	4.0	0.0	0.0	0.0	4.0	17.3

Taluka : Sakri (Aichale, Akkalpada, Bhamer, Bramnhavel, Chinchkheda, Dahival, Gondas, Isarde, Jaithane, Jebapur, Khampada, Lonkhede, Mahir, Pimpalner, Rojegaon, Sakri, Shelbari, Umarpata)												
Min	7.3	115.0	44.0	6.4	2.9	0.0	40.0	6.1	17.8	10.0	0.1	0.1
Max	10.5	1449.4	540.0	94.0	91.0	0.3	545.0	664.9	344.4	108.0	1.6	187.9
Average	8.4	452.7	200.8	28.5	31.5	0.1	203.6	217.7	70.9	35.7	0.6	16.3
Stdev	0.7	258.8	88.3	18.4	16.8	0.1	111.3	145.3	67.8	24.3	0.3	30.3
% < Des	0.0	75.0	91.7	97.9	52.1	97.9	54.2	0.0	97.9	100.0	87.5	95.8
% P	68.8	25.0	8.3	2.1	47.9	2.1	45.8	0.0	2.1	0.0	8.3	0.0
% > Ex P	31.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	4.2

Taluka : Shirpur (Ajanad, Ambe, Bhatane, Boradi, Dahivad, Fattepur, Gadhadeo, Ghosdogaon, Hadakhed, Higaon, Khambale, Kherde, Khmkheda, Kolid, Mohide, Nimzari, Palasner, Sangivi, Shirpur, Songir, Sule, Tardi, Tembhe Bk., Thalner, Umarde, Wagjadi)												
Min	7.5	209.0	128.0	3.2	13.6	0.0	85.0	96.8	22.0	6.0	0.1	0.1
Max	9.1	1221.7	520.0	130.0	82.6	0.8	432.0	524.6	383.4	115.0	1.8	171.7
Average	8.3	482.7	250.0	32.9	40.7	0.1	233.9	257.5	88.0	39.7	0.6	18.1
Stdev	0.4	207.1	72.3	26.4	13.8	0.1	78.6	101.1	66.2	22.1	0.4	27.1
% < Des	0.0	56.9	77.6	93.1	24.1	87.9	29.3	0.0	96.6	100.0	86.2	93.1
% P	74.1	43.1	22.4	6.9	75.9	12.1	70.7	0.0	3.4	0.0	8.6	0.0
% > Ex P	25.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	6.9

Taluka : Sindkheda (Betavad, Chimthane, Dabhashi, Dalwade, Dangurne, Degaon, Dhavde, Dondaicha, Ichhapur, Kalmadi, Karle, Khalane, Mahalsar, Malpur, Methi, Nardana, Salve, Sandle, Satare, Shevade, Shinkheda, Sukvad, Takarkhede, Vaghadi, Varpada, Varshi, Varud, Varzadi, Virdel)												
Min	7.5	240.0	104.0	4.8	12.6	0.0	36.0	43.7	22.0	15.0	0.1	0.1
Max	9.2	3117.0	1000.0	195.2	204.1	0.3	468.0	571.0	820.0	274.1	1.6	310.0
Average	8.2	862.2	341.0	46.5	54.6	0.1	216.9	254.1	206.6	67.7	0.6	29.9
Stdev	0.4	506.7	207.6	39.4	37.3	0.1	94.6	118.2	186.3	47.4	0.3	47.7
% < Des	0.0	20.8	58.3	81.9	16.7	100.0	50.0	0.0	72.2	97.2	86.1	93.1
% P	72.2	76.4	30.6	18.1	72.2	0.0	50.0	0.0	27.8	2.8	12.5	0.0
% > Ex P	27.8	2.8	11.1	0.0	11.1	0.0	0.0	0.0	0.0	0.0	1.4	6.9

10. GADCHIROLI

Taluka : Aheri (Allapalli, Govindgaon, Govindpur, Khamancheru, Kottur, Medpalli, Mirkal masahat, Modumadgu, Mosam, Nandigaon masahat, Permili surveyed, Pirimili, Rajeram, Repanpalli, Talodhi Rampur, Timiram, Umanur)												
	'pH	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.1	246.0	160.0	12.0	12.0	0.0	75.0	91.5	30.0	9.0	0.2	0.1
Max	9.0	1401.0	850.9	176.0	118.6	0.9	605.0	738.1	430.0	624.0	2.4	211.0
Average	8.0	669.0	394.9	64.3	56.9	0.1	310.1	367.8	113.7	65.1	0.7	50.8
Stdev	0.5	277.0	187.2	47.5	27.9	0.2	142.4	177.0	109.6	106.7	0.4	45.6
% < Des	0.0	25.0	40.6	68.8	12.5	87.5	28.1	0.0	87.5	96.9	84.4	59.4
% P	84.4	75.0	40.6	31.3	78.1	12.5	68.8	0.0	12.5	0.0	12.5	0.0
% > Ex P	15.6	0.0	18.8	0.0	9.4	0.0	3.1	0.0	0.0	3.1	3.1	40.6

Taluka : Bhamragarh (Bhamragad, Dodepalli, Kiyar, Narguda, Tadgaon)												
Min	7.9	335.9	208.0	33.6	29.0	0.0	136.0	134.3	58.0	8.0	0.0	1.0
Max	8.4	605.0	380.0	76.8	53.5	0.5	408.0	497.8	152.0	44.0	0.9	30.0
Average	8.1	478.0	304.4	60.2	37.4	0.2	213.2	241.0	96.6	23.8	0.4	16.3
Stdev	0.2	114.0	59.1	15.2	8.9	0.1	86.1	118.0	35.9	14.0	0.3	10.0
% < Des	0.0	50.0	50.0	62.5	25.0	87.5	62.5	0.0	100.0	100.0	100.0	100.0
% P	100.0	50.0	50.0	37.5	75.0	12.5	37.5	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Chamorshi (Ashti, Bhendala, Chamorshi, Ghot, Konsari, Kurud, Nawargaon, Regadi, Shankarpur Heti, Talodhi mokasa, Wagholi)												
Min	7.5	279.6	180.0	12.8	27.2	0.0	56.0	68.3	34.0	6.0	0.2	1.0
Max	9.0	1099.0	720.0	174.0	133.2	0.4	412.0	473.4	490.0	153.6	2.5	169.9
Average	8.2	601.6	343.1	51.5	52.1	0.1	240.3	264.8	133.3	38.4	0.8	46.7
Stdev	0.5	265.7	169.3	43.5	28.8	0.1	99.4	114.3	120.8	37.5	0.5	62.3
% < Des	0.0	50.0	50.0	78.6	14.3	92.9	35.7	0.0	92.9	100.0	85.7	78.6
% P	78.6	50.0	35.7	21.4	78.6	7.1	64.3	0.0	7.1	0.0	7.1	0.0
% > Ex P	21.4	0.0	14.3	0.0	7.1	0.0	0.0	0.0	0.0	0.0	7.1	21.4

Taluka : Desaiganj (wadsa) (Shankarpur, Wadsa)												
Min	7.5	292.9	220.0	44.0	25.5	0.0	70.0	85.4	82.0	28.0	0.1	8.0
Max	8.3	878.6	598.4	162.0	47.0	0.0	269.7	329.0	248.0	88.0	0.5	126.0
Average	7.8	539.2	384.1	91.7	37.7	0.0	169.9	201.2	151.4	49.4	0.3	60.1
Stdev	0.3	238.1	146.7	47.4	7.8	0.0	76.3	96.6	76.2	24.3	0.1	55.9
% < Des	0.0	50.0	33.3	50.0	16.7	100.0	66.7	0.0	100.0	100.0	100.0	50.0
% P	100.0	50.0	66.7	50.0	83.3	0.0	33.3	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0

Taluka : Dhanora (Chatgaon, Chavela, Dhanora, Kosami, Murmadi, Murumgaon, Pendhri, Rangi, Sakhera, Salebhatti, Sawargaon, Yerkadmowad)												
Min	7.3	143.0	84.0	19.2	6.8	0.0	75.0	91.5	25.0	4.0	0.1	1.0
Max	8.7	794.0	380.0	112.0	33.0	0.3	209.8	256.0	190.0	121.0	1.1	156.0
Average	8.0	389.8	223.4	57.6	19.3	0.1	146.5	163.9	81.2	29.4	0.4	29.5
Stdev	0.4	185.8	82.0	25.3	8.1	0.1	53.4	65.1	48.3	29.7	0.3	37.6
% < Des	0.0	76.5	76.5	70.6	88.2	94.1	70.6	0.0	100.0	100.0	88.2	76.5
% P	88.2	23.5	23.5	29.4	11.8	5.9	29.4	0.0	0.0	0.0	11.8	0.0
% > Ex P	11.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.5

Taluka : Etapalli (Aldandi, Alenga(tola), Dindwi, Elchil, Etapalli, Halewara, Kandoli surveyed, Nender, Parsalgondi masahat, Tadgaon, Todsa Tola, Yetapalli)												
	'pH	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^-**	**SO_4^{-2}**	**F^-**	**NO_3^-**
Min	7.6	292.8	180.0	22.0	6.8	0.0	100.0	4.8	28.0	6.0	0.1	1.0
Max	11.0	834.0	480.0	97.6	76.8	0.3	548.0	610.0	170.0	57.6	1.8	88.0
Average	8.2	480.9	288.8	57.8	35.1	0.1	214.1	247.5	76.0	34.5	0.6	45.0
Stdev	0.8	151.8	92.5	22.8	18.3	0.1	116.7	143.3	35.6	17.2	0.4	29.5
% < Des	0.0	56.3	56.3	75.0	43.8	100.0	56.3	0.0	100.0	100.0	87.5	56.3
% P	87.5	43.8	43.8	25.0	56.3	0.0	43.8	0.0	0.0	0.0	6.3	0.0
% > Ex P	12.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	43.8

Taluka : Gadchiroli (Bamni, Chandona Tola, Erkar, Fulbori, Gadchiroli, Govindpur alias pipalkhut, Gowardha, Jarawadi (Indiranagar), Khondala, Mulchera, Porla, Potegaon, Sakhara, Yelgur Tola)												
Min	7.1	74.2	50.0	12.0	4.8	0.0	50.0	61.0	10.7	2.4	0.0	1.0
Max	8.4	1132.0	672.0	134.0	91.4	0.3	409.8	500.0	516.0	101.0	1.1	254.0
Average	7.9	419.8	277.5	61.8	29.9	0.0	188.8	226.2	94.8	26.2	0.4	30.4
Stdev	0.3	265.8	161.0	35.4	23.3	0.1	90.4	108.3	125.7	25.6	0.3	49.2
% < Des	0.0	71.4	60.7	71.4	60.7	96.4	57.1	0.0	89.3	100.0	96.4	78.6
% P	100.0	28.6	32.1	28.6	39.3	3.6	42.9	0.0	10.7	0.0	3.6	0.0
% > Ex P	0.0	0.0	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.4

Taluka : Korchi (Bedgaon, Betkathi, Bodaldand, Bori, Korchi, Kotgul, Malewara, Maseli, Zankargondi)												
Min	7.4	104.5	68.0	18.0	3.9	0.0	64.8	66.3	20.0	1.0	0.2	1.0
Max	9.4	1069.9	760.0	82.0	135.0	0.3	160.0	189.0	238.0	142.0	0.5	316.0
Average	8.4	363.3	222.1	45.8	26.2	0.2	120.9	115.7	75.8	27.2	0.3	44.1
Stdev	0.6	304.7	212.4	21.8	41.8	0.1	36.6	38.9	69.1	45.2	0.1	102.4
% < Des	0.0	77.8	88.9	88.9	77.8	88.9	100.0	0.0	100.0	100.0	100.0	88.9
% P	66.7	22.2	0.0	11.1	11.1	11.1	0.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	33.3	0.0	11.1	0.0	11.1	0.0	0.0	0.0	0.0	0.0	0.0	11.1

Taluka : Kurkheda (Bijarpurtola, Gargada, Gewardha, Ghati, Gothangaon, Jambhulkheda, Kasari, Khedegaon, Kurkheda, Malewada, Mendha, Shivani, Talegaon, Wadhona, Yengelkheda)												
Min	7.7	193.0	128.0	20.8	7.8	0.0	76.0	74.5	28.0	3.0	0.1	1.0
Max	8.5	694.0	448.0	107.2	47.0	0.5	209.8	256.0	230.0	60.0	0.7	67.0
Average	8.3	379.0	222.3	51.1	23.0	0.2	136.1	138.6	95.4	19.4	0.3	12.6
Stdev	0.2	148.0	91.4	23.6	11.9	0.1	44.7	51.3	50.9	16.7	0.2	16.1
% < Des	0.0	81.3	87.5	81.3	75.0	93.8	81.3	0.0	100.0	100.0	100.0	93.8
% P	100.0	18.8	12.5	18.8	25.0	6.3	18.8	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3

Taluka : Mulchera (Chaudampalli, Ghot, Gomni, Koparalli, Lagam, Mulchera)												
Min	7.3	223.0	140.0	20.8	17.0	0.0	80.0	97.6	18.0	5.8	0.2	1.0
Max	8.7	1515.0	796.0	190.0	131.0	0.2	464.8	567.0	348.0	245.8	2.0	290.2
Average	7.9	854.7	493.7	90.1	65.2	0.1	253.6	298.2	184.0	97.7	0.8	135.3
Stdev	0.5	465.9	215.4	54.4	34.9	0.1	101.8	128.2	124.2	92.5	0.6	112.0
% < Des	0.0	20.0	20.0	40.0	20.0	100.0	30.0	0.0	70.0	70.0	60.0	40.0
% P	80.0	80.0	40.0	60.0	60.0	0.0	70.0	0.0	30.0	30.0	30.0	0.0
% > Ex P	20.0	0.0	40.0	0.0	20.0	0.0	0.0	0.0	0.0	0.0	10.0	60.0

Taluka : Sironcha (Nandigaon, Rangayyapalli, Sirkonda mal, Sironcha)												
	'pH	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.4	351.0	150.0	50.0	6.0	0.0	48.0	46.8	57.0	19.0	0.1	18.0
Max	8.6	837.0	655.0	96.0	115.0	0.4	450.0	549.0	110.0	72.0	0.7	129.0
Average	7.9	563.5	370.6	70.6	47.5	0.1	249.0	296.9	80.3	48.3	0.5	69.0
Stdev	0.5	188.8	192.1	16.5	39.4	0.1	151.9	191.9	18.3	19.5	0.3	47.7
% < Des	0.0	42.9	42.9	42.9	42.9	85.7	42.9	0.0	100.0	100.0	100.0	42.9
% P	85.7	57.1	42.9	57.1	42.9	14.3	57.1	0.0	0.0	0.0	0.0	0.0
% > Ex P	14.3	0.0	14.3	0.0	14.3	0.0	0.0	0.0	0.0	0.0	0.0	57.1

Taluka : Armori (Armori, Bolddhachak, Delanwadi, Dongargaon(bhusari), Jambhali, Shankarnagar, Waddha, Wairagarh)												
Min	7.4	208.7	155.0	24.0	17.5	0.0	95.0	115.9	49.7	9.6	0.1	1.0
Max	8.4	875.0	443.4	100.0	53.5	0.7	295.1	360.0	216.0	84.0	0.6	172.0
Average	7.9	482.8	286.0	63.3	31.0	0.1	190.9	223.9	111.4	31.2	0.3	25.6
Stdev	0.3	174.2	91.2	25.2	10.4	0.2	63.7	83.7	46.4	17.9	0.2	42.8
% < Des	0.0	64.3	64.3	64.3	42.9	92.9	64.3	0.0	100.0	100.0	100.0	92.9
% P	100.0	35.7	35.7	35.7	57.1	7.1	35.7	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.1

Taluka : Wadsa (Boddha-gaoganna, Kasari t.k., Shankarpur, Vihirgaon, Wadsa)												
Min	8.1	131.0	116.0	11.2	21.4	0.2	52.0	11.0	36.0	4.0	0.1	1.0
Max	10.6	622.0	304.0	56.0	42.8	0.4	184.0	181.8	198.0	47.0	0.7	20.0
Average	8.8	454.8	236.0	43.2	31.1	0.3	93.6	73.7	131.6	28.8	0.3	12.4
Stdev	1.0	190.4	71.4	18.2	8.9	0.1	54.5	69.3	68.9	15.8	0.2	7.3
% < Des	0.0	60.0	80.0	100.0	40.0	40.0	100.0	0.0	100.0	100.0	100.0	100.0
% P	40.0	40.0	20.0	0.0	60.0	60.0	0.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	60.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

11. GONDIA

Taluka : Amgaon (Amgaon, Dahegaon, Dongargaon, Kalimati, Malhi, Padmapur, Thana, Waghdongri)												
	'pH	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.4	128.7	65.0	16.0	2.4	0.0	69.7	85.0	28.0	4.3	0.0	1.2
Max	8.3	821.0	440.0	92.8	58.3	0.6	348.0	424.6	222.0	73.0	1.6	126.0
Average	7.9	412.0	240.4	55.6	24.6	0.1	169.1	199.1	111.7	28.3	0.7	22.9
Stdev	0.3	212.6	120.4	25.0	16.8	0.2	73.0	84.2	72.9	22.3	0.5	33.0
% < Des	0.0	70.6	64.7	70.6	52.9	76.5	58.8	0.0	100.0	100.0	76.5	82.4
% P	100.0	29.4	35.3	29.4	47.1	23.5	41.2	0.0	0.0	0.0	17.6	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9	17.6

Taluka : Arjuni Moregaon (Arjuni Morgaon, Bondgaon, Bondgaon Devi, Gothangaon, Karandli, Navegaon, Navegaon II (Kh.), Pandharwani (mal), Salai Bk, Tadgaon, Tukum Narayan, Umarpayali, Zanshinagar)												
Min	7.3	160.0	115.0	22.0	5.3	0.0	65.0	79.3	11.0	0.2	0.1	0.2
Max	8.3	1019.0	684.0	126.0	100.1	0.4	260.0	317.2	336.0	98.9	1.4	142.8
Average	7.9	447.8	272.9	67.1	25.5	0.1	166.3	192.7	107.6	37.6	0.5	45.1
Stdev	0.3	257.8	148.0	34.3	20.9	0.2	53.2	64.1	90.7	34.7	0.3	52.2
% < Des	0.0	60.0	65.0	70.0	70.0	85.0	65.0	0.0	95.0	100.0	90.0	65.0
% P	100.0	40.0	30.0	30.0	25.0	15.0	35.0	0.0	5.0	0.0	10.0	0.0
% > Ex P	0.0	0.0	5.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	35.0

Taluka : Deori (Ambhora, Bonde, Borgaon Bazar, Chichgad, Deori, Hardoli, Kadikasa, Mhaisuli, Murdoli, Palandur(zamindari))												
Min	7.6	107.0	60.0	12.8	6.3	0.0	56.0	54.2	14.0	3.0	0.2	1.2
Max	9.6	496.0	248.0	72.0	28.2	0.5	245.1	299.0	148.0	56.2	1.0	105.0
Average	8.3	328.6	160.9	38.0	16.0	0.2	133.9	143.5	78.7	25.8	0.5	26.7
Stdev	0.6	134.7	56.3	18.3	6.9	0.2	55.7	68.0	41.6	18.4	0.2	29.6
% < Des	0.0	100.0	100.0	100.0	100.0	81.3	93.8	0.0	100.0	100.0	93.8	81.3
% P	75.0	0.0	0.0	0.0	0.0	18.8	6.3	0.0	0.0	0.0	6.3	0.0
% > Ex P	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.8

Taluka : Gondia (Arjuni, Asoli, Bonde, Datora, Ekodi, Ghattemni, Ghonari, Katangi Bk., Navegaon, Pandharabodi, Rajegaon, Sangadi, Sindbiri, Sondad)												
Min	7.0	56.6	30.0	8.0	2.4	0.0	25.4	31.0	7.0	0.1	0.0	0.1
Max	9.5	1062.0	704.0	153.6	101.1	0.6	265.0	323.3	470.0	97.9	1.6	127.7
Average	8.0	333.0	203.9	53.6	17.0	0.1	115.1	133.9	86.6	21.7	0.5	26.1
Stdev	0.5	251.3	143.5	32.1	20.0	0.2	59.6	77.1	101.9	29.0	0.4	31.8
% < Des	0.0	86.2	86.2	86.2	86.2	79.3	89.7	0.0	93.1	100.0	89.7	82.8
% P	89.7	13.8	10.3	13.8	10.3	20.7	10.3	0.0	6.9	0.0	6.9	0.0
% > Ex P	10.3	0.0	3.4	0.0	3.4	0.0	0.0	0.0	0.0	0.0	3.4	17.2

Taluka : Goregaon (Goregaon)												
Min	7.5	326.4	135.0	30.0	12.2	0.0	140.0	170.8	53.3	27.4	0.8	8.1
Max	8.1	507.6	200.0	54.0	16.0	0.0	230.3	281.0	117.0	36.0	1.1	27.0
Average	7.7	396.8	173.3	46.0	14.2	0.0	183.4	223.8	88.7	32.5	0.9	17.3
Stdev	0.3	97.1	34.0	13.9	1.9	0.0	45.3	55.2	32.5	4.5	0.1	9.5
% < Des	0.0	66.7	100.0	100.0	100.0	100.0	66.7	0.0	100.0	100.0	66.7	100.0
% P	100.0	33.3	0.0	0.0	0.0	0.0	33.3	0.0	0.0	0.0	33.3	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Sadal Arjuni (Khodshioni, Kohemara, Malijunga, Mhaswani, Saundad, Sawangi)												
	'pH	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.9	145.0	96.0	11.2	9.7	0.0	60.0	53.1	36.0	3.0	0.3	4.2
Max	9.1	488.0	308.0	70.4	44.7	0.5	208.0	238.0	142.0	56.0	1.4	58.8
Average	8.4	318.8	209.1	42.9	24.7	0.2	148.9	158.9	74.0	24.6	0.6	16.2
Stdev	0.4	123.7	68.6	21.0	11.3	0.2	56.3	65.5	38.8	18.7	0.4	18.0
% < Des	0.0	100.0	87.5	100.0	75.0	62.5	75.0	0.0	100.0	100.0	87.5	87.5
% P	62.5	0.0	12.5	0.0	25.0	37.5	25.0	0.0	0.0	0.0	12.5	0.0
% > Ex P	37.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.5

Taluka : Tiroda (Boda, Chorkhamara, Ghogra, Kachewani, Kawalewada, Lonhara, Rustampur, Salebardi, Sarra, Sejgaon, Tiroda, Vihirgaon)												
Min	7.3	273.2	120.0	12.8	14.6	0.0	44.0	24.4	14.0	6.0	0.3	2.4
Max	9.4	1771.0	1220.0	275.2	129.3	0.8	448.0	449.0	608.0	197.0	2.4	285.6
Average	8.1	604.8	367.4	86.4	36.8	0.2	160.8	184.4	191.4	60.5	0.9	62.6
Stdev	0.7	380.1	252.5	67.6	26.8	0.2	106.5	124.6	154.3	53.1	0.6	76.4
% < Des	0.0	45.0	40.0	50.0	65.0	65.0	75.0	0.0	80.0	100.0	70.0	60.0
% P	70.0	55.0	50.0	45.0	30.0	35.0	25.0	0.0	20.0	0.0	15.0	0.0
% > Ex P	30.0	0.0	10.0	5.0	5.0	0.0	0.0	0.0	0.0	0.0	15.0	40.0

Taluka : Salekasa (Kahali, Khedepar, Latori, Salekasa, Thadezari, Tirkhedi)												
Min	7.6	160.0	64.0	14.4	2.4	0.0	64.0	48.1	11.0	0.3	0.2	2.0
Max	9.5	1082.0	568.0	118.4	66.1	0.7	195.1	238.0	420.0	101.0	0.9	88.2
Average	8.6	395.4	207.4	47.2	21.7	0.3	110.4	114.5	126.8	26.9	0.6	14.9
Stdev	0.8	312.0	166.8	34.8	21.8	0.2	42.4	62.9	133.6	34.7	0.3	29.7
% < Des	0.0	75.0	75.0	87.5	75.0	62.5	100.0	0.0	87.5	100.0	100.0	87.5
% P	37.5	25.0	25.0	12.5	25.0	37.5	0.0	0.0	12.5	0.0	0.0	0.0
% > Ex P	62.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.5

12. HINGOLI

Taluka : Aundha (Nag) (Ajalsoda, Aundha (Nag), Shiradshahapur, Undegaon)												
	'pH	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.2	402.0	136.0	16.0	2.9	0.0	40.4	49.0	40.0	15.0	0.2	0.5
Max	11.0	1352.0	400.0	78.0	84.1	0.8	275.4	336.0	348.0	220.0	4.1	29.0
Average	8.3	784.5	273.2	50.8	35.6	0.3	166.1	190.8	148.3	65.3	1.2	7.5
Stdev	1.1	362.4	81.7	23.4	21.5	0.2	81.3	99.6	99.4	59.8	1.1	10.3
% < Des	0.0	30.0	70.0	90.0	50.0	60.0	50.0	0.0	90.0	90.0	50.0	100.0
% P	70.0	70.0	30.0	10.0	50.0	40.0	50.0	0.0	10.0	10.0	30.0	0.0
% > Ex P	30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	0.0

Taluka : Basmatnagar (Adgaon-I, Aral, Babulgaon, Basmath, Hatta, Hingoli, Lon Bk, Pardi KH, Sawangi bk, Telgaon)												
Min	7.3	233.0	52.0	4.8	1.0	0.0	36.0	39.9	25.0	15.0	0.3	0.6
Max	11.0	1352.0	392.0	99.2	64.2	0.8	404.9	494.0	180.0	91.1	1.7	85.2
Average	7.9	529.8	243.9	50.4	28.6	0.2	165.7	198.2	84.4	44.2	0.8	18.7
Stdev	0.8	278.1	91.8	25.2	14.6	0.2	89.8	106.2	46.0	24.9	0.4	27.9
% < Des	0.0	57.9	73.7	84.2	57.9	68.4	73.7	0.0	100.0	100.0	78.9	84.2
% P	94.7	42.1	26.3	15.8	42.1	31.6	26.3	0.0	0.0	0.0	10.5	0.0
% > Ex P	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.5	15.8

Taluka : Hingoli (Alegaon (Old), Basamba, Brahmapur, Chincholi Rumna, Churawa, Hingoli, Karanjala, Limbala, Narsinamdeo)												
Min	7.2	222.0	48.0	8.0	1.0	0.0	32.0	0.0	20.0	2.0	0.3	0.7
Max	9.0	1612.0	650.0	174.4	94.0	0.8	445.1	543.0	450.0	347.5	1.6	55.0
Average	8.0	733.5	334.6	63.4	42.8	0.2	195.0	212.5	152.7	85.4	0.9	13.3
Stdev	0.6	376.0	153.5	41.1	26.7	0.2	99.2	135.4	114.2	92.4	0.3	15.9
% < Des	0.0	29.2	41.7	66.7	37.5	75.0	45.8	0.0	79.2	87.5	66.7	91.7
% P	79.2	70.8	50.0	33.3	62.5	25.0	54.2	0.0	20.8	12.5	29.2	0.0
% > Ex P	20.8	0.0	8.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	8.3

Taluka : Sengaon (Kanhergaon, Khadki, Sakhara)												
Min	7.5	168.0	52.0	14.4	2.9	0.0	28.5	12.1	44.0	6.0	0.1	0.6
Max	10.0	724.0	304.3	74.0	44.7	0.5	250.0	305.0	136.0	50.0	1.6	9.7
Average	8.2	410.0	198.7	47.4	19.6	0.2	140.0	157.4	81.3	23.0	0.8	4.4
Stdev	0.9	188.1	116.2	24.6	18.0	0.2	95.0	129.7	33.9	15.8	0.6	3.8
% < Des	0.0	66.7	66.7	100.0	66.7	66.7	66.7	0.0	100.0	100.0	66.7	100.0
% P	83.3	33.3	33.3	0.0	33.3	33.3	33.3	0.0	0.0	0.0	16.7	0.0
% > Ex P	16.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.7	0.0

Taluka : Kalmnuri (Bibgavhan, Bolda, Dongarkada, Redgaon, Tuppa)												
Min	7.6	449.0	156.0	14.4	29.2	0.1	92.0	90.9	32.0	18.3	0.8	0.8
Max	8.3	969.0	612.0	139.2	64.2	0.6	296.0	361.1	256.0	83.0	1.5	9.0
Average	7.9	624.7	313.7	58.3	40.8	0.4	184.4	210.8	132.9	49.1	1.1	3.7
Stdev	0.3	196.4	149.3	41.7	12.7	0.2	74.3	97.5	70.2	25.0	0.2	3.4
% < Des	0.0	42.9	57.1	71.4	28.6	28.6	57.1	0.0	85.7	100.0	42.9	100.0
% P	100.0	57.1	28.6	28.6	71.4	71.4	42.9	0.0	14.3	0.0	57.1	0.0
% > Ex P	0.0	0.0	14.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

13. JALGAON

Taluka : Amalner (Amalner, Bodwad, Dhar, Lon Bk., Lone, Mehergaon, Mudi pr.dangr, Mundane. Pr. Amalner., Pimpri. p. jalod., Sadavan Bk.,Savkheda)												
	'pH	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.4	264.0	108.0	20.8	10.7	0.0	100.0	122.0	26.0	19.0	0.2	0.3
Max	9.6	4051.0	2080.0	449.6	449.6	0.5	600.0	731.5	1263.8	757.0	1.7	1153.2
Average	8.4	1523.3	758.6	122.8	109.8	0.2	275.1	322.2	427.3	163.3	0.8	171.2
Stdev	0.6	1267.1	678.6	115.1	122.8	0.2	143.5	182.3	403.6	209.1	0.4	359.9
% < Des	0.0	18.8	25.0	50.0	25.0	75.0	37.5	0.0	43.8	81.3	75.0	75.0
% P	62.5	56.3	37.5	31.3	43.8	25.0	62.5	0.0	37.5	0.0	18.8	0.0
% > Ex P	37.5	25.0	37.5	18.8	31.3	0.0	0.0	0.0	18.8	18.8	6.3	25.0

Taluka : Bhadgaon (Balad kh., Bhadgaon, Kajgaon, Nimbhore, Pasardi, Varkhedi)												
Min	7.4	364.7	124.0	12.8	22.4	0.0	100.0	113.8	50.0	0.3	0.4	21.0
Max	8.3	1832.8	1300.0	280.0	145.9	0.2	320.0	390.4	538.8	294.0	0.7	465.0
Average	8.0	774.8	438.6	85.4	54.7	0.1	220.4	266.1	158.9	82.7	0.5	101.5
Stdev	0.3	502.7	349.8	84.2	35.1	0.1	75.1	96.3	161.5	89.2	0.1	158.3
% < Des	0.0	50.0	30.0	80.0	10.0	100.0	30.0	0.0	80.0	90.0	100.0	70.0
% P	100.0	50.0	50.0	10.0	80.0	0.0	70.0	0.0	20.0	10.0	0.0	0.0
% > Ex P	0.0	0.0	20.0	10.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	30.0

Taluka : Bhusawal (Bhusawal (New), Mondhale, Thakali)												
Min	7.3	381.1	192.5	10.0	25.3	0.0	115.0	140.3	24.8	0.4	0.5	1.2
Max	8.8	697.0	410.0	62.0	62.0	0.4	400.0	488.0	163.1	100.8	2.2	30.0
Average	8.1	479.8	256.6	34.0	41.7	0.1	242.9	296.3	81.1	48.5	1.0	10.0
Stdev	0.5	111.1	74.7	20.6	14.3	0.2	134.7	164.3	56.1	39.6	0.6	10.0
% < Des	0.0	71.4	85.7	100.0	28.6	85.7	57.1	0.0	100.0	100.0	42.9	100.0
% P	85.7	28.6	14.3	0.0	71.4	14.3	42.9	0.0	0.0	0.0	42.9	0.0
% > Ex P	14.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.3	0.0

Taluka : Bodwad (Bodwad)												
Min	8.0	419.3	290.0	33.0	50.5	0.0	155.0	189.1	79.8	35.0	0.5	58.0
Max	8.0	593.9	400.0	60.0	60.8	0.0	190.1	231.9	156.2	105.6	0.6	60.8
Average	8.0	506.6	345.0	46.5	55.6	0.0	172.5	210.5	118.0	70.3	0.6	59.4
Stdev	0.0	123.4	77.8	19.1	7.3	0.0	24.8	30.2	54.0	49.9	0.1	2.0
% < Des	0.0	50.0	50.0	100.0	0.0	100.0	100.0	0.0	100.0	100.0	100.0	0.0
% P	100.0	50.0	50.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0

Taluka : Chalisgaon (Adgaon, Bhoraj, Bhoras bk., Chalisgaon, Hirapur, Kharjai, Mahunbare, Mehunbare, Patne, Pimpalgaon, Sevanagar, Wakdi)												
Min	7.4	321.4	165.0	30.0	16.0	0.0	85.0	103.7	75.0	22.0	0.3	5.0
Max	8.2	1024.0	690.0	156.0	73.0	0.3	290.1	353.9	259.2	158.4	0.7	203.0
Average	7.9	601.1	309.4	60.7	38.3	0.2	164.3	194.1	128.6	59.6	0.5	39.9
Stdev	0.2	193.7	120.0	32.1	14.2	0.1	58.0	73.9	61.3	41.5	0.1	52.9
% < Des	0.0	31.3	62.5	81.3	25.0	68.8	75.0	0.0	87.5	100.0	100.0	68.8
% P	100.0	68.8	31.3	18.8	75.0	31.3	25.0	0.0	12.5	0.0	0.0	0.0
% > Ex P	0.0	0.0	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	31.3

Taluka : Chopda (Adawad, Adgaon, Chahardi, Chopda, Deoziri, Dhanora, Hated bk., Karjane, Lahasur, Maratha, Mitawali)												
	'pH	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.9	309.0	35.0	13.0	0.6	0.0	37.5	45.8	34.0	10.0	0.1	0.0
Max	8.9	1690.0	780.0	156.8	177.9	1.3	720.0	878.4	470.0	118.0	1.6	137.6
Average	8.3	712.0	339.4	53.6	49.9	0.4	225.4	263.0	169.0	48.4	0.8	18.6
Stdev	0.3	348.8	184.8	36.7	34.3	0.3	125.3	153.3	117.2	25.7	0.4	25.1
% < Des	0.0	29.0	61.3	87.1	25.8	32.3	51.6	0.0	77.4	100.0	71.0	96.8
% P	90.3	71.0	29.0	12.9	67.7	58.1	45.2	0.0	22.6	0.0	25.8	0.0
% > Ex P	9.7	0.0	9.7	0.0	6.5	9.7	3.2	0.0	0.0	0.0	3.2	3.2

Taluka : Dharangaon (Dharangaon, Pimpalkotha)												
Min	7.5	480.8	310.0	32.0	48.6	0.0	115.0	140.3	159.8	24.0	0.3	83.7
Max	8.1	1454.4	930.0	204.0	102.1	0.0	210.1	256.3	510.5	148.8	0.7	290.0
Average	7.8	822.0	504.0	85.6	70.5	0.0	154.0	187.9	249.7	78.4	0.5	154.8
Stdev	0.3	374.1	245.6	71.9	21.3	0.0	40.6	49.5	147.4	47.1	0.2	81.7
% < Des	0.0	20.0	0.0	60.0	0.0	100.0	80.0	0.0	80.0	100.0	100.0	0.0
% P	100.0	80.0	80.0	20.0	80.0	0.0	20.0	0.0	20.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	20.0	20.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0

Taluka : Erandol (Adgaon, Chandsar, Eklagna, Erandol, Kasoda, Kavhal, Kharchi bk., Nagduli, Paldhi kh., Pastane .kh, Pimpri seem.,Vankothe, Zurkheda)												
Min	7.3	255.0	165.0	24.0	19.4	0.0	120.0	138.6	37.2	12.0	0.2	1.0
Max	8.8	1683.0	920.0	160.0	161.4	0.6	460.0	560.7	489.2	201.6	1.1	275.0
Average	8.1	729.7	371.3	55.1	56.7	0.2	231.4	271.2	161.3	54.7	0.5	38.7
Stdev	0.3	438.1	183.1	31.0	38.4	0.2	81.8	105.1	123.1	43.7	0.3	66.8
% < Des	0.0	42.3	46.2	84.6	23.1	73.1	38.5	0.0	80.8	96.2	88.5	84.6
% P	88.5	57.7	42.3	15.4	65.4	26.9	61.5	0.0	19.2	3.8	11.5	0.0
% > Ex P	11.5	0.0	11.5	0.0	11.5	0.0	0.0	0.0	0.0	0.0	0.0	15.4

Taluka : Jamner (Jamner, Kekat Nimbhora, Neri, Shendurni, Shengola)												
Min	7.3	328.0	180.0	24.0	26.7	0.0	100.0	122.0	32.0	29.8	0.4	8.7
Max	8.2	1029.5	690.0	112.0	131.3	0.0	390.1	476.0	248.2	124.8	0.9	192.0
Average	7.9	555.0	342.0	51.3	52.0	0.0	224.6	274.0	102.2	65.0	0.6	72.0
Stdev	0.3	208.5	148.1	24.6	29.2	0.0	95.5	116.6	59.0	30.6	0.1	59.2
% < Des	0.0	45.5	36.4	90.9	18.2	100.0	54.5	0.0	100.0	100.0	100.0	36.4
% P	100.0	54.5	54.5	9.1	72.7	0.0	45.5	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	9.1	0.0	9.1	0.0	0.0	0.0	0.0	0.0	0.0	63.6

Taluka : Mukainagar (Narvel)												
Min	7.4	751.6	520.0	28.0	109.4	0.0	290.1	353.9	141.8	22.0	0.4	194.0
Max	7.4	751.6	520.0	28.0	109.4	0.0	290.1	353.9	141.8	22.0	0.4	194.0
Average	7.4	751.6	520.0	28.0	109.4	0.0	290.1	353.9	141.8	22.0	0.4	194.0
% < Des	0.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0	100.0	100.0	100.0	0.0
% P	100.0	100.0	100.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0

Taluka : Parola (Adgaon, Dholi, Jamde, Karadi, Mhasve, Parola, Rajwad, Sarve. bk., Titvishiv, Undirkheda)												
	'pH	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.5	278.0	144.0	18.0	7.8	0.0	100.0	122.0	24.0	12.0	0.1	1.0
Max	8.7	1131.0	564.0	139.2	64.4	1.2	290.0	353.8	275.0	134.4	0.8	148.2
Average	8.0	587.0	311.1	64.0	36.7	0.3	212.4	237.9	104.5	41.6	0.5	26.3
Stdev	0.4	248.3	113.5	34.2	16.3	0.3	50.8	66.4	74.4	34.3	0.2	43.1
% < Des	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	100.0	0.0
% P	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	100.0	100.0	100.0	100.0	0.0	100.0	0.0	100.0	100.0	0.0	100.0

Taluka : Raver (Ahirwadi, Balvadi, Bhokri, Lalmati, Lohara, Managalwadi, Padle bk., Rasalpur, Raver, Savkheda kh., Talwade Kd.)												
Min	7.5	279.2	185.0	12.0	24.3	0.0	95.0	108.9	28.4	9.0	0.1	1.5
Max	9.4	761.0	440.0	72.0	78.7	0.3	310.0	378.2	110.0	110.4	1.6	151.0
Average	8.2	461.5	269.2	39.1	41.7	0.1	174.9	198.2	80.9	37.8	0.5	31.3
Stdev	0.5	122.2	72.5	13.3	14.2	0.1	46.7	63.6	22.9	22.0	0.4	42.3
% < Des	0.0	60.9	78.3	100.0	13.0	95.7	65.2	0.0	100.0	100.0	82.6	78.3
% P	82.6	39.1	21.7	0.0	87.0	4.3	34.8	0.0	0.0	0.0	13.0	0.0
% > Ex P	17.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	21.7

Taluka : Yaval (Bamnod, Chincholi, Dujkheda, Faizpur, Gahukheda, Mohrale, Navi, Nimgaon, Ridhiri, Viroda, Waghoda, Yawal)												
Min	7.7	210.0	72.0	8.0	10.9	0.0	36.0	1.9	20.0	0.2	0.1	0.3
Max	10.7	1136.0	480.0	104.0	89.4	1.3	300.0	366.0	216.0	83.0	1.0	25.0
Average	8.4	505.0	256.1	42.6	36.4	0.3	193.9	211.3	98.5	33.2	0.5	8.9
Stdev	0.8	262.8	104.1	24.2	18.7	0.3	61.2	89.2	59.0	20.1	0.3	6.8
% < Des	0.0	54.5	68.2	86.4	50.0	81.8	59.1	0.0	100.0	100.0	95.5	100.0
% P	68.2	45.5	31.8	13.6	50.0	9.1	40.9	0.0	0.0	0.0	4.5	0.0
% > Ex P	31.8	0.0	0.0	0.0	0.0	9.1	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Jalgaon (Abhora Bk., Bodar, Chincholi, Dangarda, Dapore, Hated Budruk, Higone, Jalgaon, Jalke, Khedi, Kusumbe kh., Mendhoda, Naseerabad, Pimpri Akarant, Vakdi)												
Min	7.2	297.9	140.0	11.0	9.7	0.0	45.0	54.9	28.4	5.0	0.1	0.3
Max	8.8	1595.4	1050.0	196.0	136.2	0.2	650.2	793.3	581.4	148.8	2.0	409.8
Average	8.0	626.6	371.3	57.3	55.4	0.0	219.9	264.4	142.1	55.9	0.8	64.2
Stdev	0.4	336.6	190.5	37.6	29.4	0.1	113.1	139.5	138.3	38.4	0.5	96.8
% < Des	0.0	44.4	44.4	81.5	14.8	100.0	37.0	0.0	81.5	100.0	66.7	70.4
% P	92.6	55.6	48.1	18.5	77.8	0.0	59.3	0.0	18.5	0.0	29.6	0.0
% > Ex P	7.4	0.0	7.4	0.0	7.4	0.0	3.7	0.0	0.0	0.0	3.7	29.6

Taluka : Pachora (Bambrud .kh.p., Khurad bk., Nagardeola bk., Neri, Pachora, Satgaon, Vadgaon ambe)												
Min	8.0	438.0	156.0	30.4	18.5	0.1	164.0	149.5	10.0	6.0	0.1	2.0
Max	9.3	1199.0	544.0	113.6	66.1	0.9	484.0	590.5	210.0	96.0	1.1	72.0
Average	8.6	704.9	295.4	57.4	36.9	0.3	273.7	313.3	120.9	45.4	0.7	26.3
Stdev	0.5	332.4	172.7	37.2	19.7	0.3	144.9	194.1	63.0	28.6	0.4	30.6
% < Des	0.0	42.9	71.4	71.4	57.1	71.4	42.9	0.0	100.0	100.0	71.4	71.4
% P	42.9	57.1	28.6	28.6	42.9	28.6	57.1	0.0	0.0	0.0	28.6	0.0
% > Ex P	57.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.6

14. JALNA

Taluka : Ambad (Ambad, Churmapuri, Dungaon, Mahakalwasti, Nalewadi, Pangarkheda, Renapuri, Rohilagad, Shahagad, Shahapur, Shevga, Tahadgaon, Zirpi)												
	'pH	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.3	371.0	140.0	14.4	3.9	0.0	84.0	49.3	46.0	13.0	0.1	0.8
Max	9.5	2263.6	608.0	225.6	98.0	1.9	545.1	665.0	496.0	878.4	2.5	215.0
Average	8.0	1037.5	370.3	87.0	37.1	0.6	225.8	271.9	192.0	119.3	1.0	31.1
Stdev	0.5	524.1	132.7	52.9	22.0	0.6	109.5	137.4	99.9	188.4	0.5	42.4
% < Des	0.0	8.1	29.7	51.4	37.8	45.9	40.5	0.0	75.7	91.9	35.1	81.1
% P	91.9	83.8	64.9	43.2	62.2	29.7	59.5	0.0	24.3	2.7	51.4	0.0
% > Ex P	8.1	8.1	5.4	5.4	0.0	24.3	0.0	0.0	0.0	5.4	13.5	18.9

Taluka : Badnapur (Badnapur, Chanegaon, Deogaon kusali, Dhabadi, Dhopteshwar, Georai bazaar, Kandari kh., Matrewadi, Pangarkheda, Roshangaon, Silegaon, Tahadgaon)												
Min	7.1	288.0	134.0	11.2	4.4	0.0	55.8	37.7	36.0	5.0	0.4	0.6
Max	9.9	1495.0	725.0	176.0	97.0	1.5	357.5	436.2	344.0	440.0	2.0	83.3
Average	8.5	710.1	334.4	59.9	44.9	0.4	197.9	210.8	120.2	70.4	1.1	17.3
Stdev	0.8	373.6	177.8	50.9	21.8	0.5	97.6	146.4	82.1	91.3	0.4	24.5
% < Des	0.0	35.0	50.0	70.0	15.0	60.0	55.0	0.0	90.0	95.0	30.0	85.0
% P	55.0	65.0	40.0	30.0	85.0	25.0	45.0	0.0	10.0	0.0	55.0	0.0
% > Ex P	45.0	0.0	10.0	0.0	0.0	15.0	0.0	0.0	0.0	5.0	15.0	15.0

Taluka : Bhokardan (Badnapur, Baranjala lokhande, Bharadkheda, Bhokardan, Bhutkheda, Borgaon jahagir, Chanegaon, Dhopteshwar, Gosegaon, Hasnabad, Jafrabad, Kedar kheda, Khandala, Kumbhari, Latifpur, Longaon Mahora, Malkapur, Malkheda, Matrewadi, Muthad, Pimpalgaon Renukai, Takli kolte, Talegaon, Talni, Wakadi, Walsa khalsa, Walsadawargaon)												
Min	6.7	270.0	136.0	0.6	2.9	0.0	66.0	40.7	32.0	6.0	0.0	0.8
Max	10.0	3120.0	900.0	264.0	178.0	1.0	785.2	958.0	1290.0	401.0	2.0	569.8
Average	8.1	842.2	389.9	76.1	48.5	0.1	204.3	229.1	175.4	79.9	0.8	51.1
Stdev	0.8	476.3	190.7	58.9	32.4	0.2	104.8	139.2	183.8	65.9	0.5	106.2
% < Des	0.0	20.4	44.4	66.7	27.8	90.7	53.7	0.0	79.6	94.4	63.0	75.9
% P	79.6	77.8	40.7	25.9	66.7	9.3	44.4	0.0	18.5	3.7	25.9	0.0
% > Ex P	20.4	1.9	14.8	7.4	5.6	0.0	1.9	0.0	1.9	1.9	11.1	24.1

Taluka : Ghansawangi (Ghansawangi, Ghonshi bk., Jambsamarth, Kumbharpimpalgaon, Masegaon, Murma Kh., Paradgaon, Rajani, Rani unchegaon, Ranjani, Ravna, Tirthpuri)												
Min	7.5	228.0	122.0	14.4	14.6	0.0	64.0	56.7	24.0	9.0	0.1	0.1
Max	9.1	1638.0	800.0	147.2	139.0	0.5	300.0	366.0	470.0	150.0	1.6	206.0
Average	8.1	692.2	357.0	60.8	49.9	0.2	191.7	222.9	154.6	56.2	1.0	28.1
Stdev	0.5	334.2	179.6	36.5	33.2	0.1	62.5	85.9	119.4	41.9	0.5	40.6
% < Des	0.0	34.5	41.4	69.0	31.0	93.1	44.8	0.0	82.8	100.0	44.8	82.8
% P	75.9	65.5	48.3	31.0	58.6	6.9	55.2	0.0	17.2	0.0	24.1	0.0
% > Ex P	24.1	0.0	10.3	0.0	10.3	0.0	0.0	0.0	0.0	0.0	31.0	17.2

Taluka: Jafrabad (Bharadkheda,Bhutkheda, Deoulzari, Dhagi, Dungaon, Gola pangri, Jafrabad, Kalegaon, Kumbhari, Mahora, Pimpalgaon, Pokhari (singade), Revgaon, Rohilagad, Shevga, Viregaon, Zirpi)												
	'pH	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.3	224.0	116.0	17.6	4.9	0.0	48.0	42.4	26.0	9.0	0.2	0.6
Max	9.8	5648.3	3716.1	796.0	578.0	0.9	416.0	507.5	1344.0	504.0	1.3	2517.0
Average	8.1	1407.5	672.8	142.1	78.7	0.2	196.5	227.2	322.5	103.7	0.7	288.3
Stdev	0.7	1006.6	914.5	184.6	127.7	0.2	112.3	148.1	403.8	110.7	0.3	731.1
% < Des	0.0	29.2	37.5	58.3	41.7	70.8	66.7	0.0	66.7	87.5	54.2	66.7
% P	83.3	50.0	33.3	16.7	45.8	29.2	33.3	0.0	20.8	8.3	45.8	0.0
% > Ex P	16.7	20.8	29.2	25.0	12.5	0.0	0.0	0.0	12.5	4.2	0.0	33.3

Taluka : Jalna (Badnapur, Dhagi, Gola pangri, Jalna, Maujpuri, Ner, Pimpalgaon, Pokhari (singade), Ramnagar, Rohanwadi, Samangaon, Sarwadi, Seoli, Tirthpuri, Viregaon)												
Min	7.1	315.0	148.0	16.0	3.9	0.0	66.0	64.1	32.0	16.0	0.1	0.9
Max	9.9	5122.0	1595.0	325.0	289.7	1.4	836.4	1020.4	1000.0	308.0	2.0	152.0
Average	8.1	973.0	446.6	83.7	57.7	0.3	216.9	254.3	196.1	93.1	0.9	32.2
Stdev	0.7	890.6	322.5	64.7	58.8	0.4	148.4	188.1	214.9	77.7	0.5	39.4
% < Des	0.0	22.6	41.9	54.8	29.0	58.1	58.1	0.0	77.4	90.3	45.2	77.4
% P	80.6	74.2	48.4	41.9	54.8	32.3	38.7	0.0	22.6	9.7	45.2	0.0
% > Ex P	19.4	3.2	9.7	3.2	16.1	9.7	3.2	0.0	0.0	0.0	9.7	22.6

Taluka : Mantha (Dhoksal, Helas, Mantha, Pangri wayal, Patoda kh., Talni, Wadgaon saradh, Wakdi, Watur)												
Min	7.4	248.0	102.0	19.2	13.1	0.0	40.0	35.2	24.0	10.0	0.1	1.0
Max	9.2	2218.0	1412.3	232.0	246.0	0.7	320.0	390.4	709.0	140.0	2.0	533.0
Average	7.9	803.0	476.6	79.0	67.8	0.2	201.6	235.3	215.2	64.2	0.8	79.7
Stdev	0.5	550.2	315.2	63.8	55.3	0.2	82.4	108.8	195.0	43.3	0.5	128.7
% < Des	0.0	41.2	29.4	64.7	17.6	76.5	41.2	0.0	70.6	100.0	58.8	58.8
% P	88.2	52.9	41.2	23.5	70.6	23.5	58.8	0.0	29.4	0.0	35.3	0.0
% > Ex P	11.8	5.9	29.4	11.8	11.8	0.0	0.0	0.0	0.0	0.0	5.9	41.2

Taluka : Parthur (Asangaon, Loni kh., Partur, Satona kh., Shreshti, Shristi, Singona, Watur)												
Min	7.3	143.0	78.0	8.0	14.1	0.0	32.0	36.1	30.0	6.0	0.1	1.0
Max	9.3	1807.0	720.0	152.0	122.0	0.7	394.0	480.7	490.0	658.6	1.7	147.0
Average	8.0	827.5	394.4	65.4	56.1	0.2	224.3	261.3	168.8	107.9	0.9	31.1
Stdev	0.5	455.5	184.4	43.0	32.0	0.2	95.3	121.7	119.5	166.8	0.4	41.6
% < Des	0.0	30.4	39.1	69.6	26.1	65.2	30.4	0.0	73.9	91.3	52.2	78.3
% P	82.6	69.6	43.5	30.4	65.2	34.8	69.6	0.0	26.1	0.0	34.8	0.0
% > Ex P	17.4	0.0	17.4	0.0	8.7	0.0	0.0	0.0	0.0	8.7	13.0	21.7

15. KOLHAPUR

Taluka : Ajra (Ajara, Gavase, Harur, Kowade, Lakudwadi, Maligre, Sulgaon, Uttur)												
	'pH	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	6.9	49.9	36.0	6.4	2.4	0.0	28.0	28.0	16.0	3.8	0.1	0.9
Max	9.1	389.6	256.0	62.4	30.0	1.2	152.0	152.0	96.0	46.2	1.0	112.0
Average	8.0	209.1	114.1	26.9	13.6	0.5	87.7	89.0	50.8	15.9	0.5	19.2
Stdev	0.7	96.0	58.7	14.2	8.3	0.4	37.1	39.3	21.4	10.1	0.3	28.6
% < Des	0.0	100.0	100.0	100.0	95.2	33.3	100.0	0.0	100.0	100.0	90.5	90.5
% P	71.4	0.0	0.0	0.0	4.8	52.4	0.0	0.0	0.0	0.0	9.5	0.0
% > Ex P	28.6	0.0	0.0	0.0	0.0	14.3	0.0	0.0	0.0	0.0	0.0	9.5

Taluka : Bhudargad (Gargoti, Helewadi, Karadwadi, Madilge Bk., Madur, Minche kh., Naganwadi, Nilpan, Nitawade, Patgaon, Pimpalgaon, Pimpalgaon,Tiravade, Vengrul)												
Min	6.9	27.5	30.0	6.0	1.2	0.0	30.3	32.0	7.0	0.1	0.0	0.1
Max	9.1	348.2	289.0	70.0	35.0	1.1	219.7	268.0	70.0	36.0	0.9	82.0
Average	7.9	165.7	104.3	26.0	11.1	0.4	79.6	83.9	38.0	13.3	0.5	13.0
Stdev	0.6	100.9	65.9	17.2	7.1	0.3	51.0	61.6	18.8	9.4	0.3	17.5
% < Des	0.0	100.0	100.0	100.0	96.3	33.3	92.6	0.0	100.0	100.0	100.0	96.3
% P	81.5	0.0	0.0	0.0	3.7	55.6	7.4	0.0	0.0	0.0	0.0	0.0
% > Ex P	18.5	0.0	0.0	0.0	0.0	11.1	0.0	0.0	0.0	0.0	0.0	3.7

Taluka : Chandgad (Adkur, Chandgad, Date, Gudavale Kh., Gulumb Kodali, Hajgoli, Halkarni, Kanhur Kh.,Karve, Kodali, Patne, Porewadi (Amroli), Saroli, Shinoli Bk., Surute, Tambulwadi)												
Min	6.8	28.8	20.0	3.2	1.2	0.0	9.8	12.0	3.5	0.1	0.0	0.0
Max	8.8	358.4	124.0	40.0	13.2	1.0	176.0	176.0	82.0	30.5	1.0	50.9
Average	7.6	99.6	56.4	15.5	5.2	0.3	43.3	44.3	28.3	7.6	0.4	14.5
Stdev	0.5	67.0	31.5	9.5	3.3	0.2	29.9	29.8	15.3	7.0	0.3	11.7
% < Des	0.0	100.0	100.0	100.0	100.0	42.9	100.0	0.0	100.0	100.0	97.1	97.1
% P	91.4	0.0	0.0	0.0	0.0	57.1	0.0	0.0	0.0	0.0	2.9	0.0
% > Ex P	8.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9

Taluka : Gadinglaj (Donewadi, Gadhinglaj, Halkarni, Harali Bk., Hebbal Jaldyal, Hidaduggi, Kasba Nool, Mahagaon, Nangnur, Nesari, Nilaji)												
Min	7.2	117.6	80.0	14.4	5.0	0.0	44.0	44.0	24.0	7.1	0.0	0.4
Max	8.7	913.3	400.0	118.0	57.0	1.1	316.0	366.0	232.0	145.0	1.0	117.4
Average	7.8	442.9	190.0	41.9	24.5	0.3	127.2	135.1	110.8	41.5	0.4	33.3
Stdev	0.4	221.1	89.5	26.5	14.7	0.3	86.6	98.9	63.2	36.2	0.3	32.5
% < Des	0.0	67.9	85.7	89.3	60.7	64.3	82.1	0.0	100.0	100.0	96.4	71.4
% P	92.9	32.1	14.3	10.7	39.3	32.1	17.9	0.0	0.0	0.0	3.6	0.0
% > Ex P	7.1	0.0	0.0	0.0	0.0	3.6	0.0	0.0	0.0	0.0	0.0	28.6

Taluka : Gaganbawada (Asandoli, Aslaj, Gagan bauda, Tisagiwadi)												
Min	6.9	20.7	15.0	2.0	1.2	0.0	4.9	6.0	3.5	0.1	0.0	0.1
Max	8.2	137.0	84.0	22.4	9.6	0.5	72.0	79.0	30.0	16.1	0.6	15.7
Average	7.6	60.3	44.3	11.5	4.3	0.1	30.9	33.3	14.9	4.8	0.2	6.3
Stdev	0.5	37.1	24.0	6.5	2.7	0.2	20.5	22.8	8.3	5.5	0.2	5.4
% < Des	0.0	100.0	100.0	100.0	100.0	83.3	100.0	0.0	100.0	100.0	100.0	100.0
% P	100.0	0.0	0.0	0.0	0.0	16.7	0.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Hatkanangale (Chokak, Halondi, Hatkanangale, Ichalkarnji(Chugulemala), Ichalkarnji(Surve mala), Kabnoor, Kini wathar, Korochi, Majale, Nej, Pargaon, Rendal, Rukadi, Shiroli, Vadgoan, Wathar T. Wadgaon, Yalgud)												
	'pH	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.3	108.8	72.0	16.0	4.8	0.0	16.0	16.0	36.0	9.3	0.1	1.4
Max	8.5	1612.8	612.0	160.0	98.0	1.1	352.0	360.0	692.0	410.0	0.9	108.5
Average	7.9	621.5	308.9	60.3	46.1	0.5	146.9	151.7	176.1	111.8	0.5	39.9
Stdev	0.3	285.7	137.3	35.0	22.2	0.3	87.4	96.2	123.1	99.7	0.2	25.4
% < Des	0.0	31.4	51.4	74.3	14.3	28.6	74.3	0.0	82.9	82.9	100.0	77.1
% P	100.0	68.6	45.7	25.7	85.7	62.9	25.7	0.0	17.1	14.3	0.0	0.0
% > Ex P	0.0	0.0	2.9	0.0	0.0	8.6	0.0	0.0	0.0	2.9	0.0	22.9

Taluka : Kagal (Galgale, Ka. Sangaon, Kagal, Kapashi, Khadakewada, Kurukali, Murgud, Murud, Surupali, Undarwadi, Walve Kh., Yamage)												
Min	7.0	80.6	28.0	8.0	2.4	0.0	52.0	52.0	36.0	1.0	0.2	0.2
Max	8.4	782.7	460.0	72.0	122.4	1.0	300.0	366.0	452.0	91.5	0.8	48.7
Average	7.8	306.4	215.3	38.1	34.8	0.5	163.2	168.8	80.8	23.2	0.5	18.0
Stdev	0.4	168.8	110.2	19.9	30.1	0.3	61.2	74.4	82.7	19.2	0.2	15.7
% < Des	0.0	92.0	84.0	100.0	60.0	24.0	76.0	0.0	96.0	100.0	100.0	96.0
% P	100.0	8.0	16.0	0.0	32.0	76.0	24.0	0.0	4.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0

Taluka : Kolhapur (Authur, Girgaon, Gokul shirgaon, Halkarne, Jaital, Kerli, Khindi Varvade, Khupire, Kogli Bk., Kolhapur, Kuditre, Kurukali, Madlgi Budrukh, Nigave Du., Parite, Partangale, Sangwade, Shiradwad, Shiroli, Solankuv, Washi)												
Min	7.2	52.6	30.0	8.0	2.4	0.0	30.3	37.0	11.0	2.2	0.0	0.1
Max	8.4	1059.9	735.0	174.0	98.0	1.1	275.4	336.0	291.0	258.0	0.6	62.0
Average	7.8	347.9	244.5	56.8	26.1	0.2	153.5	175.3	85.7	36.8	0.3	16.6
Stdev	0.3	225.8	161.8	38.3	23.3	0.3	64.7	84.7	74.4	47.5	0.2	16.5
% < Des	0.0	80.4	73.9	78.3	67.4	63.0	76.1	0.0	91.3	97.8	100.0	91.3
% P	100.0	19.6	21.7	21.7	32.6	34.8	23.9	0.0	8.7	2.2	0.0	0.0
% > Ex P	0.0	0.0	4.3	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0	8.7

Taluka : Panhala (Asurle, Kisrool, Marali, Panhala, Pimplethane, Pimpli Tarf Thane, Punal, Undri)												
Min	7.1	74.7	45.0	8.0	2.4	0.0	14.8	18.0	11.0	2.0	0.0	0.4
Max	8.3	725.1	336.0	112.0	38.4	0.8	300.0	300.0	172.0	41.6	0.7	35.4
Average	7.8	185.6	115.8	32.4	10.0	0.3	79.5	83.9	50.6	14.5	0.4	8.5
Stdev	0.4	154.7	72.7	25.3	8.5	0.3	66.8	68.6	43.0	13.1	0.2	10.5
% < Des	0.0	94.4	94.4	94.4	94.4	44.4	94.4	0.0	100.0	100.0	100.0	100.0
% P	100.0	5.6	5.6	5.6	5.6	55.6	5.6	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Radhanagari (Chande, Dhmod, Hasane, Kasarwada, Mhasurli, Pungaon, Radhanagari, Shelewadi, Solankur)												
	'pH	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.4	26.2	44.0	8.0	1.2	0.0	32.0	32.0	14.0	0.3	0.0	0.4
Max	8.3	358.7	290.0	70.0	28.0	0.7	225.4	275.0	76.0	26.2	0.6	34.1
Average	7.9	132.8	99.2	25.4	9.8	0.3	74.1	79.9	38.0	13.5	0.3	8.6
Stdev	0.3	86.3	56.0	16.7	6.1	0.2	45.2	55.3	12.9	7.8	0.2	10.9
% < Des	0.0	100.0	100.0	100.0	100.0	38.1	95.2	0.0	100.0	100.0	100.0	100.0
% P	100.0	0.0	0.0	0.0	0.0	61.9	4.8	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Shahuwadi (Amba, Chandoli, Jambur, Malkapur, Paijarwadi, Ukhalu, Wadgaon, Wadicharan)												
Min	7.5	28.8	40.0	8.0	1.2	0.0	20.0	20.0	7.0	0.4	0.0	0.1
Max	8.3	782.0	445.0	110.0	72.0	0.9	469.7	573.0	152.0	49.0	0.6	16.4
Average	7.9	191.4	125.5	31.4	12.2	0.4	117.4	132.7	41.9	13.5	0.3	4.4
Stdev	0.3	216.4	123.5	26.5	17.1	0.3	129.0	158.5	40.6	14.9	0.2	4.4
% < Des	0.0	89.5	89.5	94.7	89.5	42.1	89.5	0.0	100.0	100.0	100.0	100.0
% P	100.0	10.5	10.5	5.3	10.5	57.9	10.5	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Shirol (Chipri, Danwad Nave, Ganeshwadi, Ghosarwad, Jambhali, Jaysingpur, Kondigre, Kurundwad, Shirol, Shiroli (Shahunagar), Takali, Udgaon)												
Min	7.3	116.5	80.0	16.0	12.0	0.2	20.0	20.0	48.0	31.1	0.1	5.8
Max	8.4	1504.0	624.0	208.0	114.0	0.9	412.0	412.0	460.0	520.0	0.8	155.1
Average	7.9	819.3	417.2	110.8	42.1	0.5	114.0	114.0	229.3	214.5	0.5	65.6
Stdev	0.3	322.1	133.3	52.7	29.2	0.2	95.4	95.4	93.1	136.1	0.2	41.9
% < Des	0.0	16.7	16.7	25.0	54.2	4.2	83.3	0.0	66.7	58.3	100.0	37.5
% P	100.0	83.3	79.2	70.8	37.5	95.8	16.7	0.0	33.3	33.3	0.0	0.0
% > Ex P	0.0	0.0	4.2	4.2	8.3	0.0	0.0	0.0	0.0	8.3	0.0	62.5

16. LATUR

Taluka : Ahmadpur (Ahmadpur, Andhori, Dhalegaon, Hipparga kopdev, Khandali, Kingaon, Kolwadi, Mankhed, Sindgi bk., Tambatsangvi, Waigaon, Walsangi)												
	'pH	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.6	187.9	100.0	9.6	5.8	0.0	64.0	16.0	20.0	4.8	0.0	0.1
Max	9.0	1749.0	705.0	158.0	87.5	1.3	465.0	567.3	426.0	286.0	1.1	112.2
Average	8.1	483.9	275.8	48.8	38.2	0.2	181.7	188.4	95.8	45.1	0.6	15.5
Stdev	0.4	316.6	164.6	40.0	21.7	0.2	91.9	118.6	97.5	51.1	0.3	26.6
% < Des	0.0	71.0	67.7	87.1	45.2	90.3	61.3	0.0	90.3	96.8	74.2	87.1
% P	83.9	29.0	22.6	12.9	54.8	6.5	38.7	0.0	9.7	3.2	25.8	0.0
% > Ex P	16.1	0.0	9.7	0.0	0.0	3.2	0.0	0.0	0.0	0.0	0.0	12.9

Taluka : Nilanga (Ambulga (bk)., Aurad (shahjani), Barmachiwadi, Gaur, Halsi, Kasar Sirsi, Kelgaon, Mal Hipparga, Nilanga, Panchincholi, Sarwadi, Shelgi, Shivni kothal, Sindkhed)												
Min	7.4	150.0	100.0	12.8	9.7	0.0	52.0	41.0	18.0	3.7	0.0	0.1
Max	9.6	672.5	455.0	110.0	70.0	2.3	355.0	433.1	205.9	65.7	1.3	112.8
Average	8.2	385.0	233.1	43.8	30.1	0.2	172.4	181.2	72.5	34.0	0.6	16.2
Stdev	0.5	138.7	95.0	25.9	13.5	0.4	79.2	98.7	47.0	16.5	0.3	25.8
% < Des	0.0	82.9	80.0	88.6	54.3	85.7	57.1	0.0	100.0	100.0	80.0	91.4
% P	82.9	17.1	20.0	11.4	45.7	8.6	42.9	0.0	0.0	0.0	20.0	0.0
% > Ex P	17.1	0.0	0.0	0.0	0.0	5.7	0.0	0.0	0.0	0.0	0.0	8.6

Taluka : Ausa (Aashiv, Ausa, Belkund, Bhada, Borgaon, Budhoda, Dapegaon, Karla, Kharosa, Khuntegaon, Killari, Lamjana Phata, Nandurga, Selu, Shivali, Taka, Talni)												
Min	7.5	163.0	96.0	12.8	9.7	0.0	70.0	52.7	22.0	4.3	0.0	0.2
Max	9.6	969.7	695.0	188.0	71.0	1.7	276.0	336.7	254.0	155.0	1.6	226.0
Average	8.0	475.7	278.1	54.5	34.5	0.2	170.7	183.9	86.0	46.7	0.6	21.9
Stdev	0.4	206.8	118.2	37.5	13.8	0.3	56.6	68.1	59.2	29.7	0.4	40.7
% < Des	0.0	64.5	64.5	83.9	38.7	83.9	67.7	0.0	96.8	100.0	77.4	93.5
% P	96.8	35.5	32.3	16.1	61.3	12.9	32.3	0.0	3.2	0.0	19.4	0.0
% > Ex P	3.2	0.0	3.2	0.0	0.0	3.2	0.0	0.0	0.0	0.0	3.2	6.5

Taluka : Chakur (Ashta, Chapoli, Deokara, Gharni, Kabansangvi, Latur road, Mahalangra, Nalegaon, Shivankhed, Sugaon)												
Min	7.6	163.8	84.0	11.2	9.7	0.0	59.0	0.0	12.0	6.9	0.0	0.1
Max	9.8	820.5	610.0	150.0	57.0	1.8	290.0	353.8	228.0	132.0	1.5	133.9
Average	8.2	434.6	270.3	51.8	34.2	0.3	178.8	192.6	71.2	43.1	0.5	46.8
Stdev	0.5	162.7	122.1	37.9	12.2	0.5	76.0	9.2	102.5	29.6	0.4	40.7
% < Des	0.0	66.7	58.3	79.2	25.0	79.2	50.0	0.0	100.0	100.0	79.2	83.3
% P	75.0	33.3	37.5	20.8	75.0	12.5	50.0	0.0	0.0	0.0	20.8	0.0
% > Ex P	25.0	0.0	4.2	0.0	0.0	8.3	0.0	0.0	0.0	0.0	0.0	16.7

Taluka : Jalkot (Kolnoor, Patoda)												
Min	7.8	277.0	124.0	16.0	17.5	0.0	104.0	101.5	30.0	2.4	0.4	0.7
Max	8.6	323.6	290.0	60.0	36.0	1.0	245.0	298.9	74.6	38.4	1.0	3.1
Average	8.2	305.2	196.8	31.2	28.9	0.3	166.8	185.8	49.7	23.1	0.6	1.8
Stdev	0.3	20.2	68.8	19.8	8.3	0.5	58.7	82.8	21.3	15.7	0.3	1.0
% < Des	0.0	100.0	100.0	100.0	50.0	75.0	75.0	0.0	100.0	100.0	75.0	100.0
% P	75.0	0.0	0.0	0.0	50.0	25.0	25.0	0.0	0.0	0.0	25.0	0.0
% > Ex P	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Latur (Babalgoan, Bhadi, Bhatkheda, Bhisewagholi, Borgaon bk, Chikurda, Chincholirao, Karsa, Latur, Mamdapur, Murud, Murud bk., Murud-Akola, Nandgaon, Neoli, Panderwadi, Patroli)												
	'pH	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.5	163.2	96.0	4.8	5.8	0.0	60.0	32.0	14.0	4.8	0.0	0.1
Max	9.0	864.3	610.0	170.0	72.9	0.9	292.0	354.0	213.0	152.0	1.3	261.0
Average	8.1	438.1	266.6	48.0	35.6	0.1	167.5	176.9	83.6	48.1	0.6	31.1
Stdev	0.4	187.0	120.8	33.8	17.5	0.2	70.1	84.4	55.7	36.8	0.3	52.5
% < Des	0.0	57.9	57.9	81.6	44.7	97.4	68.4	0.0	100.0	100.0	81.6	78.9
% P	76.3	42.1	39.5	18.4	55.3	2.6	31.6	0.0	0.0	0.0	18.4	0.0
% > Ex P	23.7	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.1

Taluka : Renapur (Dawangaon, Garsuli, Mamdapur, Palshi, Pangaon, Renapur, Sindgoan)												
Min	7.6	239.3	92.0	12.8	8.8	0.0	44.0	36.8	16.0	15.8	0.0	0.3
Max	10.0	563.0	315.0	78.0	41.8	1.5	269.7	329.0	116.0	42.0	1.6	16.0
Average	8.3	345.8	181.3	35.5	22.5	0.2	141.4	145.7	56.1	28.2	0.6	7.2
Stdev	0.6	76.1	60.1	18.2	9.6	0.4	59.7	74.1	32.4	6.8	0.4	4.7
% < Des	0.0	93.3	93.3	93.3	86.7	86.7	86.7	0.0	100.0	100.0	80.0	100.0
% P	80.0	6.7	6.7	6.7	13.3	6.7	13.3	0.0	0.0	0.0	13.3	0.0
% > Ex P	20.0	0.0	0.0	0.0	0.0	6.7	0.0	0.0	0.0	0.0	6.7	0.0

Taluka : Udgir (Arasnal, Haibatpur, Kiniyalladevi, Kodli, Mogha, Somnathpur, Tiruka, Togari, Udgir)												
Min	7.6	176.8	72.0	9.6	7.8	0.0	72.0	60.0	14.0	9.6	0.0	0.3
Max	9.1	721.0	400.0	104.0	62.2	1.8	290.2	354.0	194.0	78.0	1.0	31.0
Average	8.2	402.3	237.2	43.8	31.0	0.3	179.3	186.9	60.5	35.1	0.5	7.6
Stdev	0.4	141.6	89.0	29.0	13.2	0.4	62.8	84.0	53.5	21.6	0.4	9.2
% < Des	0.0	78.9	73.7	78.9	52.6	63.2	57.9	0.0	100.0	100.0	68.4	100.0
% P	73.7	21.1	26.3	21.1	47.4	31.6	42.1	0.0	0.0	0.0	31.6	0.0
% > Ex P	26.3	0.0	0.0	0.0	0.0	5.3	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Deoni (Achola, Deoni bk., Hanchnal)												
Min	7.9	187.9	120.0	17.6	14.6	0.0	88.0	72.0	20.0	3.6	0.6	0.9
Max	8.6	607.8	324.0	46.4	61.2	1.5	276.0	276.0	46.0	47.0	1.0	10.9
Average	8.2	412.3	232.7	31.7	37.3	0.3	200.7	195.7	31.7	29.3	0.8	7.0
Stdev	0.2	161.7	91.7	10.5	18.9	0.6	84.6	87.6	8.8	16.7	0.2	3.5
% < Des	0.0	66.7	66.7	100.0	33.3	83.3	33.3	0.0	100.0	100.0	50.0	100.0
% P	83.3	33.3	33.3	0.0	66.7	0.0	66.7	0.0	0.0	0.0	50.0	0.0
% > Ex P	16.7	0.0	0.0	0.0	0.0	16.7	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Shirur Anantpal (Sakol, Shivpur, Yerol)												
Min	7.6	189.8	72.0	11.2	7.8	0.1	60.0	54.4	14.0	12.0	0.1	0.3
Max	9.0	603.2	328.0	116.8	56.4	0.7	252.0	247.3	68.0	67.0	1.0	17.1
Average	8.2	369.4	205.3	41.1	24.9	0.3	168.7	166.5	41.0	35.9	0.7	5.5
Stdev	0.5	153.9	101.8	38.9	17.9	0.2	84.2	84.3	20.4	18.4	0.4	6.5
% < Des	0.0	83.3	66.7	83.3	66.7	66.7	50.0	0.0	100.0	100.0	50.0	100.0
% P	83.3	16.7	33.3	16.7	33.3	33.3	50.0	0.0	0.0	0.0	50.0	0.0
% > Ex P	16.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

17. MUMBAI

Taluka : Borivali (Dahisar)												
	'pH	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.8	310.0	195.0	38.0	24.0	0.0	180.3	220.0	53.0	38.0	0.0	0.5
Max	8.0	724.1	386.7	102.0	32.0	0.0	219.7	268.0	135.0	105.0	0.2	95.0
Average	7.9	517.1	290.8	70.0	28.0	0.0	200.0	244.0	94.0	71.5	0.1	47.8
Stdev	0.1	292.8	135.5	45.3	5.7	0.0	27.8	33.9	58.0	47.4	0.1	66.8
% < Des	0.0	50.0	50.0	50.0	50.0	100.0	50.0	0.0	100.0	100.0	100.0	50.0
% P	100.0	50.0	50.0	50.0	50.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0

Taluka : Goregaon East (A.M.C. Colony)												
Min	7.9	192.6	125.0	32.0	6.0	0.0	100.0	122.0	32.0	21.0	0.1	9.0
Max	8.0	301.3	185.8	48.0	16.0	0.0	109.8	134.0	50.0	32.0	0.2	52.0
Average	8.0	231.3	148.6	40.0	11.7	0.0	103.3	126.0	39.0	25.0	0.2	23.7
Stdev	0.1	60.7	32.6	8.0	5.1	0.0	5.7	6.9	9.6	6.1	0.1	24.5
% < Des	0.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	66.7
% P	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3

Taluka : Kurla (Chembur)												
Min	7.6	99.3	59.7	14.0	6.0	0.0	45.1	55.0	18.0	10.0	0.0	6.0
Max	7.6	99.3	59.7	14.0	6.0	0.0	45.1	55.0	18.0	10.0	0.1	6.0
Average	7.6	99.3	59.7	14.0	6.0	0.0	45.1	55.0	18.0	10.0	0.1	6.0
% < Des	0.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0
% P	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Bombay (Church Gate)												
Min	7.7	460.0	300.0	24.0	53.0	0.0	290.2	354.0	67.0	36.0	0.2	12.0
Max	8.1	682.1	348.1	52.0	58.0	0.0	330.3	403.0	110.0	97.0	0.4	24.0
Average	8.0	545.7	327.7	39.3	55.7	0.0	310.1	378.3	86.3	62.7	0.3	16.7
Stdev	0.2	119.4	24.9	14.2	2.5	0.0	20.1	24.5	21.8	31.2	0.1	6.4
% < Des	0.0	66.7	0.0	100.0	0.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0
% P	100.0	33.3	100.0	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Colaba (Dandi)												
Min	7.6	425.0	205.0	24.0	27.0	0.0	235.2	287.0	60.0	22.0	0.0	1.0
Max	8.1	492.1	256.1	58.0	39.0	0.0	304.9	372.0	78.0	48.0	0.1	54.0
Average	7.9	455.4	233.7	38.0	33.7	0.0	281.7	343.7	67.3	34.7	0.1	19.0
Stdev	0.3	34.0	26.1	17.8	6.1	0.0	40.2	49.1	9.5	13.0	0.0	30.3
% < Des	0.0	100.0	100.0	100.0	33.3	100.0	0.0	0.0	100.0	100.0	100.0	66.7
% P	100.0	0.0	0.0	0.0	66.7	0.0	100.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3

Taluka : Deulwadi (Deulwadi)												
	'pH	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	8.1	447.8	235.0	56.0	23.0	0.0	304.9	372.0	53.0	23.0	0.4	9.0
Max	8.1	447.8	235.0	56.0	23.0	0.0	304.9	372.0	53.0	23.0	0.4	9.0
Average	8.1	447.8	235.0	56.0	23.0	0.0	304.9	372.0	53.0	23.0	0.4	9.0
% < Des	0.0	100.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0
% P	100.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Mahim (Mahim Village)												
Min	7.8	190.0	150.0	34.0	6.0	0.0	150.0	183.0	18.0	6.0	0.0	5.0
Max	8.0	339.3	224.7	80.0	26.0	0.0	240.2	293.0	32.0	21.0	0.1	19.0
Average	7.9	268.4	189.9	50.0	16.0	0.0	191.8	234.0	25.0	15.3	0.1	13.3
Stdev	0.1	74.9	37.6	26.0	10.0	0.0	45.4	55.4	7.0	8.1	0.1	7.4
% < Des	0.0	100.0	100.0	66.7	100.0	100.0	66.7	0.0	100.0	100.0	100.0	100.0
% P	100.0	0.0	0.0	33.3	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Mahroli (Chembur)												
Min	8.1	505.0	310.0	54.0	43.0	0.0	354.9	433.0	71.0	25.0	0.4	9.0
Max	8.1	505.0	310.0	54.0	43.0	0.0	354.9	433.0	71.0	25.0	0.4	9.0
Average	8.1	505.0	310.0	54.0	43.0	0.0	354.9	433.0	71.0	25.0	0.4	9.0
% < Des	0.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0
% P	100.0	100.0	100.0	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

18. NAGPUR

Taluka : Bhivapur (Besur, Bordikala, Kargaon, Nawegaon (Deshmukh), Naxhi, Panjrepar (nand), Zamkoli)												
	'pH	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.1	251.9	105.0	16.0	15.8	0.0	225.0	0.0	10.6	0.9	0.6	1.2
Max	8.1	1811.0	820.0	180.8	105.0	0.4	516.0	9.6	420.0	157.0	2.0	52.0
Average	7.8	828.6	423.5	92.9	46.5	0.2	333.3	1.1	149.7	59.3	1.3	14.8
Stdev	0.3	498.8	230.9	54.7	28.8	0.1	87.0	3.2	135.4	47.9	0.4	17.8
% < Des	0.0	27.3	36.4	36.4	36.4	81.8	0.0	0.0	72.7	100.0	27.3	81.8
% P	100.0	72.7	45.5	63.6	54.5	18.2	100.0	0.0	27.3	0.0	45.5	0.0
% > Ex P	0.0	0.0	18.2	0.0	9.1	0.0	0.0	0.0	0.0	0.0	27.3	18.2

Taluka : Hingna (Adegaon, Amgaon, Kanholibora, Mangli, Pipaldhara, Saongi deoli, Shivmadka, Takalghat, Wandongri)												
Min	7.0	271.2	145.0	16.0	24.5	0.0	195.0	0.0	17.7	4.1	0.1	2.1
Max	8.1	1952.0	840.0	216.0	138.0	0.5	512.0	1.6	436.0	170.0	1.4	150.0
Average	7.6	805.5	529.6	105.1	64.8	0.2	330.1	0.1	165.8	66.2	0.9	42.1
Stdev	0.3	483.5	221.3	51.8	38.0	0.1	96.0	0.4	118.7	46.5	0.3	40.4
% < Des	0.0	26.3	21.1	26.3	21.1	68.4	5.3	0.0	84.2	100.0	57.9	52.6
% P	100.0	73.7	36.8	68.4	57.9	31.6	94.7	0.0	15.8	0.0	42.1	0.0
% > Ex P	0.0	0.0	42.1	5.3	21.1	0.0	0.0	0.0	0.0	0.0	0.0	47.4

Taluka : Kalmeshwar (Dhapewada, Ghogli, Ghorad, Kalmeshwar, Khumari, Mohli, Mohpa, Telkamthi, Tishti bk.)												
Min	7.0	389.4	336.0	50.0	31.1	0.0	45.0	0.0	54.0	7.7	0.1	1.0
Max	8.1	4393.4	3470.0	772.0	597.8	1.3	540.0	9.6	2485.0	269.8	1.8	199.6
Average	7.6	1218.3	919.6	170.8	119.7	0.3	312.7	0.9	501.6	50.4	1.0	52.1
Stdev	0.3	1193.4	990.2	187.4	149.4	0.4	98.2	2.3	793.7	59.8	0.5	54.5
% < Des	0.0	23.5	0.0	41.2	0.0	76.5	11.8	0.0	76.5	94.1	52.9	58.8
% P	100.0	58.8	76.5	35.3	70.6	17.6	88.2	0.0	5.9	5.9	29.4	0.0
% > Ex P	0.0	17.6	23.5	23.5	29.4	5.9	0.0	0.0	17.6	0.0	17.6	41.2

Taluka : Kamptee (Adka, Gumthala, Kadholi, Kamptee, Kamthi, Khaparkheda, Koradi, Sawali, Wadoda)												
Min	7.0	382.0	268.0	32.0	20.4	0.0	95.0	0.0	60.0	3.8	0.5	1.0
Max	8.1	974.0	520.0	128.0	90.0	0.7	408.0	3.4	230.0	192.0	2.2	155.0
Average	7.6	641.8	395.2	71.5	52.6	0.2	310.8	0.3	148.3	54.6	0.9	36.1
Stdev	0.3	153.9	78.7	27.1	18.6	0.2	78.3	0.8	48.1	46.6	0.4	49.0
% < Des	0.0	11.8	11.8	70.6	5.9	64.7	11.8	0.0	100.0	100.0	64.7	76.5
% P	100.0	88.2	88.2	29.4	94.1	35.3	88.2	0.0	0.0	0.0	29.4	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9	23.5

Taluka : Kuhi (Gothangaon, Kanheri (dongar], Kuhi, Mandhal, Weltur)												
Min	7.3	145.5	115.0	24.0	13.4	0.0	110.0	0.0	10.6	1.2	0.7	2.0
Max	8.1	1247.0	780.0	203.2	103.0	0.4	324.0	2.9	410.0	74.0	3.5	36.0
Average	7.6	730.8	454.1	91.0	55.1	0.2	244.0	0.4	204.0	37.9	1.5	11.4
Stdev	0.3	444.4	238.4	61.6	29.1	0.1	65.1	0.9	170.8	25.6	0.9	11.3
% < Des	0.0	44.4	33.3	44.4	22.2	66.7	22.2	0.0	55.6	100.0	33.3	100.0
% P	100.0	55.6	22.2	44.4	66.7	33.3	77.8	0.0	44.4	0.0	33.3	0.0
% > Ex P	0.0	0.0	44.4	11.1	11.1	0.0	0.0	0.0	0.0	0.0	33.3	0.0

Taluka : Mouda (Chacher, Charbha, Dharmapuri, Khat, Mathni, Mauda)												
	'pH	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.5	193.0	150.0	8.0	20.4	0.0	140.0	0.0	37.2	0.4	0.5	1.0
Max	8.3	1606.0	1125.0	83.2	231.6	0.4	704.0	48.0	754.0	276.0	3.7	19.0
Average	7.9	592.3	350.1	46.4	56.9	0.1	340.3	4.3	195.5	45.8	1.4	6.7
Stdev	0.2	375.9	241.5	20.7	54.4	0.1	146.6	12.7	199.8	70.5	1.0	5.5
% < Des	0.0	64.3	57.1	92.9	28.6	92.9	7.1	0.0	71.4	92.9	42.9	100.0
% P	100.0	35.7	35.7	7.1	64.3	7.1	85.7	0.0	28.6	7.1	35.7	0.0
% > Ex P	0.0	0.0	7.1	0.0	7.1	0.0	7.1	0.0	0.0	0.0	21.4	0.0

Taluka : Nagpur (Bahadura, Bhandewadi, Bokhara, Borkhedi, Chorbaoli, Deolapar, Gonhi, Gumgaon, Kalamna, Kanholi bara, Makardhokda, Mangli, Nagpur City, Nara, Panchgaon, Pardi, Sathnaori, Sirpur Toli, Sivani, Sonegaon Lodhi, Tamaswadi, Wagholi, Wanjra)												
Min	7.1	234.0	115.0	16.0	14.6	0.0	70.0	0.0	14.2	0.3	0.0	0.5
Max	8.4	1779.0	820.0	180.0	102.1	0.3	524.0	24.0	447.3	172.8	3.2	303.8
Average	7.8	564.8	317.4	62.4	39.3	0.1	267.8	0.9	102.2	38.9	0.9	42.1
Stdev	0.2	318.5	157.7	43.9	18.0	0.1	84.7	4.2	99.1	38.9	0.7	62.9
% < Des	0.0	51.9	59.6	71.2	32.7	94.2	17.3	0.0	92.3	100.0	65.4	76.9
% P	100.0	48.1	32.7	28.8	65.4	5.8	82.7	0.0	7.7	0.0	23.1	0.0
% > Ex P	0.0	0.0	7.7	0.0	1.9	0.0	0.0	0.0	0.0	0.0	11.5	23.1

Taluka : Nagpur (Rural) (Borkhedi, Bothli, Mohgaon)												
Min	7.5	344.0	236.0	25.6	34.0	0.1	172.0	0.8	90.0	16.0	0.7	1.0
Max	8.8	470.0	388.0	76.8	47.6	0.3	280.0	10.1	120.0	21.0	1.3	5.0
Average	8.2	427.3	308.0	55.5	41.1	0.2	210.7	4.7	103.3	18.7	1.1	3.3
Stdev	0.7	72.2	76.3	26.6	6.8	0.1	60.2	4.8	15.3	2.5	0.3	2.1
% < Des	0.0	100.0	33.3	66.7	0.0	100.0	66.7	0.0	100.0	100.0	33.3	100.0
% P	66.7	0.0	66.7	33.3	100.0	0.0	33.3	0.0	0.0	0.0	66.7	0.0
% > Ex P	33.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Narkhed (Belona, Jamgaon (bk), Kharala, Lohara, Narkhed, Rohana, Saonga (lohari), Sawargaon, Wadvihara, Wardhamna, Yeni Koni)												
Min	7.3	292.1	175.0	24.0	15.8	0.0	105.0	0.0	30.0	4.1	0.0	2.0
Max	8.3	1984.0	1112.0	276.8	153.6	0.4	568.0	5.2	480.0	150.0	1.5	226.3
Average	7.7	765.1	501.5	99.0	61.7	0.1	295.9	0.3	162.9	49.0	0.6	52.5
Stdev	0.2	401.0	243.6	56.4	34.6	0.1	95.7	1.0	123.4	35.3	0.3	54.1
% < Des	0.0	32.3	22.6	41.9	22.6	93.5	9.7	0.0	77.4	100.0	93.5	48.4
% P	100.0	67.7	48.4	54.8	61.3	6.5	90.3	0.0	22.6	0.0	6.5	0.0
% > Ex P	0.0	0.0	29.0	3.2	16.1	0.0	0.0	0.0	0.0	0.0	0.0	51.6

Taluka : Parseoni (Amdi, Chargaon, Chargaon (Punarwasi), Dhawalapur, Gahuhiwra, Ghukshi, Kandri (kanhan), Karambhad, Khandala (ghatate), Nayakund, Nimba, Parseoni)												
Min	7.2	204.0	112.0	24.0	8.7	0.0	105.0	0.0	21.3	0.2	0.0	1.0
Max	8.2	779.0	500.0	131.2	91.4	0.5	452.0	28.8	156.0	74.0	3.9	71.0
Average	7.7	467.9	302.2	65.6	33.6	0.2	261.6	1.9	72.5	30.7	1.1	23.3
Stdev	0.3	154.6	99.0	30.5	17.8	0.1	89.0	6.2	39.6	21.4	1.1	20.3
% < Des	0.0	61.5	53.8	69.2	46.2	80.8	23.1	0.0	100.0	100.0	61.5	84.6
% P	100.0	38.5	46.2	30.8	53.8	19.2	76.9	0.0	0.0	0.0	26.9	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.5	15.4

Taluka : Ramtek (Armtek, Bhandarbodi, Chorbaoli, Deolapar, Karwahi, Mansar, Ramtek, Salai, Sillari, Tangla)												
	'pH	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.3	276.0	160.0	22.4	22.4	0.0	80.0	0.0	54.0	1.1	0.1	3.0
Max	8.2	1664.0	800.0	192.0	77.8	0.3	492.0	1.9	410.0	133.0	3.2	239.9
Average	7.6	804.9	442.2	99.2	47.2	0.2	248.2	0.5	179.1	62.5	1.8	60.3
Stdev	0.3	412.5	190.8	53.4	19.0	0.1	124.8	0.8	108.1	43.5	1.9	85.8
% < Des	0.0	27.3	27.3	36.4	27.3	72.7	36.4	0.0	72.7	100.0	36.4	63.6
% P	100.0	72.7	54.5	63.6	72.7	27.3	63.6	0.0	27.3	0.0	36.4	0.0
% > Ex P	0.0	0.0	18.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27.3	36.4

Taluka : Saoner (Chandkapur, Chhatrapur, Kelod, Kelwad, Khairi (p), Khubala, Kothulna, Manegaon Tek, Mohpa, Nagalwadi, Salai, Saoner, Sironji)												
Min	7.2	256.0	120.0	12.8	15.8	0.0	130.0	0.0	19.5	3.8	0.2	0.3
Max	8.8	1568.0	1000.0	216.0	194.6	0.3	604.0	72.0	482.0	272.2	1.5	182.9
Average	7.8	640.2	390.1	62.6	56.8	0.1	314.4	9.7	121.9	39.0	0.8	42.5
Stdev	0.3	350.7	188.7	45.6	34.8	0.1	106.0	20.3	115.2	50.5	0.3	48.5
% < Des	0.0	40.0	31.4	77.1	17.1	100.0	8.6	0.0	85.7	97.1	71.4	65.7
% P	97.1	60.0	54.3	20.0	74.3	0.0	88.6	0.0	14.3	2.9	25.7	0.0
% > Ex P	2.9	0.0	14.3	2.9	8.6	0.0	2.9	0.0	0.0	0.0	2.9	34.3

Taluka : Umred (Amgaon Deoli, Bela, Pachgaon, Sawangi Kh., Sirsi, Thana, Umred)												
Min	7.3	261.7	125.0	30.0	12.2	0.0	72.0	0.0	42.6	20.0	0.1	3.0
Max	8.2	877.0	552.0	136.0	64.2	0.4	372.0	2.7	204.0	85.0	1.3	35.0
Average	7.7	586.8	357.6	76.6	40.4	0.2	216.3	0.3	117.6	49.7	0.8	19.0
Stdev	0.3	199.4	148.1	39.6	17.8	0.1	98.1	1.0	60.1	19.7	0.4	11.9
% < Des	0.0	25.0	37.5	50.0	25.0	75.0	50.0	0.0	100.0	100.0	62.5	100.0
% P	100.0	75.0	62.5	50.0	75.0	25.0	50.0	0.0	0.0	0.0	37.5	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Katol (Dhotiwada, Katol, Khangaon, Nandora, Ringnabodi)												
Min	7.0	347.0	168.0	56.0	1.9	0.1	200.0	0.0	28.0	23.0	0.5	1.0
Max	7.9	1061.0	696.0	153.6	115.7	0.9	408.0	1.2	300.0	151.0	1.9	35.0
Average	7.4	640.6	434.5	93.8	48.6	0.3	322.9	0.3	123.3	68.9	0.9	14.5
Stdev	0.3	223.5	134.0	30.4	27.5	0.2	54.0	0.4	95.7	47.1	0.4	12.0
% < Des	0.0	27.3	9.1	27.3	9.1	72.7	0.0	0.0	81.8	100.0	81.8	100.0
% P	100.0	72.7	81.8	72.7	81.8	27.3	100.0	0.0	18.2	0.0	9.1	0.0
% > Ex P	0.0	0.0	9.1	0.0	9.1	0.0	0.0	0.0	0.0	0.0	9.1	0.0

19. NANDED

Taluka : Ardhapur (Dour, Lahan, Pardi)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	8.1	468.0	200.0	49.6	5.8	0.1	108.0	63.4	86.0	7.0	0.6	9.0
Max	9.2	713.0	252.0	91.2	25.3	0.2	176.0	167.7	156.0	69.5	1.0	9.0
Average	8.7	558.7	226.7	63.5	16.5	0.1	148.0	129.7	111.3	46.8	0.7	9.0
Stdev	0.6	134.3	26.0	24.0	9.9	0.1	35.6	57.6	38.8	34.6	0.2	0.0
% < Des	0.0	66.7	100.0	66.7	100.0	100.0	100.0	0.0	100.0	100.0	66.7	100.0
% P	33.3	33.3	0.0	33.3	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0
% > Ex P	66.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Bhokar (Bhokar, Divshi Kh, Kinipalaj, Nanda Bk., Somthana (patti Bhokar), Wakad)												
Min	7.1	387.0	186.0	28.8	7.8	0.0	66.0	0.0	66.0	22.7	0.1	2.0
Max	9.6	1026.0	675.0	170.0	61.0	0.2	304.9	372.0	269.0	103.0	1.4	186.0
Average	8.1	666.2	342.8	93.0	26.8	0.1	171.3	156.5	151.0	62.0	0.8	41.6
Stdev	0.8	260.3	165.1	42.4	17.9	0.1	79.4	140.6	82.5	31.2	0.4	63.9
% < Des	0.0	33.3	44.4	33.3	55.6	100.0	66.7	0.0	77.8	100.0	66.7	77.8
% P	66.7	66.7	44.4	66.7	44.4	0.0	33.3	0.0	22.2	0.0	33.3	0.0
% > Ex P	33.3	0.0	11.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.2

Taluka : Hadgaon (Dhanora(hastara), Dongargaon, Dorli, Ghogari, Hadgaon, Shivpuri, Sibdara, Talni, Tamsa, Taroda kh., Umri p.k.,Walki Kh.)												
Min	7.5	250.0	120.0	12.8	7.8	0.0	33.0	0.0	40.0	10.0	0.5	5.0
Max	9.6	1098.9	496.0	116.8	61.0	0.7	490.2	598.0	224.0	81.2	1.9	112.0
Average	8.4	577.4	265.3	61.2	27.3	0.2	161.0	171.8	130.8	40.7	1.1	19.8
Stdev	0.7	233.7	121.2	37.0	13.8	0.2	113.4	152.4	61.4	22.5	0.4	24.9
% < Des	0.0	35.3	58.8	58.8	70.6	88.2	70.6	0.0	100.0	100.0	23.5	94.1
% P	70.6	64.7	41.2	41.2	29.4	11.8	29.4	0.0	0.0	0.0	52.9	0.0
% > Ex P	29.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.5	5.9

Taluka : Himayat Nagar (Dabdhari tanda, Himayatnagar, Khairgaon, Palaspur)												
Min	7.1	325.0	176.0	40.0	4.9	0.0	20.0	0.0	64.0	45.0	0.2	0.0
Max	9.4	1147.0	775.0	184.0	77.0	0.2	245.1	299.0	322.0	144.0	1.9	174.0
Average	8.4	862.3	374.2	105.6	26.9	0.1	114.0	107.7	231.0	84.4	1.0	46.4
Stdev	0.9	335.9	246.2	64.7	28.8	0.1	82.3	123.3	120.9	39.0	0.6	72.2
% < Des	0.0	20.0	40.0	40.0	80.0	100.0	80.0	0.0	40.0	100.0	40.0	80.0
% P	60.0	80.0	40.0	60.0	20.0	0.0	20.0	0.0	60.0	0.0	40.0	0.0
% > Ex P	40.0	0.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	20.0

Taluka : Mahur (Anjankhed, Datta manjri, Sindkhed)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.8	289.0	98.0	25.6	8.3	0.0	72.0	62.0	40.0	13.1	0.5	5.0
Max	9.2	443.2	300.0	48.0	52.0	0.2	250.0	305.0	67.0	28.0	1.0	55.0
Average	8.4	345.4	191.3	35.9	24.6	0.1	158.0	172.4	53.0	20.2	0.7	21.7
Stdev	0.7	85.0	101.9	11.3	23.9	0.1	89.2	123.0	13.5	7.5	0.3	28.9
% < Des	0.0	100.0	66.7	100.0	66.7	100.0	66.7	0.0	100.0	100.0	66.7	66.7
% P	66.7	0.0	33.3	0.0	33.3	0.0	33.3	0.0	0.0	0.0	33.3	0.0
% > Ex P	33.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3

Taluka : Kinwat (Apprao peth, Bodhadi Bk., Bothroad (Bodhadi), Chikhali, Islapur, Kamthala, Kinwat, Kosmet, Kuncholi, Malbrogaon, Pardi, Pradhnsangvi, Sarkhani, Talaiguda, Unkeshwar)												
Min	7.3	204.6	92.0	9.6	1.9	0.0	39.0	38.8	18.0	8.0	0.1	4.0
Max	9.2	1202.0	400.0	156.8	39.9	0.2	200.0	244.0	366.0	99.0	2.3	29.0
Average	8.2	477.5	197.2	49.9	17.6	0.1	105.3	115.4	116.4	39.7	1.4	13.3
Stdev	0.5	292.6	89.1	36.2	9.7	0.1	58.7	70.7	104.1	25.7	0.6	8.5
% < Des	0.0	75.0	81.3	87.5	87.5	100.0	87.5	0.0	87.5	100.0	31.3	100.0
% P	81.3	25.0	18.8	12.5	12.5	0.0	12.5	0.0	12.5	0.0	18.8	0.0
% > Ex P	18.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0

Taluka: Mukhed (Barad, Barhali, Gojegaon, Halni, Khatgaon, Lahan, Malegaon, Mandlapur, Mudkhed, Mukrambad (Kharka), Sikarghat (Amdura))												
Min	7.1	228.1	120.0	26.0	8.5	0.0	72.2	87.3	11.0	6.2	0.1	2.0
Max	9.0	1339.0	535.0	150.0	57.0	0.2	400.0	488.0	288.0	135.0	3.5	125.0
Average	7.8	592.9	297.6	69.2	30.3	0.0	195.1	227.4	113.7	51.6	0.8	44.0
Stdev	0.5	259.1	102.9	28.9	14.0	0.1	92.8	121.8	75.2	34.5	1.2	37.9
% < Des	0.0	38.1	42.9	71.4	42.9	100.0	61.9	0.0	95.2	100.0	71.4	66.7
% P	90.5	61.9	57.1	28.6	57.1	0.0	38.1	0.0	4.8	0.0	19.0	0.0
% > Ex P	9.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.5	33.3

Taluka : Mudkhed (Mudkhed, Mugat)												
Min	8.0	469.0	172.0	32.0	16.5	0.0	75.4	32.6	100.0	33.0	1.0	3.0
Max	9.0	827.0	296.0	62.4	52.5	0.1	105.0	128.1	292.0	71.5	1.5	32.0
Average	8.4	638.5	247.0	40.0	35.7	0.1	87.3	85.3	187.5	45.1	1.2	15.0
Stdev	0.4	172.8	60.4	15.0	19.0	0.1	13.4	39.4	82.5	17.7	0.3	14.0
% < Des	0.0	25.0	100.0	100.0	50.0	100.0	100.0	0.0	75.0	100.0	25.0	100.0
% P	75.0	75.0	0.0	0.0	50.0	0.0	0.0	0.0	25.0	0.0	50.0	0.0
% > Ex P	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0

Taluka : Naigaon (Badbada, Billoli, Degaon, Kondalwadi, Naigaon Bazar, Yesgi)												
Min	7.8	345.0	212.0	60.8	11.7	0.1	125.0	123.9	40.0	24.8	0.8	1.0
Max	9.0	1521.0	736.0	172.8	73.9	0.1	344.0	419.7	466.0	102.2	1.5	23.0
Average	8.2	714.9	374.1	96.7	32.2	0.1	231.4	248.4	150.0	54.9	1.1	11.9
Stdev	0.4	481.5	205.4	46.0	22.9	0.0	73.2	102.1	171.5	29.6	0.3	9.2
% < Des	0.0	57.1	57.1	42.9	57.1	100.0	28.6	0.0	71.4	100.0	42.9	100.0
% P	85.7	42.9	28.6	57.1	42.9	0.0	71.4	0.0	28.6	0.0	28.6	0.0
% > Ex P	14.3	0.0	14.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.6	0.0

Taluka : Nanded (Adampur, Dhawari Buzurg, Jamb Buzurg, Jhalakwadi, Kamtala, Karadkher, Markand, Nanded, Narwat, Tuppa, Wadi Bk., Waranga)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.3	273.0	122.0	19.2	17.5	0.0	76.0	70.4	11.0	6.0	0.1	10.0
Max	9.5	1086.0	580.0	179.2	70.5	0.2	280.3	342.0	332.0	190.0	1.3	166.2
Average	7.9	548.8	357.8	78.4	39.2	0.0	200.1	233.8	114.3	50.9	0.5	58.9
Stdev	0.6	253.5	119.3	39.7	14.2	0.1	68.9	90.8	97.2	50.8	0.4	43.6
% < Des	0.0	61.1	33.3	61.1	27.8	100.0	44.4	0.0	88.9	100.0	77.8	50.0
% P	83.3	38.9	66.7	38.9	72.2	0.0	55.6	0.0	11.1	0.0	22.2	0.0
% > Ex P	16.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0

Taluka : Biloli (Narsi)												
Min	7.7	287.7	215.0	34.0	32.0	0.0	185.2	226.0	39.0	20.0	0.1	18.0
Max	7.8	473.6	315.8	72.0	33.0	0.0	325.4	397.0	53.0	37.0	0.3	21.0
Average	7.8	380.7	265.4	53.0	32.5	0.0	255.3	311.5	46.0	28.5	0.2	19.5
Stdev	0.1	131.5	71.3	26.9	0.7	0.0	99.1	120.9	9.9	12.0	0.1	2.1
% < Des	0.0	100.0	50.0	100.0	0.0	100.0	50.0	0.0	100.0	100.0	100.0	100.0
% P	100.0	0.0	50.0	0.0	100.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Deglur (Amdapur, Dawangir, Deglur, Halli, Hanegaon, Narangal Bk., Tadkhel, Wazarga)												
Min	7.6	249.0	142.0	4.8	6.3	0.1	33.0	1.2	24.0	4.0	0.8	2.0
Max	9.5	1619.0	456.0	113.6	68.0	0.2	256.0	312.3	490.0	137.0	1.7	33.8
Average	8.4	685.4	269.3	58.6	29.8	0.1	145.2	149.4	148.0	42.5	1.2	16.5
Stdev	0.6	371.2	91.8	24.9	17.8	0.0	54.5	79.7	139.1	36.2	0.3	10.2
% < Des	0.0	35.7	71.4	78.6	57.1	100.0	92.9	0.0	85.7	100.0	21.4	100.0
% P	64.3	64.3	28.6	21.4	42.9	0.0	7.1	0.0	14.3	0.0	50.0	0.0
% > Ex P	35.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.6	0.0

Taluka : Dharmabad (Dharmabad, Karegaon, Pataoda b.k., Yeoti)												
Min	8.0	387.0	130.0	11.2	8.3	0.1	60.0	54.4	56.0	7.0	0.7	8.0
Max	9.0	683.0	320.0	86.4	59.3	0.3	184.0	224.5	134.0	72.6	1.6	37.0
Average	8.5	513.2	249.2	52.5	28.7	0.1	152.6	163.6	87.2	38.4	1.1	15.8
Stdev	0.4	119.0	72.0	30.2	18.8	0.1	53.7	64.2	28.6	24.8	0.3	12.4
% < Des	0.0	60.0	80.0	60.0	80.0	100.0	100.0	0.0	100.0	100.0	20.0	100.0
% P	40.0	40.0	20.0	40.0	20.0	0.0	0.0	0.0	0.0	0.0	60.0	0.0
% > Ex P	60.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	0.0

Taluka : Kandhar (Bachoti, Bamni p.k., Bhadurpura, Kandhar, Nagalgaon, Osmanagar, Pethwadaj, Shekapur, Warwant)												
Min	7.9	72.0	60.0	6.4	1.9	0.1	42.0	23.2	30.0	9.0	0.6	3.0
Max	9.2	1200.0	364.0	113.6	41.8	0.9	160.0	168.4	300.0	107.0	1.6	34.6
Average	8.5	569.3	218.8	51.7	21.7	0.3	102.7	105.8	139.5	42.8	1.1	11.2
Stdev	0.5	344.3	78.9	31.8	11.7	0.3	43.8	50.2	89.0	30.5	0.4	9.6
% < Des	0.0	50.0	91.7	83.3	75.0	66.7	100.0	0.0	83.3	100.0	58.3	100.0
% P	58.3	50.0	8.3	16.7	25.0	33.3	0.0	0.0	16.7	0.0	25.0	0.0
% > Ex P	41.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.7	0.0

Taluka : Loha (Janapuri, Loha, Malakoli (khedkarwadi), Savargaon(nipani), Shambergaon)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.6	402.0	128.0	32.0	8.8	0.1	46.0	56.1	70.0	30.0	0.8	0.0
Max	9.1	1346.0	460.0	152.0	48.6	0.7	243.0	296.5	376.0	89.4	1.9	51.7
Average	8.2	872.1	325.1	90.3	24.2	0.3	142.4	163.1	206.9	59.7	1.3	13.5
Stdev	0.5	318.5	125.3	51.0	15.7	0.3	66.6	77.6	105.2	25.3	0.4	18.3
% < Des	0.0	14.3	42.9	42.9	71.4	57.1	85.7	0.0	71.4	100.0	14.3	85.7
% P	71.4	85.7	57.1	57.1	28.6	42.9	14.3	0.0	28.6	0.0	42.9	0.0
% > Ex P	28.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	42.9	14.3

Taluka : Umri (Gortha, Karla, Kawalguda Kh., Somthana J., Waghalwada)												
Min	8.0	259.0	120.0	8.0	7.8	0.1	39.0	0.0	36.0	14.0	0.8	3.8
Max	9.5	1963.0	580.0	97.6	81.6	0.2	246.0	300.1	324.0	208.0	1.6	30.4
Average	8.9	734.2	236.2	45.0	30.1	0.1	112.0	109.0	164.8	54.0	1.0	10.8
Stdev	0.6	537.7	146.2	33.4	20.0	0.0	67.6	96.0	113.6	58.7	0.3	9.2
% < Des	0.0	50.0	80.0	70.0	70.0	100.0	90.0	0.0	70.0	90.0	60.0	100.0
% P	40.0	50.0	20.0	30.0	30.0	0.0	10.0	0.0	30.0	10.0	30.0	0.0
% > Ex P	60.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0

20. NADURBAR

Taluka : Akkalkuva (Akkalkuva, Digiamba, Karanpada, Kathi, Khapar, Moramba, Raisingpur)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.5	75.0	52.0	8.0	5.8	0.0	48.0	35.8	8.0	4.0	0.1	0.4
Max	9.5	1824.0	820.0	99.2	175.0	0.2	331.0	403.8	590.0	143.0	0.9	41.8
Average	8.3	429.1	274.9	45.2	39.4	0.1	180.8	197.4	93.0	37.7	0.4	8.7
Stdev	0.5	366.7	173.4	26.8	36.4	0.1	79.4	105.8	118.4	31.5	0.2	10.0
% < Des	0.0	79.2	62.5	83.3	50.0	100.0	54.2	0.0	95.8	100.0	100.0	100.0
% P	75.0	20.8	33.3	16.7	45.8	0.0	45.8	0.0	4.2	0.0	0.0	0.0
% > Ex P	25.0	0.0	4.2	0.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Nandurbar (Akarale, Bhadavad, Dhandane, Dhanora, Dhekwad, Khuntamwadi, Loy, Nandurbar, Nimboni, Patharai, Rajhava, Ranala, Samsherpur, Shanimandal, Vadkolambi, Wadali Shivar)												
Min	7.2	196.0	148.0	19.2	8.7	0.0	62.0	75.6	10.7	5.0	0.0	0.3
Max	9.1	3040.0	1780.0	326.4	234.3	0.5	459.8	561.0	990.0	560.0	0.9	104.2
Average	8.1	619.5	351.6	65.2	45.8	0.1	225.7	263.7	145.1	68.1	0.4	18.8
Stdev	0.4	439.4	238.2	51.7	35.7	0.1	69.9	87.9	160.3	83.6	0.3	22.4
% < Des	0.0	49.0	54.9	76.5	33.3	98.0	27.5	0.0	90.2	96.1	100.0	90.2
% P	86.3	49.0	37.3	21.6	62.7	2.0	72.5	0.0	9.8	2.0	0.0	0.0
% > Ex P	13.7	2.0	7.8	2.0	3.9	0.0	0.0	0.0	0.0	2.0	0.0	9.8

Taluka : Navapur (Anjane, Dokare, Jamtalav, Kadwan, Kamod, Khokarwade, Kolvihir, Mograni, Navapur, Nijampur, Shravani, Sonkhamb, Vadkalambi, Vadkhut, Viasarwadi)												
Min	7.7	154.0	40.0	4.8	6.8	0.0	68.0	66.9	16.0	12.0	0.1	0.2
Max	8.9	1025.0	512.0	92.8	85.5	0.6	320.0	388.4	230.0	205.0	0.8	68.8
Average	8.2	393.3	248.8	39.5	36.5	0.1	199.6	215.0	72.2	39.2	0.4	10.3
Stdev	0.3	170.7	105.7	22.4	16.9	0.1	66.1	83.9	48.0	30.2	0.2	15.9
% < Des	0.0	77.8	64.4	93.3	35.6	95.6	42.2	0.0	100.0	97.8	100.0	93.3
% P	86.7	22.2	35.6	6.7	64.4	4.4	57.8	0.0	0.0	2.2	0.0	0.0
% > Ex P	13.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7

Taluka : Dhadgaon (Bijari, Chinalkuva, Dhadgaon, Mandavi bk., Umarani kh.)												
Min	7.9	169.0	80.0	6.4	7.8	0.0	60.0	59.0	12.0	7.0	0.1	0.2
Max	8.7	508.0	388.0	80.0	50.5	0.2	220.0	217.8	138.0	59.0	0.6	15.0
Average	8.3	289.8	205.9	40.4	25.5	0.1	157.6	156.1	52.8	22.5	0.3	5.6
Stdev	0.3	100.7	83.7	21.7	12.7	0.1	46.2	45.5	36.6	14.9	0.2	4.2
% < Des	0.0	94.1	88.2	94.1	58.8	100.0	82.4	0.0	100.0	100.0	100.0	100.0
% P	64.7	5.9	11.8	5.9	41.2	0.0	17.6	0.0	0.0	0.0	0.0	0.0
% > Ex P	35.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Shahada (Dongargaon, Fattepur, Gogapur, Hol, Jayanagar, Kakarde kh., Khaparkheda, Kukwal, Mandane, Manmodya, Prakashe, Sarangkheda, Shahada, Sonwad, Ubhadagad)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.4	181.0	72.0	8.0	2.9	0.0	36.0	35.6	32.0	4.0	0.1	0.1
Max	9.2	1231.0	492.0	83.2	84.6	0.9	500.0	609.3	372.0	196.0	1.3	26.0
Average	8.4	519.8	217.6	38.5	29.5	0.1	180.4	200.0	107.9	51.3	0.4	5.0
Stdev	0.4	311.0	98.8	20.0	18.7	0.2	101.0	128.7	78.5	43.4	0.4	5.4
% < Des	0.0	56.3	87.5	96.9	65.6	87.5	68.8	0.0	93.8	100.0	93.8	100.0
% P	75.0	43.8	12.5	3.1	34.4	12.5	31.3	0.0	6.3	0.0	6.3	0.0
% > Ex P	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Taloda (Gopalpur, Kothar, Mod, Rozwe, Taloda, Umari)												
Min	7.8	183.0	80.0	11.2	8.7	0.0	80.0	79.0	17.8	4.0	0.1	1.0
Max	8.8	676.0	355.0	94.4	67.0	0.2	380.0	463.6	142.0	59.0	0.6	23.0
Average	8.1	394.4	230.1	38.6	32.5	0.0	229.5	254.3	67.9	24.9	0.3	9.4
Stdev	0.3	116.5	79.1	24.7	16.7	0.0	89.0	117.8	30.1	13.5	0.2	5.9
% < Des	0.0	88.2	76.5	88.2	52.9	100.0	35.3	0.0	100.0	100.0	100.0	100.0
% P	88.2	11.8	23.5	11.8	47.1	0.0	64.7	0.0	0.0	0.0	0.0	0.0
% > Ex P	11.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

21. NASHIK

Taluka : Baglan (Varche Tembhe, Avhati, Deopurpada, Dhandripada, Jad, Karanjad, Mahad, Nampur, Satana, Surane, Utrane, Vasol, Vaygaon)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.7	204.0	108.0	6.4	3.9	0.0	60.0	73.2	12.0	2.0	0.1	0.3
Max	9.5	1987.0	940.0	176.0	121.5	0.9	480.0	585.6	370.0	365.0	1.5	46.2
Average	8.4	675.7	316.1	57.7	41.7	0.1	231.1	261.4	117.6	59.9	0.6	10.3
Stdev	0.4	410.0	165.1	40.6	26.1	0.1	92.0	117.1	95.9	60.7	0.3	9.9
% < Des	0.0	39.6	50.0	72.9	41.7	95.8	33.3	0.0	87.5	95.8	83.3	97.9
% P	72.9	60.4	43.8	27.1	54.2	4.2	66.7	0.0	12.5	4.2	14.6	0.0
% > Ex P	27.1	0.0	6.3	0.0	4.2	0.0	0.0	0.0	0.0	0.0	2.1	2.1

Taluka : Deola (Deola, Gunjalnagar)												
Min	7.6	490.0	208.0	12.8	3.9	0.0	56.0	68.3	108.0	46.0	0.2	2.7
Max	9.6	1489.0	492.0	188.8	75.8	0.1	325.0	396.5	530.0	421.0	1.5	119.0
Average	8.3	1036.0	418.3	107.1	36.6	0.0	176.5	203.8	286.3	193.5	0.7	27.8
Stdev	0.8	407.5	116.9	69.4	30.3	0.0	113.0	145.4	192.8	177.1	0.5	45.1
% < Des	0.0	16.7	16.7	33.3	50.0	100.0	66.7	0.0	66.7	66.7	83.3	83.3
% P	66.7	83.3	83.3	66.7	50.0	0.0	33.3	0.0	33.3	0.0	0.0	0.0
% > Ex P	33.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	16.7	16.7

Taluka : Dindori (Awankhed, Chausale, Dhakambe, Dindori, Jambutake, Karanjali, Kokanwadi, Kona, Mhasrul, Mokhnal, Nalegaon, Nanashi, Talegaon Dindori, Umrale Bk.)												
Min	7.7	156.0	60.0	12.8	3.9	0.0	68.0	10.1	14.0	7.0	0.1	0.3
Max	10.6	1203.0	540.0	134.4	78.7	0.4	355.0	433.1	208.0	136.0	7.0	45.3
Average	8.3	406.9	247.0	45.8	32.2	0.1	170.1	189.8	73.6	43.2	0.7	10.9
Stdev	0.6	228.9	127.9	29.9	18.5	0.1	71.8	94.9	50.3	27.5	1.2	11.2
% < Des	0.0	75.0	71.9	87.5	50.0	90.6	75.0	0.0	100.0	100.0	93.8	96.9
% P	84.4	25.0	28.1	12.5	50.0	9.4	25.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	15.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	3.1

Taluka : Igatpuri (Gonde, Igatpuri, Kanchangaon, Khed, Mundegaon, Take Deogaon, Talegaon, Vasali, Wadi Varhe)												
Min	7.8	108.0	48.0	8.0	6.8	0.0	44.0	20.1	16.0	0.0	0.1	0.1
Max	10.0	744.0	330.0	86.0	54.7	0.9	315.0	384.3	164.0	84.0	0.9	17.0
Average	8.4	292.4	177.4	32.2	23.5	0.2	142.7	145.2	47.2	23.3	0.4	2.2
Stdev	0.5	148.1	73.2	20.6	10.9	0.3	60.8	73.5	31.8	15.8	0.3	3.9
% < Des	0.0	89.7	94.9	94.9	76.9	79.5	87.2	0.0	100.0	100.0	100.0	100.0
% P	74.4	10.3	5.1	5.1	23.1	20.5	12.8	0.0	0.0	0.0	0.0	0.0
% > Ex P	25.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Kalwan (Abhona, Bhagurdi, Dalwat, Desgaon, Inshi, Jamle Pale, Kalwan, Matane, Pilakos, Sakore, Visapur)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.6	193.0	100.0	12.8	3.9	0.0	40.0	16.1	7.2	10.0	0.1	2.4
Max	10.3	1536.0	1180.0	214.4	156.5	0.3	328.0	398.5	526.0	410.0	1.1	41.0
Average	8.5	532.4	303.8	50.0	43.9	0.1	175.9	188.3	92.4	62.0	0.6	12.1
Stdev	0.6	372.6	209.7	48.1	36.1	0.1	72.8	95.7	104.7	89.7	0.4	9.1
% < Des	0.0	64.3	67.9	82.1	35.7	89.3	64.3	0.0	92.9	89.3	89.3	100.0
% P	53.6	35.7	28.6	14.3	53.6	10.7	35.7	0.0	7.1	7.1	10.7	0.0
% > Ex P	46.4	0.0	3.6	3.6	10.7	0.0	0.0	0.0	0.0	3.6	0.0	0.0

Taluka : Malegaon (Agar bk., Ajande, Ajang, Chikhalohal, Dapur, Daregaon, Dhane, Gilane, Jalgaon, Jhodga, Karanjagavan, Malegaon, Nagzari, Ravalgaon, Saudane, Umarane, Vajirkhede, Virane, Zodge)												
Min	7.6	185.0	96.0	4.8	11.7	0.0	84.0	32.5	36.0	12.0	0.1	0.1
Max	10.4	2291.0	864.0	134.4	166.2	1.6	690.0	841.8	878.0	465.0	1.9	73.8
Average	8.2	840.2	354.9	40.6	61.6	0.3	281.0	326.7	177.8	121.8	0.5	10.9
Stdev	0.6	492.5	188.8	31.0	40.0	0.4	126.4	169.6	174.0	117.3	0.4	15.4
% < Des	0.0	28.9	36.8	84.2	28.9	78.9	26.3	0.0	78.9	78.9	92.1	94.7
% P	84.2	68.4	52.6	15.8	57.9	10.5	71.1	0.0	21.1	18.4	5.3	0.0
% > Ex P	15.8	2.6	10.5	0.0	13.2	10.5	2.6	0.0	0.0	2.6	2.6	5.3

Taluka : Nandgaon (Bolthan, Chandore, Dhotane Bk, Hiswal Kh., Jalgaon Bk., Jamdari, Jawalki, Khadgaon, Manmad, Muldongari, Nandgaon, Nandur, Naydongari, Panewadi, Pardhadi, Sakore, Talwade)												
Min	6.8	225.0	120.0	6.4	9.7	0.0	135.2	132.5	30.0	4.0	0.1	0.2
Max	9.2	2074.0	765.0	128.0	143.0	0.3	607.0	734.4	464.0	270.0	2.4	270.0
Average	8.3	787.0	325.3	49.9	48.7	0.1	281.8	325.2	160.6	84.1	0.7	33.1
Stdev	0.5	465.6	172.2	32.0	31.4	0.1	117.2	154.9	139.7	81.1	0.4	58.7
% < Des	0.0	34.5	44.8	79.3	31.0	100.0	27.6	0.0	69.0	82.8	93.1	89.7
% P	62.1	62.1	51.7	20.7	58.6	0.0	69.0	0.0	31.0	17.2	3.4	0.0
% > Ex P	37.9	3.4	3.4	0.0	10.3	0.0	3.4	0.0	0.0	0.0	3.4	10.3

Taluka : Nashik (Ambebahula, Bhagur, Borgaon Pimpri, Chikhalohol, Deolali, Devargaon, Dhundegaon, Dudgaon, Eklahara, Gangapur/someshvar, Ghagbari, Jakhori, Kotamgaon, Lahvit, Lohashingwe, Mhasrul, Nandur Shirgate, Nashik, Pimpalgaon Khamb, Pimpri Sayad, Raslapur, Satpur, Shevge Darna, Shinde, Vadala, Villoli)												
Min	7.5	95.0	64.0	7.6	0.0	0.0	33.0	40.3	18.0	4.0	0.0	0.1
Max	9.4	1809.0	885.0	212.0	157.0	0.9	430.0	524.6	730.0	329.0	1.0	101.1
Average	8.2	549.6	309.7	50.8	44.3	0.1	223.0	254.7	122.9	57.6	0.3	14.6
Stdev	0.4	358.2	159.9	38.5	30.0	0.1	98.1	125.1	150.8	59.4	0.2	23.2
% < Des	0.0	55.1	55.1	81.2	39.1	97.1	42.0	0.0	85.5	94.2	100.0	91.3
% P	85.5	44.9	39.1	17.4	56.5	2.9	58.0	0.0	14.5	5.8	0.0	0.0
% > Ex P	14.5	0.0	5.8	1.4	4.3	0.0	0.0	0.0	0.0	0.0	0.0	8.7

Taluka : Niphad (Ahergaon, Antarweli, Gajarwadi, Kasbesukene, Katargaon, Kotamgaon, Lonwadi, Mhalsakore, Niphad, Ozar mig, Pachorewani, Pimpalgaon Basvant, Rui, Sakore, Sarole Thadi, Savargaon, Thergaon, Umbarkhed, Wakad)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.5	188.0	160.0	10.4	4.9	0.0	69.0	84.2	14.0	21.0	0.2	0.1
Max	9.5	2778.0	920.0	286.4	163.3	0.5	780.0	950.4	886.0	487.0	1.9	220.7
Average	8.3	889.1	413.0	55.8	66.5	0.1	246.2	287.4	217.4	104.2	0.7	31.7
Stdev	0.4	625.2	202.4	52.6	42.8	0.1	136.4	170.2	203.0	98.5	0.4	48.5
% < Des	0.0	24.4	31.7	85.4	17.1	97.6	41.5	0.0	78.0	87.8	82.9	80.5
% P	78.0	68.3	51.2	9.8	61.0	2.4	56.1	0.0	22.0	9.8	9.8	0.0
% > Ex P	22.0	7.3	17.1	4.9	22.0	0.0	2.4	0.0	0.0	2.4	7.3	19.5

Taluka : Satana (Lakhmapur, Nampur, Satana)												
Min	7.5	313.1	250.0	22.0	29.2	0.0	260.0	317.2	21.3	10.1	0.2	0.1
Max	8.1	1910.7	1015.0	198.0	204.0	0.0	400.0	488.0	564.5	376.0	1.0	280.9
Average	7.9	1064.5	550.0	82.7	83.5	0.0	340.9	415.9	278.5	143.9	0.6	93.9
Stdev	0.2	679.6	303.9	61.0	61.8	0.0	53.1	64.8	212.9	131.9	0.3	129.9
% < Des	0.0	16.7	16.7	66.7	16.7	100.0	0.0	0.0	66.7	66.7	100.0	66.7
% P	100.0	83.3	50.0	33.3	66.7	0.0	100.0	0.0	33.3	33.3	0.0	0.0
% > Ex P	0.0	0.0	33.3	0.0	16.7	0.0	0.0	0.0	0.0	0.0	0.0	33.3

Taluka : Peinth (Adgaon Harsul, Ambe, Goldari, Harsul, Nirgude, Peinth, Peth)												
Min	7.5	96.0	44.0	8.0	5.8	0.0	40.0	10.4	14.0	1.0	0.2	0.1
Max	10.3	548.2	375.0	84.0	43.7	0.3	220.0	268.4	205.9	71.0	1.0	22.9
Average	8.4	257.8	180.4	33.3	23.6	0.1	149.6	150.1	54.0	19.3	0.4	3.9
Stdev	0.8	150.8	96.8	25.2	11.8	0.1	55.9	72.7	55.2	18.0	0.2	7.4
% < Des	0.0	92.9	85.7	85.7	57.1	92.9	85.7	0.0	100.0	100.0	92.9	100.0
% P	71.4	7.1	14.3	14.3	42.9	7.1	14.3	0.0	0.0	0.0	7.1	0.0
% > Ex P	28.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Trimbakeshwar (Dahalewadi, Harsul, Trimbakeswar)												
Min	7.8	168.1	145.0	36.0	9.7	0.0	114.8	140.0	11.0	8.2	0.0	0.1
Max	8.2	556.4	355.0	104.0	23.1	0.0	345.0	420.9	95.9	46.1	0.3	14.9
Average	8.0	257.7	192.5	52.0	15.2	0.0	174.1	212.5	30.2	26.4	0.2	3.5
Stdev	0.1	148.1	80.4	26.1	4.9	0.0	85.6	104.4	32.6	14.3	0.1	5.8
% < Des	0.0	83.3	83.3	83.3	100.0	100.0	83.3	0.0	100.0	100.0	100.0	100.0
% P	100.0	16.7	16.7	16.7	0.0	0.0	16.7	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Yeola (Andarsul, Ankai, Bharam, Bokate, Mahalkheda, Mukhed, Nagarsal, Satali, Yeola)												
Min	7.7	145.0	72.0	16.0	7.8	0.0	64.0	59.6	22.0	22.0	0.2	0.3
Max	9.8	1616.0	712.0	104.0	115.7	0.2	580.0	707.1	600.0	222.0	1.9	50.0
Average	8.5	624.3	306.0	47.8	45.3	0.1	240.9	270.7	122.1	74.4	0.6	16.6
Stdev	0.5	452.7	185.4	28.3	32.7	0.1	130.8	169.1	149.3	54.9	0.4	18.3
% < Des	0.0	58.8	64.7	82.4	41.2	100.0	35.3	0.0	88.2	94.1	94.1	88.2
% P	47.1	41.2	23.5	17.6	47.1	0.0	64.7	0.0	11.8	5.9	0.0	0.0
% > Ex P	52.9	0.0	11.8	0.0	11.8	0.0	0.0	0.0	0.0	0.0	5.9	11.8

Taluka : Sinnar (Agaskhind, Atkawade, Baragaon Pimpri, Borkhind, Chondhi, Dodi kh., Dubere, Kirtangali, Mohdari, Musalgaon, Nirhale, Sinnar, Sonewadi, Ujjani)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.6	131.0	48.0	8.0	5.8	0.0	32.0	30.1	24.0	8.0	0.1	0.1
Max	10.3	2314.0	925.0	170.0	206.6	0.4	608.0	739.8	442.0	275.0	1.6	236.2
Average	8.5	934.0	403.7	69.0	56.2	0.1	272.4	316.8	180.6	82.7	0.6	24.9
Stdev	0.5	594.1	203.8	39.8	42.3	0.1	115.7	149.1	115.4	70.6	0.3	49.2
% < Des	0.0	27.5	35.0	60.0	35.0	95.0	15.0	0.0	82.5	87.5	90.0	90.0
% P	70.0	67.5	47.5	40.0	55.0	5.0	82.5	0.0	17.5	12.5	7.5	0.0
% > Ex P	30.0	5.0	17.5	0.0	10.0	0.0	2.5	0.0	0.0	0.0	2.5	10.0

Taluka : Chandvad (Chandvad, Chikhalambe, Kanmandale, Nimgavhan, Sogras, Vadbare, Varadi)												
Min	7.8	194.2	155.0	18.4	12.2	0.0	86.0	84.2	28.0	6.0	0.2	0.8
Max	9.3	1018.0	480.0	86.4	80.7	0.5	224.0	273.3	202.0	137.0	1.1	20.4
Average	8.4	439.1	289.8	42.2	44.8	0.1	155.4	169.4	65.2	44.5	0.7	10.1
Stdev	0.4	209.1	113.5	20.9	19.4	0.1	44.2	54.8	47.7	31.9	0.2	7.4
% < Des	0.0	60.0	66.7	86.7	20.0	92.9	73.3	0.0	100.0	100.0	73.3	100.0
% P	73.3	40.0	33.3	13.3	80.0	14.3	26.7	0.0	0.0	0.0	26.7	0.0
% > Ex P	26.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Surgana (Chikadi, Kothule, Surgana)												
Min	8.0	152.0	112.0	10.4	11.7	0.0	76.0	67.4	22.0	8.0	0.5	0.3
Max	9.2	416.0	340.0	62.4	54.4	0.9	200.0	196.8	206.0	43.0	0.9	9.8
Average	8.6	282.5	195.3	31.1	28.6	0.2	135.3	128.7	65.0	19.5	0.7	3.8
Stdev	0.6	122.9	108.7	22.4	16.1	0.4	57.1	61.5	71.7	12.6	0.1	4.5
% < Des	0.0	100.0	66.7	100.0	66.7	83.3	83.3	0.0	100.0	100.0	100.0	100.0
% P	50.0	0.0	33.3	0.0	33.3	16.7	16.7	0.0	0.0	0.0	0.0	0.0
% > Ex P	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

22. OSMANABAD

Taluka : Bhum (Bhoom, Dahiphal, Hatola, Rui, Wakwad)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.8	98.0	48.0	12.8	2.9	0.0	36.0	28.1	36.0	4.8	0.0	0.7
Max	11.0	982.0	415.7	91.2	84.0	0.8	364.8	445.0	148.0	78.0	1.4	70.0
Average	8.5	480.5	239.6	44.1	31.4	0.2	160.3	185.5	77.0	34.6	0.6	13.7
Stdev	1.0	245.1	125.5	24.2	24.5	0.2	114.6	149.0	38.8	24.7	0.4	18.6
% < Des	0.0	41.7	75.0	91.7	58.3	91.7	75.0	0.0	100.0	100.0	83.3	91.7
% P	75.0	58.3	25.0	8.3	41.7	8.3	25.0	0.0	0.0	0.0	16.7	0.0
% > Ex P	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.3

Taluka : Kalambh (Deo dhanaora, Diksal, Ghargaon, Gour, Hawargaon, Lakhangaon, Malkaranja, Mohar, Pimpalwandi, Ratnapur, Shiradhone, Stra, Watwada, Yermala)												
Min	7.2	182.0	72.0	14.4	3.9	0.0	56.0	32.0	30.0	11.0	0.1	0.4
Max	11.0	1905.0	1205.0	301.0	148.7	0.4	443.0	540.5	580.0	246.0	1.4	326.0
Average	8.4	614.1	332.6	74.1	35.8	0.2	160.8	172.4	131.3	70.0	0.6	29.8
Stdev	0.9	431.6	265.1	71.5	31.5	0.1	90.3	120.2	131.8	68.5	0.4	75.1
% < Des	0.0	41.4	65.5	72.4	58.6	93.1	79.3	0.0	89.7	86.2	79.3	93.1
% P	72.4	58.6	20.7	20.7	34.5	6.9	20.7	0.0	10.3	13.8	20.7	0.0
% > Ex P	27.6	0.0	13.8	6.9	6.9	0.0	0.0	0.0	0.0	0.0	0.0	6.9

Taluka : Lohara (Lohara Buzurg)												
Min	7.5	493.1	285.0	12.0	23.1	0.0	169.7	207.0	103.0	52.8	0.1	24.0
Max	7.6	555.3	400.0	76.0	85.0	0.0	225.4	275.0	131.0	90.0	0.3	76.0
Average	7.5	519.5	354.9	52.7	54.4	0.0	203.4	248.1	114.7	65.6	0.2	45.7
Stdev	0.1	32.1	61.4	35.3	31.0	0.0	29.6	36.2	14.6	21.1	0.1	27.0
% < Des	0.0	33.3	33.3	66.7	33.3	100.0	33.3	0.0	100.0	100.0	100.0	66.7
% P	100.0	66.7	66.7	33.3	66.7	0.0	66.7	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3

Taluka : Osmanabad (Anandwadi, Arni, Borewadi, Chilwadi, Dhoki, Dhola, Goverdhanwadi, Irla, Jagji, Kanagara, Kawalewadi, Kolhegaon, Mouje Barul, Osmanabad, Rajuri, Ruibhar, Takwala, Vadgaon, Siddheswar, Wakwad, Wanewadi, Yedshi)												
Min	7.3	148.0	84.0	8.0	4.9	0.0	26.0	2.4	22.0	4.8	0.0	0.6
Max	9.5	1248.0	732.0	190.4	86.0	0.6	413.0	503.9	430.0	228.0	1.6	198.0
Average	8.0	628.0	363.4	74.6	42.9	0.1	211.5	249.1	127.3	76.8	0.7	29.5
Stdev	0.4	314.2	158.4	43.9	20.5	0.2	87.9	113.6	90.4	63.6	0.4	42.0
% < Des	0.0	47.4	31.6	60.5	26.3	89.5	42.1	0.0	94.7	94.7	78.9	81.6
% P	86.8	52.6	55.3	39.5	73.7	10.5	57.9	0.0	5.3	5.3	15.8	0.0
% > Ex P	13.2	0.0	13.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	18.4

Taluka : Omerga (Aloor, Babalsoor, Diggi, Gunjoti, Holi, Jakekur, Kader, Kanegaon, Kawatha, Naichakur, Sastur, Sawalsoor, Turori)												
Min	7.4	199.0	116.0	6.4	1.9	0.0	88.0	82.8	32.0	9.6	0.0	0.3
Max	9.9	741.2	521.8	94.4	111.0	0.4	380.0	463.6	227.0	82.0	3.0	76.0
Average	8.1	414.2	253.1	43.7	35.0	0.2	179.6	188.9	93.2	30.0	2.1	9.9
Stdev	0.6	146.1	118.8	25.2	26.0	0.1	76.4	99.5	52.6	16.8	15.0	16.3
% < Des	0.0	73.7	84.2	94.7	57.9	94.7	63.2	0.0	100.0	100.0	73.7	94.7
% P	73.7	26.3	15.8	5.3	36.8	5.3	36.8	0.0	0.0	0.0	21.1	0.0
% > Ex P	26.3	0.0	0.0	0.0	5.3	0.0	0.0	0.0	0.0	0.0	5.3	5.3

Taluka : Paranda (Asu, Bavchi, Kapilapuri, Mankeshwar, Shelgaon, Sonari, Wakdi, Wangi (kd))												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.6	312.0	148.0	32.0	1.9	0.0	78.7	0.0	49.7	3.4	0.5	1.3
Max	11.0	1261.0	616.0	196.8	40.0	0.2	225.0	274.5	314.0	182.3	1.5	68.3
Average	8.7	539.6	275.8	72.4	23.0	0.1	150.2	154.6	121.2	45.4	1.0	21.8
Stdev	1.2	282.0	136.4	49.0	12.3	0.1	50.2	85.2	84.1	52.7	0.3	25.3
% < Des	0.0	50.0	80.0	80.0	70.0	100.0	70.0	0.0	90.0	100.0	50.0	80.0
% P	60.0	50.0	10.0	20.0	30.0	0.0	30.0	0.0	10.0	0.0	40.0	0.0
% > Ex P	40.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	20.0

Taluka : Tuljapur (Andoor, Bolegaon, Gandora, Hatola, Kati, Kemwadi, Keshegaon, Kunsawali, Mangrul, Naldurg, Sangvi, Tailor nagar, Tamalwadi, Tambatwadi)												
Min	7.3	159.0	84.0	11.2	3.9	0.0	40.0	34.1	26.0	10.9	0.3	0.7
Max	9.6	1060.0	544.0	155.2	66.0	0.3	264.0	322.1	256.0	162.0	3.0	22.8
Average	8.3	485.0	248.6	53.5	27.9	0.1	125.4	137.0	105.9	61.9	1.0	8.5
Stdev	0.5	214.1	118.2	39.9	14.5	0.1	58.2	72.2	62.8	50.0	0.6	6.5
% < Des	0.0	45.2	64.5	71.0	51.6	96.8	87.1	0.0	96.8	100.0	54.8	100.0
% P	67.7	54.8	35.5	29.0	48.4	3.2	12.9	0.0	3.2	0.0	38.7	0.0
% > Ex P	32.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.5	0.0

23. PARBHANI

Taluka : Jintur (Ambarwadi, Asegaon, Bhogaon, Borkini, Dhanora bk., Dudhgaon, Jintur, Kawada, Mankeswar, Nagapur, Pokharni)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.5	223.0	86.0	17.3	6.3	0.0	64.0	62.0	21.0	3.0	0.1	0.1
Max	8.5	1879.0	780.0	102.4	108.9	0.3	344.0	419.7	620.0	201.0	2.0	147.0
Average	7.8	843.3	383.8	49.9	45.7	0.2	216.3	252.5	206.9	70.9	1.1	15.6
Stdev	0.3	520.8	208.3	24.0	32.9	0.1	78.3	99.6	172.7	65.8	0.6	30.0
% < Des	0.0	39.1	39.1	91.3	43.5	91.3	34.8	0.0	65.2	95.7	30.4	95.7
% P	100.0	60.9	47.8	8.7	47.8	8.7	65.2	0.0	34.8	4.3	47.8	0.0
% > Ex P	0.0	0.0	13.0	0.0	8.7	0.0	0.0	0.0	0.0	0.0	21.7	4.3

Taluka : Manwat (Kekarjawla, Kolha, Manwat)												
Min	7.3	568.0	204.0	12.8	9.7	0.0	82.0	100.0	54.0	28.0	0.2	7.1
Max	8.3	807.5	531.4	150.0	59.3	0.2	243.0	296.5	184.6	100.8	2.0	171.7
Average	7.8	663.8	349.1	73.2	34.6	0.1	157.9	192.6	106.8	64.6	0.9	63.4
Stdev	0.4	96.2	140.0	53.7	16.3	0.1	71.4	87.1	57.2	26.1	0.7	78.8
% < Des	0.0	0.0	50.0	66.7	33.3	100.0	66.7	0.0	100.0	100.0	50.0	66.7
% P	100.0	100.0	50.0	33.3	66.7	0.0	33.3	0.0	0.0	0.0	16.7	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	33.3

Taluka : Parbhani (Asola, Balas Kh, Barwandi, Borwand bk, Daithana, Gojegaon, Kotamwadi, Parbhani, Pedgaon, Pingali, Pingali kothala, Singanapur, Tadlimla, Takli kumbharna, Todkalas, Zari)												
Min	6.9	273.0	165.0	8.3	3.9	0.0	75.0	91.5	21.0	17.0	0.1	0.1
Max	8.5	2613.0	1032.0	139.2	116.6	0.2	531.0	647.8	526.0	153.0	3.0	147.0
Average	7.8	719.3	317.6	48.8	39.0	0.1	201.9	234.6	113.9	63.5	1.2	21.2
Stdev	0.4	467.4	159.1	30.8	23.5	0.1	92.9	112.3	108.4	42.1	1.5	31.3
% < Des	0.0	40.0	65.7	80.0	34.3	100.0	54.3	0.0	88.6	100.0	45.7	85.7
% P	100.0	57.1	31.4	20.0	60.0	0.0	45.7	0.0	11.4	0.0	34.3	0.0
% > Ex P	0.0	2.9	2.9	0.0	5.7	0.0	0.0	0.0	0.0	0.0	20.0	14.3

Taluka : Palam (Barbhani, Kerwadi, Palam, Parwa, Pendu bk., Pharkanda)												
Min	7.1	368.3	208.0	11.5	15.6	0.0	41.0	0.0	28.0	15.0	0.4	4.6
Max	9.5	1853.0	616.0	89.6	106.9	0.5	433.0	528.3	328.0	207.0	2.0	83.3
Average	7.9	870.8	361.7	49.5	45.8	0.2	179.4	209.0	126.2	83.3	1.0	23.3
Stdev	0.6	476.0	113.7	21.9	22.5	0.1	101.5	134.6	88.3	62.3	0.5	19.6
% < Des	0.0	21.4	21.4	92.9	14.3	71.4	78.6	0.0	85.7	85.7	35.7	92.9
% P	85.7	78.6	71.4	7.1	78.6	28.6	21.4	0.0	14.3	14.3	50.0	0.0
% > Ex P	14.3	0.0	7.1	0.0	7.1	0.0	0.0	0.0	0.0	0.0	14.3	7.1

Taluka : Pathari (Babulgaon, Banegaon, Depandara, Kansur, Niwali, Pathargavhan bk., Pathari, Zari)												
Min	7.1	208.0	168.0	9.0	21.4	0.0	72.2	39.2	35.5	14.0	0.2	0.1
Max	9.0	2275.0	608.0	100.0	74.8	0.2	325.4	397.0	416.0	219.0	1.9	259.0
Average	7.8	862.4	309.2	40.4	40.9	0.1	194.7	218.9	152.9	75.0	1.0	25.7
Stdev	0.4	637.8	111.3	27.2	15.0	0.0	66.4	83.9	126.6	56.8	0.5	59.3
% < Des	0.0	38.9	61.1	83.3	16.7	100.0	50.0	0.0	66.7	94.4	38.9	94.4
% P	94.4	50.0	33.3	16.7	83.3	0.0	50.0	0.0	33.3	5.6	44.4	0.0
% > Ex P	5.6	11.1	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.7	5.6

Taluka : Selu (Chikhalthana, Dasala, Dhengali pimpalgaon, Gulkhand, Raipur, Selu, Sindhe)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.4	231.3	124.0	10.2	13.6	0.0	80.0	79.2	7.0	1.4	0.3	0.2
Max	8.2	2132.0	792.0	69.1	111.8	1.0	425.4	519.0	340.0	308.0	2.0	39.0
Average	7.9	732.8	313.2	41.4	39.8	0.1	222.3	269.0	127.4	86.4	1.2	14.0
Stdev	0.2	538.8	186.5	17.4	26.0	0.2	100.9	126.3	111.4	88.2	0.5	15.2
% < Des	0.0	27.8	61.1	100.0	44.4	88.9	50.0	0.0	77.8	88.9	27.8	100.0
% P	100.0	61.1	27.8	0.0	50.0	11.1	50.0	0.0	22.2	11.1	44.4	0.0
% > Ex P	0.0	11.1	11.1	0.0	5.6	0.0	0.0	0.0	0.0	0.0	27.8	0.0

Taluka : Gangakhed (Akoli, Ban pimpla, Chinch takli, Chukar, Dhangar moha, Dharkheda, Dongar pimpla, Gangakhed, Golegaon, Mahatpuri, Muli, Sonpeth)												
Min	6.7	371.0	124.0	5.8	11.7	0.1	48.0	45.6	34.0	2.0	0.4	0.1
Max	8.7	1027.0	484.0	80.0	98.2	0.6	316.0	385.5	306.0	142.0	2.0	32.0
Average	7.8	592.2	275.7	32.2	39.9	0.2	182.5	205.0	104.1	47.2	1.0	9.0
Stdev	0.5	230.9	85.6	19.6	19.8	0.1	62.2	77.2	65.0	34.1	0.5	8.2
% < Des	0.0	45.8	70.8	95.8	33.3	95.8	54.2	0.0	95.8	100.0	41.7	100.0
% P	95.8	54.2	29.2	4.2	66.7	4.2	45.8	0.0	4.2	0.0	41.7	0.0
% > Ex P	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.7	0.0

Taluka : Purna (Chudawa, Ekrukha gangakhed, Nila, Tadkalas)												
Min	7.2	315.0	132.0	24.3	8.8	0.1	80.0	97.6	44.0	16.0	0.4	0.2
Max	8.3	988.0	456.0	81.6	61.2	0.2	289.0	352.6	230.0	118.0	1.0	9.4
Average	7.7	601.3	256.5	38.6	26.2	0.1	167.1	189.2	101.3	59.9	0.7	3.8
Stdev	0.5	238.8	110.2	18.4	16.9	0.0	66.8	79.9	56.2	32.4	0.3	3.5
% < Des	0.0	37.5	75.0	87.5	62.5	100.0	75.0	0.0	100.0	100.0	50.0	100.0
% P	100.0	62.5	25.0	12.5	37.5	0.0	25.0	0.0	0.0	0.0	50.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Sonpeth (Digol islampur, Khadka)												
Min	7.6	403.0	172.0	12.8	22.4	0.1	140.0	139.4	30.0	30.0	0.7	2.9
Max	7.8	949.0	424.0	60.8	66.1	0.2	275.0	335.5	160.0	124.0	2.0	27.6
Average	7.7	673.8	289.0	34.9	42.0	0.1	189.8	214.6	87.5	58.8	1.2	11.4
Stdev	0.1	301.4	118.9	23.2	22.5	0.1	59.6	88.4	57.8	44.3	0.6	11.3
% < Des	0.0	50.0	50.0	100.0	50.0	100.0	75.0	0.0	100.0	100.0	50.0	100.0
% P	100.0	50.0	50.0	0.0	50.0	0.0	25.0	0.0	0.0	0.0	25.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0

24. PUNE

Taluka : Ambegaon (Chinchle (Bk) Karanjv, Kalamb, Khadaki, Loni (Ambegaon), Manchar, Ranjani)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.3	124.8	104.0	14.0	1.2	0.0	80.0	80.0	11.0	0.1	0.2	0.9
Max	8.7	1033.2	425.0	115.2	77.0	0.4	569.7	695.0	178.0	160.0	1.1	114.0
Average	8.1	532.4	258.2	43.9	38.9	0.1	275.5	301.8	88.8	41.4	0.6	41.8
Stdev	0.4	292.9	95.9	27.6	24.3	0.1	161.1	181.3	55.4	44.2	0.3	36.1
% < Des	0.0	42.1	63.2	89.5	42.1	89.5	36.8	0.0	100.0	100.0	89.5	52.6
% P	84.2	57.9	36.8	10.5	57.9	10.5	63.2	0.0	0.0	0.0	10.5	0.0
% > Ex P	15.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	47.4

Taluka : Baramati (Ambi Bk., Baramati, Dhumalwadi, Dorlewadi, Jogawadi, Karanje, Karhati, Katewadi, Korale Kh., Loni Bhapkar, Mawadi kp., Medad, Morgaon, Nira, Pandare, Sangavi, Vadgaon Nimbalkar)												
Min	7.0	249.6	96.0	19.2	4.8	0.0	64.0	64.0	60.0	25.0	0.1	0.9
Max	10.3	5218.6	2660.0	416.0	486.0	1.5	500.0	610.0	2270.0	1800.0	1.0	553.8
Average	8.1	1211.8	490.3	83.9	79.5	0.4	210.6	223.1	354.0	262.7	0.5	77.1
Stdev	0.6	1293.1	508.2	91.3	97.9	0.4	111.3	129.7	481.4	425.9	0.3	101.6
% < Des	0.0	29.7	48.6	70.3	32.4	43.2	59.5	0.0	67.6	73.0	94.6	45.9
% P	81.1	54.1	29.7	18.9	43.2	48.6	40.5	0.0	24.3	13.5	5.4	0.0
% > Ex P	18.9	16.2	21.6	10.8	24.3	8.1	0.0	0.0	8.1	13.5	0.0	54.1

Taluka : Daund (Daund, Gar, Girim, Kalewadi, Kasurdi Bk., Pargaon Satumala, Patas, Rahu, Ravangaon, Sonawade, Warwand, Yavat)												
Min	7.2	207.4	52.0	8.0	1.2	0.0	44.0	38.0	43.0	17.6	0.1	0.4
Max	9.7	2528.0	1348.0	372.8	280.8	0.9	464.8	567.0	1160.0	1200.0	1.0	288.0
Average	8.0	833.5	397.2	80.9	57.2	0.2	197.5	206.4	281.4	188.9	0.5	53.5
Stdev	0.4	593.9	388.5	95.4	63.2	0.2	107.2	125.5	279.1	304.0	0.3	70.0
% < Des	0.0	27.0	56.8	67.6	35.1	59.5	48.6	0.0	73.0	78.4	97.3	67.6
% P	91.9	67.6	24.3	18.9	51.4	40.5	51.4	0.0	21.6	5.4	2.7	0.0
% > Ex P	8.1	5.4	18.9	13.5	13.5	0.0	0.0	0.0	5.4	16.2	0.0	32.4

Taluka : Pune (Haveli) (Alandi Mhatobachi, Bhosari, Bukum, Charholi Bk., Chinchwad, Dhanori, Donje, Kasarwadi, Kasarwadi, Koregoan Mul, Lonikalbhor, Moshi, Parne, Pimpari Sandas, Pimpri (Kh) Malvasti, Pune, Shivpur Khed, Undavri Kade Pathar, Uralikanchan, Uruli Kanchan, Wadebolai, Wagholi)												
Min	7.0	209.1	0.0	6.0	9.6	0.0	60.0	60.0	28.0	0.6	0.1	0.4
Max	8.8	1523.2	770.9	160.0	112.0	0.5	530.3	647.0	506.0	485.0	1.7	330.0
Average	7.9	592.1	303.4	48.4	48.3	0.1	217.3	244.8	148.8	77.7	0.4	52.6
Stdev	0.4	346.4	147.7	33.0	25.4	0.2	110.5	132.2	115.2	98.4	0.3	57.0
% < Des	0.0	50.0	59.6	82.7	25.0	69.2	53.8	0.0	82.7	88.5	98.1	61.5
% P	94.2	50.0	36.5	17.3	69.2	30.8	46.2	0.0	17.3	7.7	0.0	0.0
% > Ex P	5.8	0.0	3.8	0.0	5.8	0.0	0.0	0.0	0.0	3.8	1.9	38.5

Taluka : Indapur (Balpudi, Bhadalwadi, Bhigvan, Hingangaon, Indapur, Kalamb, Kauthali, Lasurne, Loni, Deokar, Nimbgaon-Ketke, Nirgude, Reda, Rui, Shetphal gade, Tavashi, Warkute bk.)												
Min	6.6	150.4	80.0	4.8	3.6	0.0	32.0	32.0	24.0	3.0	0.1	0.2
Max	9.3	2828.8	1128.0	171.2	256.8	1.4	364.0	362.0	880.0	768.0	1.1	531.6
Average	8.3	723.4	292.0	45.9	51.2	0.5	153.0	153.3	201.9	177.4	0.5	57.4
Stdev	0.6	527.1	202.0	31.8	45.0	0.4	79.3	83.8	168.4	203.3	0.3	96.2
% < Des	0.0	40.5	64.3	88.1	35.7	26.2	73.8	0.0	76.2	78.6	90.5	69.0
% P	64.3	54.8	28.6	11.9	57.1	64.3	26.2	0.0	23.8	7.1	9.5	0.0
% > Ex P	35.7	4.8	7.1	0.0	7.1	9.5	0.0	0.0	0.0	14.3	0.0	31.0

Taluka : Junnar (Ale, Ane, Arvi, Belhe, Bori Bk., Dholwad, Junnar, Khanapur, Narayan gaon Vaiduwadi, Narayangaon, Narayanpur, Otur, Pimpalwandi, Sakori, Tejewadi)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.1	168.0	145.0	8.0	2.4	0.0	88.0	88.0	11.0	0.4	0.1	1.5
Max	8.9	886.2	513.3	128.0	140.4	1.1	328.0	378.0	284.0	115.0	1.0	256.0
Average	8.0	410.2	261.8	46.9	38.2	0.1	192.5	210.2	81.5	36.5	0.4	38.0
Stdev	0.4	182.4	93.6	28.9	31.0	0.2	63.8	79.0	63.0	31.0	0.2	49.1
% < Des	0.0	77.5	75.0	80.0	42.5	95.0	52.5	0.0	97.5	100.0	95.0	80.0
% P	95.0	22.5	25.0	20.0	50.0	2.5	47.5	0.0	2.5	0.0	5.0	0.0
% > Ex P	5.0	0.0	0.0	0.0	7.5	2.5	0.0	0.0	0.0	0.0	0.0	20.0

Taluka : Mawal (Kanhe, Karala, Malavali, Somatane Fata, Talegaon Dabhade)												
Min	7.4	85.8	80.0	20.8	3.6	0.0	52.0	52.0	36.0	1.0	0.2	0.4
Max	8.4	481.3	465.0	66.0	73.0	0.3	309.8	378.0	135.0	53.5	0.7	31.0
Average	7.9	246.7	186.5	39.2	23.2	0.1	137.7	150.8	68.5	19.9	0.4	9.5
Stdev	0.3	137.6	118.0	14.7	22.1	0.1	77.1	101.3	26.6	17.5	0.2	11.5
% < Des	0.0	100.0	76.9	100.0	76.9	76.9	84.6	0.0	100.0	100.0	100.0	100.0
% P	100.0	0.0	23.1	0.0	23.1	23.1	15.4	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Mulshi (Bhugaon, Kharawade, Kolwan, Mulshi, Nere, Paud, Sus)												
Min	7.3	66.6	50.6	12.0	4.8	0.0	40.2	49.0	7.0	0.1	0.0	0.0
Max	8.2	291.2	236.0	65.6	30.0	0.4	232.0	256.0	64.0	42.4	0.8	33.2
Average	8.0	178.8	135.1	34.1	13.6	0.1	126.2	135.8	30.9	15.3	0.3	5.8
Stdev	0.3	66.0	51.5	16.9	7.9	0.1	53.1	58.8	19.1	14.6	0.2	10.1
% < Des	0.0	100.0	100.0	100.0	93.8	93.8	87.5	0.0	100.0	100.0	100.0	100.0
% P	100.0	0.0	0.0	0.0	6.3	6.3	12.5	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Purandar (Belsar, Chambali, Dive, Jejuri, Khalad, Khanawadi, Mawadi Kp., Nira, Pangre Sailar, Basti, Pargaon, Sakurde, Valha, Zendewadi)												
Min	7.0	129.3	60.0	4.8	8.4	0.0	60.0	60.0	11.0	1.2	0.1	0.4
Max	8.4	1580.8	980.0	244.8	134.4	0.8	484.0	484.0	590.0	391.0	0.9	155.1
Average	7.9	509.2	281.0	56.6	39.2	0.2	180.4	195.1	159.9	71.0	0.4	48.4
Stdev	0.3	343.9	171.0	51.3	28.2	0.2	103.4	114.4	150.4	90.2	0.2	46.8
% < Des	0.0	61.0	68.3	73.2	36.6	63.4	63.4	0.0	73.2	87.8	100.0	61.0
% P	100.0	39.0	29.3	24.4	56.1	36.6	36.6	0.0	26.8	12.2	0.0	0.0
% > Ex P	0.0	0.0	2.4	2.4	7.3	0.0	0.0	0.0	0.0	0.0	0.0	39.0

Taluka : Rajgurnagar(Khed) (Alandi, Bahul, Bhorgiri, Chakan, Chas, Kadus, Kharabwadi, Khed, Koye, Nimgaon, Rajgurnagar (Khed), Solu)												
Min	7.5	111.4	89.7	8.0	4.8	0.0	64.0	64.0	7.0	5.0	0.2	1.8
Max	8.4	857.6	492.0	152.0	49.0	0.6	272.0	287.0	242.0	108.0	0.9	150.6
Average	8.0	360.0	214.8	54.6	22.2	0.2	153.3	159.9	91.2	46.3	0.5	51.7
Stdev	0.3	169.9	111.4	36.8	11.5	0.2	65.6	70.6	54.8	27.1	0.2	46.3
% < Des	0.0	87.5	83.3	79.2	70.8	54.2	75.0	0.0	100.0	100.0	100.0	50.0
% P	100.0	12.5	16.7	20.8	29.2	45.8	25.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0

Taluka : Shirur (Andalgaon, Dhamari, Gunat, Inamgaon, Kanhur Mesai, Kavathe, Knhur Mesai, Kondhanpuri, Navara, Nimgaon, Nimgaondude, Pabal, Pilmple Jagtap, Ranjangaon, Ravangaon, Shikrapur, Shirasgaon kata, Shirur, Tandali)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.0	236.0	108.0	16.0	3.6	0.0	40.0	40.0	18.0	0.6	0.1	2.0
Max	8.8	2528.0	780.0	224.0	110.4	0.6	264.8	323.0	820.0	1740.0	1.1	310.1
Average	7.9	671.5	321.4	62.7	45.9	0.2	157.7	168.0	210.8	200.2	0.5	62.7
Stdev	0.4	431.8	155.3	48.2	25.7	0.2	56.8	70.8	162.8	283.5	0.2	67.1
% < Des	0.0	43.9	53.7	75.6	26.8	63.4	78.0	0.0	73.2	61.0	97.6	48.8
% P	90.2	53.7	39.0	19.5	70.7	36.6	22.0	0.0	26.8	31.7	2.4	0.0
% > Ex P	9.8	2.4	7.3	4.9	2.4	0.0	0.0	0.0	0.0	7.3	0.0	51.2

Taluka : Wadgaon (Maval) (Lonawala)												
Min	7.8	142.0	120.0	30.0	10.0	0.0	104.9	128.0	11.0	5.9	0.0	1.7
Max	8.1	201.0	156.2	46.0	11.0	0.0	119.7	146.0	28.0	28.0	0.1	12.0
Average	8.0	171.5	138.1	38.0	10.5	0.0	112.3	137.0	19.5	17.0	0.0	6.9
Stdev	0.2	41.7	25.6	11.3	0.7	0.0	10.4	12.7	12.0	15.6	0.0	7.3
% < Des	0.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0
% P	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Wehle (Wehle)												
Min	7.8	110.0	72.0	16.0	5.0	0.0	75.4	76.0	14.0	0.4	0.0	1.0
Max	8.4	136.5	95.0	30.0	9.7	0.3	90.2	110.0	42.0	8.0	0.3	35.4
Average	8.1	120.7	84.3	21.5	7.9	0.1	81.7	95.5	23.0	4.0	0.1	13.2
Stdev	0.3	11.3	9.4	6.2	2.2	0.2	7.2	15.0	12.8	3.6	0.1	15.2
% < Des	0.0	100.0	100.0	100.0	100.0	75.0	100.0	0.0	100.0	100.0	100.0	100.0
% P	100.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Bhor (Nasarapur, Bholawade, Bhor)												
Min	7.0	218.2	152.0	24.0	24.0	0.2	76.0	76.0	62.0	33.3	0.2	22.6
Max	7.6	348.8	212.0	36.8	36.0	0.3	112.0	112.0	92.0	66.7	0.4	66.5
Average	7.4	272.0	174.7	30.9	29.2	0.2	96.0	96.0	73.3	47.2	0.3	38.1
Stdev	0.3	68.3	32.6	6.5	6.2	0.1	18.3	18.3	16.3	17.4	0.1	24.6
% < Des	0.0	100.0	100.0	100.0	66.7	66.7	100.0	0.0	100.0	100.0	100.0	66.7
% P	100.0	0.0	0.0	0.0	33.3	33.3	0.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3

25. RAIGAD

Taluka : Alibag (Alibag, Belkade, Belwade, Bilji (Umta), Chinchwad, Dokawade, Gunjes, Nagaon, Pezari, Poynad, Revadande, Umate, Veshwi, Zirad)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.1	74.1	60.0	16.0	4.8	0.0	72.0	72.0	7.8	1.0	0.0	0.8
Max	8.7	746.0	408.0	82.0	55.0	0.1	360.0	400.2	135.0	96.0	0.7	19.0
Average	8.0	353.8	219.5	42.0	27.7	0.0	203.4	211.4	47.1	30.8	0.3	4.6
Stdev	0.4	177.2	96.0	19.1	15.0	0.0	85.1	98.8	29.7	23.8	0.2	4.5
% < Des	0.0	82.1	82.1	92.9	60.7	100.0	53.6	0.0	100.0	100.0	100.0	100.0
% P	92.9	17.9	17.9	7.1	39.3	0.0	46.4	0.0	0.0	0.0	0.0	0.0
% > Ex P	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Karjat (Ambivali, Hudhre Budruk (Karjat), Kalamb, Karjat, Kashele, Khandas, Mangaon Waredi, Neral, Uambarkhand, Vadavali, Varai V, Wadavali)												
Min	6.9	156.0	120.0	17.6	11.6	0.0	80.0	36.0	11.0	1.0	0.0	0.0
Max	8.3	1599.0	640.0	76.9	108.0	0.1	280.3	342.0	705.6	194.0	0.8	38.9
Average	7.6	339.3	203.3	41.8	23.9	0.0	162.0	162.2	63.6	36.7	0.3	9.6
Stdev	0.5	271.5	102.2	15.5	18.1	0.0	50.3	67.8	132.3	57.0	0.2	12.5
% < Des	0.0	96.2	96.2	96.2	88.5	100.0	76.9	0.0	96.2	100.0	100.0	100.0
% P	100.0	3.8	0.0	3.8	7.7	0.0	23.1	0.0	3.8	0.0	0.0	0.0
% > Ex P	0.0	0.0	3.8	0.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Khalapur (Chowk, Hal-Khurdh, Kargaon, Khalapur, Khopoli)												
Min	7.1	111.3	32.0	9.6	1.9	0.0	40.0	40.0	12.4	0.8	0.0	0.0
Max	8.3	464.8	316.0	56.1	42.4	0.8	308.0	280.0	77.0	101.1	0.8	22.1
Average	7.6	242.4	150.8	31.8	17.2	0.1	146.3	152.5	37.3	24.6	0.3	6.0
Stdev	0.4	109.9	70.0	10.9	12.0	0.2	79.2	74.0	21.7	29.0	0.3	6.2
% < Des	0.0	100.0	92.9	100.0	85.7	92.9	78.6	0.0	100.0	100.0	100.0	100.0
% P	100.0	0.0	7.1	0.0	14.3	7.1	21.4	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Mahad (Birvadi, Chimbhave, Dapoli, Jite, Kharavali, Konzar, Mahad, Mangharun, Nate, Talkies near, Varandha, Vinhere)												
Min	7.3	44.9	48.0	12.8	1.9	0.0	36.0	36.0	5.5	1.0	0.1	0.5
Max	8.3	5122.3	2973.0	246.0	573.0	0.3	216.0	250.0	3028.0	1475.0	1.0	25.0
Average	7.8	521.2	278.9	42.4	42.0	0.0	127.2	131.2	174.9	85.3	0.3	8.5
Stdev	0.3	1149.9	604.1	50.8	117.5	0.1	59.9	63.6	625.0	308.5	0.3	7.7
% < Des	0.0	91.3	91.3	91.3	78.3	100.0	87.0	0.0	91.3	91.3	100.0	100.0
% P	100.0	0.0	0.0	4.3	17.4	0.0	13.0	0.0	4.3	4.3	0.0	0.0
% > Ex P	0.0	8.7	8.7	4.3	4.3	0.0	0.0	0.0	4.3	4.3	0.0	0.0

Taluka : Mangaon (Mangaon, Chandore, Goregaon, Indapur, Mangaon)												
Min	7.4	59.7	35.0	10.0	2.0	0.0	19.7	24.0	11.0	4.0	0.0	0.4
Max	8.6	371.8	248.0	72.1	28.0	0.2	264.0	264.0	60.8	33.0	0.7	12.1
Average	7.8	258.8	168.3	39.7	16.7	0.0	156.4	157.9	37.4	17.4	0.3	4.8
Stdev	0.4	95.6	55.6	15.5	7.8	0.1	56.6	53.5	17.7	8.4	0.2	4.0
% < Des	0.0	100.0	100.0	100.0	100.0	100.0	78.6	0.0	100.0	100.0	100.0	100.0
% P	92.9	0.0	0.0	0.0	0.0	0.0	21.4	0.0	0.0	0.0	0.0	0.0
% > Ex P	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Mhasala (Ambet, Bhandarane, Birwadi, Chimbhave, Kelte, Kharivali, Konzar, Kumbale, Lipani, Magothane, Mharula, Nate, Pangari, Varandha, Vinhere)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	6.4	23.0	15.0	4.0	0.0	0.0	9.8	12.0	7.0	1.0	0.0	0.1
Max	8.7	427.1	228.0	70.5	28.0	1.0	224.0	224.0	117.6	23.7	0.9	29.1
Average	7.9	185.8	119.2	28.7	11.5	0.1	125.4	126.3	36.3	5.7	0.4	5.7
Stdev	0.5	99.6	55.4	17.8	7.3	0.2	62.0	60.4	26.3	7.0	0.3	8.0
% < Des	5.0	100.0	100.0	100.0	100.0	95.0	85.0	0.0	100.0	100.0	100.0	100.0
% P	90.0	0.0	0.0	0.0	0.0	5.0	15.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Panvel (Ajivali, Bambavi, Barapada, Navade, Nere, Palaspe, Panvel, Taloja, Vaje, Wanje)												
Min	6.9	90.0	74.4	10.0	4.8	0.0	50.0	61.0	18.0	1.0	0.1	0.2
Max	8.4	1560.0	600.0	136.3	62.7	0.1	460.0	460.0	352.8	162.9	1.1	19.0
Average	7.6	427.5	243.5	55.1	25.6	0.0	221.4	214.9	79.9	39.8	0.4	6.3
Stdev	0.5	307.0	119.0	28.1	13.8	0.0	99.5	99.1	83.2	39.0	0.3	5.5
% < Des	0.0	72.7	72.7	77.3	68.2	100.0	45.5	0.0	90.9	100.0	95.5	100.0
% P	100.0	27.3	27.3	22.7	31.8	0.0	54.5	0.0	9.1	0.0	4.5	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Pen (Gagote Bk., Kamarli, Kumbharcha Kosta Bk., Pen, Rameshwar, Saigaon Govalwadi, Salinde, Umbarde, Vadkhal)												
Min	7.0	102.7	84.0	12.8	3.9	0.0	54.9	67.0	5.9	1.0	0.0	1.0
Max	8.5	2353.5	1643.4	281.0	242.0	0.5	308.0	317.0	1418.0	267.0	0.8	31.8
Average	7.9	500.4	290.4	61.5	33.1	0.0	170.0	173.3	143.2	47.5	0.3	7.2
Stdev	0.5	557.3	343.9	62.4	48.5	0.1	62.6	62.7	332.6	59.2	0.2	7.8
% < Des	0.0	74.1	77.8	88.9	77.8	96.3	55.6	0.0	92.6	96.3	100.0	100.0
% P	100.0	18.5	14.8	3.7	14.8	3.7	44.4	0.0	0.0	3.7	0.0	0.0
% > Ex P	0.0	7.4	7.4	7.4	7.4	0.0	0.0	0.0	7.4	0.0	0.0	0.0

Taluka : Poladpur (Parli, Poladpur)												
Min	7.4	133.3	72.0	17.6	5.8	0.0	84.0	84.0	9.2	1.0	0.0	0.0
Max	8.2	276.1	206.4	50.0	21.0	0.0	185.2	226.0	44.3	38.0	0.4	23.0
Average	7.8	206.0	140.7	34.8	13.0	0.0	122.4	140.6	27.4	13.3	0.2	12.9
Stdev	0.4	60.6	60.1	13.8	6.8	0.0	38.8	54.2	13.4	14.9	0.1	9.7
% < Des	0.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0
% P	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Raigad (Phugaon, Sochinde, Temple)												
Min	7.4	170.7	140.0	30.0	10.9	0.0	117.2	143.0	17.0	4.0	0.0	2.0
Max	8.1	482.7	328.1	72.0	36.0	0.0	254.9	311.0	99.0	115.0	0.2	30.0
Average	7.9	326.5	228.4	52.3	23.8	0.0	171.7	209.5	49.7	42.6	0.2	12.8
Stdev	0.3	134.7	67.3	15.8	8.9	0.0	49.4	60.3	29.1	45.8	0.1	12.1
% < Des	0.0	100.0	85.7	100.0	71.4	100.0	71.4	0.0	100.0	100.0	100.0	100.0
% P	100.0	0.0	14.3	0.0	28.6	0.0	28.6	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Roha (Durtodi Sutarwadi, Kharapati, Khutal, Kolad, Nagotane, Roha, Savanewadi)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.3	135.9	68.0	9.6	3.9	0.0	68.0	68.0	18.0	0.3	0.0	0.0
Max	8.4	335.4	264.0	57.7	28.9	0.1	260.0	262.0	49.0	51.0	0.7	10.3
Average	8.0	241.8	168.9	38.4	17.7	0.0	157.1	166.3	34.0	16.9	0.2	3.4
Stdev	0.4	53.8	49.0	11.6	7.5	0.0	50.8	60.6	10.2	15.7	0.2	2.8
% < Des	0.0	100.0	100.0	100.0	100.0	100.0	72.7	0.0	100.0	100.0	100.0	100.0
% P	100.0	0.0	0.0	0.0	0.0	0.0	27.3	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Sudhagad (Jambhulpada, Pali, Varad jambhulpada)												
Min	7.5	129.0	100.0	22.4	9.7	0.0	100.0	122.0	18.0	1.0	0.0	1.0
Max	8.0	356.9	297.0	60.0	43.0	0.0	250.0	305.0	71.0	24.0	0.6	14.0
Average	7.8	303.3	187.7	41.9	20.1	0.0	173.4	204.8	48.2	11.4	0.3	5.5
Stdev	0.2	98.1	75.3	17.6	13.7	0.0	55.9	72.9	23.1	9.6	0.2	5.3
% < Des	0.0	100.0	100.0	100.0	80.0	100.0	60.0	0.0	100.0	100.0	100.0	100.0
% P	100.0	0.0	0.0	0.0	20.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Shrivardhan (Aadagaon, Bhanrdakol, Borli, Shrivardhan)												
Min	7.5	119.6	60.0	16.0	4.8	0.0	80.0	80.0	39.0	1.0	0.1	0.0
Max	8.2	457.0	336.0	76.9	41.5	0.1	316.0	316.0	105.6	30.0	0.8	35.8
Average	7.8	313.5	202.7	46.5	20.9	0.0	197.8	197.7	59.7	9.8	0.3	7.0
Stdev	0.3	98.9	85.3	21.0	9.9	0.0	65.5	65.5	24.2	9.5	0.3	11.2
% < Des	0.0	100.0	88.9	88.9	88.9	100.0	66.7	0.0	100.0	100.0	100.0	100.0
% P	100.0	0.0	11.1	11.1	11.1	0.0	33.3	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Tala (Mandad, Padhavan)												
Min	7.1	174.2	148.0	35.3	14.5	0.0	200.0	200.0	41.8	1.0	0.1	1.6
Max	8.2	588.9	360.0	64.1	51.1	0.2	352.0	352.0	149.6	38.8	0.6	8.8
Average	7.8	336.7	269.0	52.5	33.3	0.1	278.0	278.0	95.4	13.7	0.2	4.5
Stdev	0.5	179.9	88.3	12.6	15.2	0.1	67.4	67.4	49.8	17.2	0.2	3.1
% < Des	0.0	75.0	75.0	100.0	25.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0
% P	100.0	25.0	25.0	0.0	75.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Uran (Jasai, Karanja, Uran)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.2	135.2	160.0	28.9	14.5	0.0	156.0	92.0	37.4	1.0	0.1	0.6
Max	8.3	611.0	236.0	52.9	25.1	0.0	240.0	200.0	98.0	60.0	0.1	13.6
Average	8.0	361.5	182.4	40.1	19.9	0.0	188.8	161.6	68.4	31.8	0.1	6.0
Stdev	0.5	171.1	30.8	9.7	4.3	0.0	34.6	41.6	21.9	28.7	0.0	5.2
% < Des	0.0	80.0	100.0	100.0	100.0	100.0	60.0	0.0	100.0	100.0	100.0	100.0
% P	100.0	20.0	0.0	0.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Murud (Barshiv, Chikani, Chorde, Dongari, Murud, Nandagaon)												
Min	6.4	117.0	24.0	3.2	3.9	0.0	20.0	20.0	19.6	1.0	0.1	0.0
Max	8.3	546.0	288.0	54.5	40.8	0.5	256.0	256.0	155.0	34.0	0.4	14.8
Average	7.9	329.6	180.0	36.0	21.8	0.1	167.7	161.5	60.6	9.8	0.2	2.5
Stdev	0.5	140.0	77.0	15.6	11.5	0.1	67.7	73.9	45.3	12.8	0.2	4.0
% < Des	7.7	84.6	100.0	100.0	84.6	92.3	53.8	0.0	100.0	100.0	100.0	100.0
% P	92.3	15.4	0.0	0.0	15.4	7.7	46.2	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

26. RATNAGIRI

Taluka : Chipalun (Agave, Bamnoli, Bhom, Chiplun, Kalkavane, Kamathe, Khandala Satwade, Kolambe, Kutare, Lanja, Margtamhane, Mervi, Murtavada, Niwali, Owali, Pophali, Sawarde, Valope, Veer, Yegaon)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.1	63.7	24.0	3.2	1.9	0.0	28.8	0.0	3.5	0.2	0.0	0.0
Max	8.3	330.0	188.0	62.5	33.7	0.5	208.0	208.0	64.0	16.4	0.5	18.0
Average	7.5	150.6	94.3	21.9	9.6	0.1	93.4	97.3	20.8	3.8	0.1	3.4
Stdev	0.3	69.6	40.1	12.9	6.4	0.1	45.6	50.5	13.8	3.7	0.1	4.3
% < Des	0.0	100.0	100.0	100.0	97.9	97.9	93.8	0.0	100.0	100.0	100.0	100.0
% P	100.0	0.0	0.0	0.0	2.1	2.1	6.3	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Dapoli (Dabhol, Dapoli, Harnai, Karanjali, Kavadoli, Kumbhave, Kumble, Nante, Oni, Palgad, Unhavare)												
Min	6.8	33.1	8.0	1.6	1.0	0.0	7.2	7.2	3.9	0.1	0.0	0.0
Max	8.0	395.2	330.0	62.0	49.0	0.4	300.0	366.0	46.0	17.7	0.9	68.0
Average	7.4	134.0	88.1	16.9	11.1	0.0	80.8	85.9	18.9	3.6	0.2	4.1
Stdev	0.3	81.6	69.2	11.8	10.4	0.1	61.8	71.1	10.3	3.4	0.2	11.0
% < Des	0.0	100.0	95.2	100.0	92.9	95.2	95.2	0.0	100.0	100.0	100.0	97.6
% P	100.0	0.0	4.8	0.0	7.1	4.8	4.8	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4

Taluka : Guhagar (Abloli, Dhopave, Guhagar, Jambhari, Kalkavane, Kamathe, Kaundher, Kotluk, Koundar, Kutare, Palshet, Pimpar, Pomendi (Kh), Shingartale, Valop, Vankhed, Velamb)												
Min	6.3	28.0	20.0	4.0	1.9	0.0	14.8	18.0	2.0	0.2	0.0	0.0
Max	7.9	242.5	160.0	36.0	22.1	0.4	125.4	153.0	235.0	240.8	0.5	35.0
Average	7.4	109.4	76.0	14.7	9.5	0.0	61.9	66.4	23.5	10.0	0.1	4.0
Stdev	0.4	54.7	35.1	8.5	5.6	0.1	30.2	32.5	35.7	36.7	0.1	5.9
% < Des	4.8	100.0	100.0	100.0	100.0	97.6	100.0	0.0	100.0	97.6	100.0	100.0
% P	95.2	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	2.4	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Kehd (Asthan, Avashi, Bhelsai, Chichghar, Dabhil, Dasturi, Devghar, Gunade, Jakadevi, Kalvane, Karji, Khavati, Khed, Khopi, Lavel, Lote, Shivthar, Tisangi, Veral, Wave)												
Min	6.8	23.0	15.0	2.0	1.9	0.0	9.8	4.0	3.9	0.1	0.0	0.0
Max	9.9	254.0	195.0	49.6	28.7	5.0	184.0	184.0	55.0	25.0	0.9	60.0
Average	7.7	117.5	80.8	17.1	9.2	0.1	70.8	72.3	16.8	3.5	0.1	3.2
Stdev	0.7	50.1	36.5	11.6	6.7	0.8	37.3	35.4	9.2	4.4	0.2	2.7
% < Des	0.0	100.0	100.0	100.0	100.0	98.5	100.0	0.0	100.0	100.0	100.0	98.5
% P	92.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	7.6	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	1.5

Taluka : Mandangarh (Devhare, Kumbale, Mandangarh, Shipole, Velas)												
Min	7.1	85.0	20.0	6.4	1.0	0.0	10.8	10.8	3.9	1.0	0.0	0.0
Max	7.9	222.7	140.0	36.9	19.3	0.1	160.0	160.0	37.4	10.3	0.8	9.5
Average	7.5	136.3	81.0	20.2	7.4	0.0	86.6	90.3	17.5	3.1	0.3	2.9
Stdev	0.2	37.4	31.0	8.1	5.5	0.0	33.8	34.1	8.4	2.3	0.2	2.6
% < Des	0.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0
% P	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Rajapur (Aravali, Bhom, Date, Dervan, Guhaghar, Jaitapur, Kalkavane, Kandye T.S., Karel, Konde, Koundar, Kutare, Mandrul, Moroshi, Murtvade, Nate, Pachal, Raipatan, Rajapur, Shede/Sade, Solgaon, Tamhane, Volape, Yegaon, Yerdav)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	6.1	47.8	24.0	3.2	2.0	0.0	16.0	16.0	3.9	0.0	0.0	0.0
Max	8.2	3438.5	680.0	104.2	101.2	0.6	464.0	464.0	2376.0	138.0	0.8	28.5
Average	7.5	192.7	89.5	20.9	9.1	0.1	81.7	83.8	80.0	6.8	0.2	3.9
Stdev	0.4	480.8	91.9	16.0	14.0	0.1	66.4	65.5	342.5	20.5	0.2	6.0
% < Des	4.2	97.9	97.9	97.9	97.9	93.8	97.9	0.0	95.8	100.0	100.0	100.0
% P	95.8	0.0	0.0	2.1	0.0	6.3	2.1	0.0	2.1	0.0	0.0	0.0
% > Ex P	0.0	2.1	2.1	0.0	2.1	0.0	0.0	0.0	2.1	0.0	0.0	0.0

Taluka : Ratnagiri (Ambed Budruk, Dugvay, Golap, Jaigad, Jakadevi, Jalgaon, Kasarveli, Kasheli, Khedashi, Kolmbe, Kotavade, Malgund, Mervi, Nevare, Ratnagiri, Sadye, Vakarli, Valops Pudhwadi, Vandri)												
Min	7.0	21.0	14.9	2.0	1.9	0.0	9.8	12.0	3.9	0.1	0.0	0.1
Max	8.6	525.9	196.0	50.0	18.3	0.2	180.0	180.0	147.0	40.0	0.7	434.0
Average	7.6	142.3	75.5	18.8	6.9	0.0	64.9	67.2	23.9	8.4	0.1	12.9
Stdev	0.4	100.1	41.0	11.3	4.6	0.0	29.7	29.5	24.0	11.8	0.2	55.0
% < Des	0.0	98.4	100.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	96.8
% P	96.8	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2

Taluka : Sangameshwar (Amurshi, Ambed, Ambed Bk., Aravali, Dabhole, Devrukh, Dhamni, Maral, Muchari (Bhatadewadi), Murshi, Nayari, Sakarpa, Vandri)												
Min	6.6	41.8	24.0	4.8	1.9	0.0	18.0	17.9	2.0	0.6	0.0	0.4
Max	8.3	185.0	145.0	44.0	14.5	0.6	150.0	183.0	95.0	9.3	0.5	33.5
Average	7.6	115.5	67.7	15.7	6.9	0.1	64.8	67.6	20.2	2.3	0.1	5.3
Stdev	0.4	38.3	31.2	10.6	3.7	0.1	33.9	38.9	16.5	2.1	0.1	7.9
% < Des	0.0	100.0	100.0	100.0	100.0	97.1	100.0	0.0	100.0	100.0	100.0	100.0
% P	100.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Lanja (Bhambed, Lanja, Math)												
Min	6.7	57.2	56.0	6.4	1.9	0.0	36.0	36.0	4.0	0.9	0.1	0.1
Max	7.9	156.0	88.0	28.9	10.6	0.5	84.0	84.0	33.0	5.0	0.1	15.4
Average	7.2	96.3	66.9	17.2	5.8	0.1	54.9	54.9	18.3	1.6	0.1	4.9
Stdev	0.4	35.2	13.8	8.8	2.8	0.2	17.4	17.4	8.9	1.5	0.0	5.1
% < Des	0.0	100.0	100.0	100.0	100.0	85.7	100.0	0.0	100.0	100.0	100.0	100.0
% P	100.0	0.0	0.0	0.0	0.0	14.3	0.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

27. SANGLI

Taluka : Atpadi (Atapadi, Balewade, Dhavadwadi, Dighanchi, Ghanand, Gomewadi, Hivathad, Kargani, Kharsundi, Parekarwadi, Pimpri Kh., Pujarwadi, Ramnagara, Shetphale, Umbargaon, Vibhutwadi, Vithalpur, Zare)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.1	199.7	114.1	16.0	6.0	0.0	40.0	40.0	32.0	3.1	0.2	0.4
Max	9.2	1260.6	679.5	144.0	91.0	0.6	390.0	475.8	414.0	536.0	1.3	70.9
Average	8.0	579.3	285.9	61.5	38.0	0.2	231.7	241.2	159.7	61.9	0.7	16.3
Stdev	0.5	271.2	132.5	33.5	23.7	0.2	79.3	87.3	98.9	98.1	0.2	19.7
% < Des	0.0	56.3	71.9	75.0	53.1	62.5	31.3	0.0	87.5	93.8	90.6	87.5
% P	81.3	43.8	25.0	25.0	46.9	37.5	68.8	0.0	12.5	3.1	9.4	0.0
% > Ex P	18.8	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0	12.5

Taluka : Islampur (Takari)												
Min	7.8	618.2	413.9	24.0	55.9	0.0	335.2	409.0	92.3	5.0	0.4	42.2
Max	8.1	702.2	435.0	82.0	86.0	0.0	455.0	555.1	124.0	56.2	0.4	98.0
Average	8.0	660.2	424.5	53.0	70.9	0.0	395.1	482.1	108.2	30.6	0.4	70.1
Stdev	0.2	59.4	14.9	41.0	21.3	0.0	84.7	103.3	22.4	36.2	0.0	39.5
% < Des	0.0	0.0	0.0	50.0	0.0	100.0	0.0	0.0	100.0	100.0	100.0	50.0
% P	100.0	100.0	100.0	50.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0

Taluka : Jath (Bagewadi, Bavnoor, Bilur, Borgi bk., Daphlapur, Deonal, Dhavadwadi, Jadarbablad, Jath, Karanjani, Khojanwadi, Kumbhari, Lavangi, Morbagi, Muchandi, Nigdi kh., Sankh, Shegaon, Sinhgnapur, Tippehalli, Utagi, Vaspet, Waifal)												
Min	7.2	245.1	76.0	16.0	-6.1	0.0	56.0	56.0	50.0	16.1	0.1	0.9
Max	8.8	3283.2	1812.0	512.0	264.0	0.7	435.0	530.7	1090.0	1184.0	1.3	290.0
Average	7.9	863.7	432.0	110.8	42.7	0.3	186.9	199.0	225.8	219.3	0.6	58.1
Stdev	0.3	638.2	344.7	90.6	48.6	0.2	79.7	96.1	204.5	249.8	0.3	77.7
% < Des	0.0	26.4	39.6	41.5	64.2	52.8	54.7	0.0	75.5	66.0	84.9	69.8
% P	98.1	67.9	37.7	45.3	26.4	47.2	45.3	0.0	20.8	18.9	15.1	0.0
% > Ex P	1.9	5.7	22.6	13.2	9.4	0.0	0.0	0.0	3.8	15.1	0.0	30.2

Taluka : Kadegaon (Kadepur, Khambale, Kumbhargaon, Soholi, Sonasal, Wangi)												
Min	7.4	96.6	68.0	16.0	7.3	0.0	40.0	40.0	52.0	8.1	0.2	0.9
Max	8.4	850.1	315.5	94.0	39.0	0.6	450.0	549.0	110.0	49.0	0.7	70.7
Average	7.8	296.6	179.2	41.0	21.8	0.3	150.2	164.9	75.7	26.4	0.5	17.6
Stdev	0.3	227.3	75.6	23.6	10.6	0.2	122.6	153.5	20.2	15.9	0.2	25.6
% < Des	0.0	88.9	88.9	88.9	77.8	55.6	88.9	0.0	100.0	100.0	100.0	77.8
% P	100.0	11.1	11.1	11.1	22.2	44.4	11.1	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.2

Taluka : Kavathemahankal (Alkud, Chorochi, Deshinge, Dhudhebhavi, Dhulagaon, Dudhebhavi, Hingangaon, Karewadi, Kavathemahankal, Kerewadi, Kokale, Kuchi, Kundalpur, Nagaj, Nimaj, Ranjani, Sarati, Shirdhon)												
Min	7.1	174.1	132.0	22.4	3.6	0.0	56.0	46.0	50.0	1.8	0.1	1.8
Max	8.3	3104.0	1612.0	536.0	223.2	0.9	832.0	832.0	800.0	1650.0	1.2	256.0
Average	7.7	781.6	428.3	102.4	49.6	0.3	244.1	251.1	205.5	145.8	0.6	46.6
Stdev	0.4	650.3	348.4	97.0	44.4	0.2	150.0	153.1	186.9	317.5	0.3	56.4
% < Des	0.0	37.5	40.6	40.6	37.5	50.0	37.5	0.0	75.0	87.5	78.1	78.1
% P	100.0	56.3	46.9	53.1	56.3	50.0	59.4	0.0	25.0	6.3	21.9	0.0
% > Ex P	0.0	6.3	12.5	6.3	6.3	0.0	3.1	0.0	0.0	6.3	0.0	21.9

Taluka : Khanapur (Belavade, Bhaurachi Wadi, Bhood, Bombewadi, Ghoti Kh., Hanumantwadi, Karanje, Karve, Khanapur, Mahuli, Mitaki, Nagewadi, Palashi, Pandharewadi, Salshinge, Sulewadi, Vejegaon, Vita, Walkhed, Wangi, Zare)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.5	84.5	56.0	12.8	2.4	0.0	40.0	40.0	18.0	1.8	0.1	0.4
Max	9.3	1278.2	860.0	248.0	123.6	0.7	425.0	518.5	510.0	316.0	0.8	64.0
Average	8.3	443.7	232.6	52.9	28.0	0.3	148.5	160.4	143.5	62.1	0.4	14.4
Stdev	0.4	330.7	174.9	48.9	22.8	0.2	77.2	98.6	130.7	76.6	0.2	16.5
% < Des	0.0	79.3	82.8	82.8	55.2	37.9	79.3	0.0	82.8	93.1	100.0	93.1
% P	75.9	20.7	10.3	13.8	41.4	62.1	20.7	0.0	17.2	6.9	0.0	0.0
% > Ex P	24.1	0.0	6.9	3.4	3.4	0.0	0.0	0.0	0.0	0.0	0.0	6.9

Taluka : Miraj (Arag, Belanki, Dhavali, Dudhagaon, Kalambi, Kasbe Digraj, Kavalapur, Kavathepiran, Kupwad, Madhavanagar, Mahaishal, Mahdavanagara, Maisal, Nandre, Samdoli, Sangli, Savalwadi, Soholi, Tisangi, Tung, Walkhed)												
Min	7.2	105.0	100.0	16.0	-15.6	0.0	40.0	40.0	36.0	4.7	0.1	2.2
Max	8.4	4012.8	1400.0	316.8	228.0	0.9	312.0	353.8	854.0	410.0	0.9	230.4
Average	7.7	989.3	409.8	99.1	48.2	0.3	163.9	165.1	229.1	120.6	0.4	53.7
Stdev	0.3	877.5	265.7	70.7	49.8	0.2	77.6	82.7	187.4	104.3	0.2	52.1
% < Des	0.0	22.2	33.3	48.1	44.4	55.6	66.7	0.0	66.7	88.9	100.0	51.9
% P	100.0	66.7	51.9	44.4	48.1	44.4	33.3	0.0	33.3	7.4	0.0	0.0
% > Ex P	0.0	11.1	14.8	7.4	7.4	0.0	0.0	0.0	0.0	3.7	0.0	48.1

Taluka : Palus (Bambwade, Bhilwadi/Palus, Kundal, Wasagade)												
Min	7.2	359.9	120.0	40.0	6.0	0.0	56.0	56.0	60.0	12.0	0.1	0.4
Max	8.2	1337.6	536.0	150.4	48.0	1.9	300.0	366.0	350.0	372.0	0.6	110.8
Average	7.9	793.6	363.0	105.5	27.7	0.5	173.7	193.2	149.1	137.2	0.4	44.6
Stdev	0.4	356.3	158.4	49.1	16.7	0.7	85.1	112.5	110.7	125.9	0.2	37.8
% < Des	0.0	16.7	33.3	33.3	50.0	50.0	66.7	0.0	83.3	83.3	100.0	50.0
% P	100.0	83.3	66.7	66.7	50.0	33.3	33.3	0.0	16.7	16.7	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	16.7	0.0	0.0	0.0	0.0	0.0	50.0

Taluka : Shirala (Bilashi, Biur/Wakurde Bk., Chikhali, Chikhalwadi, Mandur, Mangle, Rile, Sawantwadi, Shirala, Sirshi)												
Min	7.3	83.2	52.0	12.8	1.2	0.0	60.0	60.0	30.0	2.2	0.1	0.4
Max	8.7	517.1	340.0	128.0	37.2	1.9	156.0	156.0	340.0	91.3	1.1	53.2
Average	8.1	275.3	163.7	40.6	18.4	0.4	122.6	122.9	99.9	25.0	0.6	21.2
Stdev	0.4	175.3	96.0	34.9	11.5	0.5	33.9	33.9	86.0	28.3	0.4	19.1
% < Des	0.0	81.8	81.8	81.8	90.9	54.5	100.0	0.0	90.9	100.0	72.7	90.9
% P	90.9	18.2	18.2	18.2	9.1	36.4	0.0	0.0	9.1	0.0	27.3	0.0
% > Ex P	9.1	0.0	0.0	0.0	0.0	9.1	0.0	0.0	0.0	0.0	0.0	9.1

Taluka : South Solapur (Valsang)												
Min	7.7	466.2	220.0	68.0	12.2	0.0	109.8	134.0	35.5	109.0	0.4	19.8
Max	8.0	1314.2	900.0	252.0	78.0	0.0	220.0	268.4	220.0	571.0	0.6	44.0
Average	7.9	1018.5	645.3	172.7	52.1	0.0	159.9	195.1	151.5	413.3	0.5	32.6
Stdev	0.2	478.7	370.7	94.6	35.1	0.0	55.8	68.0	101.0	263.6	0.1	12.1
% < Des	0.0	33.3	33.3	33.3	33.3	100.0	66.7	0.0	100.0	33.3	100.0	100.0
% P	100.0	66.7	0.0	33.3	66.7	0.0	33.3	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	66.7	33.3	0.0	0.0	0.0	0.0	0.0	66.7	0.0	0.0

Taluka : Tasgaon (Buruli, Gavan, Kamathe, Panmalewadi, Tasgaon, Turchi, Waifale, Yevali, Yogewadi)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.6	88.3	120.0	24.0	4.8	0.0	40.0	40.0	35.5	10.0	0.1	5.0
Max	8.5	2400.8	1625.0	414.0	143.4	0.8	290.0	353.8	1171.5	289.0	0.8	186.1
Average	8.0	855.1	448.6	121.9	37.5	0.3	167.0	175.8	314.3	100.6	0.3	52.3
Stdev	0.3	726.3	475.5	114.9	47.0	0.3	78.4	94.3	364.2	87.5	0.2	58.2
% < Des	0.0	41.7	50.0	41.7	83.3	58.3	66.7	0.0	66.7	83.3	100.0	58.3
% P	100.0	50.0	33.3	41.7	0.0	41.7	33.3	0.0	25.0	16.7	0.0	0.0
% > Ex P	0.0	8.3	16.7	16.7	16.7	0.0	0.0	0.0	8.3	0.0	0.0	41.7

Taluka : Walwa (Ashta, Bahe, Bavachi, Borgaon, Hubalwadi, Itkare, Nave khed, Nerle, Peth, Rethre, Sakharale, Shivapuri, Tandulwadi, Tujarpur, Walwa, Wategaon, Yednipani, Yellur)												
Min	7.0	143.4	40.0	16.0	-3.6	0.0	72.0	72.0	25.0	1.0	0.1	1.8
Max	8.4	697.4	503.1	124.0	70.0	0.8	360.0	439.2	212.0	128.6	0.8	81.0
Average	7.9	361.7	239.7	53.4	28.6	0.1	178.0	198.6	87.1	33.5	0.4	19.5
Stdev	0.4	171.6	116.6	33.3	17.4	0.2	81.3	108.5	49.8	37.3	0.2	17.0
% < Des	0.0	76.0	72.0	72.0	64.0	88.0	64.0	0.0	100.0	100.0	100.0	96.0
% P	100.0	24.0	28.0	28.0	36.0	12.0	36.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0

28. SATARA

Taluka : Javali (Javali, Medha)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.6	139.5	88.0	17.6	12.0	0.0	68.0	68.0	21.0	2.0	0.2	0.5
Max	8.6	779.4	420.0	58.0	66.8	0.4	540.0	658.8	206.0	64.0	0.7	60.7
Average	8.2	480.5	215.6	29.2	37.2	0.2	343.0	376.2	96.3	29.5	0.4	17.8
Stdev	0.4	327.9	142.7	19.3	23.2	0.2	229.4	264.9	82.1	31.7	0.2	28.9
% < Des	0.0	50.0	75.0	100.0	50.0	75.0	25.0	0.0	100.0	100.0	100.0	75.0
% P	75.0	50.0	25.0	0.0	50.0	25.0	75.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0

Taluka : Karad (Beldare, Gote, Kale, Kambirwadi, Karad, Khadakwadi, Korti, Malkapur, Mhapre, Padali, Rethare bk., Saudapur/Sadashivgad, Savade, Talbeed, Umbraj, Undale, Varade, Wanvasmachi)												
Min	7.5	70.2	54.8	9.6	3.6	0.0	40.3	37.0	7.0	4.0	0.0	0.0
Max	9.0	742.4	425.0	120.0	82.8	0.6	348.0	384.0	306.0	108.0	1.3	70.9
Average	8.3	285.0	198.9	34.7	31.7	0.2	193.6	206.3	61.1	26.6	0.7	21.3
Stdev	0.4	160.4	101.5	27.2	16.4	0.2	85.5	100.6	62.9	21.9	0.4	19.6
% < Des	0.0	87.5	83.3	91.7	37.5	66.7	62.5	0.0	95.8	100.0	79.2	87.5
% P	70.8	12.5	16.7	8.3	62.5	33.3	37.5	0.0	4.2	0.0	20.8	0.0
% > Ex P	29.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.5

Taluka : Khandala (Bhade, Ghadagewadi, Khandala, Khed Bk., Koparde, Lonand, Naigaon, Shirval, Surur)												
Min	7.4	70.4	96.0	18.0	-6.0	0.0	60.0	60.0	40.0	3.8	0.3	0.9
Max	8.3	764.0	499.0	89.6	77.0	0.4	480.0	585.6	220.0	61.9	0.9	94.0
Average	7.9	411.8	229.6	52.1	25.7	0.2	201.9	226.3	95.9	32.1	0.6	20.2
Stdev	0.3	197.4	119.5	20.7	24.8	0.1	133.0	171.0	56.5	16.8	0.2	26.9
% < Des	0.0	61.5	69.2	84.6	61.5	69.2	69.2	0.0	100.0	100.0	100.0	80.8
% P	100.0	38.5	30.8	15.4	38.5	30.8	30.8	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.2

Taluka : Khatav (Aundh, Bhushangad, Budh, Chitali, Datewadi, Katar Khatav, Kokrale, Kuroli S., Lalgun, Manjarvadi (Mol), Mayani, Mol, Musandwadi, Pusegaon, Pusesavali, Waduj Satewadi, Wakeshwar, Wardhangad, Yeliv)												
Min	7.4	72.3	52.0	16.0	2.4	0.0	88.0	88.0	20.0	1.6	0.2	0.0
Max	8.8	1888.0	545.0	105.6	79.2	1.4	435.0	530.7	836.0	550.0	1.2	111.0
Average	8.1	368.9	209.8	46.7	24.7	0.1	193.7	206.0	105.8	42.9	0.7	22.4
Stdev	0.3	386.5	133.5	26.9	21.9	0.3	87.0	110.8	167.6	108.7	0.3	29.2
% < Des	0.0	76.0	80.0	84.0	72.0	84.0	68.0	0.0	92.0	96.0	88.0	84.0
% P	92.0	24.0	20.0	16.0	28.0	12.0	32.0	0.0	8.0	0.0	12.0	0.0
% > Ex P	8.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	4.0	0.0	16.0

Taluka : Koregaon (Chanchali, Eksal, Jamb Kh., Koregaon, Pimpode Bk, Rahimatpur, Rehmatpur, Satara Rd, Surli, Wathar Station)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.6	115.8	112.0	11.2	11.0	0.0	64.8	79.0	14.0	1.8	0.1	0.1
Max	9.2	887.8	489.0	126.0	82.8	1.9	490.0	597.8	266.0	82.0	1.0	68.0
Average	8.4	355.5	232.6	37.4	39.0	0.4	210.2	227.8	93.9	27.8	0.7	25.3
Stdev	0.5	205.9	110.0	29.9	19.6	0.5	90.9	120.5	75.0	26.6	0.3	25.2
% < Des	0.0	76.9	73.1	84.6	46.2	53.8	42.3	0.0	96.2	100.0	92.3	73.1
% P	69.2	23.1	26.9	15.4	53.8	30.8	57.7	0.0	3.8	0.0	7.7	0.0
% > Ex P	30.8	0.0	0.0	0.0	0.0	15.4	0.0	0.0	0.0	0.0	0.0	26.9

Taluka : Mahabaleswar (Bhose, Mahabaleshwar, Panchagani)												
Min	7.3	26.2	20.0	6.4	1.2	0.0	24.0	24.0	3.5	0.4	0.0	0.0
Max	8.5	131.8	124.0	28.8	15.6	1.2	95.1	116.0	52.0	12.3	0.5	27.9
Average	8.0	84.0	63.5	16.4	5.9	0.2	47.0	54.5	21.7	5.1	0.2	10.3
Stdev	0.3	35.1	31.4	7.8	4.2	0.4	23.2	29.1	14.9	4.3	0.2	10.3
% < Des	0.0	100.0	100.0	100.0	100.0	77.8	100.0	0.0	100.0	100.0	100.0	100.0
% P	100.0	0.0	0.0	0.0	0.0	11.1	0.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	11.1	0.0	0.0	0.0	0.0	0.0	0.0

Taluka: Man (Dahivadi) (Bidal, Dahiwadi, Dhuldeo, Diwad, Kasarwadi, Malwadi, Mhasvad, Mograle, Pandharwadi, Pingli, Ranand, Shenawadi, Shinde kh., Shinganapur, Shirtav, Takewadi, Walai, Warkute Malwadi, Wavarhire)												
Min	7.2	149.8	39.8	9.6	2.4	0.0	56.0	56.0	26.0	1.2	0.3	0.0
Max	9.1	1548.8	715.0	176.0	99.6	1.1	552.0	552.0	748.0	480.0	1.4	203.8
Average	8.1	524.5	233.7	51.9	29.2	0.5	246.6	258.6	136.6	74.7	0.9	36.8
Stdev	0.4	406.4	168.2	43.7	24.1	0.4	111.6	117.1	170.8	113.3	0.3	44.0
% < Des	0.0	69.2	76.9	76.9	53.8	46.2	34.6	0.0	80.8	88.0	57.7	61.5
% P	84.6	30.8	19.2	23.1	46.2	46.2	65.4	0.0	19.2	12.0	42.3	0.0
% > Ex P	15.4	0.0	3.8	0.0	0.0	7.7	0.0	0.0	0.0	4.0	0.0	38.5

Taluka : Medha (Medha, Varoshi)												
Min	7.8	109.1	90.0	28.0	5.0	0.0	90.2	110.0	7.0	1.6	0.1	3.0
Max	8.2	323.8	275.0	82.0	24.3	0.0	254.9	311.0	49.7	12.0	0.2	6.8
Average	8.1	226.4	188.1	49.6	15.6	0.0	169.9	207.3	30.5	6.4	0.1	4.9
Stdev	0.2	97.1	81.2	22.7	8.2	0.0	70.2	85.6	17.7	4.8	0.1	1.4
% < Des	0.0	100.0	100.0	80.0	100.0	100.0	60.0	0.0	100.0	100.0	100.0	100.0
% P	100.0	0.0	0.0	20.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Satara (Atit, Aundh, Karanje, Kondve, Kuran, Manainagar, Manure, Mardhe, Mogarle, Mutlavadi, Nagewadi, Nandgaon, Nune, Phadatarwadi, Pimpalwadi, Shendre, Shendri, Tathvade, Udtara, Vaduth, Warne, Warye)												
Min	7.5	53.7	14.9	4.0	1.2	0.0	35.2	36.0	3.5	1.0	0.0	0.0
Max	9.0	1780.3	638.8	124.8	120.0	0.6	600.0	732.0	447.0	382.0	3.4	182.0
Average	8.0	353.5	225.7	43.2	30.5	0.1	200.8	231.6	71.8	36.8	0.4	16.7
Stdev	0.3	353.2	153.5	24.9	26.9	0.2	133.2	164.2	97.0	71.0	0.5	30.2
% < Des	0.0	81.6	81.6	92.1	55.3	81.6	52.6	0.0	92.1	94.7	97.4	94.7
% P	97.4	18.4	10.5	7.9	39.5	18.4	47.4	0.0	7.9	5.3	0.0	0.0
% > Ex P	2.6	0.0	7.9	0.0	5.3	0.0	0.0	0.0	0.0	0.0	2.6	5.3

Taluka : Patan (Dhebevadi, Ghot, Girewadi, Goshatwadi, Helwak, Malharpeth, Marali, Mirgaon, Morgir (Shivpurpeth), Morgiri, Nimbore, Patan, Sakhari, Tarale, Velkhandwadi (Tarli), Yerphale)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.5	28.8	32.0	9.6	2.4	0.0	40.0	40.0	11.0	0.0	0.0	0.0
Max	9.8	2478.8	1138.1	190.0	183.0	1.2	375.0	457.5	1074.0	437.0	1.1	186.6
Average	8.2	529.8	310.2	60.1	40.1	0.3	178.6	201.7	172.7	51.3	0.5	32.9
Stdev	0.5	730.3	311.5	46.4	48.8	0.4	91.2	110.1	320.6	114.2	0.3	52.9
% < Des	0.0	82.1	82.1	71.4	75.0	60.7	57.1	0.0	82.1	89.3	89.3	82.1
% P	82.1	7.1	7.1	28.6	14.3	32.1	42.9	0.0	7.1	7.1	10.7	0.0
% > Ex P	17.9	10.7	10.7	0.0	10.7	7.1	0.0	0.0	10.7	3.6	0.0	17.9

Taluka : Phaltan (Adarki bk., Dudhebavi, Gokhali, Khunte, Murum, Nimbalak, Padegaon, Phaltan, Rajale, Rajuri, Savanthwadi (Jinti), Somanthali, Tambave, Taradgaon, Tathavade, Wadale)												
Min	7.7	143.4	92.0	9.6	8.5	0.0	100.0	100.0	14.0	3.0	0.1	0.5
Max	9.8	1657.6	840.0	166.0	103.3	1.3	760.0	760.0	635.5	334.0	1.1	132.9
Average	8.2	585.2	275.7	52.3	38.8	0.4	263.1	285.8	141.6	84.4	0.6	36.4
Stdev	0.5	435.4	199.6	39.7	26.6	0.4	134.6	140.9	158.2	97.4	0.4	31.2
% < Des	0.0	65.2	78.3	78.3	43.5	52.2	34.8	0.0	73.9	87.0	73.9	65.2
% P	82.6	34.8	13.0	21.7	47.8	39.1	60.9	0.0	26.1	13.0	26.1	0.0
% > Ex P	17.4	0.0	8.7	0.0	8.7	8.7	4.3	0.0	0.0	0.0	0.0	34.8

Taluka : Wai (Anawadi, Asare, Chindhavali, Dhom, Kadegaon, Udtare, Vele, Wai(R))												
Min	7.9	83.2	68.0	16.0	2.4	0.0	76.0	72.0	24.0	1.4	0.1	0.4
Max	8.8	480.2	390.0	88.0	70.0	2.8	375.0	457.5	96.0	21.0	1.1	26.1
Average	8.2	254.4	198.1	26.5	36.1	0.6	221.8	232.4	45.2	9.3	0.6	10.7
Stdev	0.3	127.4	99.5	19.7	17.7	0.9	86.7	111.8	25.6	6.8	0.3	9.4
% < Des	0.0	100.0	75.0	91.7	33.3	58.3	41.7	0.0	100.0	100.0	91.7	100.0
% P	83.3	0.0	25.0	8.3	66.7	25.0	58.3	0.0	0.0	0.0	8.3	0.0
% > Ex P	16.7	0.0	0.0	0.0	0.0	16.7	0.0	0.0	0.0	0.0	0.0	0.0

29. SINDHUDURG

Taluka : Devgad (Dahibav, Deogarh, Devgad, Dhaibav, Hadi (Gaonkarwadi), Jamsande, Kotkamte, Kunkaule, Kunkeshawar, Padel, Phanasgaon, Wada, Wareri, Welgive)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.0	51.6	12.0	1.6	1.9	0.0	24.0	24.0	14.0	1.0	0.0	0.0
Max	8.4	228.8	160.0	40.0	29.9	0.7	140.0	140.0	49.0	65.7	0.2	19.0
Average	7.6	127.3	78.5	15.7	9.5	0.2	69.1	72.6	30.1	8.5	0.1	4.4
Stdev	0.4	53.0	42.9	10.5	6.7	0.2	31.6	31.8	10.7	16.9	0.1	4.1
% < Des	0.0	100.0	100.0	100.0	100.0	80.8	100.0	0.0	100.0	100.0	100.0	100.0
% P	100.0	0.0	0.0	0.0	0.0	19.2	0.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Dodamarg (Adali (Dewalwadi), Dodamarga, Kasaidoda, Kherkand, Kolzar, Konal, Kotkamte, Sasoli, Shirgaon (Shirgar), Talkat, Vazare)												
Min	6.8	16.3	16.0	3.2	1.9	0.0	4.0	-24.0	3.9	0.0	0.0	0.0
Max	9.1	161.0	90.0	20.0	11.7	0.7	85.2	104.0	48.4	22.0	0.6	11.0
Average	7.7	78.9	47.8	7.9	6.8	0.1	39.9	40.5	19.3	3.6	0.1	3.7
Stdev	0.5	41.3	21.0	5.1	3.0	0.2	20.2	28.8	11.8	4.9	0.2	3.5
% < Des	0.0	100.0	100.0	100.0	100.0	90.0	100.0	0.0	100.0	100.0	100.0	100.0
% P	95.0	0.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Kankavli (Harkul, Harkul Kh., Janavali, Kalsuli, Kanedi Bazar, Kankavali, Kankavalli, Karanje, Khare Patan, Nadgive, Nandgaon, Narange, Nardave, Phonda, Savdav, Wargaon)												
Min	6.4	34.5	16.0	3.2	1.9	0.0	12.0	8.0	6.0	0.0	0.0	0.0
Max	9.1	211.0	140.0	40.0	20.2	1.2	140.0	153.0	57.0	56.3	2.0	12.0
Average	7.6	120.0	71.1	13.9	8.8	0.2	59.3	60.8	28.1	8.3	0.2	3.6
Stdev	0.6	55.5	28.9	7.7	4.5	0.3	29.9	33.8	12.9	12.2	0.4	3.5
% < Des	2.6	100.0	100.0	100.0	100.0	89.5	100.0	0.0	100.0	100.0	94.7	100.0
% P	89.5	0.0	0.0	0.0	0.0	5.3	0.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	7.9	0.0	0.0	0.0	0.0	5.3	0.0	0.0	0.0	0.0	5.3	0.0

Taluka : Kudal (Ambadpal, Awalegaon, Chendavan, Goveri, Kasal, Keravade, Kudal, Mangaon Bazar, Nirukhe, Pagrad, Pandur, Pavashi, Pundur, Ramgarh, Sawarwad, Sonavade, Vados, Zarap)												
Min	6.6	61.8	28.0	6.4	1.9	0.0	24.0	12.0	11.0	0.0	0.0	0.0
Max	9.5	1391.0	728.0	200.4	80.0	0.5	404.0	404.0	413.6	380.0	1.9	16.3
Average	7.7	223.1	130.3	25.3	16.3	0.1	88.3	97.3	49.5	26.5	0.3	3.5
Stdev	0.5	274.7	147.5	36.9	19.2	0.1	77.3	89.5	68.6	69.4	0.4	4.5
% < Des	0.0	90.7	88.4	95.3	88.4	83.7	90.7	0.0	97.7	95.3	93.0	100.0
% P	95.3	9.3	9.3	2.3	11.6	16.3	9.3	0.0	2.3	4.7	2.3	0.0
% > Ex P	4.7	0.0	2.3	2.3	0.0	0.0	0.0	0.0	0.0	0.0	4.7	0.0

Taluka : Malvan (Achara, Bandivade BK., Gothane, Kandelgaon, Khewand, Kolamb, Kumbharmath, Malwan, Math, Mogarne, Nandrukh, Palsamb, Terela, Vagothan, Vijayadurga)												
Min	5.4	36.0	16.0	3.2	1.9	0.0	9.8	0.0	9.8	0.1	0.0	0.0
Max	9.1	817.1	275.0	75.3	41.0	0.6	240.0	244.0	239.1	50.0	0.5	33.0
Average	7.5	164.7	83.5	17.5	9.6	0.1	64.6	69.4	42.5	10.4	0.1	6.6
Stdev	0.6	162.0	69.9	18.3	8.1	0.1	55.5	59.0	52.2	14.2	0.1	8.7
% < Des	2.5	95.0	100.0	97.5	95.0	92.5	92.5	0.0	100.0	100.0	100.0	100.0
% P	95.0	5.0	0.0	2.5	5.0	7.5	7.5	0.0	0.0	0.0	0.0	0.0
% > Ex P	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Sawantwadi (Ajgaon, Amboli, Banda, Choukal, Danoli, Insuli, Kalmbist, Malgaon, Sawanthwadi, Talkat, Talvade)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.1	53.0	25.0	3.2	1.9	0.0	24.0	24.0	3.9	0.0	0.0	0.0
Max	8.6	179.8	147.0	20.0	26.0	0.8	95.1	116.0	60.0	24.2	0.4	13.2
Average	7.8	101.6	58.4	10.2	8.0	0.1	50.5	54.2	23.6	3.6	0.1	3.5
Stdev	0.5	37.3	30.0	5.1	5.4	0.2	20.6	26.4	15.7	5.5	0.1	2.6
% < Des	0.0	100.0	100.0	100.0	100.0	89.7	100.0	0.0	100.0	100.0	100.0	100.0
% P	93.1	0.0	0.0	0.0	0.0	10.3	0.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Vaibhavwadi (Achime, Bhuibavda, Kokisare, Mangavali, Navale, Nim Arule, Sonali, Vaibhavwadi)												
Min	6.8	29.9	20.0	1.6	2.9	0.0	20.0	20.0	5.9	1.0	0.0	0.0
Max	8.5	1088.8	880.0	304.6	30.8	1.8	400.0	400.0	35.3	380.0	1.0	7.0
Average	7.6	209.7	145.6	37.3	12.7	0.4	114.1	111.7	24.2	39.4	0.3	2.6
Stdev	0.5	240.3	193.7	68.7	9.0	0.5	90.2	90.0	8.4	91.8	0.3	2.1
% < Des	0.0	94.4	94.4	94.4	94.4	77.8	83.3	0.0	100.0	94.4	100.0	100.0
% P	100.0	5.6	0.0	0.0	5.6	11.1	16.7	0.0	0.0	5.6	0.0	0.0
% > Ex P	0.0	0.0	5.6	5.6	0.0	11.1	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Vengurla (Adeli (Bomderwadi), Dabhole, Dhaoli, Dodamarga, Hodavade, Khanole, Khanoli, Math, Mhapan, Redi, Shirode, Vajrat, Vengurla, Vetore, Wargaon)												
Min	5.8	45.5	12.0	1.6	1.9	0.0	4.0	4.0	9.8	1.0	0.0	0.0
Max	8.3	1527.5	648.0	161.9	58.8	1.1	424.0	424.0	421.4	74.5	0.9	7.9
Average	7.2	154.8	73.5	14.9	8.8	0.3	67.3	70.9	42.3	9.4	0.2	3.2
Stdev	0.5	274.1	115.5	29.2	10.7	0.4	76.6	77.5	76.1	16.5	0.2	2.1
% < Des	3.6	96.4	96.4	96.4	96.4	78.6	96.4	0.0	96.4	100.0	100.0	100.0
% P	96.4	3.6	0.0	3.6	3.6	7.1	3.6	0.0	3.6	0.0	0.0	0.0
% > Ex P	0.0	0.0	3.6	0.0	0.0	14.3	0.0	0.0	0.0	0.0	0.0	0.0

30. SOLAPUR

Taluka : Akkalkot (Akkalkot, Kegaon, Nagansur, Wagdhari)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.4	583.8	204.9	40.0	25.5	0.0	214.8	262.0	99.0	33.0	0.3	10.0
Max	8.2	1839.9	1206.2	308.0	106.0	0.0	364.8	445.0	515.0	189.1	0.8	416.0
Average	7.7	939.7	591.1	145.4	55.2	0.0	275.6	336.3	226.1	125.2	0.5	102.7
Stdev	0.3	442.3	334.1	87.8	28.8	0.0	52.5	64.0	144.7	58.3	0.2	147.2
% < Des	0.0	0.0	28.6	28.6	28.6	100.0	0.0	0.0	71.4	100.0	100.0	57.1
% P	100.0	100.0	42.9	57.1	57.1	0.0	100.0	0.0	28.6	0.0	0.0	0.0
% > Ex P	0.0	0.0	28.6	14.3	14.3	0.0	0.0	0.0	0.0	0.0	0.0	42.9

Taluka : Barshi (Dhanore, Manegaon, Nari, Pangri, Rople, Shelgaon)												
Min	7.6	270.5	153.2	30.0	15.8	0.0	165.0	201.3	21.3	3.8	0.0	7.4
Max	8.0	1258.0	775.0	174.0	104.0	0.0	309.8	378.0	312.0	227.0	0.7	174.8
Average	7.8	692.1	422.8	92.8	46.3	0.0	238.3	290.7	146.3	88.7	0.3	83.7
Stdev	0.1	349.6	200.7	40.3	28.7	0.0	51.6	63.0	104.2	83.4	0.2	63.8
% < Des	0.0	33.3	33.3	41.7	33.3	100.0	33.3	0.0	75.0	75.0	100.0	33.3
% P	100.0	66.7	41.7	58.3	58.3	0.0	66.7	0.0	25.0	25.0	0.0	0.0
% > Ex P	0.0	0.0	25.0	0.0	8.3	0.0	0.0	0.0	0.0	0.0	0.0	66.7

Taluka : Karmala (Kandar, Karmala, Varkute)												
Min	7.6	394.5	194.7	40.0	23.0	0.0	159.8	195.0	82.0	65.0	0.5	14.0
Max	8.1	1014.3	439.6	110.0	40.0	0.0	354.9	433.0	209.0	136.0	0.8	147.0
Average	7.8	715.8	334.6	82.4	31.2	0.0	269.0	328.2	142.0	101.2	0.7	61.0
Stdev	0.2	279.1	88.4	26.6	8.0	0.0	80.5	98.3	51.7	26.2	0.1	63.8
% < Des	0.0	20.0	20.0	20.0	40.0	100.0	20.0	0.0	100.0	100.0	100.0	60.0
% P	100.0	80.0	80.0	80.0	60.0	0.0	80.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40.0

Taluka : Madha (BItergaon Haveli, Parite, Tembhurni)												
Min	7.4	501.8	301.1	76.0	27.0	0.0	180.3	220.0	96.0	67.0	0.2	3.7
Max	7.8	937.8	615.0	166.0	69.3	0.0	275.4	336.0	252.1	156.0	0.7	106.6
Average	7.7	754.9	477.5	116.7	45.1	0.0	223.5	272.7	188.6	111.7	0.5	67.5
Stdev	0.2	208.2	128.9	38.0	15.8	0.0	32.6	39.7	67.0	40.7	0.1	34.7
% < Des	0.0	0.0	0.0	0.0	16.7	100.0	16.7	0.0	83.3	100.0	100.0	16.7
% P	100.0	100.0	83.3	100.0	83.3	0.0	83.3	0.0	16.7	0.0	0.0	0.0
% > Ex P	0.0	0.0	16.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	83.3

Taluka : Malshiras (Dharmapuri, Malsiras, Natepute, Piliv, Salmukh, Velapur)												
Min	7.6	313.6	150.0	52.0	1.2	0.0	150.0	183.0	36.0	19.0	0.3	16.0
Max	8.2	1105.5	835.0	174.0	97.0	0.0	520.5	635.0	376.0	196.0	0.6	104.8
Average	7.9	833.4	417.5	88.8	47.5	0.0	348.2	424.8	188.1	81.6	0.5	46.6
Stdev	0.2	326.9	219.9	39.2	31.8	0.0	136.0	165.9	121.9	59.8	0.1	32.0
% < Des	0.0	25.0	37.5	50.0	37.5	100.0	12.5	0.0	62.5	100.0	100.0	62.5
% P	100.0	75.0	50.0	50.0	62.5	0.0	87.5	0.0	37.5	0.0	0.0	0.0
% > Ex P	0.0	0.0	12.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	37.5

Taluka : Mangalwedha (Junoni, Mangalvedha, Marwade, Pout)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.5	405.0	200.0	48.0	19.4	0.0	260.0	317.2	49.7	30.2	0.3	4.3
Max	8.2	1092.6	665.2	192.0	57.0	0.0	290.0	353.8	252.0	245.0	0.6	70.0
Average	7.9	769.5	408.0	99.2	38.9	0.0	277.1	338.1	156.8	133.0	0.5	36.7
Stdev	0.3	283.4	209.4	65.9	13.9	0.0	11.0	13.4	81.5	104.3	0.1	29.6
% < Des	0.0	20.0	60.0	60.0	20.0	100.0	0.0	0.0	80.0	60.0	100.0	60.0
% P	100.0	80.0	20.0	40.0	80.0	0.0	100.0	0.0	20.0	40.0	0.0	0.0
% > Ex P	0.0	0.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40.0

Taluka : Mohol (Ichgaon, Kurul, Narayan Chincholi, Sohole)												
Min	7.5	548.1	350.0	68.0	34.0	0.0	190.0	231.8	107.0	17.8	0.3	20.0
Max	8.2	1240.8	658.4	186.0	64.0	0.0	330.3	403.0	284.0	209.3	0.7	247.0
Average	7.7	857.3	490.7	115.8	48.9	0.0	250.6	305.8	188.6	127.0	0.5	100.8
Stdev	0.2	284.1	113.8	38.2	10.1	0.0	52.8	64.4	67.1	55.4	0.1	100.0
% < Des	0.0	0.0	0.0	11.1	0.0	100.0	22.2	0.0	77.8	88.9	100.0	55.6
% P	100.0	100.0	66.7	88.9	100.0	0.0	77.8	0.0	22.2	11.1	0.0	0.0
% > Ex P	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	44.4

Taluka : N.Solapur (Nannaj, Shivni, Soregaon, Vadval)												
Min	7.6	362.0	180.0	54.0	10.9	0.0	235.0	286.7	50.0	11.0	0.3	8.0
Max	8.2	1260.4	870.1	218.0	97.2	0.0	369.7	451.0	284.0	316.0	0.7	160.0
Average	7.8	783.6	461.1	102.0	50.1	0.0	293.0	357.5	152.6	138.7	0.5	43.4
Stdev	0.2	314.0	246.6	57.4	30.1	0.0	56.1	68.5	96.5	125.8	0.1	56.0
% < Des	0.0	25.0	37.5	37.5	37.5	100.0	0.0	0.0	75.0	62.5	100.0	75.0
% P	100.0	75.0	25.0	50.0	62.5	0.0	100.0	0.0	25.0	37.5	0.0	0.0
% > Ex P	0.0	0.0	37.5	12.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0

Taluka : Pandharpur (Ajoti, Bhandi-Shegaon, Chale, Eklaspur, Karkamb, Pandharpur, Ranzani)												
Min	7.4	311.2	215.0	52.0	13.0	0.0	224.6	274.0	35.5	11.5	0.3	13.6
Max	8.1	2903.3	1181.0	451.0	106.9	0.0	330.0	402.6	887.5	738.2	0.9	254.0
Average	7.8	1228.1	609.3	166.1	47.2	0.0	263.1	321.0	279.0	277.1	0.5	69.1
Stdev	0.2	792.5	305.2	107.2	27.4	0.0	29.9	36.4	250.6	220.7	0.2	73.9
% < Des	0.0	20.0	20.0	26.7	40.0	100.0	0.0	0.0	66.7	53.3	100.0	53.3
% P	100.0	60.0	33.3	46.7	53.3	0.0	100.0	0.0	33.3	13.3	0.0	0.0
% > Ex P	0.0	20.0	46.7	26.7	6.7	0.0	0.0	0.0	0.0	33.3	0.0	46.7

Taluka : Sangola (Chincholi, Manjri, Sangola)												
Min	7.5	405.8	189.4	56.0	12.0	0.0	174.6	213.0	43.0	41.0	0.2	32.0
Max	8.1	658.7	420.0	86.0	49.8	0.0	219.7	268.0	134.9	73.0	0.4	137.6
Average	7.7	502.0	302.7	72.8	29.3	0.0	199.8	243.8	91.6	57.3	0.3	61.7
Stdev	0.2	97.5	84.0	11.8	13.9	0.0	19.1	23.3	35.7	11.7	0.1	43.0
% < Des	0.0	60.0	40.0	60.0	60.0	100.0	40.0	0.0	100.0	100.0	100.0	40.0
% P	100.0	40.0	60.0	40.0	40.0	0.0	60.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60.0

Taluka : Solapur (Hivre, Nagaj, Nandni)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.7	297.3	183.8	44.0	7.0	0.0	175.0	213.5	14.2	11.0	0.2	2.5
Max	8.0	1181.8	530.0	94.0	74.1	0.0	380.0	463.6	319.5	147.4	0.5	151.3
Average	7.9	600.0	355.7	76.4	40.0	0.0	243.1	296.6	123.6	79.7	0.4	45.2
Stdev	0.1	360.7	145.5	22.3	25.5	0.0	83.8	102.2	124.2	55.4	0.1	61.5
% < Des	0.0	40.0	40.0	40.0	20.0	100.0	40.0	0.0	80.0	100.0	100.0	80.0
% P	100.0	60.0	60.0	60.0	80.0	0.0	60.0	0.0	20.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0

Taluka : South Solapur (Ule)												
Min	7.4	1840.0	1050.7	0.0	612.0	0.0	174.0	43.0	134.0	14.0	0.0	214.8
Max	7.4	1840.0	1050.7	0.0	612.0	0.0	174.0	43.0	134.0	14.0	0.0	214.8
Average	7.4	1840.0	1050.7	0.0	612.0	0.0	174.0	43.0	134.0	14.0	0.0	214.8
% < Des	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% P	100.0	0.0	100.0	0.0	0.0	0.0	100.0	100.0	0.0	0.0	0.0	100.0
% > Ex P	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

31. THANE

Taluka : Bhivandi (Angaon, Bhinar, Bhivandi, Chavindra, Dapode, Gothanpada, Junadurkhi, Karahe, Karavali, Katai, Khoni, Padghe, Sange, Saravali)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	6.1	117.1	80.0	8.8	2.9	0.0	0.7	37.9	7.0	0.3	0.0	0.4
Max	8.7	1134.9	532.0	107.4	76.2	0.3	584.0	584.0	227.4	120.0	2.5	94.0
Average	7.9	402.8	240.8	49.0	27.8	0.0	176.0	168.6	68.4	26.8	0.4	13.2
Stdev	0.6	221.4	107.7	23.7	17.0	0.1	95.5	92.7	60.4	25.0	0.4	17.0
% < Des	2.4	75.6	73.2	85.4	63.4	100.0	65.9	0.0	100.0	100.0	97.6	97.6
% P	87.8	24.4	26.8	14.6	36.6	0.0	34.1	0.0	0.0	0.0	0.0	0.0
% > Ex P	9.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	2.4

Taluka : Dahanu (Bramhanwadi, Dahanu, Dapchari Takarpada, Dhanivari, Dhanoshi, Gunjad, Kasa, Saiwan, Saravali Sawata, Udhwa)												
Min	7.1	96.0	64.0	10.0	5.8	0.0	0.6	20.0	7.0	0.2	0.1	0.1
Max	8.5	1233.4	625.0	96.0	123.0	0.2	500.0	610.0	433.0	109.0	1.1	28.0
Average	7.8	349.0	223.4	43.7	26.4	0.0	197.5	222.9	62.6	17.1	0.2	8.6
Stdev	0.4	295.8	125.0	20.1	28.6	0.1	120.2	150.8	106.9	27.0	0.2	8.9
% < Des	0.0	85.3	85.3	94.1	82.4	100.0	67.6	0.0	91.2	100.0	97.1	100.0
% P	100.0	14.7	11.8	5.9	8.8	0.0	32.4	0.0	8.8	0.0	2.9	0.0
% > Ex P	0.0	0.0	2.9	0.0	8.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Jawhar (Chalatwad, Dhanoshi, Javahar, Sarsun, Sukhasale, Talawada, Vikramgadh)												
Min	7.3	95.0	52.0	11.0	4.8	0.0	60.0	60.0	5.5	1.0	0.1	0.4
Max	8.4	495.0	375.0	84.0	47.2	0.8	291.1	311.0	124.0	48.0	0.8	62.0
Average	7.8	228.5	175.6	39.0	18.9	0.1	144.2	151.9	38.2	13.0	0.2	11.0
Stdev	0.3	117.7	96.9	20.4	13.0	0.2	70.8	85.2	36.2	15.6	0.2	15.7
% < Des	0.0	100.0	82.4	88.2	82.4	88.2	76.5	0.0	100.0	100.0	100.0	94.1
% P	100.0	0.0	17.6	11.8	17.6	11.8	23.5	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9

Taluka : Mokhada (Devali, Dolhara, Khodala, Mokhada, Talasari, Talasarimala)												
Min	7.2	115.7	24.0	6.4	1.9	0.0	80.0	32.0	7.8	1.0	0.0	0.4
Max	8.5	564.4	340.0	94.0	45.3	0.1	292.0	292.0	131.0	55.0	0.7	112.0
Average	7.9	287.3	190.5	47.8	17.3	0.0	153.0	151.8	39.8	15.3	0.2	19.1
Stdev	0.4	137.0	94.0	22.6	12.4	0.0	63.5	80.2	40.1	14.0	0.2	29.3
% < Des	0.0	85.0	80.0	85.0	90.0	100.0	70.0	0.0	100.0	100.0	100.0	90.0
% P	100.0	15.0	20.0	15.0	10.0	0.0	30.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0

Taluka : Murbad (Burshinge, Kolimb, Murbad, Shivale, Talegaon, Thune phata, Tokavade, Tokavade (Tokoda), Tokawade)												
Min	7.2	111.8	80.0	16.0	1.0	0.0	1.6	37.0	9.2	0.1	0.0	0.3
Max	8.6	743.0	515.0	122.0	56.9	1.0	314.1	360.0	273.0	75.0	3.1	40.8
Average	7.9	320.6	222.0	49.1	23.9	0.1	165.4	171.6	44.3	18.8	0.5	9.4
Stdev	0.4	169.3	106.7	26.3	14.3	0.3	70.0	74.8	50.9	18.5	1.3	11.6
% < Des	0.0	87.9	75.8	87.9	75.8	90.9	66.7	0.0	97.0	100.0	93.9	100.0
% P	97.0	12.1	24.2	12.1	24.2	9.1	33.3	0.0	3.0	0.0	0.0	0.0
% > Ex P	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	0.0

Taluka : Palghar (Dahisar, Devkop, Dhekale, Kajali, Karavale, Karwali, Kolgaon, Mahim, Makunsar, Manor, Mukunsar, Nishanpada, Safale, Shirgaon, Somata, Vedhi, Yeur)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.2	154.1	96.0	10.0	1.9	0.0	9.6	78.0	9.0	0.1	0.0	0.0
Max	8.5	8080.0	464.0	111.0	65.6	0.2	492.0	492.0	777.0	85.0	1.8	76.0
Average	7.8	534.3	227.9	49.9	25.4	0.0	205.5	206.1	87.9	20.0	0.2	8.4
Stdev	0.4	1074.4	74.4	20.7	13.8	0.0	81.5	77.2	120.5	19.2	0.3	12.6
% < Des	0.0	71.7	79.2	88.7	75.5	100.0	50.9	0.0	94.3	100.0	98.1	98.1
% P	100.0	26.4	20.8	11.3	24.5	0.0	49.1	0.0	5.7	0.0	0.0	0.0
% > Ex P	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.9

Taluka : Shahapur (Bapgaon, Bhatasai, Bhinar, Sathgaon, Shendrun, Talempada (Bihigaon), Titwala, Varaskol, Vehlole, Vihigaon, Virskol, Washind)												
Min	7.2	78.0	60.0	9.6	4.8	0.0	40.0	24.0	5.5	0.5	0.0	0.4
Max	9.0	572.0	472.0	79.0	67.0	0.1	400.0	320.0	154.8	84.6	0.6	44.0
Average	8.0	271.0	201.4	40.5	24.3	0.0	174.1	161.4	43.2	18.9	0.2	8.0
Stdev	0.5	123.1	95.9	19.4	16.6	0.0	72.9	62.0	35.0	19.5	0.2	10.7
% < Des	0.0	96.9	87.5	90.6	81.3	100.0	68.8	0.0	100.0	100.0	100.0	100.0
% P	84.4	3.1	12.5	9.4	18.8	0.0	31.3	0.0	0.0	0.0	0.0	0.0
% > Ex P	15.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Thane (Pavane, Balkhapara, Bindarpada, Cherfully, Dahisar, Gansali, Giraj, K.khairne, Kajli, Khairne, Koparkhairne, Koperkhairne, Rabale, Shiravane, Turbha, Wafana)												
Min	7.0	106.0	75.0	18.0	3.9	0.0	9.6	78.0	7.0	0.1	0.0	0.3
Max	8.8	2619.5	1600.0	400.8	144.6	0.6	480.0	480.0	882.0	161.0	1.9	34.0
Average	7.9	464.4	272.2	62.2	28.7	0.1	193.0	206.8	90.6	28.6	0.3	7.1
Stdev	0.4	402.5	221.4	56.2	23.1	0.1	90.7	90.9	149.7	29.5	0.3	7.5
% < Des	0.0	74.0	74.0	80.0	66.0	92.0	48.0	0.0	96.0	100.0	98.0	100.0
% P	94.0	24.0	22.0	18.0	32.0	8.0	52.0	0.0	4.0	0.0	0.0	0.0
% > Ex P	6.0	2.0	4.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0

Taluka : Vasai (Aagashi, Ambadi, Boling, Chandansar, Gokhivare, Katolwadi (Mulgaon), Khanivade, Nalasopara, Sandor, Sansoonghar, Sativli, Tuling, Vasai, Virar, Waliv)												
Min	7.0	137.8	96.0	6.4	4.8	0.0	60.0	16.0	7.3	0.5	0.0	0.6
Max	8.7	1644.5	895.0	128.2	160.0	1.2	595.1	726.0	514.0	122.0	0.9	40.0
Average	7.9	531.4	301.2	50.8	42.2	0.1	223.8	228.6	124.6	35.3	0.2	11.2
Stdev	0.5	392.7	170.0	26.2	39.9	0.2	118.3	156.4	134.1	32.4	0.2	11.6
% < Des	0.0	63.8	61.7	85.1	55.3	95.7	53.2	0.0	83.0	100.0	100.0	100.0
% P	89.4	36.2	29.8	14.9	31.9	2.1	46.8	0.0	17.0	0.0	0.0	0.0
% > Ex P	10.6	0.0	8.5	0.0	12.8	2.1	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Wada (Aambiste, Devali, Jogamargepada, Kanchad, Kudus, Nehroli, Nimbawali, Parali, Rinzadpada (Kanchad), Wada)												
Min	7.2	77.0	60.0	5.6	2.9	0.0	40.0	24.0	7.0	2.0	0.0	0.1
Max	8.5	870.4	528.0	115.4	72.9	1.3	360.0	390.4	166.6	80.9	1.0	37.6
Average	8.0	316.2	214.9	45.3	24.6	0.1	187.4	188.4	43.2	18.3	0.3	6.6
Stdev	0.4	156.7	97.2	24.5	17.3	0.2	76.5	81.8	37.8	18.5	0.2	8.9
% < Des	0.0	90.9	84.1	90.9	70.5	93.2	68.2	0.0	100.0	100.0	95.5	100.0
% P	100.0	9.1	15.9	9.1	29.5	4.5	31.8	0.0	0.0	0.0	4.5	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Ambernath (Badlapur Katrap, Karav, Nevale)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.1	194.0	116.0	20.8	-20.2	0.0	57.5	56.0	11.0	5.1	0.1	1.0
Max	9.3	2646.8	344.0	96.2	61.7	1.4	264.3	264.3	1076.0	214.2	0.4	18.9
Average	8.1	513.0	213.7	47.6	22.8	0.2	159.8	137.8	120.9	36.2	0.3	4.5
Stdev	0.7	675.4	68.3	23.7	21.7	0.4	58.0	67.4	301.3	57.2	0.1	4.9
% < Des	0.0	91.7	91.7	83.3	75.0	66.7	66.7	0.0	91.7	91.7	100.0	100.0
% P	83.3	0.0	8.3	16.7	25.0	25.0	33.3	0.0	0.0	8.3	0.0	0.0
% > Ex P	16.7	8.3	0.0	0.0	0.0	8.3	0.0	0.0	8.3	0.0	0.0	0.0

Taluka : Kalyan (Goveli, Kambe, Newali, Titwala)												
Min	7.3	146.0	124.0	17.6	14.0	0.0	0.8	39.0	16.3	0.1	0.1	0.1
Max	8.4	417.3	292.0	85.0	31.8	0.5	291.1	291.1	111.7	22.2	3.2	24.7
Average	7.9	305.9	200.3	43.7	22.0	0.1	176.4	173.0	40.4	12.3	0.5	5.3
Stdev	0.4	82.1	47.1	19.2	4.5	0.1	69.6	67.5	30.1	7.2	1.0	7.3
% < Des	0.0	100.0	100.0	93.3	93.3	93.3	66.7	0.0	100.0	100.0	93.3	100.0
% P	100.0	0.0	0.0	6.7	6.7	6.7	33.3	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7	0.0

Taluka : Murud (Talegaon, Tokawade, Bursange, Tunepada, Karav, Shivale)												
Min	8.4	124.0	84.0	11.0	9.0	0.0	48.0	12.0	22.0	2.0	0.1	0.0
Max	9.4	145.0	116.0	26.0	21.0	0.0	96.0	56.0	88.0	9.0	0.7	1.1
Average	9.0	130.8	101.3	17.2	14.2	0.0	69.3	33.3	41.3	4.8	0.3	0.7
Stdev	0.4	8.5	12.0	5.5	4.5	0.0	22.3	20.7	25.8	3.0	0.2	0.4
% < Des	0.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0
% P	16.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	83.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Talasari (Bursange, Karav, Shivale, Talegaon, Tokawade, Tunepada)												
Min	7.1	161.9	72.0	17.6	4.0	0.0	116.0	0.0	20.1	1.0	0.1	0.2
Max	8.5	889.2	460.0	91.4	55.9	0.2	320.0	291.0	200.0	72.8	0.8	17.0
Average	7.8	309.0	204.0	48.0	20.3	0.0	185.3	159.2	58.3	18.8	0.2	4.5
Stdev	0.5	140.0	74.0	18.5	12.3	0.0	51.5	60.1	49.0	15.8	0.2	4.2
% < Des	0.0	96.0	92.0	88.0	84.0	100.0	60.0	0.0	100.0	100.0	100.0	100.0
% P	100.0	4.0	8.0	12.0	16.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Taluka : Ulhasnagar (Kajali, Talasari, Uadhwa, Vadoli, Zai, Zari)												
Min	7.2	191.0	152.0	11.6	9.6	0.0	2.2	33.0	6.0	0.1	0.0	0.5
Max	8.5	701.0	440.0	96.0	75.0	0.4	287.3	280.6	98.0	75.0	3.2	36.1
Average	8.0	376.0	239.6	48.9	31.1	0.1	156.9	159.5	47.5	23.8	1.3	10.1
Stdev	0.5	155.6	88.6	27.3	18.7	0.1	88.2	71.3	30.6	25.3	2.9	11.1
% < Des	0.0	72.7	81.8	81.8	54.5	90.9	72.7	0.0	100.0	100.0	81.8	100.0
% P	100.0	27.3	18.2	18.2	45.5	9.1	27.3	0.0	0.0	0.0	0.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.2	0.0

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Taluka : Arvi (Alipur, Arvi, Borgaon(gondi), Danapur, Kachnoor, Kharangna, Mandla, Marga, Nandpur, Pachod (virul), Panjra Gondi, Rohana, Sukli, Talegaon, Wadhona)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.2	241.0	100.0	4.0	13.6	0.0	70.0	85.4	14.2	2.9	0.1	6.3
Max	8.5	1894.0	980.0	212.8	181.0	0.4	670.0	817.4	532.5	219.8	0.9	600.2
Average	7.9	669.8	390.0	72.2	50.9	0.2	314.5	352.4	114.8	51.3	0.5	104.7
Stdev	0.3	435.3	197.1	48.0	40.7	0.1	130.0	165.5	140.1	56.2	0.2	147.2
% < Des	0.0	43.5	30.4	65.2	30.4	73.9	13.0	0.0	87.0	91.3	100.0	43.5
% P	100.0	56.5	56.5	30.4	60.9	26.1	78.3	0.0	13.0	8.7	0.0	0.0
% > Ex P	0.0	0.0	13.0	4.3	8.7	0.0	8.7	0.0	0.0	0.0	0.0	56.5

Taluka : Ashti (Ahsti, Antora, Ashti, Borgaon tumni, Choti Arvi, Dhadi, Drugwada, Kakaddara, Sahur, Sindvihira, Sirsoli, Talegaon(shamji)												
Min	7.0	328.0	185.0	18.0	29.2	0.0	115.0	140.3	32.0	5.4	0.0	4.2
Max	8.3	1232.0	964.0	256.0	112.8	0.5	528.0	644.2	252.0	137.0	1.9	264.6
Average	7.7	648.1	467.1	89.3	59.3	0.2	337.2	391.7	106.3	52.9	0.5	84.4
Stdev	0.4	257.4	210.8	61.7	24.3	0.2	106.8	129.4	68.2	40.8	0.4	72.6
% < Des	0.0	35.0	20.0	45.0	5.0	75.0	10.0	0.0	95.0	100.0	90.0	50.0
% P	100.0	65.0	55.0	50.0	90.0	25.0	90.0	0.0	5.0	0.0	5.0	0.0
% > Ex P	0.0	0.0	25.0	5.0	5.0	0.0	0.0	0.0	0.0	0.0	5.0	50.0

Taluka : Deoli (Adegaon, Agargaon, Andhori, Bhidi, Dahegaon, Deoli, Giroli, Kolhapur, Kolona, Muradgaon, Nachangaon, Pulgaon, Rohini, Sarul)												
Min	6.9	265.1	210.0	11.2	19.4	0.0	75.0	87.7	17.8	0.2	0.1	1.7
Max	8.5	1722.0	1628.0	252.8	291.6	0.5	560.0	671.2	500.0	156.0	1.3	495.6
Average	7.6	651.7	425.7	80.1	54.8	0.1	267.2	313.3	123.7	59.9	0.6	101.5
Stdev	0.4	306.5	246.3	60.6	45.3	0.1	117.6	138.4	92.5	44.7	0.2	99.9
% < Des	0.0	41.0	28.2	51.3	20.5	89.7	28.2	0.0	92.3	100.0	92.3	35.9
% P	100.0	59.0	59.0	43.6	74.4	10.3	71.8	0.0	7.7	0.0	7.7	0.0
% > Ex P	0.0	0.0	12.8	5.1	5.1	0.0	0.0	0.0	0.0	0.0	0.0	64.1

Taluka : Hinganghat (Allipur, Bhaiyapur, Burkoni, Chincholi, Daroda, Dhamangaon, Dhanora, Gadegaon, Hinganghat, Inzala, Kanchangaon, Kangaon, Mankapur, Manora, Parsoda, Selu, Wadner, Wela)												
Min	6.4	294.1	147.5	16.0	6.8	0.0	100.0	99.6	24.0	0.3	0.1	3.1
Max	8.6	1753.0	1040.0	256.0	115.7	0.9	560.0	683.2	466.0	384.0	3.9	369.6
Average	7.7	733.0	428.4	79.7	55.7	0.2	245.2	283.4	144.1	77.4	1.0	127.4
Stdev	0.4	395.7	211.9	59.7	29.5	0.2	107.7	132.8	95.7	67.1	0.9	103.6
% < Des	2.3	36.4	38.6	68.2	15.9	79.5	34.1	0.0	84.1	97.7	68.2	22.7
% P	95.5	63.6	40.9	27.3	75.0	20.5	65.9	0.0	15.9	2.3	18.2	0.0
% > Ex P	2.3	0.0	20.5	4.5	9.1	0.0	0.0	0.0	0.0	0.0	13.6	77.3

Taluka : Karanja (Junapani, Karanja, Ladgad, Methirji, Nagalwadi, Sawli Kh., Sindhvihira, Thanegaon)												
Min	7.1	197.1	60.0	12.8	3.9	0.0	84.0	81.9	17.8	2.3	0.0	1.3
Max	8.5	1007.2	704.0	248.0	65.1	0.5	600.2	732.2	226.9	85.0	1.2	159.6
Average	7.9	486.7	325.3	74.8	33.6	0.2	272.0	312.5	96.9	34.7	0.4	43.3
Stdev	0.4	256.7	190.5	66.2	17.3	0.2	141.2	182.8	68.7	29.2	0.3	46.9
% < Des	0.0	57.1	57.1	57.1	42.9	71.4	21.4	0.0	100.0	100.0	92.9	64.3
% P	100.0	42.9	28.6	35.7	57.1	28.6	71.4	0.0	0.0	0.0	7.1	0.0
% > Ex P	0.0	0.0	14.3	7.1	0.0	0.0	7.1	0.0	0.0	0.0	0.0	35.7

Taluka : Samudrapur (Ajda, Barfa, Chikhli, Dhumankheda, Girad, Kankati, Khek, Khursapar, Kori, Mohogaon, Nandori, Nandori, Renkapur, Sakhra, Samudrapur, Sawangi Zade, Shedgaon, Sirpur, Waigaon Gond, Wasi)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	6.9	208.8	70.0	18.0	3.6	0.0	50.0	61.0	24.0	0.2	0.1	3.1
Max	8.4	2297.0	644.0	219.2	94.3	0.8	535.2	652.9	574.0	412.0	2.2	273.0
Average	7.8	589.5	399.2	75.6	51.1	0.2	239.3	276.0	122.6	65.3	0.7	79.0
Stdev	0.4	301.5	130.1	38.7	21.6	0.2	98.8	125.4	82.6	59.1	0.4	72.4
% < Des	0.0	40.0	21.8	56.4	14.5	81.8	36.4	0.0	98.2	98.2	78.2	45.5
% P	100.0	58.2	72.7	41.8	85.5	18.2	63.6	0.0	1.8	0.0	18.2	0.0
% > Ex P	0.0	1.8	5.5	1.8	0.0	0.0	0.0	0.0	0.0	1.8	3.6	54.5

Taluka : Seloo (Akoli, Anjangaon, Antargaon, Babapur, Bondsula, Chanki, Dindoda, Garamsur, Giroli, Gondapur, Hingni, Jamni, Janglapur, Keljhar, Kelzar, Kopra, Madni (New), Mahabala, Palasgaon, Ramna (enkapur), Salaipewat, Seldoh, Seloo, Sindi Kh.(rly), Surgaon, Wanarvihira, Yelakeli, Zadsi)												
Min	6.7	193.0	188.0	8.0	6.8	0.0	70.0	85.4	26.0	0.2	0.3	4.2
Max	9.1	2259.0	1564.0	256.0	279.9	0.7	980.0	1049.2	660.0	268.0	1.6	525.0
Average	7.9	776.9	482.9	72.2	73.5	0.2	325.0	347.8	146.4	79.3	0.7	137.2
Stdev	0.5	464.8	288.8	46.1	58.3	0.1	162.5	178.0	129.0	57.6	0.3	129.4
% < Des	0.0	32.2	22.0	62.7	18.6	88.1	16.9	0.0	86.4	94.9	83.1	27.1
% P	94.9	62.7	61.0	35.6	64.4	11.9	78.0	0.0	13.6	5.1	13.6	0.0
% > Ex P	5.1	5.1	16.9	1.7	16.9	0.0	5.1	0.0	0.0	0.0	3.4	72.9

Taluka : Wardha (Anji, Arvi, Barbadi, Bhugaon, Chichala, Khandali, Kharangana, Kurzadi, Paragothan, Pipri, Pipri(meghe), Pulgaon, Saongi Meghe, Selsura, Talegaon (talatule), Vadad, Waigaon(nipani), Wardha)												
Min	7.1	276.3	150.0	19.2	3.6	0.0	80.0	14.6	10.7	0.3	0.2	4.2
Max	8.3	2247.4	1440.0	264.0	262.4	1.3	1008.0	1112.6	932.0	339.8	1.1	474.6
Average	7.7	813.4	486.4	80.6	69.2	0.2	285.3	332.5	201.7	76.5	0.5	114.1
Stdev	0.3	551.5	322.1	65.1	59.1	0.2	183.4	220.1	211.2	68.1	0.2	132.0
% < Des	0.0	35.9	23.1	61.5	23.1	79.5	33.3	0.0	69.2	97.4	97.4	35.9
% P	100.0	56.4	48.7	28.2	56.4	17.9	61.5	0.0	30.8	2.6	2.6	0.0
% > Ex P	0.0	7.7	28.2	10.3	20.5	2.6	5.1	0.0	0.0	0.0	0.0	64.1

33. WASHIM

Taluka : Karanja (Dhanaj Bk., Dhotra Deshmukh, Janori, Karanja, Khedara Karanja, Khedra Bk., Manba, Panvihir, Shaha, Sohal, Tulajapur)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	6.7	158.0	100.0	8.0	4.8	0.1	20.0	20.0	24.0	12.0	0.1	7.0
Max	9.8	1620.0	692.0	164.8	145.4	0.4	380.0	405.0	498.0	177.0	3.0	106.0
Average	7.7	578.1	284.5	48.9	39.3	0.1	95.1	93.4	123.2	52.6	0.4	43.6
Stdev	0.8	329.0	134.2	37.1	26.9	0.1	77.3	78.4	94.5	36.8	0.9	29.2
% < Des	0.0	55.3	63.2	81.6	52.6	89.5	94.7	0.0	92.1	100.0	97.4	57.9
% P	81.6	44.7	31.6	18.4	44.7	10.5	5.3	0.0	7.9	0.0	0.0	0.0
% > Ex P	18.4	0.0	5.3	0.0	2.6	0.0	0.0	0.0	0.0	0.0	2.6	42.1

Taluka : Mangarulpir (Dabhadi, Jogaldari, Kalamba, Mangarulpir, Shelu Kh., Wanoja)												
Min	6.7	369.9	156.0	16.0	6.7	0.0	44.0	44.0	78.0	6.0	0.1	10.0
Max	8.6	998.0	534.0	70.4	109.0	0.6	284.0	346.5	219.0	130.5	1.4	102.5
Average	7.6	588.8	325.8	40.7	55.5	0.2	105.2	112.0	125.5	50.5	0.4	42.7
Stdev	0.4	177.3	118.5	16.9	32.2	0.1	69.1	77.4	42.1	30.1	0.4	21.4
% < Des	0.0	38.1	47.6	100.0	33.3	85.7	90.5	0.0	100.0	100.0	90.5	57.1
% P	90.5	61.9	52.4	0.0	61.9	14.3	9.5	0.0	0.0	0.0	9.5	0.0
% > Ex P	9.5	0.0	0.0	0.0	4.8	0.0	0.0	0.0	0.0	0.0	0.0	42.9

Taluka : Malegaon (Davha, Dongarkinhi, Ekamba, Jaulka, Karanji, Malegaon, Zodaga B.K.)												
Max	8.9	3630.0	820.0	142.4	134.4	0.3	356.0	434.3	556.0	235.0	1.0	111.0
Average	7.7	776.3	360.6	51.9	55.9	0.1	107.4	111.0	158.7	57.7	0.4	52.2
Stdev	0.6	653.6	176.9	34.4	35.8	0.1	75.5	93.6	115.2	43.2	0.2	32.7
% < Des	0.0	45.7	48.6	80.0	25.7	88.6	88.6	0.0	85.7	97.1	97.1	51.4
% P	85.7	51.4	42.9	20.0	54.3	11.4	11.4	0.0	14.3	2.9	2.9	0.0
% > Ex P	14.3	2.9	8.6	0.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	48.6

Taluka : Manora (Bhuli, Dhavanda, Kupta, Parwa, Sakharadoh, Umari Bk.)												
Min	6.9	280.0	92.0	10.8	14.4	0.0	44.0	34.2	26.0	6.0	0.1	10.0
Max	9.2	1600.0	848.0	249.6	96.2	0.4	200.0	190.3	570.0	111.0	1.2	114.0
Average	7.7	641.5	317.3	53.4	44.4	0.1	85.3	83.6	145.6	50.9	0.4	52.3
Stdev	0.7	347.8	174.9	59.4	18.9	0.1	39.7	42.8	139.0	27.7	0.3	31.1
% < Des	0.0	40.7	59.3	81.5	33.3	96.3	96.3	0.0	88.9	100.0	92.6	51.9
% P	85.2	59.3	29.6	14.8	66.7	3.7	3.7	0.0	11.1	0.0	7.4	0.0
% > Ex P	14.8	0.0	11.1	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	48.1

Taluka : Risod (Agaewadi, Degaon, Gohagaon, Lehani Kh., Mahagaon, Masalapen, Mohaja Bandi, Mop, Netansa, Risoad, Shegaon, Shelgaon, Sukali, Wanoja, Yevata)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	6.9	165.0	120.0	4.4	8.6	0.0	24.0	24.0	26.0	6.0	0.1	2.0
Max	9.2	1986.0	648.0	99.2	137.1	0.3	460.0	561.2	321.0	262.0	2.0	200.0
Average	7.7	737.5	310.8	42.4	49.6	0.1	100.1	101.7	134.2	57.6	0.4	60.3
Stdev	0.5	430.3	125.7	24.1	31.4	0.1	82.3	86.9	76.3	40.5	0.3	39.5
% < Des	0.0	42.1	51.3	85.5	34.2	89.5	92.1	0.0	90.8	98.7	94.7	36.8
% P	92.1	57.9	46.1	14.5	56.6	10.5	7.9	0.0	9.2	1.3	3.9	0.0
% > Ex P	7.9	0.0	2.6	0.0	9.2	0.0	0.0	0.0	0.0	0.0	1.3	63.2

Taluka : Washim (Bithoda Teli, Ekamba, Falegaon, Kekatumra, Pimpalgaon, Rajgaon, Sawargaon, Barade, Sukali, Tondagaon, Umara Kapase, Warla, Washim)												
Min	7.1	210.0	48.0	6.4	2.9	0.1	16.0	4.9	20.0	4.0	0.1	5.0
Max	9.1	1171.0	540.0	124.8	104.7	0.5	224.0	234.2	278.0	105.0	1.8	125.0
Average	7.8	561.0	282.3	46.7	40.2	0.1	90.0	91.0	121.1	45.4	0.4	44.5
Stdev	0.6	243.9	114.7	28.9	23.4	0.1	52.8	57.1	68.0	24.0	0.3	29.6
% < Des	0.0	46.0	60.3	81.0	38.1	95.2	95.2	0.0	93.7	100.0	96.8	55.6
% P	85.7	54.0	39.7	19.0	58.7	4.8	4.8	0.0	6.3	0.0	1.6	0.0
% > Ex P	14.3	0.0	0.0	0.0	3.2	0.0	0.0	0.0	0.0	0.0	1.6	44.4

34. YAVATMAL

Taluka : Arni (Arni, Belora van, Belora(Forest), Belura, Borgaon Punji, Dabhadi, Deurwadi, Jawala, Loanbehal, Mahagaon, Malhiwara, Mangarul, Sawali, Talani, Taroda, Umari)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	6.9	187.0	156.0	8.9	10.6	0.1	40.0	40.0	40.0	2.0	0.1	5.0
Max	8.4	1050.0	800.0	136.0	154.6	0.2	273.3	288.9	502.0	114.0	1.2	102.0
Average	7.5	615.2	377.9	44.7	64.3	0.1	115.3	124.2	172.8	32.2	0.6	43.5
Stdev	0.4	183.1	149.1	27.1	33.5	0.0	56.2	65.1	107.3	23.0	0.3	24.5
% < Des	0.0	25.9	25.9	88.9	14.8	100.0	92.6	0.0	85.2	100.0	85.2	48.1
% P	100.0	74.1	66.7	11.1	70.4	0.0	7.4	0.0	14.8	0.0	14.8	0.0
% > Ex P	0.0	0.0	7.4	0.0	14.8	0.0	0.0	0.0	0.0	0.0	0.0	51.9

Taluka : Babhulgaon (Antargaon, Babhulgaon, Dehani, Dhaba, Gharephal, Hatola, Karalgaon, Kharda, Mandi Borgaon, Maralpur, Nandura Bk., Pahur, Shindi, Virkhed, Wai Hatola)												
Min	7.1	434.0	176.0	4.4	1.9	0.1	36.0	36.0	28.0	7.0	0.4	7.3
Max	8.3	1592.5	692.0	190.4	78.7	0.2	356.0	353.3	448.0	255.0	1.2	74.0
Average	7.5	708.2	330.2	71.1	36.7	0.1	84.9	78.7	188.0	50.9	0.8	48.5
Stdev	0.3	318.6	119.3	38.6	18.7	0.0	74.1	69.0	85.5	55.1	0.2	17.7
% < Des	0.0	26.7	53.3	66.7	50.0	100.0	93.3	0.0	83.3	96.7	86.7	46.7
% P	100.0	73.3	43.3	33.3	50.0	0.0	6.7	0.0	16.7	3.3	13.3	0.0
% > Ex P	0.0	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	53.3

Taluka : Darwha (Bariarab, Bhandegaon, Bori(Arab), Darvha, Kamatwada, Lakhkhind, Mahatoli, Mangkinhi, Mohatali, Mozar, Sangvi, Shelodi, Uchegaon)												
Min	6.9	281.0	156.0	3.2	23.3	0.1	48.0	48.0	30.0	2.0	0.1	1.0
Max	8.7	1400.0	1000.0	132.0	162.8	0.3	340.0	414.8	458.0	120.0	1.2	106.0
Average	7.6	597.8	402.7	43.2	71.4	0.1	160.8	174.9	152.5	43.7	0.6	36.3
Stdev	0.4	275.5	176.9	29.9	35.4	0.1	89.1	105.1	123.6	28.0	0.3	28.4
% < Des	0.0	47.2	27.8	86.1	2.8	97.2	66.7	0.0	80.6	100.0	86.1	61.1
% P	97.2	52.8	61.1	13.9	77.8	2.8	33.3	0.0	19.4	0.0	13.9	0.0
% > Ex P	2.8	0.0	11.1	0.0	19.4	0.0	0.0	0.0	0.0	0.0	0.0	38.9

Taluka : Digras (Arambhi, Digraas(Shankartaki), Digras, Harsul, Lakhrayachi, Lonbehal, Mahagao Kasba, Mandwa, Singad, Tiwari, Vitholi)												
Min	7.0	271.8	140.0	10.8	2.0	0.1	24.0	24.0	34.0	1.0	0.1	5.0
Max	9.3	1760.0	1040.0	182.4	185.2	0.4	820.0	1000.4	540.0	125.0	1.2	125.0
Average	7.7	773.2	473.3	49.0	85.1	0.1	179.2	202.1	203.0	47.4	0.5	43.7
Stdev	0.5	407.7	179.8	45.9	43.5	0.1	157.5	194.6	119.4	28.4	0.3	36.2
% < Des	0.0	33.3	21.2	81.8	9.1	90.9	66.7	0.0	63.6	100.0	87.9	57.6
% P	90.9	66.7	63.6	18.2	54.5	9.1	30.3	0.0	36.4	0.0	12.1	0.0
% > Ex P	9.1	0.0	15.2	0.0	36.4	0.0	3.0	0.0	0.0	0.0	0.0	42.4

Taluka : Ghatanji (Belura, Ghatanji, Jarud, Kurli, Mandoli, Mandwa, Mangi, Manjari, Manoli, Vilayata, Yerandgaon)												
Min	6.7	270.0	140.0	8.0	16.3	0.1	44.0	32.0	30.0	8.0	0.4	2.0
Max	8.5	1626.0	988.0	249.6	160.4	0.2	370.0	451.4	628.0	185.0	3.5	108.0
Average	7.5	542.3	337.8	60.4	45.1	0.1	113.9	115.1	159.6	36.4	0.9	43.6
Stdev	0.4	257.5	185.7	45.2	31.2	0.0	89.3	106.8	118.2	34.3	0.6	28.5
% < Des	0.0	55.9	64.7	85.3	44.1	100.0	85.3	0.0	82.4	100.0	73.5	55.9
% P	100.0	44.1	23.5	11.8	50.0	0.0	14.7	0.0	17.6	0.0	20.6	0.0
% > Ex P	0.0	0.0	11.8	2.9	5.9	0.0	0.0	0.0	0.0	0.0	5.9	44.1

Taluka : Kalamb (Chaparda, Chincholi, Dongarkharda, Jodmoha, Kalamb, Kamthwada, Kinwat, Kotha, Mangi, Mthikhedaa, Pahur, Pilkhana, Rajur, Satephal, Sonegaon, Umari)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.1	280.0	180.0	5.6	14.4	0.1	40.0	40.0	32.0	15.0	0.1	4.0
Max	8.2	900.3	540.0	104.0	84.7	0.2	440.0	536.8	326.0	95.0	1.5	87.0
Average	7.5	586.8	319.6	62.6	39.3	0.1	111.4	118.7	163.8	40.1	0.8	46.8
Stdev	0.3	172.2	85.8	24.0	19.6	0.0	109.6	127.6	68.4	22.2	0.3	23.9
% < Des	0.0	26.7	50.0	73.3	46.7	100.0	80.0	0.0	93.3	100.0	60.0	46.7
% P	100.0	73.3	50.0	26.7	53.3	0.0	20.0	0.0	6.7	0.0	40.0	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	53.3

Taluka : Kelapur (Borgaon Kh., Chakhna, Dharana, Ghubadi, Kelapur, Khairgaon, Marathkawadi, Maregaon, Mohada, Pahapal, Pandharkawada, Sunna, Warha)												
Min	6.7	243.0	128.0	5.6	11.5	0.1	32.0	32.0	50.0	8.0	0.3	9.0
Max	8.1	1180.0	704.0	132.8	123.2	0.2	280.0	341.6	572.0	77.0	2.2	255.0
Average	7.4	495.0	268.4	49.1	35.2	0.1	79.2	85.9	141.5	31.3	0.6	47.4
Stdev	0.3	231.3	127.7	25.5	22.5	0.0	65.0	76.5	96.4	17.4	0.3	45.9
% < Des	0.0	54.8	74.2	87.1	48.4	100.0	90.3	0.0	93.5	100.0	93.5	64.5
% P	100.0	45.2	22.6	12.9	48.4	0.0	9.7	0.0	6.5	0.0	3.2	0.0
% > Ex P	0.0	0.0	3.2	0.0	3.2	0.0	0.0	0.0	0.0	0.0	3.2	35.5

Taluka : Mahagaon (Dhanoda, Kahurwadi, Mahagaon, Pisgaon, Tembhi, Wadad)												
Min	7.1	186.0	120.0	12.8	13.4	0.1	48.0	48.0	38.0	5.0	0.2	12.0
Max	8.4	1014.0	528.0	118.4	102.5	0.4	280.0	341.6	294.0	102.0	1.3	46.0
Average	7.7	509.3	304.6	43.2	47.6	0.2	116.1	123.3	124.3	39.2	0.6	30.8
Stdev	0.4	189.2	131.2	31.0	27.4	0.1	67.5	81.7	70.8	22.1	0.3	12.4
% < Des	0.0	56.3	43.8	81.3	37.5	87.5	93.8	0.0	93.8	100.0	87.5	81.3
% P	100.0	43.8	56.3	18.8	56.3	12.5	6.3	0.0	6.3	0.0	12.5	0.0
% > Ex P	0.0	0.0	0.0	0.0	6.3	0.0	0.0	0.0	0.0	0.0	0.0	18.8

Taluka : Maregaon (Jalaka, Maregaon, Pathari, Pisgaon)												
Min	7.0	200.0	160.0	12.0	22.1	0.1	48.0	48.0	56.0	6.0	0.1	9.0
Max	8.4	910.0	408.0	126.4	49.1	0.2	248.0	244.3	218.0	85.0	1.2	85.0
Average	7.7	448.9	250.0	44.0	33.9	0.1	104.6	103.5	109.2	35.6	0.7	40.5
Stdev	0.5	235.0	79.7	38.7	10.9	0.0	69.4	68.1	53.7	24.8	0.4	27.0
% < Des	0.0	75.0	75.0	87.5	37.5	100.0	87.5	0.0	100.0	100.0	62.5	75.0
% P	100.0	25.0	25.0	12.5	62.5	0.0	12.5	0.0	0.0	0.0	37.5	0.0
% > Ex P	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0

Taluka : Ner (Bangaon, Bramhanwada, Dhanaj, Gharefal, Gharephal, Khandala, Mozar, Ner, Pimpari, Uttarwadhona, Watfali, Yelgonda)												
Min	7.0	177.0	120.0	5.6	7.7	0.0	32.0	32.0	60.0	5.0	0.1	5.0
Max	8.8	1500.0	810.0	104.0	162.8	0.3	300.0	366.0	550.0	101.0	1.0	120.0
Average	7.7	703.8	368.0	52.3	57.4	0.1	110.2	117.2	195.9	42.5	0.5	45.3
Stdev	0.5	354.2	152.6	27.2	35.4	0.1	69.5	81.5	124.4	28.1	0.2	30.4
% < Des	0.0	33.3	36.7	76.7	20.0	93.3	86.7	0.0	66.7	100.0	96.7	40.0
% P	93.3	66.7	56.7	23.3	66.7	6.7	13.3	0.0	33.3	0.0	3.3	0.0
% > Ex P	6.7	0.0	6.7	0.0	13.3	0.0	0.0	0.0	0.0	0.0	0.0	60.0

Taluka : Pusad (Chikhali, Chondhi, Jamnaik, Pusad (Naik Bng.), Kakaddati, Adarsh Ng., Singad, Warud)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	7.1	222.0	128.0	14.3	6.7	0.1	8.0	8.0	46.0	17.0	0.1	11.8
Max	8.9	660.7	484.0	129.6	97.9	0.2	251.8	292.7	224.0	85.0	0.8	89.0
Average	7.6	450.5	317.4	44.5	49.7	0.1	76.1	79.3	138.0	40.7	0.3	37.8
Stdev	0.5	170.3	109.4	30.9	31.7	0.0	64.4	75.6	58.4	20.5	0.2	21.7
% < Des	0.0	50.0	41.7	91.7	41.7	100.0	91.7	0.0	100.0	100.0	100.0	75.0
% P	91.7	50.0	58.3	8.3	58.3	0.0	8.3	0.0	0.0	0.0	0.0	0.0
% > Ex P	8.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0

Taluka : Ralegaon (Ashtona, Dapori, Kahiree, Khadaki, Khairey, Kinhi Jawade, Ralegaon, Ramthirth, Wadhona Bz., Wanoja, Zadgaon)												
Min	7.1	316.8	124.0	4.4	1.9	0.1	40.0	40.0	28.0	12.0	0.3	3.0
Max	8.2	1182.0	740.0	166.4	131.2	0.2	440.0	536.8	382.0	60.0	1.4	116.0
Average	7.6	671.2	353.2	71.4	42.1	0.1	140.1	152.5	169.2	30.6	0.8	50.7
Stdev	0.3	239.7	140.3	35.4	29.5	0.0	118.6	142.1	102.1	12.5	0.3	30.0
% < Des	0.0	19.4	41.9	64.5	41.9	100.0	74.2	0.0	77.4	100.0	64.5	48.4
% P	100.0	80.6	51.6	35.5	51.6	0.0	25.8	0.0	22.6	0.0	35.5	0.0
% > Ex P	0.0	0.0	6.5	0.0	6.5	0.0	0.0	0.0	0.0	0.0	0.0	51.6

Taluka : Umarkhed (Akoli, Bitragaon, Bramhangaon, Dhanki, Ekamba, Kharbi, Marsal, Pophali, Sawaleshwar, Thakani, Umarkhed, Vidul)												
Min	6.9	177.6	186.0	0.8	9.6	0.1	12.0	12.0	77.0	3.0	0.1	7.0
Max	8.6	1261.0	624.0	193.6	139.0	0.3	193.3	211.9	348.0	102.0	1.2	105.0
Average	7.7	618.0	347.9	53.2	51.9	0.1	74.6	80.1	169.2	48.1	0.6	46.8
Stdev	0.4	288.2	123.4	43.7	30.5	0.1	52.7	61.5	66.2	26.9	0.3	33.9
% < Des	0.0	39.1	39.1	82.6	21.7	91.3	100.0	0.0	91.3	100.0	91.3	60.9
% P	95.7	60.9	56.5	17.4	73.9	8.7	0.0	0.0	8.7	0.0	8.7	0.0
% > Ex P	4.3	0.0	4.3	0.0	4.3	0.0	0.0	0.0	0.0	0.0	0.0	39.1

Taluka : Wani (Asaha Lodge, Cement Godown, Chilai, Ganeshpur, Naigaon, Pimpri k., Punwat, Rasa, Shindola, Shirpur, Sonamata Mandir, Ukani, Wani)												
Min	6.9	290.0	168.0	14.0	17.3	0.1	40.0	40.0	36.0	18.0	0.1	0.7
Max	9.3	1664.0	728.0	140.8	131.5	0.3	476.0	580.7	352.7	400.0	3.1	150.0
Average	7.7	888.8	376.7	49.3	61.5	0.1	172.0	197.3	175.7	103.2	1.2	41.7
Stdev	0.5	318.5	135.3	31.0	27.0	0.0	113.2	137.2	79.8	76.9	0.7	34.4
% < Des	0.0	3.4	27.6	86.2	10.3	96.6	65.5	0.0	86.2	93.1	51.7	62.1
% P	93.1	96.6	69.0	13.8	82.8	3.4	34.5	0.0	13.8	6.9	17.2	0.0
% > Ex P	6.9	0.0	3.4	0.0	6.9	0.0	0.0	0.0	0.0	0.0	31.0	37.9

Taluka : Yavatmal (Akola Bazar, Bechkheda, Borisingh, Chinchghat, Daheli, Khorad, Lohara, Sawargad, Talegaon, Wadgaon, Yavatmal)												
	'Ph	**TDS**	**TH**	**Ca^{2+}**	**Mg^{2+}**	**Fe**	**TA**	**HCO3**	**Cl^{-}**	**SO_4^{-2}**	**F^{-}**	**NO_3^{-}**
Min	6.8	250.0	168.0	12.8	13.4	0.1	36.0	12.0	23.0	11.0	0.1	5.0
Max	8.1	1250.0	900.0	186.8	111.1	0.2	248.0	302.6	374.0	75.0	1.2	77.0
Average	7.5	559.1	353.1	58.4	50.0	0.1	105.7	110.8	159.9	32.0	0.6	39.3
Stdev	0.3	202.3	142.6	34.9	26.6	0.0	66.1	78.5	79.9	16.7	0.3	20.5
% < Des	0.0	48.5	36.4	75.8	21.2	100.0	87.9	0.0	84.8	100.0	87.9	54.5
% P	100.0	51.5	60.6	24.2	72.7	0.0	12.1	0.0	15.2	0.0	12.1	0.0
% > Ex P	0.0	0.0	3.0	0.0	6.1	0.0	0.0	0.0	0.0	0.0	0.0	45.5

Taluka : Zari Jamni (Ardhavan, Dabha, Isapur, Katali Borgaon, Matharjun, Mudhati, Mukutban, Shibala, Sindhiwadhana, Zari)												
Min	6.4	237.0	100.0	6.0	6.7	0.1	36.0	36.0	24.0	3.5	0.1	5.0
Max	8.4	918.0	836.0	248.0	75.8	0.2	234.0	226.9	514.0	61.0	2.8	170.0
Average	7.4	456.8	277.9	47.7	38.4	0.1	111.9	113.9	115.6	24.3	1.0	38.3
Stdev	0.5	197.4	176.8	59.5	16.7	0.0	59.9	58.9	124.6	16.4	0.9	41.1
% < Des	7.1	71.4	71.4	92.9	28.6	100.0	85.7	0.0	92.9	100.0	71.4	78.6
% P	92.9	28.6	21.4	0.0	71.4	0.0	14.3	0.0	7.1	0.0	7.1	0.0
% > Ex P	0.0	0.0	7.1	7.1	0.0	0.0	0.0	0.0	0.0	0.0	21.4	21.4

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Annexure X

District wise Water Quality Indices of Maharashtra State (2007-2011)

Table x.1 : Water Quality Index of Groundwater of Ahmednagar District

Taluka : Ahmednagar			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe)			
Chinchandi Patil	G/AH-059	**86**	**GW**
Dehre	G/AH-033	**96**	**GW**
Jakhangaon	G/AH-037	**124**	**PW**
Manjur	G/AH-026	**411**	**UNSUT**
Bhitkewadi	G/AH-057	**102**	**PW**
2008 (Without Fe)			
Chinchandi Patil	G/AH-059	**85**	**GW**
Dehre	G/AH-033	**88**	**GW**
Jakhangaon	G/AH-037	**121**	**PW**
Manjur	G/AH-026	**360**	**UNSUT**
Bhitkewadi	G/AH-057	**55**	**GW**
2009 (Without Fe)			
Chinchandi Patil	G/AH-059	**80**	**GW**
Dehre	G/AH-033	**84**	**GW**
Jakhangaon	G/AH-037	**407**	**UNSUT**
Manjur	G/AH-026	**428**	**UNSUT**
Bhitkewadi	G/AH-057	**61**	**GW**

Taluka : Ahmednagar			
Villages	**Well No.**	**WQI**	**Category**
2010 (With Fe)			
Jakhangaon	ANOBW001	**85**	**GW**
Nepti	ANOBW002	**179**	**PW**
Bolhegaon	ANOBW003	**90**	**GW**
Kamargaon	ANOBW009	**105**	**PW**
Wakodi	ANOBW005	**59**	**GW**
Jeur	ANOBW004	**111**	**PW**
Mehekari	ANOBW018	**121**	**PW**
Hatwalan	ANWQN001	**82**	**GW**
Pargaonmaulla	ANOBW008	**96**	**GW**
Ruichhattishi.	ANOBW013	**109**	**PW**
Takalikazi.	ANOBW015	**95**	**GW**
Burudgaon	ANOBW007	**44**	**EXLT**
*Wakodi	ANOBW005	**240**	**VPW**
*Pargaonmaulla	ANOBW008	**127**	**PW**
*Shiradhon	ANOBW011	**156**	**PW**
*Ruichhattishi.	ANOBW013	**105**	**PW**
*Hatwalan	ANWQN001	**102**	**PW**
*Arangaon	ANOBW006	**97**	**GW**
*Burudgaon	ANOBW007	**297**	**VPW**
*Walaki	ANOBW010	**128**	**PW**
*Takalikazi.	ANOBW015	**91**	**GW**
*Jeur	ANOBW004	**161**	**PW**
*Jakhangaon	ANOBW001	**30**	**EXLT**
*Nepti	ANOBW002	**133**	**PW**

Taluka : Ahmednagar			
Villages	**Well No.**	**WQI**	**Category**
2011 (With Fe)			
Hatwalan	ANWQN001	**72**	**GW**
Jakhangaon	ANOBW001	**109**	**PW**
Nepti	ANOBW002	**146**	**PW**
Bolhegaon	ANOBW003	**33**	**EXLT**
Wakodi	ANOBW005	**95**	**GW**
Arangaon	ANOBW006	**99**	**GW**
Burudgaon	ANOBW007	**390**	**UNSUT**
Pargaonmaulla	ANOBW008	**136**	**PW**
Walaki	ANOBW010	**300**	**UNSUT**
Shiradhon	ANOBW011	**97**	**GW**
Ruichhattishi.	ANOBW013	**81**	**GW**
Takalikazi.	ANOBW015	**62**	**GW**
Hatwalan.	ANOBW023	**84**	**GW**
Ambilwadi	ANPZ002	**109**	**PW**
Jakhangaon	ANPZ016	**112**	**PW**
Mandve	ANPZ025	**94**	**GW**
Jeur	ANOBW004	**135**	**PW**
Nandgaon	ANPZ028	**88**	**GW**

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.1(Contd..) Ahmednagar District

Taluka : Akole			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe)			
Rajur	G/AH-006	**156**	**PW**
Tambhol	G/AH-063	**113**	**PW**
2008 (Without Fe)			
Rajur	G/AH-006	**271**	**VPW**
Tambhol	G/AH-063	**64**	**GW**
Vadegaon Madhe	G/AH-064	**104**	**PW**
2009 (Without Fe)			
Rajur	G/AH-006	**257**	**VPW**
Tambhol	G/AH-063	**60**	**GW**
Vadegaon Madhe	G/AH-064	**113**	**PW**
Data Not Available for 2010 (With Fe)			
2011 (With Fe)			
Tahakali	ANOBW102	**38**	**EXLT**
Waki	ANOBW105	**45**	**EXLT**
Takali	ANOBW107	**80**	**GW**
Kalas kh.	ANOBW108	**73**	**GW**
Maveshi.	ANOBW109	**29**	**EXLT**
Unch khadak.	ANOBW111	**50**	**EXLT**
Kotul	ANPZ022	**73**	**GW**
Parakadpur	ANWQN010	**128**	**PW**

Taluka : Jamkhed			
Villages	**Well No.**	**WQI**	**Category**
2007(Without Fe)			
Jamkhed	G/AH-053	**64**	**GW**
2008 (Without Fe)			
Jamkhed	G/AH-053	**104**	**PW**
2009 (Without Fe)			
Jamkhed	G/AH-053	**100**	**PW**
2010(With Fe)			
Arangaon	ANOBW028	**70**	**GW**
Nanaj.	ANOBW039	**175**	**PW**
Arangaon	ANOBW028	**74**	**GW**
2011(With Fe)			
Arangaon	ANOBW028	**103**	**PW**
Nanaj.	ANOBW039	**70**	**GW**
Jamkhed	ANPZ017	**84**	**GW**
Arangaon	ANOBW028	**62**	**GW**
Nanaj.	ANOBW039	**62**	**GW**

Taluka : Karjat			
Villages	**Well No.**	**WQI**	**Category**
2007(Without Fe)			
Kolwadi	G/AH-062	**89**	**GW**
Pategaon	G/AH-060	**293**	**VPW**
Rassin	K/AH-009	**120**	**PW**
2008(Without Fe)			
Kolwadi	G/AH-062	**213**	**VPW**
Pategaon	G/AH-060	**90**	**GW**
Rassin	K/AH-009	**106**	**PW**
2009(Without Fe)			
Kolwadi	G/AH-062	**371**	**UNSUT**
Pategaon	G/AH-060	**98**	**GW**
Rassin	K/AH-009	**119**	**PW**
2010(With Fe)			
Babulgaon khalasa	ANOBW025	**132**	**PW**
Nimgaondaku.	ANOBW032	**172**	**PW**
Jalalpur.	ANOBW065	**76**	**GW**
Chichondi kaldat.	ANOBW030	**108**	**PW**
*Mahi jalgaon	ANPZ024	**110**	**PW**
2011(With Fe)			
Babulgaon khalasa	ANOBW025	**90**	**GW**
Chichondi kaldat.	ANOBW030	**62**	**GW**
Nimgaondaku.	ANOBW032	**71**	**GW**
Jalalpur.	ANOBW065	**113**	**PW**
Rashin.	ANOBW071	**71**	**GW**
Baradgaon sudrik	ANPZ004	**78**	**GW**
Dombalwadi	ANPZ010	**51**	**GW**
Mahi jalgaon	ANPZ024	**101**	**PW**
Rashin	ANPZ037	**75**	**GW**

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.1(Contd..) Ahmednagar District

Taluka : Kopargaon			
Villages	**Well No.**	**WQI**	**Category**
2007(Without Fe)			
Chas	K/AH-017	**142**	**PW**
Kolpewadi	G/AH-055	**91**	**GW**
2008 (Without Fe)			
Chas	K/AH-017	**65**	**GW**
Kolpewadi	G/AH-055	**56**	**GW**
2009 (Without Fe)			
Chas	K/AH-017	**70**	**GW**
Kolpewadi	G/AH-055	**57**	**GW**
2010 (With Fe)			
Dhamori.	ANOBW078	**109**	**PW**
Derde korhale.	ANOBW083	**118**	**PW**
Takali	ANOBW085	**265**	**VPW**
Apegaon.	ANOBW087	**49**	**EXLT**
Talegaon male.	ANOBW091	**102**	**PW**
Shinganapur	ANWQN009	**105**	**PW**
*Puntamba	ANOBW158	**104**	**PW**
*Apegaon.	ANOBW087	**148**	**PW**
*Talegaon mle.	ANOBW091	**85**	**GW**

Taluka : Kopargaon			
Villages	**Well No.**	**WQI**	**Category**
2011(With Fe)			
Dhamori.	ANOBW078	**119**	**PW**
Shahajapur.	ANOBW079	**175**	**PW**
Ranjangaon deshmukh	ANOBW081	**154**	**PW**
Derde korhale.	ANOBW083	**106**	**PW**
Takali	ANOBW085	**180**	**PW**
Kopargaon	ANOBW086	**144**	**PW**
Apegaon	ANOBW087	**357**	**UNSUT**
Talegaon male.	ANOBW091	**85**	**GW**
Dahigaon bolka	ANPZ008	**53**	**GW**
Mahegaon deshmukh	ANPZ023	**89**	**GW**
Pohegaon	ANPZ032	**81**	**GW**
Kolpewadi	ANWQN007	**84**	**GW**
Shinganapur	ANWQN009	**277**	**VPW**
Puntamba	ANOBW158	**188**	**PW**
Rahata	ANPZ033	**61**	**GW**
Derde korhale.	ANOBW083	**64**	**GW**
Takali	ANOBW085	**43**	**EXLT**
Shinganapur	ANWQN009	**38**	**EXLT**

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Taluka : Pathardi			
Villages	**Well No.**	**WQI**	**Category**
2010(With Fe)			
Kasar Pimpalgaon	ANWQN004	**113**	**PW**

Taluka : Pathardi			
Villages	**Well No.**	**WQI**	**Category**
2011(With Fe)			
Kasar Pimpalgaon	ANWQN004	**74**	**GW**

Data is Not Available for 2007 to 2009 (Without Fe)

Table x.1(Contd..) Ahmednagar District

Taluka : Nevasa				Taluka : Nevasa				Taluka : Nevasa			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007(Without Fe)				**2010(With Fe)**				**2011(With Fe)**			
Khadka	G/AH-050	**67**	**GW**	Belpandhari	ANOBW160	**178**	**PW**	Belpandhari	ANOBW160	**122**	**PW**
Bambori	G/AH-047	**216**	**VPW**	Wadala bahiroba	ANOBW172	**191**	**PW**	Wadala bahiroba	ANOBW172	**130**	**PW**
Shirasgaon	G/AH-051	**111**	**PW**	Watapur	ANOBW174	**330**	**UNSUT**	Watapur	ANOBW174	**334**	**UNSUT**
Sonai	G/AH-048	**80**	**GW**	Babulwedhe	ANOBW176	**129**	**PW**	Babulwedhe	ANOBW176	**53**	**GW**
Vadala Bhairoba	G/AH-002	**235**	**VPW**	Newasa kh	ANOBW177	**83**	**GW**	Newasa kh	ANOBW177	**89**	**GW**
2008(Without Fe)				Kukana	ANOBW178	**337**	**UNSUT**	Kukana	ANOBW178	**222**	**VPW**
Khadka	G/AH-050	**68**	**GW**	Galnimb	ANOBW201	**282**	**VPW**	Galnimb	ANOBW201	**122**	**PW**
Bambori	G/AH-047	**81**	**GW**	Suregaon dahigaon	ANOBW202	**211**	**VPW**	Suregaon dahigaon	ANOBW202	**115**	**PW**
Shirasgaon	G/AH-051	**60**	**GW**	*Belpandhari	ANOBW160	**88**	**GW**	Belpimpalgaon	ANPZ005	**120**	**PW**
Sonai	G/AH-048	**67**	**GW**	*Wadala bahiroba	ANOBW172	**118**	**PW**	Gidegaon	ANPZ014	**74**	**GW**
Vadala Bhairoba	G/AH-002	**209**	**VPW**	*Watapur	ANOBW174	**99**	**GW**	Karegaon	ANPZ018	**87**	**GW**
2009(Without Fe)				*Newasa kh	ANOBW177	**76**	**GW**	Telkudgaon	ANPZ043	**65**	**GW**
Khadka	G/AH-050	**75**	**GW**	*Kukana	ANOBW178	**230**	**VPW**	Bhende	ANWQN005	**95**	**GW**
Bambori	G/AH-047	**73**	**GW**	*Galnimb	ANOBW201	**54**	**GW**	Belpandhari	ANOBW160	**111**	**PW**
Shirasgaon	G/AH-051	**60**	**GW**	*Suregaon dahigaon	ANOBW202	**80**	**GW**	Newasa kh	ANOBW177	**86**	**GW**
Sonai	G/AH-048	**110**	**PW**					Galnimb	ANOBW201	**72**	**GW**
Vadala Bhairoba	G/AH-002	**265**	**VPW**					Suregaon dahigaon	ANOBW202	**78**	**GW**

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.1(Contd..) Ahmednagar District

Taluka : Parner			
Villages	**Well No.**	**WQI**	**Category**
2007(Without Fe)			
Supe	G/AH-040	**328**	**UNSUT**
2008(Without Fe)			
Supe	G/AH-040	**84**	**GW**
2009(Without Fe)			
Supe	G/AH-040	**116**	**PW**
2010(With Fe)			
Deswade	ANOBW141	**79**	**GW**
Alkuti	ANOBW046	**72**	**GW**
Chambut.	ANOBW047	**115**	**PW**
Vadzire.	ANOBW048	**81**	**GW**
Devibhoire	ANWQN002	**117**	**PW**
*Alkuti	ANOBW046	**65**	**GW**
*Chambut.	ANOBW047	**110**	**PW**
*Vadzire.	ANOBW048	**69**	**GW**
*Deswade	ANOBW141	**32**	**EXLT**
*Tas	ANOBW144	**48**	**EXLT**
2011 (With Fe)			
Deswade	ANOBW141	**92**	**GW**
Tas	ANOBW144	**66**	**GW**
Dhavalpuri	ANPZ009	**104**	**PW**
Mandve kh	ANPZ026	**68**	**GW**
Alkuti	ANOBW046	**120**	**PW**
Chambut.	ANOBW047	**112**	**PW**
Vadzire.	ANOBW048	**114**	**PW**
Nijhoj	ANPZ029	**113**	**PW**
Wadegavan	ANPZ045	**71**	**GW**
Devibhoire	ANWQN002	**84**	**GW**

Taluka : Rahata			
Villages	**Well No.**	**WQI**	**Category**
2007(Without Fe)			
Rahata	G/AH-025	**210**	**VPW**
2008(Without Fe)			
Rahata	G/AH-025	**253**	**VPW**
2009(Without Fe)			
Rahata	G/AH-025	**194**	**PW**
Data for 2010 and 2011 (With Fe) Not Available			

Taluka : Rahuri			
2007(Without Fe)			
Devlali	G/AH-045	**46**	**EXLT**
Malharwadi	G/AH-046	**38**	**EXLT**
Rahuri	G/AH-010	**62**	**GW**
2008(Without Fe)			
Devlali	G/AH-045	**212**	**VPW**
Malharwadi	G/AH-046	**147**	**PW**
Rahuri	G/AH-010	**182**	**PW**
2009(Without Fe)			
Devlali	G/AH-045	**200**	**VPW**
Malharwadi	G/AH-046	**171**	**PW**
Rahuri	G/AH-010	**137**	**PW**
2010(With Fe)			
Warshinde	ANOBW136	**285**	**VPW**
Kanghar bk	ANOBW150	**62**	**GW**
Deolali	ANOBW151	**114**	**PW**
Tambhere	ANOBW164	**63**	**GW**
Warvandi	ANOBW166	**119**	**PW**
Wambori	ANOBW169	**289**	**VPW**
Umbare	ANOBW170	**284**	**VPW**
Rahuri bk	ANOBW148	**182**	**PW**
Digras	ANOBW168	**95**	**GW**
*Warshinde	ANOBW136	**96**	**GW**
*Kanghar	ANOBW150	**77**	**GW**

Taluka : Rahuri			
Villages	**Well No.**	**WQI**	**Category**
2010 (Contd..)(With Fe)			
*Digras	ANOBW168	**105**	**PW**
*Wambori	ANOBW169	**107**	**PW**
*Umbare	ANOBW170	**224**	**VPW**
*Deolali	ANOBW151	**48**	**EXLT**
2011(With Fe)			
Warshinde	ANOBW136	**51**	**GW**
Rahuri bk	ANOBW148	**324**	**UNSUT**
Kanghar bk	ANOBW150	**64**	**GW**
Deolali	ANOBW151	**99**	**GW**
Kolhar kh	ANOBW152	**288**	**VPW**
Tambhere	ANOBW164	**82**	**GW**
Warvandi	ANOBW166	**109**	**PW**
Digras	ANOBW168	**59**	**GW**
Wambori	ANOBW169	**243**	**VPW**
Umbare	ANOBW170	**102**	**PW**
Kendal kh	ANOBW171	**36**	**EXLT**
Guha	ANPZ015	**63**	**GW**
Songaon/ anapwadi	ANPZ041	**164**	**PW**
Rahuri Kh.	ANWQN006	**36**	**EXLT**
Wambori	ANOBW169	**251**	**VPW**
Warshinde	ANOBW136	**39**	**EXLT**
Rahuri bk	ANOBW148	**149**	**PW**
Kanghar bk	ANOBW150	**48**	**EXLT**
Deolali	ANOBW151	**136**	**PW**
Tambhere	ANOBW164	**46**	**EXLT**
Warvandi	ANOBW166	**43**	**EXLT**
Kendal kh	ANOBW171	**52**	**GW**
Rahuri Kh.	ANWQN006	**221**	**VPW**

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.1(Contd..) Ahmednagar District

Taluka : Sangamner			
Villages	**Well No.**	**WQI**	**Category**
2007(Without Fe)			
Ambikhalsa	G/AH-016	**78**	**GW**
Chandanapuri	G/AH-056	**63**	**GW**
Sangamner	G/AH-013	**38**	**EXLT**
2008(Without Fe)			
Ambikhalsa	G/AH-016	**74**	**GW**
Chandanapuri	G/AH-056	**86**	**GW**
Sangamner	G/AH-013	**101**	**PW**
2009(Without Fe)			
Ambikhalsa	G/AH-016	**66**	**GW**
Chandanapuri	G/AH-056	**70**	**GW**
Sangamner	G/AH-013	**75**	**GW**
2010 (With Fe)			
Nimgaon paga	ANOBW118	**85**	**GW**
Maldad.	ANOBW074	**70**	**GW**
Gunjalwadi.	ANOBW075	**220**	**VPW**
Nimgaon paga	ANOBW118	**85**	**GW**

Taluka : Sangamner			
Villages	**Well No.**	**WQI**	**Category**
2010Contd..(With Fe)			
Ghulewadi.	ANOBW076	**215**	**VPW**
Chikhali.	ANOBW104	**217**	**VPW**
Sarola pathar.	ANOBW120	**86**	**GW**
Chandanapuri.	ANOBW123	**165**	**PW**
Nimgaonjali.	ANOBW129	**88**	**GW**
Hangewadi	ANOBW134	**215**	**VPW**
Kasare	ANOBW156	**68**	**GW**
*Maldad	ANOBW074	**73**	**GW**
*Gunjalwadi.	ANOBW075	**227**	**VPW**
*Ghulewadi.	ANOBW076	**92**	**GW**
*Nimgaonjali.	ANOBW129	**161**	**PW**
*Kasare	ANOBW156	**72**	**GW**
*Chikhali.	ANOBW104	**205**	**VPW**
*Nimgaon paga	ANOBW118	**89**	**GW**
*Hangewadi	ANOBW134	**268**	**VPW**

Taluka : Sangamner			
Villages	**Well No.**	**WQI**	**Category**
2011(With Fe)			
Maldad.	ANOBW074	**50**	**EXLT**
Gunjalwadi.	ANOBW075	**325**	**UNSUT**
Ghulewadi.	ANOBW076	**97**	**GW**
Chikhali.	ANOBW104	**196**	**PW**
Nimgaon paga	ANOBW118	**86**	**GW**
Sarola pathar.	ANOBW120	**76**	**GW**
Chandanapuri.	ANOBW123	**148**	**PW**
Nimgaonjali.	ANOBW129	**155**	**PW**
Hangewadi	ANOBW134	**389**	**UNSUT**
Kasare	ANOBW156	**104**	**PW**
Bota	ANPZ006	**55**	**GW**
Ghulewadi	ANPZ013	**53**	**GW**
Karhe	ANPZ019	**72**	**GW**
Karjule pathar	ANPZ020	**45**	**EXLT**
Raitewadi	ANPZ034	**56**	**GW**
Sangamner	ANPZ038	**64**	**GW**

Taluka : Shevgaon			
2007(Without Fe)			
Dahigaon	G/AH-041	**67**	**GW**
Ghotan	G/AH-003	**453**	**UNSUT**
Jeur	G/AH-036	**124**	**PW**
Kokona	G/AH-018	**206**	**VPW**
Rakshi	G/AH-042	**185**	**PW**
2008(Without Fe)			
Dahigaon	G/AH-041	**200**	**VPW**
Ghotan	G/AH-003	**182**	**PW**
Jeur	G/AH-036	**177**	**PW**
Kokona	G/AH-018	**80**	**GW**
Rakshi	G/AH-042	**55**	**GW**

Taluka : Shevgaon			
2009(Without Fe)			
Dahigaon	G/AH-041	**304**	**UNSUT**
Jeur	G/AH-036	**141**	**PW**
Rakshi	G/AH-042	**54**	**GW**
2010(With Fe)			
Antre	ANOBW180	**115**	**PW**
Hingangaon ne	ANOBW183	**124**	**PW**
Bodhegaon.	ANOBW098	**55**	**GW**
Karjat kh	ANOBW191	**77**	**GW**
Khanapur	ANOBW193	**82**	**GW**
Antrawali bk	ANOBW195	**63**	**GW**

Taluka : Shevgaon			
2011(With Fe)			
*Antre	ANOBW180	**105**	**PW**
*Hingangaon ne	ANOBW183	**238**	**VPW**
*Khanapur	ANOBW193	**117**	**PW**
*Antrawali bk	ANOBW195	**65**	**GW**
Bodhegaon.	ANOBW098	**132**	**PW**
Antre	ANOBW180	**74**	**GW**
Hingangaon ne	ANOBW183	**113**	**PW**
Karjat kh	ANOBW191	**199**	**PW**
Khanapur	ANOBW193	**38**	**EXLT**
Antrawali bk	ANOBW195	**39**	**EXLT**

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.1(Contd..) Ahmednagar District

Taluka : Shrigonda			
Villages	**Well No.**	**WQI**	**Category**
2007(Without Fe)			
Babhuleshwar	G/AH-039	**94**	**GW**
Ban pimpri	K/AH-005	**178**	**PW**
Chikhale	K/AH-023	**367**	**UNSUT**
Kokangaon	G/AH-001	**81**	**GW**
Shrigonda	K/AH-008	**108**	**PW**
Takle-Kazi	K/AH-024	**100**	**GW**
Walvad	K/AH-022	**100**	**GW**
2010(With Fe)			
Banpimpri.	ANOBW022	**104**	**PW**
Koregavhan.	ANOBW051	**198**	**PW**
Deodaithan.	ANOBW054	**137**	**PW**
Bori.	ANOBW057	**70**	**GW**
Chimbale.	ANOBW059	**78**	**GW**
Shedgaon.	ANOBW064	**145**	**PW**
*Banpimpri.	ANOBW022	**105**	**PW**
*Koregavhan.	ANOBW051	**150**	**PW**
*Deodaithan.	ANOBW054	**90**	**GW**
*Bori.	ANOBW057	**127**	**PW**
*Chimbale.	ANOBW059	**141**	**PW**
*Shedgaon.	ANOBW064	**64**	**GW**

Taluka : Shrigonda			
Villages	**Well No.**	**WQI**	**Category**
2008(Without Fe)			
Babhuleshwar	G/AH-039	**251**	**VPW**
Ban pimpri	K/AH-005	**190**	**PW**
Chikhale	K/AH-023	**260**	**VPW**
Kokangaon	G/AH-001	**80**	**GW**
Shrigonda	K/AH-008	**104**	**PW**
Takle-Kazi	K/AH-024	**152**	**PW**
2011(With Fe)			
Koregavhan.	ANOBW051	**160**	**PW**
Deodaithan.	ANOBW054	**54**	**GW**
Ghargaon	ANPZ011	**59**	**GW**
Rajapur	ANPZ035	**86**	**GW**
Banpimpri.	ANOBW022	**134**	**PW**

Taluka : Shrigonda			
Villages	**Well No.**	**WQI**	**Category**
2009(Without Fe)			
Babhuleshwar	G/AH-039	**209**	**VPW**
Ban pimpri	K/AH-005	**149**	**PW**
Chikhale	K/AH-023	**270**	**VPW**
Kokangaon	G/AH-001	**85**	**GW**
Shrigonda	K/AH-008	**110**	**PW**
Takle-Kazi	K/AH-024	**69**	**GW**
Walvad	K/AH-022	**109**	**PW**

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.1(Contd..) Ahmednagar District

Taluka : Srirampur				Taluka : Srirampur				Taluka : Srirampur			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007(Without Fe)				**2010 Contd..(With Fe)**				**2011(With Fe)**			
Bote	G/AH-004	**83**	**GW**	Khokar.	ANOBW096	**84**	**GW**	Rampur.	ANOBW094	**46**	**EXLT**
Srirampur	G/AH-015	**25**	**EXLT**	Takalibhan.	ANOBW097	**96**	**GW**	Wadala mahadeo.	ANOBW095	**64**	**GW**
2008(Without Fe)				Khirdi	ANOBW163	**135**	**PW**	Khokar.	ANOBW096	**116**	**PW**
Bote	G/AH-004	**68**	**GW**	*Chitali.	ANOBW092	**37**	**EXLT**	Takalibhan.	ANOBW097	**84**	**GW**
Srirampur	G/AH-015	**53**	**GW**	*Undirgaon.	ANOBW093	**78**	**GW**	Eklahare	ANOBW155	**98**	**GW**
2009(Without Fe)				*Rampur.	ANOBW094	**201**	**VPW**	Shrirampur	ANOBW161	**64**	**GW**
Bote	G/AH-004	**75**	**GW**	*Wadala mahadeo.	ANOBW095	**31**	**EXLT**	Belapur bk	ANOBW162	**165**	**PW**
Srirampur	G/AH-015	**48**	**EXLT**	*Khokar.	ANOBW096	**126**	**PW**	Khirdi	ANOBW163	**109**	**PW**
2010(With Fe)				*Takalibhan.	ANOBW097	**75**	**GW**	Belapur kh	ANOBW165	**84**	**GW**
Loni kh	ANOBW131	**68**	**GW**	*Rajankhol	ANOBW154	**37**	**EXLT**	Chitali.	ANOBW092	**174**	**PW**
Rajankhol	ANOBW154	**73**	**GW**	*Eklahare	ANOBW155	**40**	**EXLT**	Loni kh	ANOBW131	**137**	**PW**
Eklahare	ANOBW155	**76**	**GW**	*Shrirampur	ANOBW161	**87**	**GW**	Kolhar bk	ANOBW132	**134**	**PW**
Shrirampur	ANOBW161	**61**	**GW**	*Belapur bk	ANOBW162	**82**	**GW**	Babhaleshwar bk	ANOBW153	**95**	**GW**
Belapur bk	ANOBW162	**67**	**GW**	*Khirdi	ANOBW163	**34**	**EXLT**	Rajankhol	ANOBW154	**75**	**GW**
Belapur kh	ANOBW165	**52**	**GW**	*Belapur kh	ANOBW165	**82**	**GW**	Bableshwar	ANPZ003	**224**	**VPW**
Undirgaon.	ANOBW093	**99**	**GW**	*Loni kh	ANOBW131	**80**	**GW**	Undirgaon.	ANOBW093	**37**	**EXLT**
Rampur.	ANOBW094	**336**	**UNSUT**	*Babhaleshwar	ANOBW153	**85**	**GW**	Eklahare	ANOBW155	**46**	**EXLT**
								Belapur kh	ANOBW165	**112**	**PW**

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.2 : Water Quality Index of Groundwater of Akola District

Taluka : Akola			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe)			
Akola	T/AK-023	**216**	**VPW**
Andura	T/AK-042	**174**	**PW**
Borgaon Manju	T/AK-013	**55**	**GW**
Kapsi	T/AK-011	**88**	**GW**
Kurankhed	T/AK-012	**193**	**PW**
Malkapur	T/AK-022	**126**	**PW**
2007 (With Fe)			
Agar	AKOBW001	**483**	**UNSUT**
Babulgaon	AKOBW004	**101**	**PW**
Badlapur	AKOBW005	**119**	**PW**
Chikhalgaon	4AKOBW006	**145**	**PW**
Tamaswadi	AWQN003	**172**	**PW**
Kanshivani	AKOBW009	**52**	**GW**
Kapileshwar	AKWQN006	**146**	**PW**
Katyar	AKWQN001	**218**	**VPW**
Mhispur	AKOBW012	**76**	**GW**
Palso Bk	AKWQN013	**108**	**PW**
Shivar	AKWQN016	**96**	**GW**
Shivni	AKWQN015	**92**	**GW**
Ugwa	AKOBW014	**79**	**GW**
Wadad	AKWQN007	**168**	**PW**

Taluka : Akola			
Villages	**Well No.**	**WQI**	**Category**
2008 (Without Fe)			
Akola	T/AK-023	**246**	**VPW**
Borgaon Manju	T/AK-013	**85**	**GW**
Kurankhed	T/AK-012	**197**	**PW**
Malkapur	T/AK-022	**143**	**PW**
Kudwa	T/AK-042	**197**	**PW**
2008 (With Fe)			
Agar	AKOBW001	**381**	**UNSUT**
*Akola	AKWQN004	**192**	**PW**
*Apatapa	AKOBW003	**113**	**PW**
*Babulgaon	AKOBW004	**79**	**GW**
*Badlapur	AKOBW005	**216**	**VPW**
*Chikhalgaon	4AKOBW006	**99**	**GW**
*Dhamna	AKWQN012	**138**	**PW**
*Jawala Bk	AKOBW008	**59**	**GW**
Kati	AKWQN09	**275**	**VPW**
*Katyar	AKWQN001	**162**	**PW**
*Mhaisang	AKOBW011	**116**	**PW**
*Palso Bk	AKWQN013	**333**	**UNSUT**
Shivni	AKWQN015	**78**	**GW**
*Shivar	AKWQN016	**116**	**PW**
Ugwa	AKOBW014	**126**	**PW**
*Wadad	AKWQN007	**60**	**GW**
*Wanirambhapur	AKPZ003	**47**	**EXLT**

Taluka : Akola			
Villages	**Well No.**	**WQI**	**Category**
2009 (Without Fe)			
Andural1	T/AK-042	**126**	**PW**
Borgaon Manju	T/AK-013	**116**	**PW**
Kurankhed	T/AK-012	**124**	**PW**
2009 (With Fe)			
*Agar	AKOBW001	**133**	**PW**
*Akola	AKWQN004	**189**	**PW**
*Apatapa	AKOBW003	**216**	**VPW**
*Babulgaon	AKOBW004	**85**	**GW**
*Badlapur	AKOBW005	**119**	**PW**
*Dhamna	AKWQN012	**117**	**PW**
*Tamaswadi	AWQN003	**171**	**PW**
*Kanshivani	AKOBW009	**76**	**GW**
*Kapileshwar	AKWQN006	**76**	**GW**
*Kati	AKWQN09	**81**	**GW**
*Katyar	AKWQN001	**243**	**VPW**
*Mhaisang	AKOBW011	**144**	**PW**
*Palso Bk	AKWQN013	**83**	**GW**
*Rohana	AKWQN011	**82**	**GW**
*Shivar	AKWQN016	**114**	**PW**
*Shivni	AKWQN015	**103**	**PW**
*Ugwa	AKOBW014	**241**	**VPW**
*Wanirambhapur	AKPZ003	**45**	**EXLT**

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.2 (Contd..) Akola District

Taluka : Akola			
20010 (With Fe)			
Villages	**Well No.**	**WQI**	**Category**
*Akola	AKWQN004	**128**	**PW**
*Ugwa	AKOBW014	**92**	**GW**
*Agar	AKOBW001	**109**	**PW**
*Hingana tamaswadi	AWQN003	**109**	**PW**
*Atapata	AKOBW003	**174**	**PW**
*Jawala Bk.	AKOBW008	**55**	**GW**
*Wanirambhapur	AKPZ003	**43**	**EXLT**
*Kanshivani	AKOBW009	**67**	**GW**
*Palsodbade	AKWQN013	**70**	**GW**
*Babhulgaon	AKOBW004	**83**	**GW**
*Shivar	AKWQN016	**87**	**GW**
*Mhaisang	AKOBW011	**82**	**GW**
*Shivani	AKWQN015	**64**	**GW**
Mhispur	AKOBW012	**71**	**GW**

Taluka : Akola			
2011 (With Fe)			
Villages	**Well No.**	**WQI**	**Category**
Agar	AKOBW001	**123**	**PW**
Akola Camp	AKWQN004	**167**	**PW**
Apatapa	AKOBW003	**113**	**PW**
Babhulgaon	AKOBW004	**107**	**PW**
Badalpur	AKOBW005	**235**	**VPW**
Chikhalgaon	BS-4AKOBW006	**70**	**GW**
Dhamana	AKWQN012	**124**	**PW**
Hingana Tawadi	AWQN003	**125**	**PW**
Javala Bk.	AKOBW008	**65**	**GW**
Kanshivani	AKOBW009	**81**	**GW**
Kapileshwar	AKWQN006	**99**	**GW**
Katyar	AKWQN001	**115**	**PW**
Mhaisang	AKOBW011	**90**	**GW**
Mhaispur	AKOBW012	**100**	**PW**
Palsao Bade	AKWQN013	**81**	**GW**
Rohana	AKWQN011	**89**	**GW**

Taluka : Akola			
2011 Contd.. (With Fe)			
Villages	**Well No.**	**WQI**	**Category**
Shivar	AKWQN016	**85**	**GW**
Shivani	AKWQN015	**66**	**GW**
Ugwa	AKOBW014	**90**	**GW**
Wanirambhapur	AKPZ003	**57**	**GW**
Wadad	AKWQN007	**69**	**GW**
*Shivani	AKWQN015	**60**	**GW**
*Palso bK	AKWQN013	**80**	**GW**
*Sangavi	AKWQN009	**60**	**GW**
*Wadad	AKWQN007	**57**	**GW**
*Ktyar	AKWQN001	**90**	**GW**
*Shivar	AKWQN016	**69**	**GW**
Rohana	AKWQN011	**94**	**GW**
Akola Camp	AKWQN004	**139**	**PW**
Kapileshwar	AKWQN006	**76**	**GW**
Hingana Tamas	AWQN003	**107**	**PW**

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.2 (Contd..) Akola District

Taluka : Akot				Taluka : Akot				Taluka : Akot			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Patsul	T/AK-008	**308**	**UNSUT**	Patsul	T/AK-008	**272**	**VPW**	Patsul	T/AK-008	**273**	**VPW**
Popetkheda	T/AK-040	**64**	**GW**	Popet Kheda	T/AK-021	**70**	**GW**	Popatkheda	T/AK-040	**78**	**GW**
2007 (With Fe)				**2008 (With Fe)**				**2009 (With Fe)**			
Akolkhed	AKOBW013	**47**	**EXLT**	Girijapur	TS-18	**103**	**PW**	*Akolkhed	AKOBW013	**94**	**GW**
Akot	AKOBW021	**98**	**GW**	Kinkhed	AKWQN018	**445**	**UNSUT**	*Akot	BS18	**104**	**PW**
Deori	AKWQN014	**241**	**VPW**	Kutasa	AKOBW025	**61**	**GW**	*Deori	AKWQN014	**77**	**GW**
Devarda	AKWQN019	**393**	**UNSUT**	Palsad	TS11	**299**	**VPW**	*Devarda	AKWQN019	**99**	**GW**
Girijapur	TS-18	**230**	**VPW**	Patsul	AKWQN022	**224**	**VPW**	*Girijapur	TS-18	**237**	**VPW**
*Hilaladad	AKWQN017	**530**	**UNSUT**	Popatkhed	AKOBW028	**61**	**GW**	*Hilaladad	AKWQN017	**135**	**PW**
Kutasa	AKOBW025	**135**	**PW**	Sawara	AKOBW031	**77**	**GW**	*Kinkhed	AKWQN018	**67**	**GW**
Mundgaon	AKOBW026	**95**	**GW**	Akolkhed	AKOBW013	**92**	**GW**	*Mundgaon	AKOBW026	**126**	**PW**
Palsad	TS11	**232**	**VPW**	Akolkhed	AKOBW013	**92**	**GW**	*Palsad	TS11	**183**	**PW**
*Parala	AKWQN021	**345**	**UNSUT**	Akot	AKOBW021	**98**	**GW**	*Parala	AKWQN021	**188**	**PW**
*Patsul	AKWQN022	**187**	**PW**	Deori	AKWQN014	**250**	**VPW**	*Patsul	AKWQN022	**98**	**GW**
Popatkhed	AKOBW028	**45**	**EXLT**	Devarda	AKWQN019	**382**	**UNSUT**	*Popatkhed	AKOBW028	**39**	**EXLT**
Ruikhed	AKOBW029	**40**	**EXLT**	Hilaladad	AKWQN017	**258**	**VPW**	*Ruikhed	AKOBW029	**67**	**GW**
Sawara	AKOBW031	**80**	**GW**	Mundgaon	AKOBW026	**166**	**PW**	*Sawara	AKOBW031	**149**	**PW**
Shahanur	AKOBW019	**37**	**EXLT**	Ruikhed	AKOBW029	**70**	**GW**	*Shahanur	AKOBW019	**48**	**EXLT**
				Shahanur	AKOBW019	**69**	**GW**	*Takli Bk	AKWQN023	**176**	**PW**
								*Wadalisatwai	AKPZ004	**64**	**GW**

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.2 (Contd..) Akola District

Taluka : Akot				Taluka : Akot				Taluka : Akot			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2010 (With Fe)				**2011 (With Fe)**				**2011 Contd.. (With Fe)**			
Ruikhed	AKOBW029	**51**	**GW**	Akolkhed	AKOBW013	**119**	**PW**	Sawara	AKOBW031	**73**	**GW**
Sawara M.	AKOBW031	**68**	**GW**	Akot	AKOBW021	**107**	**PW**	Shahanur	AKOBW019	**74**	**GW**
Deori	AKWQN014	**70**	**GW**	Devari	AKWQN014	**173**	**PW**	Wadalisatvai	AKPZ004	**63**	**GW**
Pastul	AKWQN022	**73**	**GW**	Devarda	AKWQN019	**59**	**GW**	*Devarda	AKWQN019	**76**	**GW**
Mundgaon	AKOBW026	**116**	**PW**	Girijapur	TS-18	**186**	**PW**	*Devari	AKWQN014	**53**	**GW**
Parla	AKWQN021	**146**	**PW**	Hilalabad	AKWQN017	**150**	**PW**	*Palsod	TS11	**123**	**PW**
Devarda	AKWQN019	**82**	**GW**	Keliveli	AKOBW024	**170**	**PW**	*Girijapur	TS-18	**134**	**PW**
*Kinkhed	AKWQN018	**285**	**VPW**	Kinkhed'	AKWQN018	**213**	**VPW**	*Patsul	AKWQN022	**72**	**GW**
*Girijapur	TS-18	**196**	**PW**	Mundgaon	AKOBW026	**102**	**PW**	*Hilalabad	AKWQN017	**125**	**PW**
*Palsod	TS11	**134**	**PW**	Palsod	TS11	**132**	**PW**	*Kinkhed	AKWQN018	**170**	**PW**
Akot	AKOBW021	**61**	**GW**	Parala	AKWQN021	**139**	**PW**	*Parla	AKWQN021	**126**	**PW**
Akolkhed	AKOBW013	**66**	**GW**	Poptkhed	AKOBW028	**73**	**GW**	Nakhegaon	TS-19	**177**	**PW**
Popatkhed	AKOBW028	**28**	**EXLT**	Ruikhed	AKOBW029	**58**	**GW**	*Chhota Bz	TS-17	**114**	**PW**

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.2 (Contd..) Akola District

Taluka : Balapur			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe)			
Babulkhed	T/AK-007	**87**	**GW**
Ural	T/AK-024	**159**	**PW**
Wadegaon	T/AK-010	**269**	**VPW**
Wyala	G/AK-017	**193**	**PW**
2007 (With Fe)			
*Balapur	AKWQN062	**66**	**GW**
Batwadi	AKOBW063	**91**	**GW**
Kolasa	AKWQN005	**73**	**GW**
Nakashi	AKOBW069	**92**	**GW**
Wadegaon	AKOBW073	**79**	**GW**
2010 (With Fe)			
Nakashi	AKOBW069	**62**	**GW**
Wadegaon	AKOBW073	**66**	**GW**
Batwadi	AKOBW063	**61**	**GW**
Balapur	AKWQN062	**86**	**GW**
Paras	AKOBW071	**89**	**GW**
Kolsa	AKWQN005	**62**	**GW**
Lohara	AKOBW067	**84**	**GW**
Kajikhed	TS-21	**91**	**GW**
Balapur	AKWQN062	**88**	**GW**
Gaigaon	AKOBW064	**74**	**GW**

Taluka : Balapur			
Villages	**Well No.**	**WQI**	**Category**
2008 (Without Fe)			
Babulkhed	T/AK-007	**93**	**GW**
Ural	T/AK-024	**124**	**PW**
Wadegaon	T/AK-010	**253**	**VPW**
Wyala	G/AK-017	**133**	**PW**
2008 (With Fe)			
Batwadi	AKOBW063	**86**	**GW**
Balapur	AKWQN062	**66**	**GW**
Gaigaon	AKOBW064	**162**	**PW**
Kazikhed	TS-21	**206**	**VPW**
Lohara	AKOBW067	**403**	**UNSUT**
Nakashi	AKOBW069	**90**	**GW**
Wadegaon	AKOBW073	**95**	**GW**
2011 (With Fe)			
Balapur	AKWQN062	**89**	**GW**
Batwadi BK	AKOBW063	**91**	**GW**
Gaigaon	AKOBW064	**74**	**GW**
Kajikhed(wazeG)	TS-21	**100**	**GW**
Kolsar	AKWQN005	**73**	**GW**
Lohara	AKOBW067	**84**	**GW**
Nakashi	AKOBW069	**62**	**GW**
Paras	AKOBW071	**109**	**PW**
Wadegaon	AKOBW073	**78**	**GW**
*Kazikhed	TS-21	**83**	**GW**
*Kolsa	AKWQN005	**58**	**GW**

Taluka : Balapur			
Villages	**Well No.**	**WQI**	**Category**
2009 (Without Fe)			
Babulkhed	T/AK-007	**92**	**GW**
Ural	T/AK-024	**135**	**PW**
Wadegaon	T/AK-010	**317**	**UNSUT**
Wyala	G/AK-017	**122**	**PW**
2009 (With Fe)			
*Balapur	AKWQN062	**98**	**GW**
*Batwadi	AKOBW063	**82**	**GW**
*Gaigaon	AKOBW064	**106**	**PW**
*Kazikhed	TS-21	**121**	**PW**
*Kolasa	AKWQN005	**89**	**GW**
*Lohara	AKOBW067	**114**	**PW**
*Paras	AKOBW071	**72**	**GW**
*Wadegaon	AKOBW073	**89**	**GW**

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.2 (Contd..) Akola District

Taluka : Barshitakli				Taluka : Barshitakli				Taluka : Barshitakli			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Barshi Takli	T/AK-014	**66**	**GW**	Barshi Takli	T/AK-014	**59**	**GW**	Barshi Takli	T/AK-014	**58**	**GW**
Pinjar	G/AK-016	**95**	**GW**	Pinjar	G/AK-016	**108**	**PW**	Pinjar	G/AK-016	**89**	**GW**
2007 (With Fe)				**2008 (With Fe)**				**2009 (With Fe)**			
Dhaba	AKOBW052	**87**	**GW**	*Dhaba	AKOBW052	**66**	**GW**	*Dhaba	AKOBW052	**90**	**GW**
Hatola	AKOBW054	**54**	**GW**	*Hatola	AKOBW054	**90**	**GW**	*Gorwa	AKOBW053	**98**	**GW**
Kajaleshwar	AKOBW055	**77**	**GW**	*Kajaleshwar	AKOBW055	**98**	**GW**	*Hatola	BS33	**91**	**GW**
Kasarkhed	AKOBW058	**62**	**GW**	*Kasarkhed	AKOBW058	**63**	**GW**	*Kajaleshwar	AKOBW055	**77**	**GW**
Pinjar	AKPZ006	**139**	**PW**	*Pinjar	AKPZ006	**222**	**VPW**	*Kasarkhed	AKOBW058	**74**	**GW**
Rahit	AKOBW060	**87**	**GW**	*Rahit	AKOBW060	**374**	**UNSUT**	*Pinjar	AKPZ006	**92**	**GW**
								*Rahit	AKOBW060	**262**	**VPW**
2010 (With Fe)				**2011 (With Fe)**							
Gorvha	AKOBW053	**63**	**GW**	Gorvha	AKOBW053	**65**	**GW**				
Yeranda	AKOBW062	**52**	**GW**	Hatola	AKOBW054	**78**	**GW**				
Rahit	AKOBW060	**161**	**PW**	Kajleshwar	AKOBW055	**84**	**GW**				
Kasarkhed	AKOBW058	**59**	**GW**	Kasarkhed	AKOBW058	**67**	**GW**				
Pinjar	AKPZ006	**81**	**GW**	Pinjar	AKPZ006	**79**	**GW**				
Hatola	AKOBW054	**68**	**GW**	Rahit	AKOBW060	**155**	**PW**				
Kajaleshwar	AKOBW055	**68**	**GW**	Yeranda	AKOBW062	**46**	**EXLT**				
Dhaba	AKOBW052	**46**	**EXLT**	Dhaba	AKOBW052	**59**	**GW**				

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.2 (Contd..) Akola District

Taluka : Murtizapur			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe)			
Murtizapur	T/AK-002	**111**	**PW**
Rasulpur	T/AK-019	**484**	**UNSUT**
2007 (With Fe)			
Dapura	TS-22	**237**	**VPW**
Kawatha	TS-24	**149**	**PW**
Kinkhed	AKOBW030	**382**	**UNSUT**
Kolsara	AKWQN003	**140**	**PW**
Mana	AKOBW033	**118**	**PW**
Murtijapur	AKOBW034	**112**	**PW**
Sirso	AKOBW036	**113**	**PW**
2010 (With Fe)			
*Kinkhed	AKOBW030	**89**	**GW**
*Dapura	TS-22	**86**	**GW**
*Madhapuri	AKOBW032	**42**	**EXLT**
*Jamthi	AKPZ005	**64**	**GW**
*Mana	AKOBW033	**89**	**GW**
*Sonorobapori	AKOBW037	**127**	**PW**
*Kawada	TS-24	**109**	**PW**
*Shelu Bz.	AKOBW035	**84**	**GW**
*Yelandi	BS-38	**64**	**GW**
*Kolasara	AKWQN003	**115**	**PW**
*Sirso	AKOBW036	**101**	**PW**
*Murtizapur	AKOBW034	**83**	**GW**

Taluka : Murtizapur			
Villages	**Well No.**	**WQI**	**Category**
2008 (Without Fe)			
Murtizapur	T/AK-002	**149**	**PW**
2008 (With Fe)			
Kinkhed	AKOBW030	**659**	**UNSUT**
Dapura	TS-22	**312**	**UNSUT**
Kawatha	TS-24	**133**	**PW**
Kinkhed	AKOBW030	**76**	**GW**
Kolsara	AKWQN003	**71**	**GW**
Madhapuri	AKOBW032	**62**	**GW**
Mana	AKOBW033	**106**	**PW**
Murtijapur	AKOBW034	**103**	**PW**
Shelu Bazar	AKOBW035	**76**	**GW**
Sirso	AKOBW036	**155**	**PW**
Sonari Bopari	AKOBW037	**134**	**PW**
Yendli	BS-38	**58**	**GW**
2011 (With Fe)			
Dapura	TS-22	**80**	**GW**
Jamthi Bk.	AKPZ005	**74**	**GW**
Kawatha shelu	TS-24	**99**	**GW**
Kinkhed'	AKOBW030	**92**	**GW**
Kolsara	AKWQN003	**121**	**PW**
Madhapuri	AKOBW032	**49**	**EXLT**
Mana	AKOBW033	**90**	**GW**
Murtizapur	AKOBW034	**91**	**GW**
Shelu Bk.	AKOBW035	**81**	**GW**
Shirso	AKOBW036	**103**	**PW**
Sonoribopori	AKOBW037	**131**	**PW**
Yendli	BS-38	**73**	**GW**
Kolsara	AKWQN003	**92**	**GW**
Kawatha	TS-24	**106**	**PW**
Dapura	TS-22	**78**	**GW**

Taluka : Murtizapur			
Villages	**Well No.**	**WQI**	**Category**
Data for 2009 (Wihout Fe) Not Available			
2009 (With Fe)			
Dapura	TS-22	**81**	**GW**
Kawatha	TS-24	**125**	**PW**
Kinkhed	AKOBW030	**245**	**VPW**
Kolsara	AKWQN003	**248**	**VPW**
Madhapuri	AKOBW032	**45**	**EXLT**
Mana	AKOBW033	**90**	**GW**
Shelu Bazar	AKOBW035	**93**	**GW**
Sonari Bopari	AKOBW037	**153**	**PW**
Yendli	BS-38	**117**	**PW**

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.2 (Contd..) Akola District

Taluka : Patur				Taluka : Patur				Taluka : Patur			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Chani	G/AK-018	**71**	**GW**	Chani	G/AK-018	**68**	**GW**	Chani	G/AK-018	**70**	**GW**
Patur	T/AK-005	**72**	**GW**	Patur	T/AK-005	**56**	**GW**	Patur	T/AK-005	**77**	**GW**
2007 (With Fe)				**2008 (With Fe)**				**2009 (With Fe)**			
Chatari	BS-48	**75**	**GW**	*Chatari	BS-48	**50**	**EXLT**	*Chatari	BS-48	**89**	**GW**
Chikhalwal	BS-50	**67**	**GW**	*Chikhalwal	BS-50	**104**	**PW**	*Chikhalwal	BS-50	**65**	**GW**
Digras Kh	BS-51	**107**	**PW**	*Digras Kh	BS-51	**112**	**PW**	*Digras Kh	BS-51	**84**	**GW**
Khetri	BS-49	**64**	**GW**	*Khetri	BS-49	**55**	**GW**	*Khetri	BS-49	**52**	**GW**
Lavkhed	AKOBW056	**95**	**GW**	*Lavkhed	AKOBW056	**93**	**GW**	*Lavkhed	BS-53	**102**	**PW**
Patur	BS-52	**76**	**GW**	*Patur	BS-52	**75**	**GW**	*Patur	BS-52	**88**	**GW**
Pimpalkhuta	TS-25	**61**	**GW**	*Sawarkhed	BS-55	**91**	**GW**	*Pimpalkhuta	TS-25	**90**	**GW**
Sawargaon	AKOBW059	**56**	**GW**					*Sawargaon	AKOBW059	**70**	**GW**
								*Sawarkhed	BS-55	**49**	**EXLT**
2010 (With Fe)				**2011 (With Fe)**							
Chikhalgaon	BS-50	**46**	**EXLT**	Chatari	BS-48	**63**	**GW**				
Patur	BS-52	**63**	**GW**	Chikhalwal	BS-50	**63**	**GW**				
Sawarkheda	BS-55	**41**	**EXLT**	Digras	BS-51	**62**	**GW**				
Chikhalwal	BS-50	**55**	**GW**	Khetri	BS-49	**39**	**EXLT**				
Umra	BS-54	**44**	**EXLT**	Lavkhed	BS-53	**77**	**GW**				
Sawargaon	AKOBW059	**50**	**EXLT**	Patur	BS-52	**52**	**GW**				
Pimpalkhuta	TS-25	**65**	**GW**	Pimpalkhuta	TS-25	**58**	**GW**				
Khetri	BS-49	**37**	**EXLT**	Sawarkhed	BS-55	**53**	**GW**				
Chatari	BS-48	**71**	**GW**	Sawargaon	AKOBW059	**55**	**GW**				
Lavkhed	BS-53	**79**	**GW**	Umra	BS-54	**56**	**GW**				
Digras Kh.	BS-51	**65**	**GW**	Pimpalkhuta	TS-25	**67**	**GW**				

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.2 (Contd..) Akola District

Taluka : Telhara			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe)			
Telhara	T/AK-006	**187**	**PW**
Data for 2008 and 2009 (Without Fe) Not Avail.			
2007 (With Fe)			
*Adsul	AKOBW074	**190**	**PW**
*Hingani Bk	TS-27	**61**	**GW**
2010 (With Fe)			
Wangargaon	AKOBW079	**107**	**PW**
Wadi Adampur	BS-59	**44**	**EXLT**
Adsul	AKOBW074	**113**	**PW**
Panchagavhan	BS-57	**37**	**EXLT**
Tahr	BS-56	**37**	**EXLT**
Hingani Bk.	TS-27	**51**	**GW**
Danapur	BS-58	**84**	**GW**
Wari Warkhed	AKOBW080	**39**	**EXLT**
Shahanur	AKOBW019	**36**	**EXLT**

Taluka : Telhara			
Villages	**Well No.**	**WQI**	**Category**
2008 (With Fe)			
Danapur	BS-58	**99**	**GW**
Adsul	AKOBW074	**223**	**VPW**
Hingani Bk	TS-27	**65**	**GW**
Panchagavan	BS-57	**484**	**UNSUT**
Thar	BS-56	**58**	**GW**
Wadi Adampur	BS-59	**100**	**GW**
Wangargaon	AKOBW079	**220**	**VPW**
2011 (With Fe)			
Adsul	AKOBW074	**148**	**PW**
Danapur	BS-58	**83**	**GW**
Hingani Bk.	TS-27	**61**	**GW**
Panchgavhan	BS-57	**47**	**EXLT**
Thar	BS-56	**69**	**GW**
Wadiadampur	BS-59	**57**	**GW**
Wangargaon	AKOBW079	**186**	**PW**
Wariwarkhed	AKOBW080	**43**	**EXLT**
Adsul	AKOBW074	**134**	**PW**
Hingani Bk.	TS-27	**65**	**GW**

Taluka : Telhara			
Villages	**Well No.**	**WQI**	**Category**
2009 (With Fe)			
*Adsul	AKOBW074	**155**	**PW**
*Danapur	BS-58	**102**	**PW**
*Hingani Bk	TS-27	**70**	**GW**
*Panchagavan	BS-57	**57**	**GW**
*Thar	BS-56	**48**	**EXLT**
*WadiAdampur	BS-59	**108**	**PW**
*Wangargaon	AKOBW079	**143**	**PW**
*Wari Warkhed	AKOBW080	**57**	**GW**

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x3: Water Quality Index of Groundwater of Amravati District

Taluka : Achalpur			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe)			
Devgaon	G/AV-031	**64**	**GW**
2007 (With Fe)			
Chaushala	AMTOBW060	**151**	**PW**
Data for 2008 and 2009 Not Available			

Taluka : Achalpur			
Villages	**Well No.**	**WQI**	**Category**
2008 (Without Fe)			
Devgaon	G/AV-031	**64**	**GW**
Nimbhari	T/AV-100	**159**	**PW**
Pathrot	T/AV-103	**158**	**PW**
2010 (With Fe)			
Chavasala	AMTOBW060	**101**	**PW**
Pathrot	AMTPZ019	**69**	**GW**

Taluka : Achalpur			
Villages	**Well No.**	**WQI**	**Category**
Data for 2009 (Without Fe) and 2008 and 2009 (With Fe) Not Available			
2011 (With Fe)			
Pathrot	AMTPZ019	**72**	**GW**
Chausala	AMTOBW060	**150**	**PW**

Taluka : Amravati			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe)			
Badnera	T/AV-072	**119**	**PW**
Loni	G/AV-061	**178**	**PW**
Nandgaon	G/AV-029	**114**	**PW**
Pimpri	G/AV-044	**50**	**EXLT**
Pohra	G/AV-016	**94**	**GW**
Walgaon	T/AV-005	**218**	**VPW**
Arao	T/AV-025	**45**	**EXLT**
Behali	T/AV-035	**56**	**GW**
Chinkhedi	T/AV-034	**44**	**EXLT**
Dargarh	T/AV-037	**73**	**GW**
Kher	G/AV-049	**698**	**UNSUT**
Saiwada	G/AV-043	**123**	**PW**
Sindola	G/AV-014	**279**	**VPW**
2007 (With Fe)			
Mogra	AMTOBW167	**77**	**GW**
Pohra	AMTOBW164	**83**	**GW**

Taluka : Amravati			
Villages	**Well No.**	**WQI**	**Category**
2008 (Without Fe)			
Badnera	T/AV-072	**128**	**PW**
Loni	G/AV-061	**149**	**PW**
Nandgaon	G/AV-029	**92**	**GW**
Pimpri	G/AV-044	**55**	**GW**
Pohra	G/AV-016	**74**	**GW**
Walgaon	T/AV-005	**218**	**VPW**
Arao	T/AV-025	**47**	**EXLT**
Behali	T/AV-035	**65**	**GW**
Dargarh	T/AV-037	**73**	**GW**
Kher	G/AV-049	**1247**	**UNSUT**
Saiwada	G/AV-043	**153**	**PW**
Sindola	G/AV-014	**333**	**UNSUT**
2008 (With Fe)			
Pimpalvihir	AMTOBW136	**103**	**PW**
Pohra	AMTOBW164	**51**	**GW**
*Nandgaon	AMTOBW092	**92**	**GW**
*Revsa	AMTOBW091	**53**	**GW**
*Wagholi	AMTOBW093	**56**	**GW**

Taluka : Amravati			
Villages	**Well No.**	**WQI**	**Category**
2009 (Without Fe)			
Badnera	T/AV-072	**108**	**PW**
Loni	G/AV-061	**150**	**PW**
Nandgaon	G/AV-029	**105**	**PW**
Pimpri	G/AV-044	**74**	**GW**
Pohra	G/AV-016	**74**	**GW**
Walgaon	T/AV-005	**150**	**PW**
Arao	T/AV-025	**44**	**EXLT**
Chinkhedi	T/AV-034	**44**	**EXLT**
Kher	G/AV-049	**1017**	**UNSUT**
Sindola	G/AV-014	**307**	**UNSUT**
2009 (With Fe)			
*Amla	AMTOBW077	**76**	**GW**

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x3(Contd..) :Amravati District

Taluka : Amravati (Contd..)			
Villages	**Well No.**	**WQI**	**Category**
2010 (With Fe)			
Vdali		**55**	**GW**
Pohara	AMTOBW164	**65**	**GW**
Navsari		**101**	**PW**
Pohara	AMTOBW164	**81**	**GW**
Nandgaonpeth	AMTOBW092	**125**	**PW**
Pimpalvihir	AMTOBW136	**87**	**GW**

Taluka : Amravati			
Villages	**Well No.**	**WQI**	**Category**
2010 Contd.. (With Fe)			
Mardi		**107**	**PW**
Vagholi	AMTOBW093	**79**	**GW**
Wagholi	AMTOBW093	**59**	**GW**
Nandgaonpeth	AMTOBW092	**143**	**PW**
Revasa	AMTOBW091	**67**	**GW**
Amla	AMTOBW077	**156**	**PW**
Badnera	AMTOBW063	**86**	**GW**

Taluka : Amravati			
Villages	**Well No.**	**WQI**	**Category**
2011 (With Fe)			
Badnera	AMTOBW063	**88**	**GW**
Pohara	AMTOBW164	**82**	**GW**
Nandgaonpeth	AMTOBW092	**125**	**PW**
Pimpalvihir	AMTOBW136	**81**	**GW**
Amla	AMTOBW077	**131**	**PW**
Revasa	AMTOBW091	**69**	**GW**
Wagholi	AMTOBW093	**62**	**GW**
Badnera	AMTOBW063	**73**	**GW**

Taluka : Anjangaon			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe)			
Kolkaz	T/AV-069	**39**	**EXLT**
2007 (With Fe)			
Anjangaon Surji	AMTOBW095	**56**	**GW**
Samsherpur Kh.	AMTOBW072	**126**	**PW**
2010 (With Fe)			
Samshrpur	AMTOBW072	**118**	**PW**

Taluka : Anjangaon			
Villages	**Well No.**	**WQI**	**Category**
2008 (Without Fe)			
Kolkaz	T/AV-069	**43**	**EXLT**
2008 (With Fe)			
Anjangaon Surji	AMTOBW095	**96**	**GW**
Bhandaraj	AMTOBW098	**57**	**GW**
Karla	AMTPZ018	**47**	**EXLT**
Samsherpur Kh.	AMTOBW072	**135**	**PW**
2011 (With Fe)			
Anjangaonsurji	AMTOBW095	**75**	**GW**
Samsherpur	AMTOBW072	**127**	**PW**

Taluka : Anjangaon			
Villages	**Well No.**	**WQI**	**Category**
2009 (Without Fe)			
Kolkaz	T/AV-069	**39**	**EXLT**
Data for 2009 Not Available (With Fe)			

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x3(Contd..) :Amravati District

Taluka : Bhatkuli				Taluka : Bhatkuli				Taluka : Bhatkuli			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Bhatkulijain	G/AV-065	**172**	**PW**	Bhatkulijain	G/AV-065	**172**	**PW**	Bhatkulijain	G/AV-065	**215**	**VPW**
2007 (With Fe)				**2008 (With Fe)**				**2009 (With Fe)**			
Bhatkuli	AMTOBW083	**135**	PW	*Bhatkuli	AMTOBW083	**108**	**PW**	Ganori	AMTOBW085	**167**	**PW**
Ganori	AMTOBW085	**161**	**PW**	*Ganori	AMTOBW085	**218**	**VPW**	Nimbha	AMTOBW080	**145**	**PW**
Gaurkheda	AMTTS8	**104**	**PW**	*KharTalegaon	AMTOBW079	**56**	**GW**	Nimbhora	AMTOBW088	**127**	**PW**
Khar Talegaon	AMTOBW079	**188**	**PW**	*Nimbhora Bk.	AMTOBW088	**131**	**PW**	Sayat	AMTOBW084	**293**	**VPW**
Nimbhora Bk.	AMTOBW088	**171**	**PW**	*Nimbha	AMTOBW080	**102**	**PW**	Khar Talegaon	AMTOBW079	**123**	**PW**
Sayat	AMTOBW084	**103**	**PW**	*Sayat	AMTOBW084	**323**	**UNSUT**	Daryabad	AMTTS4	**94**	**GW**
Nimbha	AMTOBW080	**121**	**PW**	*Takarkheda	AMTOBW078	**167**	**PW**	Ganori	AMTOBW085	**124**	**PW**
Wasewadi	AMTTS7	**126**	**PW**					Gaurkheda	AMTTS8	**65**	**GW**
Daryabad	AMTTS4	**141**	**PW**					Nimbhora Bk.	AMTOBW088	**68**	**GW**
Deori	AMTTS1	**92**	**GW**					Takarkheda	AMTOBW078	**84**	**GW**
Jalka Hirapur	AMTTS9	**132**	**PW**					Wasewadi	AMTTS7	**92**	**GW**
Kholapur	AMTTS2	**295**	**VPW**					Bhatkuli	AMTOBW083	**191**	**PW**
Takarkheda	AMTOBW078	**61**	**GW**					Jalka Hirapur	AMTTS9	**187**	**PW**
								Khar Talegaon	AMTOBW079	**303**	**UNSUT**
								Sayat	AMTOBW084	**96**	**GW**
2010 (With Fe)				**2010 Contd.. (With Fe)**				**2011 Contd.. (With Fe)**			
Nimbhora	AMTOBW088	**99**	**GW**	Takerkheda Sambhu	AMTOBW078	**190**	**PW**	Ganori	AMTOBW085	**152**	**PW**
Gannori	AMTOBW085	**137**	**PW**	Afjalpur Rama		**165**	**PW**	Gaurkheda	AMTTS8	**81**	**GW**
Nimbha	AMTOBW080	**78**	**GW**	Nimbha	AMTOBW080	**136**	**PW**	Nimbha	AMTOBW080	**126**	**PW**
Shinganapur		**63**	**GW**	**2011 (With Fe)**				Vasevadi	AMTTS7	**98**	**GW**
Takarkheda Sambhu	AMTOBW078	**82**	**GW**	Takerkheda Sambhu	AMTOBW078	**145**	**PW**	Bhatkuli	AMTOBW083	**82**	**GW**
Ganori	AMTOBW085	**170**	**PW**	Kholapur	AMTTS2	**94**	**GW**	Sayat	AMTOBW084	**90**	**GW**
Asegaon		**63**	**GW**	Nimbhora BK.	AMTOBW088	**98**	**GW**				

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x3(Contd..) :Amravati District

Taluka : Chandur Bazaar			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe)			
Belora	T/AV-027	**86**	**GW**
Chandur Bazar	T/AV-008	**87**	**GW**
Kurha	G/AV-018	**81**	**GW**
2007 (With Fe)			
Surali	AMTOBW024	**58**	**GW**
Vishroli	AMTOBW054	**188**	**PW**
Surali	AMTOBW024	**72**	**GW**
2010 (With Fe)			
Chn. Rly.	AMTOBW165	**73**	**GW**
Amla Vishweshwar	AMTOBW128	**94**	**GW**
Baggi	AMTOBW166	**99**	**GW**
Rajura		**86**	**GW**
Vishroli	AMTOBW054	**75**	**GW**
Shirsgaonkasba		**156**	**PW**
Vishroli	AMTOBW054	**97**	**GW**
Surali	AMTOBW024	**68**	**GW**
Borgaon Moh.	AMTOBW044	**74**	**GW**
Ghatladki	AMTOBW171	**93**	**GW**

Taluka : Chandur Bazaar			
Villages	**Well No.**	**WQI**	**Category**
2008 (Without Fe)			
Belora	T/AV-027	**120**	**PW**
Chandur Bazar	T/AV-008	**89**	**GW**
Kurha	G/AV-018	**86**	**GW**
Wishroli	T/AV-096	**97**	**GW**
2008 (With Fe)			
Borgaon Mohna	AMTOBW044	**58**	**GW**
Ghatladki	AMTOBW171	**54**	**GW**
Surali	AMTOBW024	**52**	**GW**
Vishroli	AMTOBW054	**62**	**GW**
2011 (With Fe)			
Ghatladki	AMTOBW171	**80**	**GW**
Vishroli	AMTOBW054	**106**	**PW**
Borgaon	AMTOBW044	**75**	**GW**

Taluka : Chandur Bazaar			
Villages	**Well No.**	**WQI**	**Category**
2009 (Without Fe)			
Belora	T/AV-027	**87**	**GW**
Chandur Bazar	T/AV-008	**81**	**GW**
Kurha	G/AV-018	**81**	**GW**
Wishroli	T/AV-096	**81**	**GW**
2009 (With Fe)			
Ghatladki	AMTOBW171	**52**	**GW**
Vishroli	AMTOBW054	**39**	**EXLT**

Table x3(Contd..) :Amravati District

Taluka : Chandur Railway			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe)			
Anjansingi	G/AV-063	**160**	**PW**
Chandur Railway	G/AV-020	**123**	**PW**
Shendurjana Khurd	G/AV-006	**77**	**GW**
2007 (With Fe)			
Amla (V)	AMTOBW128	**129**	**PW**
Kavatha Kadu	AMTOBW168	**108**	**PW**
Baggi	AMTOBW166	**193**	**PW**
Kharabi	AMTOBW069	**149**	**PW**
Chandur Railway	AMTOBW165	**51**	**GW**
2010 (With Fe)			
Ch. Railway	AMTOBW165	**48**	**EXLT**
Borgaon	BS18	**104**	**PW**
Kavathakadu	AMTOBW168	**89**	**GW**
Kharabi	AMTOBW069	**91**	**GW**

Taluka : Chandur Railway			
Villages	**Well No.**	**WQI**	**Category**
2008 (Without Fe)			
Anjansingi	G/AV-063	**163**	**PW**
Chandur Railway	G/AV-020	**117**	**PW**
Shendurjana Khurd	G/AV-006	**75**	**GW**
2008 (With Fe)			
Amla (V)	AMTOBW128	**68**	**GW**
Baggi	AMTOBW166	**43**	**EXLT**
Kavatha Kadu	AMTOBW168	**77**	**GW**
Kirjawla	AMTOBW170	**95**	**GW**
Shendurjana Kh.	AMTOBW158	**62**	**GW**
2011 (With Fe)			
Chandur Rly	AMTOBW165	**57**	**GW**
Asegaon		**70**	**GW**
Borgaon		**89**	**GW**
Baggi	AMTOBW166	**105**	**PW**
Kirjwal	AMTOBW170	**72**	**GW**
Kavthakadu	AMTOBW168	**78**	**GW**
Amla Vishveshwar	AMTOBW128	**84**	**GW**
Shendurjana KH.	AMTOBW158	**72**	**GW**

Taluka : Chandur Railway			
Villages	**Well No.**	**WQI**	**Category**
2009 (Without Fe)			
Anjansingi	G/AV-063	**152**	**PW**
Chandur Railway	G/AV-020	**112**	**PW**
Shendurjana Khurd	G/AV-006	**72**	**GW**
2009 (With Fe)			
*Baggi	AMTOBW166	**42**	**EXLT**
*Chandur Railway	AMTOBW165	**88**	**GW**
*Kavatha Kadu	AMTOBW168	**89**	**GW**
*Kirjawla	AMTOBW170	**83**	**GW**
*Shendurjana Kh.	AMTOBW158	**65**	**GW**

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x3(Contd..) :Amravati District

Taluka : Chikhaldara				Taluka : Chikhaldara				Taluka : Chikhaldara			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Barukheda	T/AV-038	**53**	**GW**	Barukheda	T/AV-038	**70**	**GW**	Barukheda	T/AV-038	**65**	**GW**
Mahuli	G/AV-002	**98**	**GW**	Hatru	T/AV-024	**65**	**GW**	Hatru	T/AV-024	**57**	**GW**
Silona	T/AV-012	**58**	**GW**	Mahuli	G/AV-002	**107**	**PW**	Mahuli	G/AV-002	**70**	**GW**
				Silona	T/AV-012	**46**	**EXLT**	Silona	T/AV-012	**48**	**EXLT**
2007 (With Fe)				**2008 (With Fe)**				**2009 Contd.. (With Fe)**			
Adhav	AMTOBW021	**45**	**EXLT**	*Bartanda	AMTPZ01	**149**	**PW**	*Barukheda	AMTOB057	**62**	**GW**
Barukheda	AMTOB057	**86**	**GW**	**2009 (With Fe)**				*Borala	AMTOBW061	**54**	**GW**
Biba	AMTOBW03	**64**	**GW**	*Adhav	AMTOBW021	**49**	**EXLT**	Barukheda	AMTOB057	**47**	**EXLT**
Chunkhadi	AMTOBW030	**41**	**EXLT**	*Biba	AMTOBW03	**54**	**GW**	Biba	AMTOBW03	**69**	**GW**
Dhargad	AMTPZ008	**66**	**GW**	*Charni	AMTPZ006	**53**	**GW**	Chunkhadi	AMTOBW030	**56**	**GW**
Kelpani	AMTBS101	**111**	**PW**	*Chunkhadi	AMTOBW030	**48**	**EXLT**	Dhargad	AMTPZ008	**51**	**GW**
Semadoh	AMTOBW038	**44**	**EXLT**	*Dhargad	AMTPZ008	**37**	**EXLT**	Semadoh	AMTOBW038	**38**	**EXLT**
Borala	AMTOBW061	**62**	**GW**	*Semadoh	AMTOBW038	**46**	**EXLT**	Charni	AMTPZ006	**51**	**GW**
2010 (With Fe)				**2011 Contd.. (With Fe)**				**2011 Contd.. (With Fe)**			
Ghular Gh.		**37**	**EXLT**	Semadoh	AMTOBW038	**70**	**GW**	Bartanda	AMTPZ01	**44**	**EXLT**
Ghular Gh.		**70**	**GW**	Churni	AMTPZ006	**78**	**GW**	Adhav	AMTOBW021	**57**	**GW**
Makhla		**42**	**EXLT**	Adhao	AMTOBW021	**63**	**GW**	Semadoh	AMTOBW038	**59**	**GW**
Biba	AMTOBW03	**73**	**GW**	Chunkhadi	AMTOBW030	**76**	**GW**	Chunkhadi	AMTOBW030	**65**	**GW**
Doma		**51**	**GW**	Barukheda	AMTOB057	**54**	**GW**	Biba	AMTOBW03	**63**	**GW**
Semadoh	AMTOBW038	**56**	**GW**	Kelapani	AMTBS101	**57**	**GW**	Charni	AMTPZ006	**57**	**GW**
Adhav	AMTOBW021	**60**	**GW**	Biba	AMTOBW03	**69**	**GW**	Borala	AMTOBW061	**61**	**GW**
Chunkhadi	AMTOBW030	**66**	**GW**	Dhargad	AMTPZ008	**54**	**GW**				
Borala	AMTOBW061	**56**	**GW**	Borala	AMTOBW061	**76**	**GW**				

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x3(Contd..) :Amravati District

Taluka : Daryapur			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe)			
Daryapur	T/AV-009	**140**	**PW**
Wadner Gangai	T/AV-102	**410**	**UNSUT**
2007 (With Fe)			
Itki	AMTPZ017	**146**	**PW**
Chndicapur	AMTTS10	**83**	**GW**
Wadnerganga	AMTOBW099	**241**	**VPW**
Daryapur	AMTOBW065	**40**	**EXLT**
2010 (With Fe)			
Wadnerganga	AMTOBW099	**264**	**VPW**
Yewada		**358**	**UNSUT**
Shinganapur	AMTOBW045	**75**	**GW**

Taluka : Daryapur			
Villages	**Well No.**	**WQI**	**Category**
2008 (Without Fe)			
Daryapur	T/AV-009	**94**	**GW**
Wadner Gangai	T/AV-102	**505**	**UNSUT**
2008 (With Fe)			
*Nalwada	AMTOBW071	**89**	**GW**
*Shinganapur	AMTOBW045	**88**	**GW**
*Tongalabad	AMTTS11	**131**	**PW**
*Chndicapur	AMTTS10	**142**	**PW**
*Daryapur	AMTOBW065	**168**	**PW**
*Wadnergangai	AMTOBW099	**164**	**PW**
*Mahimpur	AMTOBW046	**78**	**GW**
Takali	AMTTS13	**135**	**PW**
2011 (With Fe)			
Alampur Borala	AMTOBW064	**71**	**GW**
Wadnergangai	AMTOBW099	**193**	**PW**
Shinganapur	AMTOBW045	**70**	**GW**
Daryapur	AMTOBW065	**78**	**GW**
Shivar BK.	AMTTS20	**72**	**GW**
Nachona	AMTTS15	**85**	**GW**

Taluka : Daryapur			
Villages	**Well No.**	**WQI**	**Category**
2009 (Without Fe)			
Wadner Gangai	T/AV-102	**332**	**UNSUT**
2009 (With Fe)			
Daryapur	AMTOBW065	**80**	**GW**
Itki	AMTPZ017	**71**	**GW**
Thillori	AMTPZ020	**126**	**PW**
Nalwada	AMTOBW071	**153**	**PW**
Shinganapur	AMTOBW045	**64**	**GW**
Wadnerganga	AMTOBW099	**117**	**PW**
Shiwar Kh	AMTTS19	**220**	**VPW**
Mahimpur	AMTOBW046	**103**	**PW**
Amla	AMTTS24	**57**	**GW**
Chndicapur	AMTTS10	**100**	**GW**
Ahmadapur	AMTOBW047	**93**	**GW**

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x3(Contd..) :Amravati District

Taluka : Dharni				Taluka : Dharni				Taluka : Dharni			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Bhokarbardi	T/AV-039	**163**	**PW**	Dharni	T/AV-010	**73**	**GW**	Dharni	T/AV-010	**80**	**GW**
Harisal	T/AV-011	**65**	**GW**	Harisal	T/AV-011	**67**	**GW**	Harisal	T/AV-011	**62**	**GW**
Lawada	T/AV-070	**44**	**EXLT**	Lawada	T/AV-070	**39**	**EXLT**	Lawada	T/AV-070	**52**	**GW**
2007 (With Fe)				**2009 (With Fe)**				**2010 (With Fe)**			
Bhokarbardi	AMTOBW019	**125**	**PW**	*Bhandum	AMTOBW023	**38**	**EXLT**	Chandpur	AMTBS95	**42**	**EXLT**
Dhulghat Road	AMTOBW018	**58**	**GW**	*Bori	AMTOBW094	**61**	**GW**	Gangarkhed	AMTOBW059	**59**	**GW**
Diya	AMTOBW031	**49**	**EXLT**	*Khongda	AMTOBW040	**59**	**GW**	Khongda	AMTOBW040	**83**	**GW**
Ranpisa	AMTOBW011	**51**	**GW**	*Baru	AMTOBW017	**53**	**GW**	Harisal	AMTOBW037	**73**	**GW**
Baru	AMTOBW017	**86**	**GW**	*Malkapur	AMTOBW058	**46**	**EXLT**	Rangubeli		**47**	**EXLT**
Bhandum	AMTOBW023	**93**	**GW**	*Ranpisa	AMTOBW011	**40**	**EXLT**	Dhulghat Rd.	AMTOBW018	**74**	**GW**
Chandpur	AMTBS95	**59**	**GW**	*Bhokarbardi	AMTOBW019	**106**	**PW**	Diya	AMTOBW031	**91**	**GW**
Patiya	AMTOBW034	**68**	**GW**	*Chinchghat	AMTPZ010	**72**	**GW**	Patiya	AMTOBW034	**90**	**GW**
Sonarbardi	AMTOBW075	**58**	**GW**	*Dharni	AMTOBW016	**76**	**GW**	Wairgad		**91**	**GW**
Gangarkhed	AMTOBW059	**46**	**EXLT**	*Dhulghat Rly.	AMTOBW014	**37**	**EXLT**	Bhondhilava		**59**	**GW**
Harisal	AMTOBW037	**70**	**GW**	*Dhulghat Road	AMTOBW018	**73**	**GW**	Bhokarbardi	AMTOBW019	**117**	**PW**
Khongda	AMTOBW040	**46**	**EXLT**	*Sonarbardi	AMTOBW075	**61**	**GW**	**2011 (With Fe) (1)**			
Kutanga	AMTOBW07	**59**	**GW**	*Diya	AMTOBW031	**68**	**GW**	Chandpur	AMTBS95	**48**	**EXLT**
2008 (With Fe) Data Not Available				*Gobarkhau	AMTOBW035	**45**	**EXLT**	Khongda	AMTOBW040	**67**	**GW**
				*Harisal	AMTOBW037	**67**	**GW**	Malkapur	AMTOBW058	**50**	**GW**
2011 Contd.. (With Fe) (2)				*Patiya	AMTOBW034	**67**	**GW**	Bori	AMTOBW094	**54**	**GW**
Patia	AMTOBW034	**93**	**GW**	Kutanga	AMTOBW07	**69**	**GW**	Harisal	AMTOBW037	**70**	**GW**
Dharni	AMTOBW016	**77**	**GW**	**2011 Contd.. (With Fe) (3)**				**2011 Contd.. (With Fe) (4)**			
Diya	AMTOBW031	**89**	**GW**	Susrda		**45**	**EXLT**	Gobarkhau	AMTOBW035	**48**	**EXLT**
Bhokarbardi	AMTOBW019	**95**	**GW**	Sawalikheda		**44**	**EXLT**	Patiya	AMTOBW034	**83**	**GW**
Dhulghat Road	AMTOBW018	**72**	**GW**	Diya	AMTOBW031	**76**	**GW**	Bod		**48**	**EXLT**
Sonabardi	AMTOBW075	**54**	**GW**	Bhondilawa		**52**	**GW**	Harisal	AMTOBW037	**72**	**GW**
Dhulghat Rly	AMTOBW014	**64**	**GW**	Kutanga	AMTOBW07	**53**	**GW**	Cahuryakund		**41**	**EXLT**
Kutanga	AMTOBW07	**58**	**GW**	Rangubeli		**45**	**EXLT**	Tarubanda		**34**	**EXLT**
Dhulghatraod	AMTOBW018	**64**	**GW**	Rangubeli (HP)		**47**	**EXLT**	Gangarkhed	AMTOBW059	**37**	**EXLT**
Ranpisa	AMTOBW011	**48**	**EXLT**	Chakarda		**31**	**EXLT**	Khongda	AMTOBW040	**67**	**GW**

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x3(Contd..) :Amravati District

Taluka : Dhamangaon Railway			
Villages	**Well No.**	**WQI**	**Category**
2007 (With Fe)			
Asegaon	AMTOBW144	**77**	**GW**
Borgaon Dhan.	AMTOBW142	**106**	**PW**
2010 (With Fe)			
Gvhanipani		**99**	**GW**
Devgaon		**62**	**GW**
Bhatkuli		**73**	**GW**
Asegaon	AMTOBW144	**71**	**GW**

Taluka : Dhamangaon Railway			
Villages	**Well No.**	**WQI**	**Category**
2008 (With Fe)			
Borgaon Dhan.	AMTOBW142	**145**	**PW**
Data for 2007 to 2009 (Without Fe) and 2011 (With Fe) With Fe Not Available			
Shendurjana Kh.	BS14	**108**	**PW**
Mangruli Dasti		**84**	**GW**
Degaon		**42**	**EXLT**

Taluka : Dhamangaon Railway			
Villages	**Well No.**	**WQI**	**Category**
2009 (With Fe)			
*Asegaon	AMTOBW144	**50**	**EXLT**
*Borgaon Dhan.	AMTOBW142	**93**	**GW**
*Titamba	AMTOBW020	**45**	**EXLT**
Shendurjana Gh.		**116**	**PW**
Gavhanipani		**117**	**PW**
Asegaon	AMTOBW144	**81**	**GW**

Taluka : Morshi			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe)			
Ambada	G/AV-046	**153**	**PW**
Ashtagaon	G/AV-042	**111**	**PW**
Chicholi	G/AV-040	**176**	**PW**
Hiwarkheda	G/AV-057	**122**	**PW**
Khanapur	G/AV-041	**191**	**PW**
Pala	G/AV-053	**260**	**VPW**
Rithpur	T/AV-036	**297**	**VPW**
2007 (With Fe)			
Yerla	AMTOBW121	**183**	**PW**
Dhanora	AMTOBW126	**137**	**PW**
Hiwarkhed	AMTT1	**80**	**GW**
Kamalpur	AMTOBW131	**178**	**PW**
Morshi	AMTOBW123	**168**	**PW**
Khanapur	AMTOBW124	**166**	**PW**
Nershipur	AMTT2	**59**	**GW**
Pala	AMT127	**105**	**PW**
Pimpalkhuta	AMTPZ032	**83**	**GW**

Taluka : Morshi			
Villages	**Well No.**	**WQI**	**Category**
2008 (Without Fe)			
Ambada	G/AV-046	**162**	**PW**
Ashtagaon	G/AV-042	**190**	**PW**
Chicholi	G/AV-040	**169**	**PW**
Dapori	T/AV-097	**138**	**PW**
Hiwarkheda	G/AV-057	**149**	**PW**
Khanapur	G/AV-041	**343**	**UNSUT**
Morshi new	T/AV-105	**58**	**GW**
Pala	G/AV-053	**153**	**PW**
Rithpur	T/AV-036	**286**	**VPW**
2007 Contd.. (With Fe)			
*Hiwarkhed	AMTT1	**65**	**GW**
Riddhapur	AMTBS71	**175**	**PW**
Yerla	AMTOBW121	**304**	**UNSUT**
Chikhalsawngi	AMT125	**95**	**GW**
Chincholi Gavali	AMTBS60	**134**	**PW**
Pardi	AMTOBW122	**81**	**GW**
Umarkhed	AMTOBW130	**61**	**GW**

Taluka : Morshi			
Villages	**Well No.**	**WQI**	**Category**
2009 (Without Fe)			
Ashtagaon	G/AV-042	**119**	**PW**
Chicholi	G/AV-040	**110**	**PW**
Dapori	T/AV-097	**125**	**PW**
Hiwarkheda	G/AV-057	**109**	**PW**
Khanapur	G/AV-041	**142**	**PW**
Morshi New	T/AV-105	**58**	**GW**
Pala	G/AV-053	**162**	**PW**
Rithpur	T/AV-036	**274**	**VPW**
2008 (With Fe)			
Riddhapur	AMTBS71	**156**	**PW**
*Dapori	AMTOBW125	**48**	**EXLT**
*Dhanora	AMTOBW126	**143**	**PW**
*Yerla	AMTOBW121	**151**	**PW**
*Khanapur	AMTOBW124	**41**	**EXLT**

Table x3(Contd..) :Amravati District

Taluka : Morshi			
Villages	**Well No.**	**WQI**	**Category**
2009 (With Fe)			
Dapori	AMTOBW125	**46**	**EXLT**
Dhanora	AMTOBW126	**60**	**GW**
Pimpalkhuta	AMTPZ032	**52**	**GW**
Khanapur	AMTOBW124	**76**	**GW**
Umarkhed	AMTOBW130	**42**	**EXLT**
2010 (With Fe)			
Pimpalkhuta	AMTPZ032	**80**	**GW**
Yerla	AMTOBW121	**115**	**PW**
Morshi	AMTOBW123	**102**	**PW**
Hiwarkhed	AMTT1	**88**	**GW**
Umarkhed	AMTOBW130	**101**	**PW**
Pimpalkhuta	AMTPZ032	**96**	**GW**
Yerla	AMTOBW121	**101**	**PW**
Vadali Sat		**63**	**GW**
Pardi	AMTOBW122	**62**	**GW**
Khanapur	AMTOBW124	**63**	**GW**
Dapori	AMTOBW125	**124**	**PW**
Umarkhed	AMTOBW130	**55**	**GW**
Chincholi Kawali	AMTBS60	**138**	**PW**
Churni	BS90	**66**	**GW**
Ridhapur	AMTBS71	**145**	**PW**
Chikhalsavgi	AMT125	**53**	**GW**
Nashirpur	AMTT2	**53**	**GW**
Vishnora	AMTOBW172	**52**	**GW**
Pada	AMT127	**102**	**PW**
Hiwarkhed	AMTT1	**93**	**GW**
Morshi	AMTOBW123	**154**	**PW**

Taluka : Morshi			
Villages	**Well No.**	**WQI**	**Category**
2009 (With Fe) (Contd..)			
Nershipur	AMTT2	**35**	**EXLT**
Chikhalsawgi	AMT125	**44**	**EXLT**
Chincholi Gavali	AMTBS60	**64**	**GW**
Pala	AMT127	**85**	**GW**
2011 (With Fe)			
Umarkhed	AMTOBW130	**55**	**GW**
Chincholi Gavali	AMTBS60	**110**	**PW**
Pimpalkhuta	AMTPZ032	**75**	**GW**
Dapori	AMTOBW125	**116**	**PW**
Dhanora	AMTOBW126	**121**	**PW**
Chikhal sawangi	AMT125	**67**	**GW**
Morshi	AMTOBW123	**131**	**PW**
Pala	AMT127	**91**	**GW**
Pardi	AMTOBW122	**66**	**GW**
Khanapur`	AMTOBW124	**82**	**GW**
Riddhapur	AMTBS71	**117**	**PW**
Vishnora	AMTOBW172	**63**	**GW**
Yerla	AMTOBW121	**94**	**GW**
Hivarkhed	AMTT1	**106**	**PW**
Nasirpur	AMTT2	**62**	**GW**

Taluka : Morshi			
Villages	**Well No.**	**WQI**	**Category**
2009 (With Fe) (Contd..)			
Riddhapur	AMTBS71	**110**	**PW**
Vishnora	AMTOBW172	**38**	**EXLT**
Yerla	AMTOBW121	**84**	**GW**
Kamalpur	AMTOBW131	**154**	**PW**

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x3(Contd..) :Amravati District

Taluka : Nandgaon Khandeshwar			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe)			
Shivni	T/AV-104	**190**	**PW**
2007 (With Fe)			
Hivara Bk.	AMTOBW087	**61**	**GW**
Mahuli Chor	AMTPZ004	**151**	**PW**
Shivani Ra.	AMTPZ005	**88**	**GW**
Nandgaon Khandeshwar	AMTOBW159	**132**	**PW**
Pimpalgaon Ipani	AMTOBW156	**87**	**GW**
Pimpri Nipani	AMTOBW150	**117**	**PW**
Hivara Murade	AMTOBW151	**58**	**GW**
2010 (With Fe)			
Nandgaon	AMTOBW159	**109**	**PW**
Mahulichor	AMTPZ004	**106**	**PW**
Jalu	AMTOBW147	**66**	**GW**
Pimpalgaon Nipani	AMTOBW150	**123**	**PW**
Hiwara	AMTOBW087	**79**	**GW**
Hiwarmurade	AMTOBW151	**126**	**PW**
PimpalNipani	AMTOBW150	**111**	**PW**
Jalu	AMTOBW147	**97**	**GW**
Shelunatwa		**98**	**GW**
Dhamak		**101**	**PW**
Yewati		**91**	**GW**
Shivani Ra.	AMTPZ005	**87**	**GW**
Pimpalgaon Ipani	AMTOBW156	**61**	**GW**
Onkarkheda	AMTOBW160	**121**	**PW**

Taluka : Nandgaon Khandeshwar			
Villages	**Well No.**	**WQI**	**Category**
2008 (Without Fe)			
Shivni	T/AV-104	**185**	**PW**
2008 (With Fe)			
*PimpriNipani	AMTOBW150	**84**	**GW**
*Hivara Bk.	AMTOBW087	**98**	**GW**
*Jalu	AMTOBW147	**76**	**GW**
*Onkarkheda	AMTOBW160	**50**	**EXLT**
*Hivara Murade	AMTOBW151	**90**	**GW**
*Nandgaon Khandeshwar	AMTOBW159	**257**	**VPW**
2011 (With Fe)			
Jalu	AMTOBW147	**76**	**GW**
Mahulichor	AMTPZ004	**109**	**PW**
Hiwaramurade	AMTOBW151	**119**	**PW**
Pimpri Nipani	AMTOBW150	**111**	**PW**
Pimpalgaon Ipani	AMTOBW156	**104**	**PW**
Shivani(Rasul)	AMTPZ005	**71**	**GW**
Nandgaon KH.	AMTOBW159	**100**	**GW**
Onkarkheda	AMTOBW160	**118**	**PW**
Hiwara	AMTOBW151	**80**	**GW**
Jalu	AMTOBW147	**65**	**GW**
Mahuli Chor	AMTPZ004	**90**	**GW**
Pimpri Nipani	AMTOBW150	**93**	**GW**
Wadhona		**59**	**GW**
Pimpalgaon Ipani	AMTOBW156	**86**	**GW**

Taluka : Nandgaon Khandeshwar			
Villages	**Well No.**	**WQI**	**Category**
2009 (Without Fe)			
Shivni	T/AV-104	**116**	**PW**
2009 (With Fe)			
*Pimpri N.	AMTOBW150	**164**	**PW**
*Hivara Bk.	AMTOBW087	**79**	**GW**
*Jalu	AMTOBW147	**93**	**GW**
*Hivara Murade	AMTOBW151	**68**	**GW**
*Mahuli Chor	AMTPZ004	**101**	**PW**
*Nandgaon Khandeshwar	AMTOBW159	**97**	**GW**
*Onkarkheda	AMTOBW160	**110**	**PW**
*Pimpalgaon Ipani	AMTOBW156	**94**	**GW**
2011 Contd.. (With Fe)			
Yewati		**81**	**GW**
Dhamak		**86**	**GW**
Sangrampur		**46**	**EXLT**
Onkarkheda	AMTOBW160	**93**	**GW**
Khandala Kh.		**50**	**GW**
Shirpur		**39**	**EXLT**

Table x3(Contd..) :Amravati District

Taluka : Tiwasa				Taluka : Tiwasa				Taluka : Tiwasa			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Sawarkheda	G/AV-028	**59**	**GW**	Sawarkheda	G/AV-028	**82**	**GW**	Sawarkheda	G/AV-028	**67**	**GW**
Teosa	G/AV-030	**145**	**PW**	Teosa	G/AV-030	**120**	**PW**	Teosa	G/AV-030	**134**	**PW**
2007 (With Fe)				**2008 (With Fe)**				**2009 (With Fe)**			
Anjangaon Singhi	AMTOBW139	**79**	**GW**	Anjangaon Singhi	AMTOBW139	**57**	**GW**	Tiwasa	AMTPZ033	**90**	**GW**
Mangarul Dastgir	AMPZ001	**167**	**PW**	Bharwadi	AMTPZ034	**56**	**GW**	Anjangaon Singhi	AMTOBW139	**105**	**PW**
Tiwasa	AMTPZ033	**94**	**GW**	Mangarul Dastgir	AMPZ001	**144**	**PW**	*Bharwadi	AMTPZ034	**76**	**GW**
Bharwadi	AMTPZ034	**94**	**GW**	Tiwasa	AMTPZ033	**128**	**PW**				
2010 (With Fe)				**2011 (With Fe)**							
Anjangaon Singhi	AMTOBW139	**102**	**PW**	Mangarul Dastgir	AMPZ001	**81**	**GW**				
Mangarul Dastgir	AMPZ001	**78**	**GW**	Bharwadi	AMTPZ034	**71**	**GW**				
Tiwasa	AMTPZ033	**94**	**GW**	Tiwsa	AMTPZ033	**92**	**GW**				
Anjansigi	AMTOBW139	**113**	**PW**	Anjansingi	AMTOBW139	**93**	**GW**				

Taluka : Warud				Taluka : Warud				Taluka : Warud			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Gadegaon	T/AV-099	**92**	**GW**	Gadegaon	T/AV-099	**113**	**PW**	Gadegaon	T/AV-099	**101**	**PW**
Jamgaon (via Khadka)	G/AV-059	**49**	**EXLT**	Jamgaon (via Khadka)	G/AV-059	**61**	**GW**	Jamgaon (via Khadka)	G/AV-059	**46**	**EXLT**
Tembhurkheda	T/AV-098	**125**	**PW**	Temburkheda	T/AV-098	**180**	**PW**	Tembhurkheda	T/AV-098	**108**	**PW**
Wadgaon (Fattepur)	T/AV-073	**110**	**PW**	Wadgaon (Fattepur)	T/AV-073	**166**	**PW**	Warud	G/AV-004	**135**	**PW**
Warud	G/AV-004	**123**	**PW**	Warud	G/AV-004	**129**	**PW**				

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x3(Contd..) :Amravati District

Taluka : Warud			
Villages	**Well No.**	**WQI**	**Category**
2007 (With Fe)			
*Ekdara	AMTT8	**82**	**GW**
*Jamgaon	AMTOBW119	**63**	**GW**
*Mangruli	AMTT7	**68**	**GW**
*Pusla	AMTT5	**69**	**GW**
Karajgaon	AMTPZ014	**85**	**GW**
Mahendri	AMTOBW100	**41**	**EXLT**
Pandhari	AMTOBW101	**48**	**EXLT**
Shendurjnaghat	AMTT6	**134**	**PW**
Wathoda	AMTOBW105	**78**	**GW**
Benoda	AMTOBW117	**60**	**GW**
Jarud	AMTPZ027	**68**	**GW**
Karwar	AMTOBW102	**48**	**EXLT**
Manakapur	AMTOBW118	**53**	**GW**
Warud	AMTOBW12	**50**	**EXLT**
Dhaga	AMTOBW106	**54**	**GW**
Wadgaon	AMTOBW113	**68**	**GW**
2011 (With Fe)			
Jarud	AMTPZ027	**96**	**GW**
Wathoda	AMTOBW105	**93**	**GW**
Wadegaon`	AMTOBW113	**72**	**GW**
Karajgaon	AMTPZ014	**78**	**GW**
Tembhurkheda	AMTOBW110	**100**	**PW**
Aamner	AMTOBW107	**77**	**GW**
Amdapur	AMTOBW120	**94**	**GW**
Dhaga	AMTOBW106	**79**	**GW**
Mankapur	AMTOBW118	**66**	**GW**
Warud	AMTOBW12	**56**	**GW**
Pandhari	AMTOBW101	**81**	**GW**

Taluka : Warud			
Villages	**Well No.**	**WQI**	**Category**
2009 (With Fe)			
Benoda	AMTOBW117	**90**	**GW**
Dhaga	AMTOBW106	**64**	**GW**
Jamgaon	AMTOBW119	**62**	**GW**
Mangruli	AMTT7	**87**	**GW**
Pandhari	AMTOBW101	**69**	**GW**
Tembhurkheda	AMTOBW110	**109**	**PW**
Wadgaon	AMTOBW113	**68**	**GW**
Ekdara	AMTT8	**52**	**GW**
Jarud	AMTPZ027	**93**	**GW**
Wathoda	AMTOBW105	**79**	**GW**
*Mahendri	AMTOBW100	**75**	**GW**
*Karajgaon	AMTPZ014	**84**	**GW**
*Shendurjnaghat	AMTT6	**68**	**GW**
Data for 2008 (With Fe) Not Available			
2011 Contd.. (With Fe)			
Benoda	AMTOBW117	**100**	**PW**
Jamgaon	AMTOBW119	**84**	**GW**
Surali	AMTT4	**100**	**PW**
Pusala	AMTT5	**97**	**GW**
Shendurjnaghat	AMTT6	**74**	**GW**
Mangruli	AMTT7	**89**	**GW**
Ekdara	AMTT8	**67**	**GW**

Taluka : Warud			
Villages	**Well No.**	**WQI**	**Category**
2010 (With Fe)			
Benoda	AMTOBW117	**91**	**GW**
Jarud	AMTPZ027	**68**	**GW**
Tembhurkheda	AMTOBW110	**95**	**GW**
Satnur		**76**	**GW**
Pusala	AMTT5	**95**	**GW**
Pandhari	AMTOBW101	**76**	**GW**
Jamgaon	AMTOBW119	**76**	**GW**
Musalkheda		**95**	**GW**
Tembhurkheda	AMTOBW110	**96**	**GW**
Mahendri	AMTOBW100	**52**	**GW**
Jarud	AMTPZ027	**103**	**PW**
Rajegaon		**61**	**GW**
Ekaladara	AMTT8	**65**	**GW**
Amner	AMTOBW107	**62**	**GW**
Amdapur	AMTOBW120	**97**	**GW**
Surali	AMTT4	**93**	**GW**
Tiwasa Gh.		**72**	**GW**
Amdapur	AMTOBW120	**85**	**GW**
Wathola	AMTOBW105	**125**	**PW**
Pusala	AMTT5	**95**	**GW**
Warud	AMTOBW12	**64**	**GW**
Shendurjnaghat	AMTT6	**68**	**GW**
Warud	AMTOBW12	**80**	**GW**
Karvat	AMTOBW102	**62**	**GW**
Jamgaon	AMTOBW119	**71**	**GW**
Mangaruli	AMTT7	**107**	**PW**
Pandhari	AMTOBW101	**69**	**GW**
Dhanora	BS64	**92**	**GW**
Mankapur	AMTOBW118	**69**	**GW**

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.4: Water Quality Index of Groundwater of Aurrangabad District

Taluka : Aurangabad				Taluka : Aurangabad				Taluka : Aurangabad			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Kinnal	G/AU-030	**120**	**PW**	Kinnal	G/AU-030	**84**	**GW**	Kinnal	G/AU-030	**106**	**PW**
Walur Tanda	G/AU-018	**184**	**PW**	Walur Tanda	G/AU-018	**210**	**VPW**	Walur Tanda	G/AU-018	**152**	**PW**
Apatgaon	G/AU-026	**125**	**PW**	Apatgaon	G/AU-026	**170**	**PW**				
2010 (With Fe)											
Dhawalapuri	AUPZ005	**89**	**GW**	Shendra K	AUOBW027	**67**	**GW**	Dhawalapuri	AUPZ005	**102**	**PW**
Golthgaon	AUOBW042	**84**	**GW**	Pendgaon aland	AUPZ003	**96**	**GW**	Golthgaon	AUOBW042	**127**	**PW**
Hatmali	AUOBW025	**81**	**GW**	Singi	AUPZ004	**89**	**GW**	Kadrabad	AUPZ002	**107**	**PW**
Kachner [ts-3]	AUWQN02	**83**	**GW**	Kadrabad	AUPZ002	**98**	**GW**	Kolghar	AUPZ013	**71**	**GW**
Kadrabad	AUPZ002	**132**	**PW**	Kolghar	AUPZ013	**76**	**GW**	Shekta	AUOBW043	**109**	**PW**
Patoda[ts-5]	AUWQN03	**74**	**GW**	Patoda[ts-5]	AUWQN03	**119**	**PW**				
Shekta	AUOBW043	**131**	**PW**	Pendgaon aland	AUPZ003	**72**	**GW**				
2011 (With Fe)											
*Dhawalapuri	AUPZ005	**73**	**GW**	*Shendra K	AUOBW027	**77**	**GW**	Golthgaon	AUOBW042	**181**	**PW**
*Golthgaon	AUOBW042	**72**	**GW**	*Pendgaon aland	AUPZ003	**108**	**PW**	Hatmali	AUOBW025	**116**	**PW**
*Hatmali	AUOBW025	**65**	**GW**	*Singi	AUPZ004	**133**	**PW**	Kachner	AUWQN02	**82**	**GW**
*Kachner	AUWQN02	**49**	**EXLT**	Patoda	AUWQN03	**169**	**PW**	Kadrabad	AUPZ002	**122**	**PW**
*Kadrabad	AUPZ002	**91**	**GW**	Singi	AUPZ004	**58**	**GW**	Kolghar	AUPZ012	**104**	**PW**
*Kolghar	AUPZ013	**96**	**GW**	Pendgaon aland	AUPZ003	**55**	**GW**	Shekta	AUOBW043	**108**	**PW**
*Patoda	AUWQN03	**135**	**PW**	Dhawalapuri	AUPZ005	**60**	**GW**	Shendra K	AUOBW027	**116**	**PW**
*Shekta	AUOBW043	**65**	**GW**					Kolghar	AUPZ013	**69**	**GW**

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.4 (Contd..) : Aurrangabad District

Taluka : Kannad				Taluka : Kannad				Taluka : Kannad			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Digar Pishore	G/AU-032	**121**	**PW**	Digar Pishore	G/AU-032	**92**	**GW**	Digar Pishore	G/AU-032	**94**	**GW**
Hatnur	G/AU-022	**125**	**PW**	Hatnur	G/AU-022	**160**	**PW**	Hatnur	G/AU-022	**121**	**PW**
2010 (With Fe)											
Andhaner	AUOBW063	**75**	**GW**	Rithi	AUPZ011	**58**	**GW**	Andhaner	AUOBW063	**51**	**GW**
Kannad[t-3]	AUWQN19	**81**	**GW**	Andhaner	AUOBW063	**66**	**GW**	Hingni[ts-20]	AUWQN20	**103**	**PW**
Nagad	AUOBW139	**57**	**GW**	Karanjkheda	AUOBW001	**70**	**GW**	Kannad[t-3]	AUWQN19	**79**	**GW**
Saigavan	AUOBW138	**79**	**GW**	Nadarpur	AUOBW005	**96**	**GW**	Nagad	AUOBW139	**83**	**GW**
Karanjkheda	AUOBW001	**62**	**GW**	Rithi	AUPZ011	**101**	**PW**	Pishor[ts-19]	AUWQN18	**83**	**GW**
Nadarpur	AUOBW005	**85**	**GW**	Wadali	AUPZ010	**96**	**GW**	Saigavan	AUOBW138	**136**	**PW**
2011 (With Fe)											
*Andhaner	AUOBW063	**78**	**GW**	*Hingni[ts-20]	AUWQN20	**268**	**VPW**	Rithi	AUPZ011	**57**	**GW**
*Kannad[t-3]	AUWQN19	**50**	**GW**	*Rithi	AUPZ011	**74**	**GW**	Saigavan	AUOBW138	**96**	**GW**
*Karanjkheda	AUOBW001	**61**	**GW**	*Wadali	AUPZ010	**121**	**PW**	Wadali	AUPZ010	**99**	**GW**
*Nadarpur	AUOBW005	**93**	**GW**	Andhaner	AUOBW063	**92**	**GW**	Pishor[ts-19]	AUWQN18	**52**	**GW**
*Nagad	AUOBW139	**64**	**GW**	Karanjkheda	AUOBW001	**68**	**GW**	Kannad[t-3]	AUWQN19	**79**	**GW**
*Pishor[ts-19]	AUWQN18	**55**	**GW**	Nadarpur	AUOBW005	**105**	**PW**	Hingni[ts-20]	AUWQN20	**131**	**PW**
*Saigavan	AUOBW138	**72**	**GW**	Nagad	AUOBW139	**73**	**GW**				

Taluka : Khultabad				Taluka : Khultabad				Taluka : Khultabad			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Khultabad	G/AU-045	**87**	**GW**	Khultabad	G/AU-045	**85**	**GW**	Khultabad	G/AU-045	**82**	**GW**
2010 (With Fe)				**2011 (With Fe)**							
Ellora	AUOBW068	**81**	**GW**	*Wanegaon	AUOBW009	**112**	**PW**	*Wadod bk.	AUPZ012	**53**	**GW**
Bodkha	AUOBW083	**89**	**GW**	*Ellora	AUOBW068	**84**	**GW**	Wanegaon	AUOBW009	**83**	**GW**
Golegaon	AUWQN21	**98**	**GW**	*Bodkha	AUOBW083	**86**	**GW**	Bodkha	AUOBW083	**61**	**GW**
Mhaismal	AUOBW007	**54**	**GW**	*Deolena BK	AUOBW008	**73**	**GW**	Deolena BK	AUOBW008	**114**	**PW**
Wadod bk.	AUPZ012	**55**	**GW**	*Golegaon	AUWQN21	**64**	**GW**	Ellora	AUOBW068	**98**	**GW**
Wanegaon	AUOBW009	**70**	**GW**	*Mhaismal	AUOBW007	**54**	**GW**	Mhaismal	AUOBW007	**76**	**GW**
								Golegaon	AUWQN21	**91**	**GW**

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.4 (Contd..) : Aurrangabad District

Taluka : Paithan				Taluka : Paithan				Taluka : Paithan			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2009 (Without Fe)**				**Data for 2008 Not Available (Without Fe)**			
Adul	G/AU-011	**704**	**UNSUT**	Adul	G/AU-011	**330**	**UNSUT**				
2010 (With Fe)											
Takali Ambad	AUOBW116	**85**	**GW**	Thergaon	AUOBW110	**484**	**UNSUT**	Paithan	AUOBW106	**81**	**GW**
Adul	AUOBW046	**248**	**VPW**	Wahegaon	AUOBW104	**118**	**PW**	Takali Ambad	AUOBW116	**89**	**GW**
Apegaon	AUWQN06	**114**	**PW**	Wahegaon	AUWQN07	**161**	**PW**	Telwadi	AUOBW108	**79**	**GW**
Bidkin	AUOBW099	**294**	**VPW**	Warwandi kh	AUOBW101	**116**	**PW**	Thergaon	AUOBW110	**351**	**UNSUT**
Dera	AUPZ006	**177**	**PW**	Adul	AUOBW046	**189**	**PW**	Thergaon	AUWQN04	**129**	**PW**
Ektuni	AUOBW047	**120**	**PW**	Dera	AUPZ006	**168**	**PW**	Thergaon	AUWQN04	**79**	**GW**
Katpur	AUWQN05	**92**	**GW**	Thergaon	AUOBW110	**63**	**GW**	Bidkin	AUOBW099	**128**	**PW**
Katpur	AUWQN05	**106**	**PW**	Wahegaon	AUWQN07	**119**	**PW**	Dera	AUPZ006	**124**	**PW**
Murma	AUOBW114	**130**	**PW**	Takali Ambad	AUOBW116	**75**	**GW**	Murma	AUOBW114	**144**	**PW**
Paithan	AUOBW106	**68**	**GW**	Adul	AUOBW046	**209**	**VPW**	Wahegaon	AUOBW104	**78**	**GW**
Takali Ambad	AUOBW116	**195**	**PW**	Apegaon	AUWQN06	**106**	**PW**	Wahegaon	AUWQN07	**107**	**PW**
Telwadi	AUOBW108	**112**	**PW**	Ektuni	AUOBW047	**64**	**GW**	Warwandi kh	AUOBW101	**73**	**GW**
2011 (With Fe)											
*Wahegaon	AUWQN07	**73**	**GW**	*Warwandi kh	AUOBW101	**59**	**GW**	Ektuni	AUOBW047	**227**	**VPW**
*Adul	AUOBW046	**248**	**VPW**	*Bidkin	AUOBW099	**199**	**PW**	Katpur	AUWQN05	**100**	**GW**
*Apegaon	AUWQN06	**95**	**GW**	*Paithan	AUOBW106	**70**	**GW**	Murma	AUOBW114	**127**	**PW**
*Dera	AUPZ006	**180**	**PW**	*Telwadi	AUOBW108	**50**	**EXLT**	Paithan	AUOBW106	**86**	**GW**
*Ektuni	AUOBW047	**75**	**GW**	*Wahegaon	AUOBW104	**107**	**PW**	Takali Ambad	AUOBW116	**177**	**PW**
*Katpur	AUWQN05	**97**	**GW**	*Wahegaon	AUWQN08	**69**	**GW**	Telwadi	AUOBW108	**90**	**GW**
*Murma	AUOBW114	**73**	**GW**	Adul	AUOBW046	**186**	**PW**	Thergaon	AUOBW110	**343**	**UNSUT**
*Takali Ambad	AUOBW116	**46**	**EXLT**	Apegaon	AUWQN06	**110**	**PW**	Thergaon	AUWQN04	**92**	**GW**
*Thergaon	AUOBW110	**456**	**UNSUT**	Bidkin	AUOBW099	**177**	**PW**	Wahegaon	AUOBW104	**120**	**PW**
*Thergaon	AUWQN04	**102**	**PW**	Dera	AUPZ006	**110**	**PW**	Wahegaon	AUWQN07	**97**	**GW**
								Warwandi kh	AUOBW101	**74**	**GW**

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.4 (Contd..) : Aurrangabad District

Taluka : Phulambri				Taluka : Phulambri				Taluka : Phulambri			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Chauka	G/AU-024	**146**	**PW**	Chauka	G/AU-024	**79**	**GW**	Chauka	G/AU-024	**131**	**PW**
Pathri	G/AU-002	**128**	**PW**	Pathri	G/AU-002	**105**	**PW**				
2010 (With Fe)				**2010 Contd.. (With Fe)**				**2011 Contd.. (With Fe)**			
Ranjangaon	AUOBW039	**53**	**GW**	Pirbawada	AUPZ001	**162**	**PW**	*Waghalgaon	AUPZ007	**113**	**PW**
Gevrai Gungi	AUOBW040	**58**	**GW**	Waghalgaon	AUPZ007	**88**	**GW**	Pandharpur	AUWQN01	**136**	**PW**
Girsawali	AUOBW038	**50**	**GW**	**2011 (With Fe)**				Gevrai Gungi	AUOBW040	**69**	**GW**
Phulambri	AUOBW021	**82**	**GW**	*Pandharpur	AUWQN01	**92**	**GW**	Girsawali	AUOBW038	**70**	**GW**
Pirbawada	AUPZ001	**95**	**GW**	*Gevrai Gungi	AUOBW040	**48**	**EXLT**	Phulambri	AUOBW021	**77**	**GW**
Ranjangaon	AUOBW039	**139**	**PW**	*Girsawali	AUOBW038	**52**	**GW**	Pirbawada	AUPZ001	**93**	**GW**
Waghalgaon	AUPZ007	**100**	**GW**	*Phulambri	AUOBW021	**80**	**GW**	Ranjangaon	AUOBW039	**113**	**PW**
Gevrai Gungi	AUOBW040	**64**	**GW**	*Pirbawada	AUPZ001	**87**	**GW**	Waghalgaon	AUPZ007	**103**	**PW**
Pandharpur	AUWQN01	**82**	**GW**	*Ranjangaon	AUOBW039	**100**	**GW**				

Taluka : Sillod				Taluka : Sillod				Taluka : Sillod			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Ajanta	T/AU-004	**106**	**PW**	Ajanta	T/AU-004	**92**	**GW**	Kannad	G/AU-013	**91**	**GW**
Kaigaon	G/AU-020	**81**	**GW**								
2010 (With Fe)											
Bhavan[ts-10]	AUWQN08	**96**	**GW**	Anad	AUOBW122	**66**	**GW**	Mangrul	AUOBW032	**52**	**GW**
Dongargaon	AUOBW033	**63**	**GW**	Jamthi	AUOBW123	**74**	**GW**	Sillod[ts-11]	AUWQN09	**87**	**GW**
Hatti	AUPZ009	**84**	**GW**	Upla	AUOBW006	**134**	**PW**	Upla	AUOBW006	**93**	**GW**
Madani	AUOBW048	**112**	**PW**	Bhavan[ts-10]	AUWQN08	**344**	**UNSUT**	Wadala	AUOBW010	**115**	**PW**
Mangrul	AUOBW032	**74**	**GW**	Bhavan[ts-10]	AUWQN08	**92**	**GW**	Anad	AUOBW122	**95**	**GW**
Sillod[ts-11]	AUWQN09	**129**	**PW**	Dongargaon	AUOBW033	**91**	**GW**	Jamthi	AUOBW123	**85**	**GW**
Wadala	AUOBW010	**46**	**EXLT**	Hatti	AUPZ009	**67**	**GW**	Madani	AUOBW048	**65**	**GW**
2011 (With Fe)											
*Bhavan[ts-10]	AUWQN09	**125**	**PW**	*Jamthi	AUOBW123	**49**	**EXLT**	Madani	AUOBW048	**105**	**PW**
*Dongargaon	AUOBW033	**53**	**GW**	Madani	AUOBW048	**92**	**GW**	Mangrul	AUOBW032	**112**	**PW**
*Hatti	AUPZ009	**56**	**GW**	Anad	AUOBW122	**62**	**GW**	Sillod[ts-11]	AUWQN09	**98**	**GW**
*Mangrul	AUOBW032	**61**	**GW**	Bhavan[ts-10]	AUWQN08	**90**	**GW**	Upla	AUOBW006	**64**	**GW**
*Upla	AUOBW006	**91**	**GW**	Dongargaon	AUOBW033	**62**	**GW**	Wadala	AUOBW010	**50**	**GW**
*Wadala	AUOBW010	**39**	**EXLT**	Hatti	AUPZ009	**72**	**GW**	Jamthi	AUOBW123	**83**	**GW**
*Anad	AUOBW122	**46**	**EXLT**								

Table x.4 (Contd..) : Aurrangabad District

Taluka : Soyegaon				Taluka : Soyegaon				Taluka : Soyegaon			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Fardapur	G/AU-029	**77**	**GW**	Fardapur	G/AU-029	**103**	**PW**	Fardapur	G/AU-029	**115**	**PW**
2010 (With Fe)											
Jamthi[	AUWQN22	**55**	**GW**	Galwada	AUOBW133	**61**	**GW**	Fardapur	AUOBW127	**96**	**GW**
Galwada	AUOBW133	**55**	**GW**	Palaskheda	AUOBW121	**51**	**GW**	Jarandi	AUOBW129	**100**	**PW**
Jarandi	AUOBW129	**78**	**GW**	Galwada	AUPZ008	**88**	**GW**	Palaskheda	AUOBW121	**61**	**GW**
Fardapur	AUOBW127	**132**	**PW**	Galwada	AUPZ008	**90**	**GW**	Jamthi	AUWQN22	**145**	**PW**
2011 (With Fe)											
*Galwada	AUPZ008	**60**	**GW**	*Ghanegaon	AUOBW117	**113**	**PW**	Ghanegaon	AUOBW117	**109**	**PW**
*Fardapur	AUOBW127	**93**	**GW**	*Palaskheda	AUOBW121	**72**	**GW**	Jarandi	AUOBW129	**92**	**GW**
*Galwada	AUOBW133	**42**	**EXLT**	Galwada	AUPZ008	**75**	**GW**	Palaskheda	AUOBW121	**60**	**GW**
*Jarandi	AUOBW129	**78**	**GW**	Fardapur	AUOBW127	**94**	**GW**	Jamthi	AUWQN22	**96**	**GW**
*Jamthi	AUWQN22	**56**	**GW**	Galwada	AUOBW133	**79**	**GW**				

Taluka : Vaijapur				Taluka : Vaijapur				Taluka : Vaijapur			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2009 (Without Fe)**				**Data for 2008 Not Available (Without Fe)**			
Rotegaon	G/AU-006	**79**	**GW**	Rotegaon	G/AU-006	**74**	**GW**				
Tunki	G/AU-016	**401**	**UNSUT**	Tunki	G/AU-016	**408**	**UNSUT**				
2010 (With Fe)											
Borsar	AUOBW057	**69**	**GW**	Shivur	AUOBW054	**105**	**PW**	Malisagaj	AUOBW074	**60**	**GW**
Jambargaon	AUOBW059	**117**	**PW**	Talwada	AUOBW140	**114**	**PW**	Nagamthan	AUOBW061	**79**	**GW**
Jambargaon	AUWQN10	**99**	**GW**	Vajapur	AUOBW050	**221**	**VPW**	Parsoda	AUWQN12	**106**	**PW**
Malisagaj	AUOBW074	**87**	**GW**	Borsar	AUOBW057	**105**	**PW**	Shivur	AUOBW054	**78**	**GW**
Nagamthan	AUWQN11	**173**	**PW**	Jambargaon	AUOBW059	**162**	**PW**	Talwada	AUOBW140	**92**	**GW**
Parsoda	AUWQN12	**64**	**GW**	Jambargaon	AUWQN10	**180**	**PW**	Vajapur	AUOBW050	**145**	**PW**
2011 (With Fe)											
*Borsar	AUOBW057	**42**	**EXLT**	*Parsoda	AUWQN12	**64**	**GW**	Jambargaon	AUWQN10	**207**	**VPW**
*Jambargaon	AUOBW059	**95**	**GW**	*Shivur	AUOBW054	**73**	**GW**	Malisagaj	AUOBW074	**103**	**PW**
*Jambargaon	AUWQN10	**58**	**GW**	*Talwada	AUOBW140	**53**	**GW**	Nagamthan	AUOBW061	**127**	**PW**
*Malisagaj	AUOBW074	**93**	**GW**	*Vajapur	AUOBW050	**92**	**GW**	Shivur	AUOBW054	**133**	**PW**
*Nagamthan	AUOBW061	**53**	**GW**	Borsar	AUOBW057	**172**	**PW**	Talwada	AUOBW140	**81**	**GW**
*Nagamthan	AUWQN11	**93**	**GW**	Jambargaon	AUOBW059	**180**	**PW**	Vajapur	AUOBW050	**214**	**VPW**
								Nagamthan	AUWQN11	**98**	**GW**
								Parsoda	AUWQN12	**163**	**PW**

Table x.4 (Contd..) : Aurrangabad District

Taluka : Gangapur					Taluka : Gangapur					Taluka : Gangapur			
Villages	**Well No.**	**WQI**	**Category**		**Villages**	**Well No.**	**WQI**	**Category**		**Villages**	**Well No.**	**WQI**	**Category**
2010 (With Fe)													
Agathan	AUPZ015	**87**	**GW**		Kinhala	AUOBW071	**101**	**PW**		Jakmatha	AUOBW093	**54**	**GW**
Derda	AUWQN15	**80**	**GW**		Limbejalgaon	AUOBW088	**98**	**GW**		Jamgaon	AUWQN16	**168**	**PW**
Jakmatha	AUOBW092	**72**	**GW**		Derda	AUWQN15	**67**	**GW**		Kaigaon	AUWQN13	**238**	**VPW**
Nevergaon	AUOBW079	**85**	**GW**		Agathan	AUPZ015	**63**	**GW**		Kaigaon	AUWQN13	**204**	**VPW**
Ranjangaon(n)	AUOBW075	**69**	**GW**		Babargaon	AUWQN17	**93**	**GW**		Limbejalgaon	AUOBW088	**85**	**GW**
Babargaon	AUWQN17	**74**	**GW**		Dahegaon	AUOBW090	**64**	**GW**		Nevergaon	AUOBW079	**66**	**GW**
Dahegaon	AUOBW090	**72**	**GW**		Dahegaon	AUWQN14	**60**	**GW**		Ranjangaon(n)	AUOBW075	**73**	**GW**
Dahegaon	AUWQN14	**97**	**GW**		Derda	AUWQN15	**57**	**GW**		Kinhala	AUOBW071	**92**	**GW**
2011 (With Fe)													
*Agathan	AUPZ015	**54**	**GW**		*Kinhala	AUOBW071	**79**	**GW**		Limbejalgaon	AUOBW088	**118**	**PW**
*Babargaon	AUWQN17	**155**	**PW**		*Limbejalgaon	AUOBW088	**79**	**GW**		Nevergaon	AUOBW079	**196**	**PW**
*Dahegaon	AUOBW090	**50**	**GW**		*Nevergaon	AUOBW079	**83**	**GW**		Ranjangaon(n)	AUOBW075	**66**	**GW**
*Dahegaon	AUWQN14	**47**	**EXLT**		*Ranjangaon(n)	AUOBW075	**60**	**GW**		Kaigaon	AUWQN13	**309**	**UNSUT**
*Derda	AUWQN15	**79**	**GW**		Agathan	AUPZ015	**107**	**PW**		Dahegaon	AUWQN14	**91**	**GW**
*Jakmatha	AUOBW092	**66**	**GW**		Dahegaon	AUOBW090	**87**	**GW**		Derda	AUWQN15	**193**	**PW**
*Jamgaon	AUWQN16	**79**	**GW**		Jakmatha	AUOBW092	**64**	**GW**		Jamgaon	AUWQN16	**189**	**PW**
*Kaigaon	AUWQN13	**204**	**VPW**		Kinhala	AUOBW071	**86**	**GW**		Babargaon	AUWQN17	**66**	**GW**

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.5: Water Quality Index of Groundwater of Beed District

Taluka : Ambejogai				Taluka : Ambejogai				Taluka : Ambejogai			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Kumbhephal	G/BD-010	**74**	**GW**	Ambejogai	G/BD-003	**45**	**EXLT**	Kumbhephal	G/BD-010	**106**	**PW**
Talni	G/BD-001	**58**	**GW**	Kumbhephal	G/BD-010	**176**	**PW**	Talni	G/BD-001	**52**	**GW**
2010 (With Fe)				Talni	G/BD-001	**66**	**GW**				
Ambajogai	BDOBW080	**72**	**GW**	**2011 (With Fe)**							
Chanai	BDOBW068	**85**	**GW**	Ambajogai	BDOBW080	**35**	**EXLT**	Ambajogai	BDOBW097	**96**	**GW**
Patoda	BDOBW096	**54**	**GW**	Chanai	BDOBW068	**127**	**PW**	Ambajogai	BDOBW100	**37**	**EXLT**
Sonawala	BDOBW069	**53**	**GW**	Patoda	BDOBW096	**29**	**EXLT**	Ambejogai	BDPZ023	**42**	**EXLT**
Bhauthana.	BDPZ020	**61**	**GW**	Bhauthana.	BDPZ020	**82**	**GW**	*Sonawala	BDOBW069	**51**	**GW**

Taluka : Ashti				Taluka : Ashti				Taluka : Ashti			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2011 (With Fe)**			
Ashti	K/BD-008	**136**	**PW**	Ashti	K/BD-008	**121**	**PW**	Ashta [h.n.]	BDPZ017	**64**	**GW**
Doithana	G/BD-023	**91**	**GW**	**Data for 2009 Not Available (Without Fe)**				Ashti	BDOBW122	**94**	**GW**
2010 (With Fe)								Dhanora.	BDPZ012	**85**	**GW**
Ashta [h.n.]	BDPZ017	**74**	**GW**	Pimpri Ghumri	BDPZ011	**63**	**GW**	Dongargaon	BDOBW114	**83**	**GW**
Chinchpur	BDOBW126	**76**	**GW**	Ashti	BDOBW122	**105**	**PW**	Hatola	BDOBW013	**65**	**GW**
Dhanora.	BDPZ012	**70**	**GW**	Dongargaon	BDOBW114	**57**	**GW**	Kinni	BDOBW118	**61**	**GW**
Kuntephal	BDOBW107	**49**	**EXLT**	Hatola	BDOBW013	**57**	**GW**	Kuntephal	BDOBW107	**128**	**PW**
Loni	BDOBW103	**51**	**GW**	Kinni	BDOBW118	**60**	**GW**	Loni	BDOBW103	**181**	**PW**
				Nimgaon choba	BDOBW117	**62**	**GW**	Nimgaon choba	BDOBW117	**127**	**PW**
								Pimpri Ghumri	BDPZ011	**79**	**GW**

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.5(Contd..) : Beed District

Taluka : Beed			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe)			
Pali	G/BD-036	**58**	**GW**
2010 (With Fe)			
Neknoor	BDOBW089	**53**	**GW**

Taluka : Beed			
Villages	**Well No.**	**WQI**	**Category**
2008 (Without Fe)			
Pali	G/BD-036	**73**	**GW**
Bhend Takli	G/BD-042	**58**	**GW**
2011 (With Fe)			
Beed	BDOBW027	**58**	**GW**
Beed	BDOBW034	**57**	**GW**
Dharur	BDOBW054	**116**	**PW**
Ambajogai	BDOBW075	**117**	**PW**

Taluka : Beed			
Villages	**Well No.**	**WQI**	**Category**
2009 (Without Fe)			
Pali	G/BD-036	**68**	**GW**
Bhend Takli	G/BD-042	**56**	**GW**
Pithi	G/BD-017	**135**	**PW**
Beed	BDOBW052	**56**	**GW**
Beed	BDPZ008	**77**	**GW**
*Neknoor	BDOBW089	**56**	**GW**
*Beed	BDOBW086	**60**	**GW**
*Beed	BDPZ018	**61**	**GW**

Taluka : Dharur			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe)			
Dharur	G/BD-020	**144**	**PW**
Pimpalwandi	G/BD-018	**65**	**GW**
2011 (With Fe)			
Kari.	BDPZ014	**61**	**GW**
*Kari.	BDPZ014	**99**	**GW**

Taluka : Dharur			
Villages	**Well No.**	**WQI**	**Category**
2008 (Without Fe)			
Dharur	G/BD-020	**201**	**VPW**
Pimpalwandi	G/BD-018	**69**	**GW**
Data for 2010 Not Available for With Fe			

Taluka : Dharur			
Villages	**Well No.**	**WQI**	**Category**
2009 (Without Fe)			
Pimpalwandi	G/BD-018	**63**	**GW**

Taluka : Kaij			
Villages	**Well No.**	**WQI**	**Category**
2009 (Without Fe)			
Kej	G/BD-047	**130**	**PW**
Data for 2007, 2008 Not Available (Without Fe)			

Taluka : Kaij			
Villages	**Well No.**	**WQI**	**Category**
2010 (With Fe)			
Bansarola	BDPZ022	**66**	**GW**
Malegaon	BDPZ022	**73**	**GW**

Taluka : Kaij			
Villages	**Well No.**	**WQI**	**Category**
2011 (With Fe)			
*Malegaon	BS-41	**67**	**GW**

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.5(Contd..) : Beed District

Taluka : Georai			
Villages	**Well No.**	**WQI**	**Category**
2009 (Without Fe)			
Patrud	G/BD-059	**155**	**PW**
Data for 2007, 2008 Not Available (Without Fe)			

Taluka : Georai			
Villages	**Well No.**	**WQI**	**Category**
2010 (With Fe)			
Bhend Takli	BDOBW127	**60**	**GW**
Georai	BDOBW024	**124**	**PW**
Hirapur	BDOBW033	**116**	**PW**
Hiwarwadi	BDOBW014	**61**	**GW**
Mahar takli	BDOBW002	**112**	**PW**
Padalsinghi	BDOBW032	**60**	**GW**
Padalsinghi	BDPZ005	**57**	**GW**
Tagadgaon	BDPZ001	**132**	**PW**
Tagadgaon	BDWQN001	**71**	**GW**
Talwada	BDOBW030	**55**	**GW**
Umapur	BDOBW015	**101**	**PW**

Taluka : Georai			
Villages	**Well No.**	**WQI**	**Category**
2011 (With Fe)			
Georai	BDOBW024	**127**	**PW**
Hirapur	BDOBW033	**177**	**PW**
Hiwarwadi	BDOBW014	**88**	**GW**
Mahar takli	BDOBW002	**58**	**GW**
Padalsinghi	BDOBW032	**62**	**GW**
Padalsinghi	BDPZ005	**51**	**GW**
Tagadgaon	BDPZ001	**125**	**PW**
Tagadgaon	BDWQN001	**52**	**GW**
Umapur	BDOBW015	**57**	**GW**
*Bhend Takli	BDOBW127	**51**	**GW**
*Talwada	BDOBW030	**45**	**EXLT**

Taluka : Parali			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe)			
Sirsala	G/BD-027	**194**	**PW**
2009 (Without Fe)			
Sirsala	G/BD-027	**162**	**PW**

Taluka : Parali			
Villages	**Well No.**	**WQI**	**Category**
2008 (Without Fe)			
Dharmapuri	G/BD-045	**60**	**GW**
Parli	G/BD-034	**143**	**PW**
Sirsala	G/BD-027	**199**	**PW**
Data for 2010 Not Available (With Fe)			

Taluka : Parali			
Villages	**Well No.**	**WQI**	**Category**
2011 (With Fe)			
Sangam	BDPZ010	**86**	**GW**
Wadgaon	BDPZ021	**39**	**EXLT**
*Wadgaon	BDPZ021	**81**	**GW**
Pimpri bk	BDOBW077	**41**	**EXLT**

Taluka : Patoda			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe)			
Patoda	G/BD-032	**105**	**PW**
2010 (With Fe)			
Naigaon	BDOBW026	**75**	**GW**
Patoda	BDPZ019	**58**	**GW**
Vidyakinhi	BDOBW085	**57**	**GW**

Taluka : Patoda			
Villages	**Well No.**	**WQI**	**Category**
2008 (Without Fe)			
Daskhed	G/BD-022	**78**	**GW**
Patoda	G/BD-032	**118**	**PW**
2011 (With Fe)			
Amalner	BDPZ013	**52**	**GW**
Naigaon	BDOBW026	**67**	**GW**
Patoda	BDPZ019	**47**	**EXLT**
Suppa	BDOBW124	**51**	**GW**
Shirapur ghat	BDOBW022	**141**	**PW**

Taluka : Patoda			
Villages	**Well No.**	**WQI**	**Category**
2009 (Without Fe)			
Daskhed	G/BD-022	**65**	**GW**
Patoda	G/BD-032	**112**	**PW**

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.5(Contd..) : Beed District

Taluka : Shirur Kasar			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe)			
Manur	G/BD-016	**242**	**VPW**
2011 (With Fe)			
Shirur kasar	BDPZ007	**122**	**PW**

Taluka : Shirur Kasar			
Villages	**Well No.**	**WQI**	**Category**
2008 (Without Fe)			
Dhanora	K/BD-009	**106**	**PW**
Manur	G/BD-016	**248**	**VPW**

Taluka : Shirur Kasar			
Villages	**Well No.**	**WQI**	**Category**
2009 (Without Fe)			
Manur	G/BD-016	**99**	**GW**
Data for 2010 Not Available (With Fe)			

Taluka : Wadwani			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe)			
Telgaon	G/BD-021	**92**	**GW**
Wadwani	G/BD-025	**223**	**VPW**

Taluka : Wadwani			
Villages	**Well No.**	**WQI**	**Category**
2008 (Without Fe)			
Telgaon	G/BD-021	**102**	**PW**
Wadwani	G/BD-025	**138**	**PW**

Taluka : Wadwani			
Villages	**Well No.**	**WQI**	**Category**
2009 (Without Fe)			
Wadwani	G/BD-025	**242**	**VPW**
Data Not Available for 2010 and 2011 (With Fe)			

Taluka : Majalgaon			
Villages	**Well No.**	**WQI**	**Category**
2011 (With Fe)	**Data for 2007 to 2009 (Without Fe) and 2010 (With Fe) Not Available**		
*Majalgaon	BDPZ006	**57**	**GW**
*Roshanpuri	BDOBW062	**37**	**EXLT**
Telgaon bk.	BDOBW059	**60**	**GW**

Taluka : Majalgaon			
Villages	**Well No.**	**WQI**	**Category**
Waghora	BDPZ002	**51**	**GW**
Bavi	BDOBW057	**54**	**GW**
*Hivra bk.	BDOBW042	**81**	**GW**

Taluka : Majalgaon			
Villages	**Well No.**	**WQI**	**Category**
Khamgaon	BDPZ015	**40**	**EXLT**
*Longaon C	BDPZ009	**41**	**EXLT**
Longaon Camp	BDPZ010	**41**	**EXLT**

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.6: Water Quality Index of Groundwater of Bhandara District

Taluka : Bhandara				Taluka : Bhandara				Taluka : Bhandara			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Bhandara	G/BH-019	**50**	**GW**	Bhandara	G/BH-019	**44**	**EXLT**	Bhandara	G/BH-019	**48**	**EXLT**
Koka (Kokha)	G/BH-023	**72**	**GW**	Varti	G/BH-024	**204**	**VPW**	Palari	G/BH-008	**85**	**GW**
Palari	G/BH-008	**74**	**GW**	Koka (Kokha)	G/BH-023	**64**	**GW**	Sakra	G/BH-025	**137**	**PW**
				Palari	G/BH-008	**83**	**GW**				
2010 (With Fe)	**Data for 2011 (With Fe) Not Available**										
*Maudi	BHOBW008	**56**	**GW**	*Shahapur/ Fulmogra	BHOBW013	**83**	**GW**	*Mujbi	BHPZ002	**73**	**GW**
Maudi	BHOBW008	**85**	**GW**	Shahapur/ Fulmogra	BHOBW013	**83**	**GW**	Mujbi	BHPZ002	**94**	**GW**
*Pahela	BHOBW009	**104**	**PW**	*Dhargaon	BHPZ001G	**64**	**GW**	*Pahela	BHPZ003	**157**	**PW**
Pahela	BHOBW009	**110**	**PW**	Dhargaon	BHPZ001G	**75**	**GW**	Pahela	BHPZ003	**165**	**PW**
Saori/ Parsodi	BHOBW012	**151**	**PW**	Kondhi	BS-14	**64**	**GW**				
Bhandara	T-02	**138**	**PW**	Kondhi	BS-14	**72**	**GW**				
Bhandara	T-02	**163**	**PW**								

Taluka : Lakhandur				Taluka : Lakhandur				Taluka : Lakhandur			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Lakhandur	G/BH-021	**90**	**GW**	Lakhandur	G/BH-021	**81**	**GW**	Lakhandur	G/BH-021	**101**	**PW**
2010 (With Fe)	**Data for 2011 (With Fe) Not Available**										
*Palandur	BHOBW071	**92**	**GW**	*Dighori	BHOBW108	**106**	**PW**	Lakhandur	BHOBW109	**102**	**PW**
Palandur	BHOBW071	**107**	**PW**	Dighori	BHOBW108	**104**	**PW**	*Soni	BHOBW111	**141**	**PW**
*Bhagadi.	BHOBW105	**73**	**GW**	Lakhandur	BHOBW109	**93**	**GW**	Soni	BHOBW111	**139**	**PW**
Bhagadi.	BHOBW105	**131**	**PW**								

Taluka : Lakhani				Taluka : Lakhani				Taluka : Lakhani			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Lakhani	G/BH-005	**59**	**GW**	Lakhani	G/BH-005	**85**	**GW**	Palandur	G/BH-022	**79**	**GW**
Palandur	G/BH-022	**92**	**GW**	Palandur	G/BH-022	**64**	**GW**				
Data for 2010 and 2011 (With Fe) Not Available											

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.6(Contd..) : Bhandara District

Taluka : Mohadi				Taluka : Mohadi				Taluka : Mohadi			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Dahegaon	G/BH-026	**72**	**GW**	Chicholi	G/BH-015	**175**	**PW**	Chicholi	G/BH-015	**196**	**PW**
Jamb	G/BH-007	**121**	**PW**	Dahegaon	G/BH-026	**51**	**GW**	Dahegaon	G/BH-026	**64**	**GW**
Usarra	G/BH-018	**86**	**GW**	Jamb	G/BH-007	**184**	**PW**	Jamb	G/BH-007	**148**	**PW**
				Kharbi	G/BH-016	**171**	**PW**				
				Usarra	G/BH-018	**132**	**PW**				
2010 (With Fe)	**Data for 2011 (With Fe) Not Available**										
Koka	BHOBW006	**128**	**PW**	Dewhada Bk.(narsingtola)	BHOBW018	**187**	**PW**	Ussara	BHOBW027	**84**	**GW**
Koka	BHOBW006	**92**	**GW**	Mohadi	BHOBW025	**94**	**GW**	Warthi	BHOBW028	**75**	**GW**
Dahegaon	BHOBW017	**84**	**GW**	Mohadi	BHOBW025	**96**	**GW**	Warthi	BHOBW028	**74**	**GW**
Dahegaon	BHOBW017	**89**	**GW**	Satona	BHOBW026	**47**	**EXLT**	Wasera	BHPZ004	**144**	**PW**
Dewhada Bk.(narsingtola)	BHOBW018	**97**	**GW**	Satona	BHOBW026	**63**	**GW**				

Taluka : Pauni				Taluka : Pauni				Taluka : Pauni			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Pauni	G/BH-020	**67**	**GW**	Pauni	G/BH-020	**57**	**GW**	Pauni	G/BH-020	**59**	**GW**
2010 (With Fe)	**Data for 2011 (With Fe) Not Available**										
Adyal	BHOBW047	**71**	**GW**	Kanhalgaon (somnala)	BHOBW053	**143**	**PW**	Sindpuri	BHOBW058	**61**	**GW**
Adyal	BHOBW047	**164**	**PW**	Kanhalgaon (somnala)	BHOBW053	**57**	**GW**	Sindpuri	BHOBW058	**67**	**GW**
Chandi	BHOBW049	**39**	**EXLT**	Kondha	BHOBW054	**70**	**GW**	*Bhavad	BHPZ005	**54**	**GW**
Chandi	BHOBW049	**52**	**GW**	Kondha	BHOBW054	**96**	**GW**	Bhavad	BHPZ009	**153**	**PW**
Dhamni	BHOBW051	**77**	**GW**	Nilaj (Amgaon).	BHOBW055	**86**	**GW**	Chichal	BHPZ010	**90**	**GW**
Gosi Bk.	BHOBW052	**53**	**GW**	Nilaj (Amgaon).	BHOBW055	**160**	**PW**	Chichal	BHPZ010	**244**	**VPW**
Gosi Bk.	BHOBW052	**59**	**GW**	Pauni	BHOBW057	**147**	**PW**	*Wahi	BHPZ011	**229**	**VPW**

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.6(Contd..) : Bhandara District

Taluka : Sakoli				Taluka : Sakoli				Taluka : Sakoli			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Ekodi	G/BH-012	**26**	**EXLT**	Ekodi	G/BH-012	**27**	**EXLT**	Ekodi	G/BH-012	**34**	**EXLT**
Sakoli	G/BH-002	**53**	**GW**	Sakoli	G/BH-002	**47**	**EXLT**	Pitezari	G/BH-010	**127**	**PW**
Pitezari	G/BH-010	**68**	**GW**	Pitezari	G/BH-010	**79**	**GW**				
2010 (With Fe)	**Data for 2011 (With Fe) Not Available**										
Kesalwada	BHOBW031	**65**	**GW**	*Kumbhli.	BHOBW068	**60**	**GW**	Salebhatta	BHOBW074	**54**	**GW**
Parsodi	BHOBW042	**187**	**PW**	Kumbhli.	BHOBW068	**98**	**GW**	Salebhatta	BHOBW074	**67**	**GW**
*Dongargaon (Niharwani)	BHOBW064	**72**	**GW**	*Mundipar	BHOBW070	**49**	**EXLT**	Kaneri (dagdi)	BHPZ005	**67**	**GW**
Dongargaon (Niharwani)	BHOBW064	**88**	**GW**	Mundipar	BHOBW070	**91**	**GW**	Bampewada	BHPZ012	**79**	**GW**
Kesalwada	BHOBW066	**106**	**PW**	Parsodi	BHOBW072	**70**	**GW**	Bampewada	BHPZ012	**94**	**GW**
*Khandala	BHOBW067	**52**	**GW**	*Sakoli	BHOBW073	**107**	**PW**				
Khandala	BHOBW067	**67**	**GW**	Sakoli	BHOBW073	**94**	**GW**				

Taluka : Tumsar				Taluka : Tumsar				Taluka : Tumsar			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Madgi	G/BH-017	**75**	**GW**	Madgi	G/BH-017	**71**	**GW**	Madgi	G/BH-017	**77**	**GW**
Nilaj	G/BH-004	**77**	**GW**	Nilaj	G/BH-004	**76**	**GW**	Nilaj	G/BH-004	**87**	**GW**
Tumsar Khapa	G/BH-003	**105**	**PW**	Tumsar Khapa	G/BH-003	**114**	**PW**	Tumsar Khapa	G/BH-003	**129**	**PW**
Ajgaon	G/BH-011	**93**	**GW**	Ajgaon	G/BH-011	**88**	**GW**	Daodipar Khapa	G/BH-009	**116**	**PW**
Daodipar Khapa	G/BH-009	**88**	**GW**	Daodipar Khapa	G/BH-009	**82**	**GW**	Sihora	G/BH-013	**115**	**PW**
Sihora	G/BH-013	**89**	**GW**	Sihora	G/BH-013	**112**	**PW**				
2010 (With Fe)	**Data for 2011 (With Fe) Not Available**										
Bagheda	BHOBW030	**57**	**GW**	*Khapa (Tumsar).	BHOBW036	**79**	**GW**	Lendezari	BHPZ007	**91**	**GW**
*Bagheda	BHOBW030	**59**	**GW**	*Mangli	BHOBW042	**224**	**VPW**	Lendezari	BHPZ007	**88**	**GW**
*Chargaon	BHOBW031	**68**	**GW**	Rajapur	BHOBW044	**146**	**PW**	Sihora	BHPZ008	**90**	**GW**
Chikhli (kamkasur)	BHOBW033	**93**	**GW**	*Rajapur	BHOBW044	**187**	**PW**	Sihora	BHPZ008	**114**	**PW**
*Chikhli (kamkasur)	BHOBW033	**111**	**PW**	Chargaon	BHOBW066	**78**	**GW**				
Khapa (Tumsar).	BHOBW036	**79**	**GW**	Mangli (Tudka)	BHOBW072	**69**	**GW**				

Table x.7 : Water Quality Index of Groundwater of Buldhana District

Taluka : Buldhana			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe)			
Buldhana	T/BL-006	**136**	**PW**
Dongar Khandala	T/BL-035	**188**	**PW**
Warwand	T/BL-038	**149**	**PW**
Kolori	T/BL-040	**482**	**UNSUT**
Sultanpur	G/BL-042	**130**	**PW**
Wagnul	T/BL-060	**115**	**PW**
Village 1	T/BL-056	**418**	**UNSUT**
Village 2	T/BL-061	**71**	**GW**
2007 (With Fe)			
Birsingpur	BUWQN001	**101**	**PW**
Buldhana	BUOBW001	**76**	**GW**
Dattapur	BUOBW027	**116**	**PW**
Dhad	BUOBW018	**125**	**PW**
Jamathi	BUOBW016	**74**	**GW**
2010 (With Fe)			
Birsingpur	BUWQN001	**94**	**GW**
Buldana	BUOBW001	**114**	**PW**
Dattapur	BUOBW027	**119**	**PW**
Dhad	BUOBW018	**150**	**PW**
Jamthi	BUOBW016	**70**	**GW**
Data for 2008 (With Fe) Not Available			

Taluka : Buldhana			
Villages	**Well No.**	**WQI**	**Category**
2008 (Without Fe)			
Buldhana	T/BL-006	**134**	**PW**
Dongar Khandala	T/BL-035	**177**	**PW**
Warwand	T/BL-038	**126**	**PW**
Kolori	T/BL-040	**307**	**UNSUT**
Sultanpur	G/BL-042	**159**	**PW**
2007 (With Fe) (Contd..)			
Mhasla Bk.	BUOBW021	**85**	**GW**
Mondhala	BUOBW019	**104**	**PW**
Sagwan	BUPZ002	**83**	**GW**
Warud	BUPZ003	**66**	**GW**
2010 Contd.. (With Fe)			
Mhasala BK	BUOBW021	**149**	**PW**
Mondhala	BUOBW019	**111**	**PW**
Nandrakoli	BUOBW026	**136**	**PW**
Nandrakoli	BUPZ001	**49**	**EXLT**
Sagwan	BUPZ002	**108**	**PW**
Wadrud	BUPZ003	**76**	**GW**

Taluka : Buldhana			
Villages	**Well No.**	**WQI**	**Category**
2009 (Without Fe)			
Buldhana	T/BL-006	**102**	**PW**
Deolgaon Mahi	G/BL-031	**88**	**GW**
Sailani	G/BL-025	**95**	**GW**
Sultanpur	G/BL-042	**108**	**PW**
2009 (With Fe)			
Birsingpur	BUWQN001	**95**	**GW**
Nandra Koli	BUPZ001	**155**	**PW**
Mondhala	BUOBW019	**71**	**GW**
2011 (With Fe)			
*Birsingpur	BUWQN001	**97**	**GW**
*Dattapur	BUOBW027	**129**	**PW**
*Dhad	BUOBW018	**167**	**PW**
*Jamthi	BUOBW016	**82**	**GW**
*Mhasala BK	BUOBW021	**161**	**PW**
*Nandrakoli	BUPZ001	**151**	**PW**
*Wadrud	BUPZ003	**82**	**GW**
*Mondhala	BUOBW019	**118**	**PW**

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.7(Contd..) : Buldhana District

Taluka : Chikhali				Taluka : Chikhali				Taluka : Chikhali			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Amdapur	T/BL-013	**56**	**GW**	Amdapur	T/BL-013	**54**	**GW**	Karwand	T/BL-034	**92**	**GW**
Karwand	T/BL-034	**115**	**PW**	Karwand	T/BL-034	**100**	**GW**	Kelwad	G/BL-041	**125**	**PW**
Mera Khurd	G/BL-024	**83**	**GW**	Mera Khurd	G/BL-024	**114**	**PW**				
Naygaon	G/BL-020	**74**	**GW**								
2007 (With Fe)				**2011 (With Fe)**				**2011 (With Fe) (Contd..)**			
*Shelodi	BUOBW038	**56**	**GW**	Borgaon Kakde	BUOBW012	**47**	**EXLT**	Hatani	BUWQN004	**57**	**GW**
*Chikhali	BUWQN003	**97**	**GW**	Borgaon Wasu	BUWQN002	**58**	**GW**	Karwand	BUOBW062	**63**	**GW**
*Harani	BUOBW014	**64**	**GW**	Chikhali	BUWQN003	**92**	**GW**	Khor	BUOBW055	**45**	**EXLT**
*Hatani	BUWQN004	**61**	**GW**	Harni	BUOBW014	**50**	**EXLT**	Palaskhed	BUPZ004	**51**	**GW**
*Karwand	BUOBW062	**64**	**GW**	Sawana	BUOBW003	**116**	**PW**	Undri	BUOBW081	**111**	**PW**
*Undri	BUOBW081	**148**	**PW**	Selodi	BUOBW038	**96**	**GW**	**Data for 2008-2009 and 2010 Not Available (With Fe)**			
*BorgaonKaka.	BUOBW012	**55**	**GW**								
*Borgaon Vasu	BUWQN002	**65**	**GW**								

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.7(Contd..) : Buldhana District

Taluka : Khamgaon				Taluka : Khamgaon				Taluka : Khamgaon			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Garadgaon	T/BL-011	**82**	**GW**	Garadgaon	T/BL-011	**88**	**GW**	Atali	T/BL-061	**69**	**GW**
Khamgaon	T/BL-015	**141**	**PW**	Khamgaon	T/BL-015	**133**	**PW**	Garadgaon	T/BL-011	**76**	**GW**
Lokhanda	T/BL-022	**75**	**GW**	Lokhanda	T/BL-022	**50**	**EXLT**	Khamgaon	T/BL-015	**147**	**PW**
Pimpalgaon Raja	T/BL-033	**66**	**GW**	Pimpalgaon Raja	T/BL-033	**65**	**GW**	Pimpalgaon Raja	T/BL-033	**53**	**GW**
2007 (With Fe)				**2009 (With Fe)**				**2010 (With Fe)**			
Awar	BUOBW123	**140**	**PW**	*Lakhanwada	BUOBW097	**85**	**GW**	Awar	BUOBW123	**127**	**PW**
Borjawala	BUOBW136	**95**	**GW**	*Tandulwadi	BUWQN022	**61**	**GW**	Borjawala	BUOBW136	**82**	**GW**
Hiwarkhed	BUOBW127	**113**	**PW**	**Data for 2008 Not Available (With Fe)**				Botha Kaji	BUOBW096	**126**	**PW**
Jalka Bhadag	BUWQN017	**90**	**GW**					Divthana	BS-29	**95**	**GW**
Nipana	TS-7	**142**	**PW**					Hiwarkhed	BUOBW127	**91**	**GW**
2011 (With Fe)								Jalka Bhadag	BUWQN017	**82**	**GW**
*Borjawala	BUOBW136	**94**	**GW**	Jaipur Land	BUOBW130	**101**	**PW**	Jyapur Lande	BUOBW130	**134**	**PW**
*Divthana	BS-29	**105**	**PW**	Khamgaon	BUOBW102	**95**	**GW**	Khamgaon	BUOBW102	**94**	**GW**
*Hiwarkhed	BUOBW127	**102**	**PW**	Kokta	BUOBW158	**107**	**PW**	Kokta	BUOBW158	**116**	**PW**
*Jyapur Lande	BUOBW130	**117**	**PW**	Lakhanwada	BUOBW097	**126**	**PW**	Lakhanwada	BUOBW097	**125**	**PW**
*Sutala	BUWQN021	**132**	**PW**	Nimkawada	BUWQN018	**110**	**PW**	Nimkawala	BUWQN018	**137**	**PW**
Awar	BUOBW123	**106**	**PW**	Nipana	TS-7	**118**	**PW**	Nipana	TS-7	**118**	**PW**
Borjawala	BUOBW136	**75**	**GW**	Palshi	BUWQN020	**73**	**GW**	Palashi kh	BUWQN020	**81**	**GW**
Bothkaji	BUOBW096	**99**	**GW**					Sutala	BUWQN021	**124**	**PW**
Divthana	BS-29	**64**	**GW**					Tandulwadi	BUWQN022	**96**	**GW**

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.7(Contd..) : Buldhana District

Taluka : Lonar				Taluka : Lonar				Taluka : Lonar			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Dhad	G/BL-026	**153**	**PW**	Dhad	G/BL-026	**189**	**PW**	Lonar1	T/BL-057	**79**	**GW**
Lonar	G/BL-057	**99**	**GW**					Dhad	G/BL-026	**236**	**VPW**
2008 (With Fe)	**Data for 2007 and 2009 Not Available (With Fe)**										
Wadhav	BUOBW076	**121**	**PW**	Shara	BUOBW073	**166**	**PW**	Borkhedi	BUWQN010	**52**	**GW**
Lonar	BUWQN011	**142**	**PW**	Sultanpur	BUOBW009	**124**	**PW**	Dhaifal	BUOBW034	**94**	**GW**
Pimplner	BUPZ007	**54**	**GW**	Bibkhed	BUOBW035	**105**	**PW**				
2011 (With Fe)	**Data for 2010 Not Available (With Fe)**										
Bhumrala	BUWQN009	**89**	**GW**	Kingaon Urdu	BUOBW060	**93**	**GW**	Shara	BUOBW073	**144**	**PW**
Bibi	BUPZ013	**72**	**GW**	Lonar	BUWQN011	**124**	**PW**	Sultanpur	BUOBW009	**91**	**GW**
Bibkhed	BUOBW035	**87**	**GW**	Sawaegaon Teli	BUOBW059	**98**	**GW**	Wadhav	BUOBW076	**96**	**GW**
Dhayaphal	BUOBW034	**102**	**PW**								

Taluka : Malkapur				Taluka : Malkapur				Taluka : Malkapur			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2009 (Without Fe)				**2007 (With Fe) Data for 2008 Not Available**				**2009 (With Fe)**			
Malkapur	T/BL-004	**171**	**PW**	Dasarkhed	BUOBW163	**78**	**GW**	Dasarkhed	BUOBW163	**50**	**GW**
Data for 2007-2008 Not Avail. (Without Fe)				Hingana Kazi	BUWQN042	**347**	**UNSUT**				
				Umali	BUOBW088	**152**	**PW**				
				Waghul	BUWQN043	**117**	**PW**				
2010 (With Fe)								**2011 (With Fe)**			
Belad	BUOBW089	**67**	**GW**	Morkhed BK	BUOBW092	**137**	**PW**	*Belad	BUOBW089	**82**	**GW**
Dasarkhed	BUOBW163	**97**	**GW**	Umali	BUOBW088	**142**	**PW**	*Dasarkhed	BUOBW163	**108**	**PW**
Hingna Kaji	BUWQN042	**268**	**VPW**	Wagola	BUPZ0011	**156**	**PW**	*Hingna Kaji	BUWQN042	**269**	**VPW**

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.7(Contd..) : Buldhana District

Taluka : Mehakar				Taluka : Mehakar				Taluka : Mehakar			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2008 (With Fe)**			
Mehkar	G/BL-008	**204**	**VPW**	Mehkar	G/BL-008	**193**	**PW**	Anjani Bk	BUOBW028	**132**	**PW**
2010 (With Fe)				**Data for 2009 Not Available (Without Fe)**				Chinchala	BS-57	**65**	**GW**
Deulgaon Sakarsha	BUOBW069	**88**	**GW**					Deulgaon Sakarsha	BUOBW069	**64**	**GW**
2011 (With Fe)								Gajarkhed	BS-61	**101**	**PW**
Ajani Bk	BUOBW028	**114**	**PW**	Mehkar	TS-15	**100**	**PW**	Dongaon	BUWQN006	**68**	**GW**
Chinchala	BS-57	**78**	**GW**	Naigaon Dattapur	BS-52	**65**	**GW**	Fardapur	BUOBW024	**130**	**PW**
Deulgaon Sakarsh	BUOBW069	**67**	**GW**	Virvi	BS-56	**118**	**PW**	Khamkhed	BS-53	**54**	**GW**
Dongaon	BUWQN006	**60**	**GW**	**Data for 2007 and 2009 Not Available (With Fe)**				Mehkar	TS-15	**99**	**GW**
Fardapur	BUOBW024	**106**	**PW**					Naigaon Dattapur	BS-52	**75**	**GW**
Gajarkhed	BS-61	**91**	**GW**					Tembhurkhed	BUWQN007	**79**	**GW**
Khandala	TS-13	**110**	**PW**					Wishvi	BS-56	**130**	**PW**

Table x.7(Contd..) : Buldhana District

Taluka : Motala				Taluka : Motala				Taluka : Motala			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Motala	T/BL-010	**223**	**VPW**	Motala	T/BL-010	**156**	**PW**	Motala	T/BL-010	**125**	**PW**
Rohinkhed	T/BL-044	**185**	**PW**	Rohinkhed	T/BL-044	**203**	**VPW**	Pimpalgaon Devi	T/BL-030	**256**	**VPW**
								Rohinkhed	T/BL-044	**160**	**PW**
2009 (With Fe) Data for 2007 and 2008 Not Avaialable (With Fe)											
Motala	BUOBW110	**131**	**PW**	Sarola Maroti	BUOBW101	**79**	**GW**	Liha	TS 17	**90**	**GW**
Dhamangaon	BS-64	**62**	**GW**	Hanvatkhed	BUOBW094	**44**	**EXLT**	Pimplgaon devi	BUPZ038	**83**	**GW**
Rajur	BUOBW109	**98**	**GW**								
2010 (With Fe)											
Dhamangaon Bade	BS-64	**100**	**PW**	Mtotala	BUOBW110	**77**	**GW**	Sarola Maroti	BUOBW101	**99**	**GW**
Dhamangaon Bade	BUPZ012	**111**	**PW**	Nimkhed	BUOBW085	**105**	**PW**	Shlelapur	BUWQN044	**113**	**PW**
Hanvatkhed	BUOBW094	**64**	**GW**	Rjur	BUOBW109	**79**	**GW**	Ubalkhed	BUOBW100	**85**	**GW**
Liha	BUOBW107	**75**	**GW**	Rohinkhed	TS-16	**130**	**PW**				
2011 (With Fe)											
*Dhamangaon Bade	BS-64	**110**	**PW**	*Nimkhed	BUOBW085	**118**	**PW**	*Shlelapur	BUWQN044	**122**	**PW**
*Hanvatkhed	BUOBW094	**76**	**GW**	*Rohinkhed	TS-16	**147**	**PW**	*Ubalkhed	BUOBW100	**99**	**GW**
*Liha	BUOBW107	**88**	**GW**	*Sarola Maroti	BUOBW101	**107**	**PW**				

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.7(Contd..) : Buldhana District

Taluka : Nandura				Taluka : Nandura				Taluka : Nandura			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Digni	T/BL-059	**122**	**PW**	Digi	T/BL-059	**158**	**PW**	Dighi	T/BL-059	**101**	**PW**
Tarvadi	T/BL-028	**87**	**GW**	Tarvadi	T/BL-028	**109**	**PW**	Tarvadi	T/BL-028	**81**	**GW**
2007 (With Fe)				**2007 Contd.. (With Fe)**				**2009 (With Fe)**			
Alampur	BUOBW147	**113**	**PW**	Kokalwadi	BUPZ010	**116**	**PW**	*Chandur B.	BUOBW135	**67**	**GW**
Chandur Biswa	BUOBW135	**89**	**GW**	Naigaon	BUPZ009	**112**	**PW**	*Fulli	BUWQN045	**93**	**GW**
Fulli	BUWQN045	**132**	**PW**	Shemba	BUOBW087	**92**	**GW**	*Narkhed	BUWQN048	**161**	**PW**
Isabpur	BUOBW146	**180**	**PW**	**Data for 2008 Not Available (With Fe)**							
2010 (With Fe)											
Alampur	BUOBW147	**110**	**PW**	Fuli	BUWQN045	**82**	**GW**	Mahalungi	BUOBW106	**89**	**GW**
Chandur Bisawa	BUOBW135	**81**	**GW**	Isapur	BUOBW146	**75**	**GW**	Naigaon	BUPZ009	**135**	**PW**
Nadura	BUWQN047	**60**	**GW**	Kharkundi	TS-18	**42**	**EXLT**	Shembha	BUOBW087	**76**	**GW**
Nimgaon	BUOBW129	**91**	**GW**	Kokalwadi	BUPZ010	**91**	**GW**				
2011 (With Fe)											
*Nadura	BUWQN047	**67**	**GW**	*Mahalungi	BUOBW106	**105**	**PW**	Isabpur	BUOBW146	**78**	**GW**
*Nimgaon	BUOBW129	**91**	**GW**	*Naigaon	BUPZ009	**146**	**PW**	Kokalwadi	BUPZ010	**83**	**GW**
*Chandur B	BUOBW135	**94**	**GW**	*Shembha	BUOBW087	**89**	**GW**	Mahalungi	BUOBW106	**82**	**GW**
*Fuli	BUWQN045	**88**	**GW**	Chandur B.	BUOBW135	**74**	**GW**	Naigaon	BUPZ009	**109**	**PW**
*Kokalwadi	BUPZ010	**109**	**PW**	Fuli	BUWQN045	**67**	**GW**	Nandura	BUWQN047	**61**	**GW**

Taluka : Sangrampur				Taluka : Sangrampur				Taluka : Sangrampur			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2009 (Without Fe)				**2009 (With Fe)**				**2007 (With Fe)**			
Dhamangaon	T/BL-027	**131**	**PW**	Patorda Bk	BUOBW168	**107**	**PW**	Awar	BUOBW149	**72**	**GW**
2010 (With Fe)				**2011 (With Fe)**				Durgadaitya	BUOBW154	**80**	**GW**
Alewadi	BUOBW119	**67**	**GW**	*Alewadi	BUOBW119	**86**	**GW**	Khiroda	BUWQN037	**158**	**PW**
Amba barwa	BS 92	**64**	**GW**	Paturda	BUOBW168	**44**	**EXLT**	Kodri	BUWQN038	**76**	**GW**
Awar	BUOBW149	**51**	**GW**	Durga Dait	BUOBW154	**70**	**GW**	Patorda Bk	BUOBW168	**70**	**GW**
Kordi	BUWQN038	**55**	**GW**	Khiroda	BUWQN037	**125**	**PW**	Patorda Kh	BUWQN036	**74**	**GW**
Paturda	BUOBW168	**48**	**EXLT**	Alewadi	BUOBW119	**74**	**GW**	Takli	TS-25	**78**	**GW**
Takli Panchagavan	TS-25	**88**	**GW**	**Data for 2007-2008 Not Available**				**Data for 2008 (With Fe) Not Available**			
Tunki BK	BUWQN041	**59**	**GW**								
Tunki BK	BUPZ014	**54**	**GW**								

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.7(Contd..) : Buldhana District

Taluka : Shegaon				Taluka : Shegaon				Taluka : Shegaon			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Shegaon	T/BL-005	**409**	**UNSUT**	Shegaon	T/BL-005	**430**	**UNSUT**	Jalamb	T/BL-058	**117**	**PW**
								Shegaon	T/BL-005	**632**	**UNSUT**
2007 (With Fe)								**2008 (With Fe)**			
Bhongaon	BUWQN025	**169**	**PW**	Manasgaon	BUWQN029	**166**	**PW**	Nagzari Bk	BS-85	**95**	**GW**
Jalamb	BUWQN026	**94**	**GW**	Matargaon Bk	BUWQN030	**101**	**PW**				
Lanjud	BUOBW113	**78**	**GW**	Pahurpurna	BUWQN031	**150**	**PW**	**Data for 2009 Not Available (With Fe)**			
2010 (With Fe)											
Alsana	BS 80	**63**	**GW**	Jawala BK	BUWQN027	**87**	**GW**	Nagzari	BS-85	**112**	**PW**
Amsari	TS 16	**137**	**PW**	Lanjud	BUOBW113	**93**	**GW**	Nimbhi	BUOBW105	**128**	**PW**
Jalamb	BUWQN026	**68**	**GW**	Matargaon BK	BUWQN030	**150**	**PW**	Pahoorjira	BUOBW104	**77**	**GW**
2011 (With Fe)											
Lanjud	BUOBW113	**108**	**PW**	Kalkhed	BUQN028	**231**	**VPW**	Nimbhi	BUOBW105	**103**	**PW**
*Nagzari	BS-85	**127**	**PW**	Lanjud	BUOBW113	**81**	**GW**	Poorjira	BUOBW104	**70**	**GW**
*Amsari		**113**	**PW**	Matergaon	BUWQN030	**140**	**PW**	Shegaon	BUOBW121	**87**	**GW**
Jalamb	BUWQN026	**73**	**GW**								

Taluka : Sindkhed Raja				Taluka : Sindkhed Raja				Taluka : Sindkhed Raja			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Kingaon Raja	T/BL-036	**324**	**UNSUT**	Kingaon Raja	T/BL-036	**304**	**UNSUT**	Kingaon Raja	T/BL-036	**243**	**VPW**
Sindkhed raja	T/BL-014	**36**	**EXLT**	Sindkhed Raja	G/BL-014	**41**	**EXLT**	Sindkhed Raja	G/BL-014	**38**	**EXLT**
2007 (With Fe)				**2008 (With Fe)**				**2009 (With Fe)**			
Kingaon Raja	T/BL-036	**289**	**VPW**	Kingaon Raja	T/BL-036	**271**	**VPW**	Kingaon Raja	T/BL-036	**217**	**VPW**
Sindkhed R.	T/BL-014	**32**	**EXLT**	Sindkhed R.	G/BL-014	**36**	**EXLT**	Sindkhed R.	G/BL-014	**34**	**EXLT**
2011 (With Fe)	**Data for 2010 Not Available (With Fe)**										
Adgaon Raja	BUOBW053	**58**	**GW**	Malkapur Pangara	BUOBW046	**55**	**GW**	Shendurjana	BUWQN015	**75**	**GW**
Changephal	BUWQN012	**76**	**GW**	Nashirabad	BUOBW051	**78**	**GW**	Sindkhed Raja	BUOBW070	**70**	**GW**
Dusrabid	BUOBW058	**85**	**GW**	Palaskhed Chakka	BUWQN014	**64**	**GW**	Waghora	BUWQN016	**62**	**GW**

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.7(Contd..) : Buldhana District

Taluka : Deolgaon Raja				Taluka : Deolgaon Raja				Taluka : Deolgaon Raja			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Deolgaon Raja	G/BL-009	**147**	**PW**	Deolgaon Raja	G/BL-009	**135**	**PW**	Deolgaon Raja	G/BL-009	**130**	**PW**
2011 (With Fe)	**Data for 2007 to 2010 Not Available (With Fe)**										
Bharosa	BUOBW039	**64**	**GW**	De.Raja	BUPZ006	**105**	**PW**	Mendgaon	BUOBW043	**63**	**GW**
De. Mahi	BUOBW041	**109**	**PW**	Gunjala	BUOBW042	**89**	**GW**	Pimpalner	BUOBW050	**55**	**GW**
De. Raja	BUWQN005	**114**	**PW**	Mehuna	BUOBW049	**124**	**PW**	Yeota	BUOBW056	**43**	**EXLT**

Taluka : Jalgaon Jamod				Taluka : Jalgaon Jamod				Taluka : Jalgaon Jamod			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2010 (With Fe)**				**2010 Contd.. (With Fe)**			
*Raipur	BUOBW152	**53**	**GW**	Chalthana	BS-26	**76**	**GW**	Kuwardeo	BUOBW116	**73**	**GW**
*Umapur	BUOBW151	**48**	**EXLT**	Jalgaon Jamod	BUOBW117	**102**	**PW**	Raipur	BUOBW152	**64**	**GW**
Data for 2008 -2009 (Without Fe) Not Avail.				Khandvi	BUWQN033	**127**	**PW**	Umapur	BUOBW151	**75**	**GW**
2011 (With Fe)											
*Jalgaon Jamod	BUOBW117	**111**	**PW**	*Umapur	BUOBW151	**82**	**GW**	Umapur	BUOBW151	**67**	**GW**
*Kuwardeo	BUOBW116	**88**	**GW**	Jalgaon Jamod	BUOBW117	**104**	**PW**	Chalthana	BS-26	**67**	**GW**
*Raipur	BUOBW152	**73**	**GW**	Raipur	BUOBW152	**74**	**GW**	**Data for 2007 -2009 (With Fe) Not Avail.**			

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.8: Water Quality Index of Groundwater of Chandrapur District

Taluka : Ballarpur				Taluka : Ballarpur				Taluka : Ballarpur			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Chora	G/CH-041	**280**	**VPW**	Kalmana	G/CH-036	**98**	**GW**	Kalmana	G/CH-036	**81**	**GW**
Kalmana	G/CH-036	**85**	**GW**	Kothari	G/CH-008	**89**	**GW**	**Data for 2010 and 2011(With Fe) Not Available**			
Kothari	G/CH-008	**87**	**GW**								

Taluka : Bhadrawati				Taluka : Bhadrawati				Taluka : Bhadrawati			
2007 (Without Fe)				**2009 (Without Fe)**				**Data for 2008 Not Available (Without Fe)**			
Ralegaon	G/CH-047	**103**	**PW**	Ralegaon	G/CH-047	**80**	**GW**				
2010 (With Fe) Data for 2011 Not Available (With Fe)											
*Chora.	CNOBW072	**88**	**GW**	*Masal visapur	CNOBW074	**70**	**GW**	*Bhadrawati	CNOBW163	**109**	**PW**
*Khatoda.	CNOBW073	**113**	**PW**	*Moharli.	CNOBW075	**49**	**EXLT**	*Sindewahi	CNPZ012	**93**	**GW**

Taluka : Brahmapuri				Taluka : Brahmapuri				Taluka : Brahmapuri			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Brahmapuri	G/CH-009	**79**	**GW**	Brahmapuri	G/CH-009	**97**	**GW**	Brahmapuri	G/CH-009	**86**	**GW**
Aksapur	G/CH-017	**91**	**GW**	Aksapur	G/CH-017	**123**	**PW**	Aksapur	G/CH-017	**97**	**GW**
Mangli	G/CH-039	**207**	**VPW**	Mangli	G/CH-039	**210**	**VPW**	Mangli	G/CH-039	**187**	**PW**
Mendki	G/CH-030	**115**	**PW**	Mendki	G/CH-030	**133**	**PW**				
2010 (With Fe) Data for 2011 Not Available (With Fe)											
*Delanwadi	CNOBW098	**71**	**GW**	*Surbodi.	CNOBW102	**128**	**PW**	*Gangalwadi	CNPZ011	**53**	**GW**
*Mendaki	CNOBW101	**74**	**GW**	*Brahmapuri	CNOBW154	**55**	**GW**				

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.8(Contd..) : Chandrapur District

Taluka : Chandrapur				Taluka : Chandrapur				Taluka : Chandrapur			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Chandrapur	G/CH-063	**76**	**GW**	Chichpalli	G/CH-021	**84**	**GW**	Chichpalli	G/CH-021	**71**	**GW**
Chichpalli	G/CH-021	**65**	**GW**	Ghugus	G/CH-033	**167**	**PW**	Ghugus	G/CH-033	**139**	**PW**
Mul	G/CH-010	**97**	**GW**	Mul	G/CH-010	**128**	**PW**	Mul	G/CH-010	**99**	**GW**
Nandegur	G/CH-025	**46**	**EXLT**	Chandrapur 1	G/CH-063	**68**	**GW**	Nandegur	G/CH-025	**56**	**GW**
Shergaon Khurd	G/CH-038	**110**	**PW**	Padmapur	G/CH-037	**28**	**EXLT**	Wihar Khurd	G/CH-004	**144**	**PW**
Wihar Khurd	G/CH-004	**169**	**PW**	Nandegur	G/CH-025	**65**	**GW**	Dabha	G/CH-027	**127**	**PW**
Dabha	G/CH-027	**124**	**PW**	Shergaon Kh.	G/CH-038	**119**	**PW**				
				Wihar Khurd	G/CH-004	**204**	**VPW**				
				Dabha	G/CH-027	**118**	**PW**				
2010 (With Fe) Data for 2011 Not Available (With Fe)											
*Agadzari	CNOBW001	**70**	**GW**	*Pandharkawda	CNOBW011	**89**	**GW**	*Padmapur	CNOBW137	**52**	**GW**
*Chinchapalli.	CNOBW005	**91**	**GW**	*Tadali.	CNOBW012	**125**	**PW**	*Chak Borda	CNOBW157	**81**	**GW**
*Kothari.	CNOBW006	**47**	**EXLT**	*Wadgaon.	CNOBW014	**97**	**GW**	*Durgapur	CNOBW158	**78**	**GW**
*Lohara	CNOBW007	**90**	**GW**	*Ghuggus	CNOBW062	**113**	**PW**	*Ballarpur	CNOBW160	**70**	**GW**
*Padoli.	CNOBW010	**101**	**PW**					*Ghuggus	CNOBW162	**100**	**PW**

Taluka : Chimur				Taluka : Chimur				Taluka : Chimur			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Chimur	G/CH-007	**64**	**GW**	Chimur	G/CH-007	**81**	**GW**	Chimur	G/CH-007	**58**	**GW**
Jambhulghat	G/CH-048	**95**	**GW**	Jambhulghat	G/CH-048	**110**	**PW**	Jambhulghat	G/CH-048	**101**	**PW**
Kawadsi	G/CH-013	**81**	**GW**	Kawadsi	G/CH-013	**86**	**GW**	Kawadsi	G/CH-013	**62**	**GW**
Sawargaon	G/CH-012	**62**	**GW**	Sawargaon	G/CH-012	**76**	**GW**	Shankarpur	G/CH-049	**96**	**GW**
Shankarpur	G/CH-049	**94**	**GW**	Shankarpur	G/CH-049	**100**	**PW**				
Tadoba	G/CH-035	**32**	**EXLT**	Wahangaon	G/CH-040	**113**	**PW**	**Data for 2011 Not Available (With Fe)**			
Wahangaon	G/CH-040	**142**	**PW**								
2010 (With Fe)											
*Khadsangi.	CNOBW085	**59**	**GW**	*Jambhulghat.	CNOBW084	**115**	**PW**	*Wadala	CNOBW096	**253**	**VPW**
*Chimur	CNOBW155	**86**	**GW**	*Neri.	CNOBW089	**102**	**PW**	*Bothali	CNPZ009	**119**	**PW**
*Brahmangaon	CNOBW082	**84**	**GW**	*Shedgaon	CNOBW094	**111**	**PW**	*Motegaon	CNPZ010	**95**	**GW**

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.8(Contd..) : Chandrapur District

Taluka : Jiwati				Taluka : Jiwati				Taluka : Jiwati			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2008 (Without Fe) Data for 2007 Not Available				**2009 (Without Fe)**				**Data for 2010 -2011 Not Available (With Fe)**			
Ballarsha	G/CH-026	**65**	**GW**	Ballarsha	G/CH-026	**67**	**GW**				

Taluka : Mul				Taluka : Mul				Taluka : Mul			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe) Data for 2009 Not Available**				**Data for 2011 Not Available (With Fe)**			
Rajoli Tukkum	G/CH-031	**153**	**PW**	Rajoli Tukkum	G/CH-031	**147**	**PW**				
2010 (With Fe)											
*Chandapur.	CNOBW016	**125**	**PW**	*Pardi kh.	CNOBW027	**119**	**PW**	*Borchandali	CNPZ001	**108**	**PW**
*Mahadwadi.	CNOBW022	**88**	**GW**	*Susi dabgaon	CNOBW030	**117**	**PW**	*Chiroli	CNPZ002	**71**	**GW**
*Mul.	CNOBW024	**118**	**PW**	*Vyahad kh.	CNOBW032	**109**	**PW**	*Mul	CNPZ003	**112**	**PW**
*Navegaon bhujala.	CNOBW026	**92**	**GW**	*Wagholi butti	CNOBW033	**121**	**PW**	*Navegaon buj	CNPZ004	**64**	**GW**

Taluka : Nagbhid				Taluka : Nagbhid				Taluka : Nagbhid			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Mohadi Mokasa	G/CH-050	**161**	**PW**	Mohadi Mokasa	G/CH-050	**193**	**PW**	Mohadi Mokasa	G/CH-050	**154**	**PW**
Nagbhir	G/CH-002	**111**	**PW**	Nagbhir	G/CH-002	**127**	**PW**	Nagbhir	G/CH-002	**114**	**PW**
2010 (With Fe) Data for 2011 Not Available (With Fe)											
*Balapur bk.	CNOBW125	**52**	**GW**	*Nagbhid.	CNOBW129	**107**	**PW**	*Kordha	CNPZ014	**65**	**GW**
*Chikalgaon.	CNOBW126	**101**	**PW**	*Talodhi.	CNOBW130	**115**	**PW**	*Talodhi	CNPZ015	**106**	**PW**
*Kirmiti mendha.	CNOBW127	**114**	**PW**	*Vaijapur	CNOBW131	**189**	**PW**				

Taluka : Pombhurna				Taluka : Pombhurna				Taluka : Pombhurna			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe) Data for 2009 Not Available**				**Data for 2010-2011 Not Available (With Fe)**			
Bhimni	G/CH-032	**81**	**GW**	Bhimni	G/CH-032	**96**	**GW**				

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.8(Contd..) : Chandrapur District

Taluka : Rajura				Taluka : Rajura				Taluka : Rajura			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Mahurli	G/CH-023	**107**	**PW**	Mahurli	G/CH-023	**110**	**PW**	Mahurli	G/CH-023	**87**	**GW**
Rajura	G/CH-019	**80**	**GW**	Wirur	G/CH-014	**127**	**PW**	Wirur	G/CH-014	**111**	**PW**
Sondo	G/CH-018	**126**	**PW**								
Wirur	G/CH-014	**104**	**PW**								
Rampur	G/CH-028	**80**	**GW**								
2010 (With Fe) Data for 2010-2011 Not Available (With Fe)											
*Arvi	CNOBW132	**68**	**GW**	*Sasti (census town)	CNOBW144	**133**	**PW**	*Patan	CNPZ016	**102**	**PW**
*Chandur(gadchandur).	CNOBW133	**93**	**GW**	*Tembhurwahi.	CNOBW146	**80**	**GW**	*Dabgaon	CNPZ018	**67**	**GW**
*Gadegaon	CNOBW134	**125**	**PW**	*Virur Stn.	CNOBW150	**126**	**PW**	*Saoli	CNPZ020	**124**	**PW**
*Palezari.	CNOBW139	**87**	**GW**	*Rajura	CNOBW152	**91**	**GW**				

Taluka : Sawali				Taluka : Sawali				Taluka : Sawali			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Sawali	G/CH-034	**108**	**PW**	Sawali	G/CH-034	**124**	**PW**	Sawali	G/CH-034	**116**	**PW**
Data for 2010-2011Not Available (With Fe)											

Taluka : Sindewahi				Taluka : Sindewahi				Taluka : Sindewahi			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Sindewahi	G/CH-006	**195**	**PW**	Sindewahi	G/CH-006	**223**	**VPW**	Niphandra	G/CH-042	**44**	**EXLT**
Niphandra	G/CH-042	**44**	**EXLT**	Alesur	G/CH-061	**129**	**PW**				
				Niphandra	G/CH-042	**48**	**EXLT**				
2010 (With Fe) Data for 2011 Not Available (With Fe)											
*Bhanapur	CNOBW103	**114**	**PW**	*Nifandra.	CNOBW114	**107**	**PW**	*SawargataCh.	CNOBW120	**86**	**GW**
*Gadbori	CNOBW105	**109**	**PW**	*Palasgaon jat	CNOBW115	**71**	**GW**	*Sindewahi.	CNOBW121	**148**	**PW**
*Gadmaushi chak	CNOBW106	**122**	**PW**	*Purkepar	CNOBW117	**105**	**PW**	*Wasera	CNOBW124	**76**	**GW**
*Kukadheti	CNOBW109	**78**	**GW**	*Ratnapur.	CNOBW118	**122**	**PW**	*Wasera	CNPZ013	**95**	**GW**
*Meha bk.	CNOBW112	**71**	**GW**								

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.8(Contd..) : Chandrapur District

Taluka : Warora				Taluka : Warora				Taluka : Warora			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Bhandak	G/CH-015	**134**	**PW**	Chargaon	G/CH-016	**106**	**PW**	Salori	G/CH-029	**78**	**GW**
Chargaon	G/CH-016	**107**	**PW**	Salori	G/CH-029	**99**	**GW**				
Salori	G/CH-029	**97**	**GW**								
2010 (With Fe) Data for 2011 Not Available (With Fe)											
*Bhatala	CNOBW051	**100**	**PW**	*Dongargaon	CNOBW161	**175**	**PW**	*Shegaon bk	CNPZ008	**73**	**GW**
*Chargaon bk.	CNOBW053	**158**	**PW**	*Chikni	CNPZ006	**162**	**PW**				

Taluka : Gondipipri				Taluka : Gondipipri				Taluka : Gondipipri			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2010 (With Fe) Data for 2007 -2009 Not Available (Without Fe) and also2011 Not Available (With Fe)											
*Bamhni Chak(katoli)	CNOBW035	**92**	**GW**	*Dudharpeth	CNOBW040	**94**	**GW**	*Pombhurna.	CNOBW047	**94**	**GW**
*Bhangaram talodhi.	CNOBW036	**87**	**GW**	*Ganpur	CNOBW041	**161**	**PW**	*Wadholi	CNPZ005	**101**	**PW**
*Bhimni	CNOBW037	**72**	**GW**								

Taluka : Korapna				Taluka : Korapna				Taluka : Korapna			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2010 (With Fe) Data for 2007 -2009 Not Available (Without Fe) and also 2011 Not Available (With Fe)											
*Gadchandur	CNOBW017	**62**	**GW**	*Jioti	CNOBW019	**92**	**GW**				

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.9 : Water Quality Index of Groundwater of Dhule District

Taluka : Dhule				Taluka : Dhule				Taluka : Dhule			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Avdhan	T/DH-009	**229**	**VPW**	Avdhan	T/DH-009	**191**	**PW**	Avdhan	T/DH-009	**199**	**PW**
Burdi Pada	T/DH-025	**37**	**EXLT**	Burdi Pada	T/DH-025	**41**	**EXLT**	Burdi Pada	T/DH-025	**38**	**EXLT**
Dhule	T/DH-030	**209**	**VPW**	Dhule	T/DH-030	**234**	**VPW**	Dhule	T/DH-030	**227**	**VPW**
Hisala	T/DH-011	**99**	**GW**	Hisala	T/DH-011	**103**	**PW**	Hisala	T/DH-011	**79**	**GW**
Laling	T/DH-033	**63**	**GW**	Laling	T/DH-033	**74**	**GW**	Laling	T/DH-033	**79**	**GW**
Mukti	T/DH-013	**139**	**PW**	Narwhal	T/DH-022	**60**	**GW**	Narwhal	T/DH-022	**70**	**GW**
Narwhal	T/DH-022	**65**	**GW**	Ner	T/DH-027	**135**	**PW**	Deobhane	T/DH-032	**113**	**PW**
Ner	T/DH-027	**155**	**PW**	Deobhane	T/DH-032	**121**	**PW**				
Deobhane	T/DH-032	**122**	**PW**								
2010 (With Fe)											
Talwada	DHOBW016	**54**	**GW**	Japi	DHWQN3	**73**	**GW**	*Khordad	DHWQN4	**70**	**GW**
Velahane	DHOBW004	**73**	**GW**	Khordad	DHWQN4	**40**	**EXLT**	*Mehergaon	DHWQN6	**89**	**GW**
Vishwanath	DHOBW015	**70**	**GW**	Kusumba	DHWQN5	**67**	**GW**	*Nandre	DHOBW072	**86**	**GW**
Talwada	DHOBW016	**77**	**GW**	Mehergaon	DHWQN6	**73**	**GW**	*Dhule	DHWQN2	**43**	**EXLT**
Borhivir	DHOBW040	**53**	**GW**	Ner	DHWQN7	**71**	**GW**	*Dhamanar	DHWQN38	**41**	**EXLT**
Ajanale	DHOBW056	**89**	**GW**	Nimdale	DHWQN8	**79**	**GW**	Purmepada	DHWQN9	**55**	**GW**
Nandre	DHOBW072	**81**	**GW**	Purmepada	DHWQN9	**55**	**GW**	Velahane	DHOBW004	**93**	**GW**
Bendrapada	DHWQN1	**59**	**GW**	Sarwad	DHWQN11	**45**	**EXLT**	Borhivir	DHOBW040	**84**	**GW**
Sadgaon	DHWQN10	**46**	**EXLT**	Dhamanar	DHWQN38	**50**	**EXLT**	Ajanale	DHOBW056	**67**	**GW**
Sarwad	DHWQN12	**64**	**GW**	*Sadgaon	DHWQN10	**51**	**GW**	Bendrapada	DHWQN1	**52**	**GW**
Songir	DHWQN13	**67**	**GW**	*Sarwad	DHWQN12	**98**	**GW**	Khordad	DHWQN4	**85**	**GW**
Walwadi	DHWQN14	**101**	**PW**	*Japi	DHWQN3	**68**	**GW**	Purmepada	DHWQN9	**46**	**EXLT**
Dhule	DHWQN2	**45**	**EXLT**								
2011 (With Fe)											
Vishwanath	DHOBW015	**54**	**GW**	Songir	DHWQN13	**55**	**GW**	Mehergaon	DHWQN6	**94**	**GW**
Nandre	DHOBW072	**47**	**EXLT**	Walwadi	DHWQN14	**50**	**GW**	Ner	DHWQN7	**64**	**GW**
Sadgaon	DHWQN10	**75**	**GW**	Dhule	DHWQN2	**60**	**GW**	Nimdale	DHWQN8	**49**	**EXLT**
Sarwad	DHWQN11	**81**	**GW**	Japi	DHWQN3	**51**	**GW**	Dhamanar	DHWQN38	**42**	**EXLT**
Sarwad	DHWQN12	**83**	**GW**	Kusumba	DHWQN5	**71**	**GW**				

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.9 (Contd..)Dhule District

Taluka : Sakri				Taluka : Sakri				Taluka : Sakri			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Dahival	T/DH-024	**78**	**GW**	Dahival	T/DH-024	**69**	**GW**	Pimpalner	T/DH-006	**67**	**GW**
Pimpalner	T/DH-006	**66**	**GW**	Pimpalner	T/DH-006	**58**	**GW**				
Sakri	T/DH-035	**161**	**PW**	Sakri	T/DH-035	**198**	**PW**				
2010 (With Fe)											
Akkalpada	DHOBW071	**41**	**EXLT**	Bhamer	DHOBW069	**50**	**GW**	Lonkhede	DHWQN45	**47**	**EXLT**
Chinchkheda	DHOBW095	**64**	**GW**	Rojegaon	DHOBW084	**65**	**GW**	Sakri	DHWQN46	**32**	**EXLT**
Umarpata	DHOBW116	**28**	**EXLT**	Lonkhede	DHOBW086	**48**	**EXLT**	*Rojegaon	DHOBW084	**64**	**GW**
Dahival	DHWQN37	**49**	**EXLT**	Aichale	DHWQN35	**46**	**EXLT**	*Dahival	DHWQN37	**66**	**GW**
Gondas	DHWQN39	**47**	**EXLT**	Bramnhavel	DHWQN36	**43**	**EXLT**	*Isarde	DHWQN41	**76**	**GW**
Jebapur	DHWQN43	**35**	**EXLT**	Mahir	DHWQN40	**34**	**EXLT**	*Gondas	DHWQN39	**43**	**EXLT**
Khampada	DHWQN44	**45**	**EXLT**	Isarde	DHWQN41	**51**	**GW**	Sakri	DHWQN46	**48**	**EXLT**
Shelbari	DHWQN47	**52**	**GW**	Jaithane	DHWQN42	**45**	**EXLT**				
2011 (With Fe)											
Akkalpada	DHOBW071	**53**	**GW**	Rojegaon	DHOBW084	**57**	**GW**	Dahival	DHWQN37	**66**	**GW**
Chinchkheda	DHOBW095	**97**	**GW**	Lonkhede	DHOBW086	**92**	**GW**	Mahir	DHWQN40	**67**	**GW**
Gondas	DHWQN39	**45**	**EXLT**	Lonkhede	DHOBW086	**71**	**GW**	Isarde	DHWQN41	**54**	**GW**
Khampada	DHWQN44	**56**	**GW**	Umarpata	DHOBW116	**55**	**GW**	Jaithane	DHWQN42	**55**	**GW**
Shelbari	DHWQN47	**56**	**GW**	Aichale	DHWQN35	**55**	**GW**	Jebapur	DHWQN43	**74**	**GW**
Bhamer	DHOBW069	**57**	**GW**	Bramnhavel	DHWQN36	**68**	**GW**	Sakri	DHWQN46	**62**	**GW**

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.9 (Contd..) Dhule District

Taluka : Shirpur				Taluka : Shirpur				Taluka : Shirpur			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (With Fe)				**2008 (With Fe) Data for 2009 Not Available (Wihtout Fe)**							
Sangivi	T/DH-012	**62**	**GW**	Kherde	T/DH-015	**122**	**PW**	Sangivi	T/DH-012	**61**	**GW**
				Palasner	T/DH-023	**170**	**PW**	Songir	T/DH-007	**58**	**GW**
2010 (With Fe)											
Ambe	DHOBW008	**84**	**GW**	Khambale	DHWQN54	**79**	**GW**	Dahivad	DHWQN51	**53**	**GW**
Savangi	DHOBW021	**87**	**GW**	Khmkheda	DHWQN55	**100**	**GW**	Nimzari	DHWQN58	**81**	**GW**
Umarde	DHOBW022	**95**	**GW**	Khmkheda	DHWQN55	**106**	**PW**	Shirpur	DHWQN60	**73**	**GW**
Gadhadeo	DHOBW043	**59**	**GW**	Kolid	DHWQN56	**49**	**EXLT**	Sule	DHWQN61	**55**	**GW**
Fattepur	DHOBW044	**61**	**GW**	Mohide	DHWQN57	**56**	**GW**	Wagjadi	DHWQN65	**48**	**EXLT**
Ajanad	DHWQN48	**62**	**GW**	Palasner	DHWQN59	**101**	**PW**	*Thalner	DHWQN64	**46**	**EXLT**
Bhatane	DHWQN49	**62**	**GW**	Tardi	DHWQN62	**62**	**GW**	Dahivad	DHWQN51	**48**	**EXLT**
Boradi	DHWQN50	**60**	**GW**	Tembhe Bk.	DHWQN63	**54**	**GW**	Mohide	DHWQN57	**89**	**GW**
Ghosdogaon	DHWQN52	**59**	**GW**	Thalner	DHWQN64	**59**	**GW**	Shirpur	DHWQN60	**52**	**GW**
Higaon	DHWQN53	**69**	**GW**	Hadakhed	DHOBW025	**75**	**GW**				
2011 (With Fe)											
Ambe	DHOBW008	**53**	**GW**	Palasner	DHWQN59	**89**	**GW**	Boradi	DHWQN50	**49**	**EXLT**
Savangi	DHOBW021	**62**	**GW**	Sule	DHWQN61	**82**	**GW**	Khmkheda	DHWQN55	**71**	**GW**
Hadakhed	DHOBW025	**71**	**GW**	Tardi	DHWQN62	**62**	**GW**	Kolid	DHWQN56	**53**	**GW**
Ajanad	DHWQN48	**53**	**GW**	Thalner	DHWQN64	**50**	**GW**	Mohide	DHWQN57	**81**	**GW**
Dahivad	DHWQN51	**54**	**GW**	Umarde	DHOBW022	**56**	**GW**	Nimzari	DHWQN58	**48**	**EXLT**
Ghosdogaon	DHWQN52	**81**	**GW**	Gadhadeo	DHOBW043	**61**	**GW**	Shirpur	DHWQN60	**49**	**EXLT**
Higaon	DHWQN53	**54**	**GW**	Fattepur	DHOBW044	**78**	**GW**	Tembhe Bk.	DHWQN63	**75**	**GW**
Khambale	DHWQN54	**64**	**GW**	Bhatane	DHWQN49	**84**	**GW**	Wagjadi	DHWQN65	**69**	**GW**

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.9 (Contd..) Dhule District

Taluka : Sindkheda				Taluka : Sindkheda				Taluka : Sindkheda			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**Data for 2009 Not Available (Without Fe)**			
Nardana	T/DH-010	**273**	**VPW**	Chimthane	T/DH-014	**195**	**PW**				
Chimthane	T/DH-014	**169**	**PW**	Methi	T/DH-019	**170**	**PW**				
Methi	T/DH-019	**122**	**PW**	Ichhapur	T/DH-017	**79**	**GW**				
2010 (With Fe)											
Varud	DHOBW051	**62**	**GW**	Vaghadi	DHWQN33	**72**	**GW**	Malpur	DHWQN22	**58**	**GW**
Varshi	DHOBW065	**59**	**GW**	Varpada	DHWQN34	**181**	**PW**	Methi	DHWQN23	**67**	**GW**
Dabhashi	DHOBW080	**83**	**GW**	Chimthane	DHOBW052	**74**	**GW**	Methi	DHWQN24	**72**	**GW**
Betavad	DHWQN15	**70**	**GW**	Sandle	DHOBW063	**66**	**GW**	Salve	DHWQN27	**66**	**GW**
Dalwade	DHWQN16	**106**	**PW**	Varzadi	DHOBW075	**73**	**GW**	*Mahalsar	DHWQN25	**134**	**PW**
Mahalsar	DHWQN25	**69**	**GW**	Karle	DHOBW096	**59**	**GW**	*Nardana	DHWQN26	**144**	**PW**
Nardana	DHWQN26	**71**	**GW**	Satare	DHOBW099	**66**	**GW**	*Dalwade	DHWQN16	**126**	**PW**
Shinkheda	DHWQN28	**61**	**GW**	Shevade	DHOBW101	**56**	**GW**	*Dondaicha	DHWQN19	**87**	**GW**
Sindkheda	DHWQN29	**57**	**GW**	Dangurne	DHWQN17	**73**	**GW**	*Sindkheda	DHWQN29	**111**	**PW**
Sukvad	DHWQN30	**85**	**GW**	Dhavde	DHWQN18	**98**	**GW**	*Varpada	DHWQN34	**103**	**PW**
Takarkhede	DHWQN31	**179**	**PW**	Dondaicha	DHWQN19	**78**	**GW**	Kalmadi	DHOBW050	**82**	**GW**
Virdel	DHWQN32	**108**	**PW**	Khalane	DHWQN21	**57**	**GW**	Degaon	DHOBW100	**51**	**GW**
2011 (With Fe)											
Varud	DHOBW051	**56**	**GW**	Varzadi	DHOBW075	**116**	**PW**	Methi	DHWQN24	**73**	**GW**
Varshi	DHOBW065	**84**	**GW**	Karle	DHOBW096	**52**	**GW**	Salve	DHWQN27	**131**	**PW**
Dabhashi	DHOBW080	**86**	**GW**	Satare	DHOBW099	**74**	**GW**	Shinkheda	DHWQN28	**98**	**GW**
Betavad	DHWQN15	**45**	**EXLT**	Shevade	DHOBW101	**48**	**EXLT**	Sindkheda	DHWQN29	**100**	**GW**
Dondaicha	DHWQN19	**98**	**GW**	Dalwade	DHWQN16	**51**	**GW**	Sukvad	DHWQN30	**85**	**GW**
Mahalsar	DHWQN25	**51**	**GW**	Dalwade	DHWQN16	**127**	**PW**	Takarkhede	DHWQN31	**102**	**PW**
Nardana	DHWQN26	**79**	**GW**	Dangurne	DHWQN17	**81**	**GW**	Virdel	DHWQN32	**114**	**PW**
Vaghadi	DHWQN33	**61**	**GW**	Khalane	DHWQN21	**77**	**GW**	Varpada	DHWQN34	**101**	**PW**
Chimthane	DHOBW052	**81**	**GW**	Malpur	DHWQN22	**67**	**GW**	Kalmadi	DHOBW050	**62**	**GW**
Sandle	DHOBW063	**83**	**GW**	Methi	DHWQN23	**75**	**GW**	Degaon	DHOBW100	**44**	**EXLT**

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.10: Water Quality Index of Groundwater of Gadchiroli District

Taluka : Aheri				Taluka : Aheri				Taluka : Aheri			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Govindpur	G/GD-036	**136**	**PW**	Govindgaon	G/GD-047	**191**	**PW**	Allapalli	G/GD-002	**109**	**PW**
Medpalli	G/GD-055	**100**	**PW**	Govindpur	G/GD-036	**167**	**PW**	Govindpur	G/GD-036	**129**	**PW**
Talodhi Rampur	G/GD-018	**46**	**EXLT**	Medpalli	G/GD-055	**112**	**PW**	Medpalli	G/GD-055	**86**	**GW**
Timiram	G/GD-025	**71**	**GW**	Talodhi Rampur	G/GD-018	**51**	**GW**	Talodhi Rampur	G/GD-018	**44**	**EXLT**
Repanpalli	G/GD-004	**96**	**GW**	Pirimili	G/GD-024	**113**	**PW**	Pirimili	G/GD-024	**88**	**GW**
Umanur	G/GD-015	**100**	**PW**	Timiram	G/GD-025	**113**	**PW**	Timiram	G/GD-025	**141**	**PW**
				Repanpalli	G/GD-004	**106**	**PW**	Repanpalli	G/GD-004	**89**	**GW**
				Umanur	G/GD-015	**130**	**PW**				
2010 (With Fe)Data for 20011 Not Available (With Fe)											
*Govindgaon	GDOBW089	**96**	**GW**	*Permili surveyed	GDOBW094	**77**	**GW**	*Umanoor	GDPZ009	**92**	**GW**
*Mirkal masahat	GDOBW091	**72**	**GW**	*Repanpalli.	GDOBW095	**71**	**GW**	*Kottur	GDWQN003	**94**	**GW**
*Modumadgu	GDOBW092	**128**	**PW**	*Khamancheru	GDPZ007	**87**	**GW**	*Rajeram	GDWQN004	**148**	**PW**
*Nandigaon masah.	GDOBW093	**76**	**GW**	*Mosam	GDPZ008	**108**	**PW**				

Taluka : Armori				Taluka : Armori				Taluka : Armori			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Delanwadi	G/GD-060	**65**	**GW**	Armori	G/GD-010	**148**	**PW**	Delanwadi	G/GD-060	**47**	**EXLT**
Wairagarh	G/GD-027	**66**	**GW**	Delanwadi	G/GD-060	**75**	**GW**	Wairagarh	G/GD-027	**45**	**EXLT**
				Wairagarh	G/GD-027	**75**	**GW**				
2010 (With Fe) Data for 20011 Not Available (With Fe)											
*Armori	GDOBW011	**61**	**GW**	*Jambhali	GDOBW017	**76**	**GW**	*Shankarnagar	GDOBW116	**53**	**GW**
*Delanwadi	GDOBW014	**60**	**GW**	*Waddha	GDOBW023	**72**	**GW**	*Bolddhachak	GDPZ001	**82**	**GW**
*Dongargaon(bhusari).	GDOBW015	**66**	**GW**								

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.10(Contd..) Gadchiroli District

Taluka : Bhamragarh				Taluka : Bhamragarh				Taluka : Bhamragarh			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2010 (With Fe) Data for 2011 Not Available (With Fe)**							
Bhamragarh	G/GD-012	**59**	**GW**	*Kiyar	GDOBW109	**58**	**GW**	*Dodepalli	GDPZ013	**86**	**GW**
Data for 2008 & 2009 Not Available (Without Fe)				*Narguda	GDOBW111	**78**	**GW**	*Bhamragad	GDWQN012	**61**	**GW**
				*Tadgaon	GDOBW114	**80**	**GW**	*Dodepalli	GDWQN013	**83**	**GW**
				*Bhamragad	GDPZ012	**62**	**GW**				

Taluka : Chamorshi				Taluka : Chamorshi				Taluka : Chamorshi			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Chamorshi	G/GD-007	**70**	**GW**	Chamorshi	G/GD-007	**76**	**GW**	Chamorshi	G/GD-007	**63**	**GW**
Konsari	G/GD-064	**151**	**PW**	Ashti	G/GD-028	**148**	**PW**	Konsari	G/GD-064	**143**	**PW**
2010 (With Fe) Data for 2011 Not Available (With Fe)											
*Bhendala	GDOBW027	**64**	**GW**	*Talodhi mokasa	GDOBW040	**78**	**GW**	*Ghot	GDPZ014	**61**	**GW**
*Kurud	GDOBW036	**101**	**PW**	*Wagholi	GDOBW041	**66**	**GW**	*Shankarpur Heti	GDWQN009	**127**	**PW**
*Regadi	GDOBW039	**78**	**GW**	*Nawargaon	GDPZ002	**68**	**GW**				

Taluka : Desaiganj (Wadsa)				Taluka : Desaiganj (Wadsa)				Taluka : Desaiganj (Wadsa)			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Shankarpur	G/GD-052	**121**	**PW**	Shankarpur	G/GD-052	**139**	**PW**	Shankarpur	G/GD-052	**94**	**GW**
Wadsa	G/GD-016	**55**	**GW**	Wadsa	G/GD-016	**76**	**GW**	Wadsa	G/GD-016	**52**	**GW**
2010 (With Fe) Data for 2011 Not Available (With Fe)											
*Boddha-gaoganna	GDOBW013	**62**	**GW**	*Shankarpur	GDOBW021	**77**	**GW**	*Wadsa.	GDOBW024	**70**	**GW**
*Kasari t.k.	GDOBW018	**68**	**GW**	*Vihirgaon	GDOBW022	**42**	**EXLT**				

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.10(Contd..) Gadchiroli District

Taluka : Dhanora				Taluka : Dhanora				Taluka : Dhanora			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Chatgaon	G/GD-008	**121**	**PW**	Chatgaon	G/GD-008	**44**	**EXLT**	Chatgaon	G/GD-008	**50**	**EXLT**
Dhanora	G/GD-030	**49**	**EXLT**	Rangi	G/GD-037	**73**	**GW**	Rangi	G/GD-037	**55**	**GW**
Murumgaon	G/GD-026	**73**	**GW**								
Rangi	G/GD-037	**67**	**GW**								
2010 (With Fe) Data for 2011 Not Available (With Fe)											
*Chavela	GDOBW042	**53**	**GW**	*Salebhatti	GDOBW052	**79**	**GW**	*Pendhri	GDPZ004	**68**	**GW**
*Murumgaon	GDOBW049	**50**	**EXLT**	*Yerkadmowad.	GDOBW054	**54**	**GW**	*Sawargaon	GDPZ005	**42**	**EXLT**
*Sakhera	GDOBW051	**86**	**GW**	*Murmadi	GDPZ003	**63**	**GW**	*Kosami	GDWQN010	**46**	**EXLT**

Taluka : Etapalli				Taluka : Etapalli				Taluka : Etapalli			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Halewara	G/GD-044	**52**	**GW**	Etapalli	G/GD-013	**100**	**GW**	Etapalli	G/GD-013	**75**	**GW**
Etapalli	G/GD-013	**91**	**GW**	Elchil	G/GD-048	**96**	**GW**	Elchil	G/GD-048	**80**	**GW**
Tadgaon	G/GD-031	**75**	**GW**								
Todsa Tola	G/GD-023	**57**	**GW**								
Elchil	G/GD-048	**104**	**PW**								
2010 (With Fe) Data for 2011 Not Available (With Fe)											
*Aldandi	GDOBW097	**108**	**PW**	*Kandoli surveyed.	GDOBW107	**70**	**GW**	*Yetapalli	GDOBW115	**55**	**GW**
*Alenga(tola)	GDOBW098	**61**	**GW**	*Parsalgondi masahat	GDOBW112	**69**	**GW**	*Nender	GDOBW118	**76**	**GW**
*Dindwi	GDOBW101	**96**	**GW**								

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.10(Contd..) Gadchiroli District

Taluka : Gadchiroli				Taluka : Gadchiroli				Taluka : Gadchiroli			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Bamni	G/GD-003	**68**	**GW**	Bamni	G/GD-003	**83**	**GW**	Mulchera	G/GD-063	**53**	**GW**
Gadchiroli	G/GD-009	**85**	**GW**	Gadchiroli	G/GD-009	**93**	**GW**	Porla	G/GD-017	**33**	**EXLT**
Mulchera	G/GD-063	**62**	**GW**	Mulchera	G/GD-063	**81**	**GW**	Gowardha	G/GD-053	**24**	**EXLT**
Porla	G/GD-017	**49**	**EXLT**	Porla	G/GD-017	**48**	**EXLT**	Yelgur Tola	G/GD-019	**70**	**GW**
Potegaon	G/GD-035	**121**	**PW**	Gowardha	G/GD-053	**34**	**EXLT**	**Data for 2011 Not Available (With Fe)**			
Chandona Tola	G/GD-020	**74**	**GW**	Khondala	G/GD-042	**45**	**EXLT**				
Erkar	G/GD-021	**47**	**EXLT**	Yelgur Tola	G/GD-019	**92**	**GW**				
Fulbori	G/GD-062	**191**	**PW**	**2010 (With Fe)**							
Gowardha	G/GD-053	**27**	**EXLT**	*Bamni	GDOBW002	**68**	**GW**	*Potegaon	GDOBW008	**83**	**GW**
Jarawadi (Indiranagar	G/GD-059	**57**	**GW**	*Govindpur alias pipalkhut	GDOBW005	**117**	**PW**	*Sakhara	GDOBW009	**73**	**GW**
Khondala	G/GD-042	**36**	**EXLT**	*Porla	GDOBW007	**50**	**EXLT**				
Yelgur Tola	G/GD-019	**68**	**GW**								

Taluka : Korchi				Taluka : Korchi				Taluka : Korchi			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**Data for 2009 Not Available (Without Fe)**			
Bori	G/GD-006	**226**	**VPW**	Malewara	G/GD-034	**29**	**EXLT**				
				Kurkhera	G/GD-011	**92**	**GW**				
2010 (With Fe) Data for 2011 Not Available (With Fe)											
*Kotgul	GDOBW046	**54**	**GW**	*Korchi	GDOBW064	**35**	**EXLT**	*Zankargondi	GDOBW075	**36**	**EXLT**
*Betkathi	GDOBW055	**52**	**GW**	*Maseli	GDOBW068	**57**	**GW**	*Bedgaon	GDPZ010	**45**	**EXLT**
*Bodaldand	GDOBW057	**66**	**GW**								

Taluka : Mulchera				Taluka : Mulchera				Taluka : Mulchera			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Chaudampalli	G/GD-001	**236**	**VPW**	Chaudampalli	G/GD-001	**212**	**VPW**	Chaudampalli	G/GD-001	**246**	**VPW**
Ghot	G/GD-029	**162**	**PW**	Ghot	G/GD-029	**150**	**PW**	Ghot	G/GD-029	**148**	**PW**
Lagam	G/GD-057	**62**	**GW**								
2010 (With Fe) Data for 2011 Not Available (With Fe)											
*Koparalli	GDOBW035	**97**	**GW**	*Mulchera	GDOBW038	**77**	**GW**	*Gomni	GDPZ011	**44**	**EXLT**

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.10(Contd..) Gadchiroli District

Taluka : Sironcha				Taluka : Sironcha				Taluka : Sironcha			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Nandigaon	G/GD-032	**157**	**PW**	Nandigaon	G/GD-032	**140**	**PW**	Nandigaon	G/GD-032	**117**	**PW**
Sironcha	G/GD-005	**52**	**GW**	Sironcha	G/GD-005	**57**	**GW**				
2010 (With Fe) Data for 2011 Not Available (With Fe)											
*Rangayyapalli	GDOBW081	**88**	**GW**	*Sirkonda mal	GDOBW083	**62**	**GW**				

Taluka : Kurkheda				Taluka : Kurkheda				Taluka : Kurkheda			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2010 (With Fe) Data for 2007 -2009 (Without Fe) and 2011 (With Fe) Not Available											
*Bijarpurtola	GDOBW056	**41**	**EXLT**	*Kasari	GDOBW062	**47**	**EXLT**	*Shivani	GDOBW071	**53**	**GW**
*Gargada	GDOBW058	**42**	**EXLT**	*Khedegaon	GDOBW063	**53**	**GW**	*Talegaon	GDOBW072	**73**	**GW**
*Gewardha	GDOBW059	**68**	**GW**	*Kurkheda	GDOBW066	**56**	**GW**	*Wadhona	GDOBW073	**41**	**EXLT**
*Gothangaon	GDOBW060	**43**	**EXLT**	*Malewada	GDOBW067	**58**	**GW**	*Yengelkheda	GDOBW074	**47**	**EXLT**
*Jambhulkheda	GDOBW061	**84**	**GW**	*Mendha	GDOBW069	**42**	**EXLT**	*Ghati	GDPZ006	**52**	**GW**

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.11: Water Quality Index of Groundwater of Gondia District

Taluka : Amgaon				Taluka : Amgaon				Taluka : Amgaon			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Amgaon	G/GN-002	**67**	**GW**	Amgaon	G/GN-002	**68**	**GW**	Amgaon	G/GN-002	**75**	**GW**
Dongargaon	G/GN-014	**27**	**EXLT**	Dongargaon	G/GN-007	**51**	**GW**	Dongargaon	G/GN-007	**56**	**GW**
Kalimati	G/GN-032	**50**	**EXLT**	Dongargaon	G/GN-014	**31**	**EXLT**	Dongargaon	G/GN-014	**32**	**EXLT**
				Kalimati	G/GN-032	**56**	**GW**	Kalimati	G/GN-032	**61**	**GW**
2010 (With Fe)	**Data for 2011 Not Available (With Fe)**										
*Amgaon	BHOBW151	**135**	**PW**	*Malhi	BHOBW155	**57**	**GW**	*Waghdongri	BHOBW158	**99**	**GW**
*Dahegaon	BHOBW153	**98**	**GW**	*Thana	BHOBW157	**111**	**PW**	*Padmapur	BHPZ021	**105**	**PW**

Taluka : Arjuni Moregaon				Taluka : Arjuni Moregaon				Taluka : Arjuni Moregaon			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Bondgaon	G/GN-030	**40**	**EXLT**	Bondgaon	G/GN-030	**38**	**EXLT**	Bondgaon	G/GN-030	**49**	**EXLT**
Navegaon	G/GN-011	**52**	**GW**	Navegaon	G/GN-011	**44**	**EXLT**	Navegaon Kh.	G/GN-025	**122**	**PW**
Navegaon Kh.	G/GN-025	**91**	**GW**	Navegaon Kh.	G/GN-025	**115**	**PW**	Karandli	G/GN-013	**105**	**PW**
Karandli	G/GN-013	**39**	**EXLT**	Karandli	G/GN-013	**37**	**EXLT**				
2010 (With Fe)	**Data for 2011 Not Available (With Fe)**										
*Arjuni Morgaon	BHOBW120	**44**	**EXLT**	*Tadgaon	BHOBW127	**162**	**PW**	*Tukum Narayan	BHPZ015	**60**	**GW**
*Pandharwani	BHOBW123	**71**	**GW**	*Umarpayali	BHOBW129	**64**	**GW**	*Zanshinagar	BHPZ016	**126**	**PW**
*Salai Bk	BHOBW125	**132**	**PW**	*Bondgaon Devi	BHPZ014	**80**	**GW**	*Gothangaon	BHOBW116	**53**	**GW**

* Post-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.11(Contd..) Gondia District

Taluka : Deori				Taluka : Deori				Taluka : Deori			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Chichgarh	G/GN-029	**37**	**EXLT**	Chichgarh	G/GN-029	**35**	**EXLT**	Murdoli	G/GN-005	**76**	**GW**
Deori	G/GN-004	**68**	**GW**	Deori	G/GN-004	**73**	**GW**				
Murdoli	G/GN-005	**73**	**GW**	Murdoli	G/GN-005	**69**	**GW**				
2010 (With Fe) Data for 2011 Not Available (With Fe)											
*Ambhora	BHOBW078	**36**	**EXLT**	*Deori	BHOBW084	**92**	**GW**	*Palandur (zamindari]	BHOBW122	**63**	**GW**
*Bonde	BHOBW079	**73**	**GW**	*Kadikasa	BHOBW088	**51**	**GW**	*Hardoli	BHOBW171	**54**	**GW**
*Chichgad	BHOBW082	**52**	**GW**	*Mhaisuli	BHOBW093	**64**	**GW**	*Borgaon Bazar	BHPZ013	**47**	**EXLT**

Taluka : Gondia				Taluka : Gondia				Taluka : Gondia			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Asoli	G/GN-018	**23**	**EXLT**	Asoli	G/GN-018	**31**	**EXLT**	Bonde	G/GN-021	**43**	**EXLT**
Bonde	G/GN-021	**43**	**EXLT**	Bonde	G/GN-021	**41**	**EXLT**	Datora	G/GN-027	**129**	**PW**
Rajegaon	G/GN-015	**57**	**GW**	Rajegaon	G/GN-015	**71**	**GW**	Rajegaon	G/GN-015	**73**	**GW**
Sangadi	G/GN-022	**46**	**EXLT**	Arjuni	G/GN-024	**55**	**GW**	Arjuni	G/GN-024	**69**	**GW**
Ghonari	G/GN-001	**33**	**EXLT**	Sangadi	G/GN-022	**45**	**EXLT**	Sangadi	G/GN-022	**47**	**EXLT**
Sindbiri	G/GN-012	**26**	**EXLT**	Ghonari	G/GN-001	**35**	**EXLT**	Sindbiri	G/GN-012	**30**	**EXLT**
Sondad	G/GN-023	**57**	**GW**	Sindbiri	G/GN-012	**30**	**EXLT**	Sondad	G/GN-023	**59**	**GW**
				Sondad	G/GN-023	**48**	**EXLT**				
2010 (With Fe) Data for 2011 Not Available (With Fe)											
*Ghattemni	BHOBW132	**69**	**GW**	*Ekodi	BHPZ017	**62**	**GW**	*Rajegaon	BHPZ019	**71**	**GW**
*Katangi Bk	BHOBW135	**82**	**GW**	*Pandharabodi	BHPZ018	**127**	**PW**	*Navegaon	GNWQN002	**81**	**GW**
*Rajegaon	BHOBW138	**132**	**PW**								

Taluka : Goregaon				Taluka : Goregaon				Taluka : Goregaon			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Goregaon	G/GN-008	**73**	**GW**	Goregaon	G/GN-008	**60**	**GW**	Goregaon	G/GN-008	**57**	**GW**
Data for 2010 and 2011 Not Available (With Fe)											

* Post-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.11(Contd..) Gondia District

Taluka : Sadal Arjuni					Taluka : Sadal Arjuni					Taluka : Sadal Arjuni			
Villages	**Well No.**	**WQI**	**Category**		**Villages**	**Well No.**	**WQI**	**Category**		**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)					**2008 (Without Fe)**					**2009 (Without Fe)**			
Kohemara	G/GN-009	**58**	**GW**		Kohemara	G/GN-009	**52**	**GW**		Kohemara	G/GN-009	**52**	**GW**
2010 (With Fe)	**Data for 2011 Not Available (With Fe)**												
*Malijunga	BHOBW092	**82**	**GW**		*Saundad	BHOBW099	**55**	**GW**		*Khodshioni	BHPZ006	**81**	**GW**
*Mhaswani	BHOBW094	**52**	**GW**		*Sawangi	BHOBW100	**66**	**GW**					

Taluka : Tiroda					Taluka : Tiroda					Taluka : Tiroda			
Villages	**Well No.**	**WQI**	**Category**		**Villages**	**Well No.**	**WQI**	**Category**		**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)					**2008 (Without Fe)**					**2009 (Without Fe)**			
Sarra	G/GN-016	**75**	**GW**		Sarra	G/GN-016	**60**	**GW**		Sarra	G/GN-016	**72**	**GW**
Sejgaon	G/GN-020	**63**	**GW**		Sejgaon	G/GN-020	**57**	**GW**		Sejgaon	G/GN-020	**70**	**GW**
Tiroda	G/GN-010	**111**	**PW**		Tiroda	G/GN-010	**91**	**GW**		Salebardi	G/GN-006	**125**	**PW**
Salebardi	G/GN-006	**111**	**PW**		Salebardi	G/GN-006	**112**	**PW**					
2010 (With Fe)	**Data for 2011 Not Available (With Fe)**												
*Chorkhamara	BHOBW143	**113**	**PW**		*Kawalewada	BHOBW146	**142**	**PW**		*Tiroda	BHOBW149	**79**	**GW**
*Ghogra	BHOBW144	**75**	**GW**		*Lonhara	BHOBW147	**64**	**GW**		*Vihirgaon	BHOBW150	**65**	**GW**
*Kachewani	BHOBW145	**89**	**GW**		*Rustampur	BHOBW148	**192**	**PW**		*Boda	GNWQN001	**259**	**VPW**

Taluka : Salekasa					Taluka : Salekasa					Taluka : Salekasa			
Villages	**Well No.**	**WQI**	**Category**		**Villages**	**Well No.**	**WQI**	**Category**		**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)					**2008 (Without Fe)**					**Data for 2009 (Without Fe) Not Available**			
Salekasa	G/GN-031	**41**	**EXLT**		Salekasa	G/GN-031	**37**	**EXLT**					
2010 (With Fe)	**Data for 2011 Not Available (With Fe)**												
*Thadezari	BHOBW077	**57**	**GW**		*Latori	BHOBW174	**43**	**EXLT**		*Tirkhedi	BHOBW177	**133**	**PW**
*Khedepar	BHOBW173	**75**	**GW**		*Salekasa	BHOBW176	**69**	**GW**		*Kahali	BHPZ023	**54**	**GW**

* Post-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.12: Water Quality Index of Groundwater of Hingoli District

Taluka : Aundha				Taluka : Aundha				Taluka : Aundha			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**Data for 2009 Not Available (Without Fe)**			
Aundha (Nag)	G/HN-025	**66**	**GW**	Aunda	G/HN-025	**69**	**GW**				
2010 (With Fe)								**2011 (With Fe)**			
Ajalsoda	HIPZ005	**109**	**PW**	Shiradshahapur	HIPZ003	**83**	**GW**	*Undegaon	HIPZ008	**92**	**GW**
Shiradshahapur	HIPZ003	**105**	**PW**	Undegaon	HIPZ008	**59**	**GW**	*Ajalsoda	HIPZ005	**81**	**GW**
Undegaon	HIPZ008	**94**	**GW**					*Shiradshahapur	HIPZ003	**100**	**PW**

Taluka : Basmatnagar				Taluka : Basmatnagar				Taluka : Basmatnagar			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2011 (With Fe)**			
Aral	G/HN-006	**114**	**PW**	Babulgaon	G/HN-010	**60**	**GW**	Adgaon - I	HIOBW033	**81**	**GW**
Babulgaon	G/HN-010	**64**	**GW**	**Data for 2009 Not Available (Without Fe)**				Hingoli	HIOBW038	**92**	**GW**
Basmath	G/HN-005	**51**	**GW**					Basmath	HIOBW020	**72**	**GW**
Hatta	G/HN-015	**75**	**GW**					Lon Bk	HIOBW023	**108**	**PW**
2010 (With Fe)								*Pardi Kh.	HIOBW056	**57**	**GW**
Basmath	HIOBW020	**56**	**GW**	Adgaon - I	HIOBW033	**68**	**GW**	*Basmath	HIPZ002	**78**	**GW**
Hingoli	HIOBW038	**74**	**GW**	Lon Bk	HIOBW023	**75**	**GW**	*Sawangi bk	HIOBW015	**55**	**GW**
Telgaon	HIPZ001	**47**	**EXLT**	Telgaon	HIPZ001	**71**	**GW**	*Telgaon	HIPZ001	**70**	**GW**

Taluka : Kalmnuri				Taluka : Kalmnuri				Taluka : Kalmnuri			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2010 (With Fe)				**Data for 2007 to 2009 Not Available (Without Fe)**							
Tuppa	HIOBW047	**99**	**GW**	**2011 (With Fe)**							
Bibgavhan	HIOBW044	**74**	**GW**	Bibgavhan	HIOBW044	**61**	**GW**	*Dongarkada	HIPZ006	**71**	**GW**
Tuppa	HIOBW047	**108**	**PW**	*Bolda	HIPZ009	**88**	**GW**	*Redgaon	HIOBW025	**79**	**GW**

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.12(Contd..) Hingoli District

Taluka : Hingoli				Taluka : Hingoli				Taluka : Hingoli			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Alegaon (Old)	G/HN-023	**152**	**PW**	Alegaon (Old)	G/HN-023	**153**	**PW**	Alegaon (Old)	G/HN-023	**139**	**PW**
Churawa	G/HN-024	**81**	**GW**								
2010 (With Fe)											
Brahmapur	HIWQN003	**62**	**GW**	Brahmapur	HIWQN003	**70**	**GW**	Karanjala	HIOBW009	**116**	**PW**
Narsinamdeo	HIPZ004	**38**	**EXLT**	Hingoli	HIWQN004	**55**	**GW**	Limbala	HIWQN001	**65**	**GW**
Basamba[	HIWQN002	**74**	**GW**								
2011 (With Fe)											
Brahmapur	HIWQN003	**60**	**GW**	*Basamba	HIWQN002	**87**	**GW**	*Karanjala	HIOBW009	**73**	**GW**
Chincholi Rumna	HIOBW039	**71**	**GW**	*Hingoli	HIWQN004	**54**	**GW**	*Brahmapur	HIWQN003	**93**	**GW**
Narsinamdeo	HIPZ004	**117**	**PW**	*Brahmapur	HIWQN003	**119**	**PW**	*Narsinamdeo	HIPZ004	**90**	**GW**
Basamba	HIWQN002	**74**	**GW**	*Limbala	HIWQN001	**83**	**GW**				
Narsinamdeo	HIPZ004	**89**	**GW**	*Chincholi	HIOBW039	**77**	**GW**				

Taluka : Sengaon				Taluka : Sengaon				Taluka : Sengaon			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe) Data 09 (Without Fe) Not Avail				**2008 (Without Fe)**				**2011 (With Fe)**			
Kanhergaon	G/HN-007	**55**	**GW**	Kanhergaon	G/HN-007	**61**	**GW**	*Sakhara	HIOBW007	**73**	**GW**
2010 (With Fe)											
Khadki	HIOBW002	**54**	**GW**	Sakhara	HIOBW007	**58**	**GW**	Sakhara	HIOBW007	**51**	**GW**

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.13: Water Quality Index of Groundwater of Jalgaon District

Taluka : Amalner			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe)			
Sadavan Bk.	T/JG-052	**449**	**UNSUT**
2010 (With Fe)			
Bodwad	JGWQN002	**152**	**PW**
Dhar	JGOWB145	**101**	**PW**
Lon Bk.	JGPZ045	**62**	**GW**

Taluka : Amalner			
Villages	**Well No.**	**WQI**	**Category**
2008 (Without Fe)			
Sadavan Bk.	T/JG-052	**726**	**UNSUT**
2011 (With Fe)			
Savkheda	JGOWB118	**103**	**PW**
Pimpri. p. jalod.	JGOWB122	**51**	**GW**
Mehergaon	JGOWB128	**162**	**PW**
Dhar	JGOWB145	**94**	**GW**
Mudi pr. dangr	JGOWB160	**120**	**PW**

Taluka : Amalner			
Villages	**Well No.**	**WQI**	**Category**
2009 (Without Fe)			
Sadavan Bk.	T/JG-052	**615**	**UNSUT**
Lone	JGPZ014	**250**	**VPW**
Lon Bk.	JGPZ045	**67**	**GW**
Amalner	JGWQN021	**101**	**PW**
Mudi pr. dangr	JGOWB160	**82**	**GW**
*Mundane. Pr. Amalner.	JGOWB131	**69**	**GW**

Taluka : Bhadgaon			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe)			
Bhadgaon	T/JG-016	**72**	**GW**
Pasardi	T/JG-033	**86**	**GW**
Varkhedi	T/JG-035	**296**	**VPW**
Data for 2009 Not Available (Without Fe)			

Taluka : Bhadgaon			
Villages	**Well No.**	**WQI**	**Category**
2008 (Without Fe)			
Bhadgaon	T/JG-016	**74**	**GW**
Pasardi	T/JG-033	**71**	**GW**
Varkhedi	T/JG-035	**289**	**VPW**
Data for 2010 Not Available (With Fe)			

Taluka : Bhadgaon			
Villages	**Well No.**	**WQI**	**Category**
2011 (With Fe)			
Nimbhore	JGOWB103	**84**	**GW**
Kajgaon	JGOWB106	**84**	**GW**
Balad kh.	JGOWB107	**52**	**GW**
Bhadhgaon	JGWQN023	**88**	**GW**

Taluka : Bhusawal			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe)			
Bhusawal (New)	T/JG-040	**86**	**GW**
Mondhale	T/JG-021	**81**	**GW**
2011 (With Fe)			
Thakali	JGWQN004	**81**	**GW**

Taluka : Bhusawal			
Villages	**Well No.**	**WQI**	**Category**
2008 (Without Fe)			
Bhusawal (New)	T/JG-040	**68**	**GW**
Mondhale	T/JG-021	**77**	**GW**
Data for 2010 Not Available (With Fe)			

Taluka : Bhusawal			
Villages	**Well No.**	**WQI**	**Category**
2009 (Without Fe)			
Bhusawal (New)	T/JG-040	**65**	**GW**
Mondhale	T/JG-021	**72**	**GW**

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.13(Contd..) Jalgaon District

Taluka : Bodwad					Taluka : Bodwad					Taluka : Bodwad			
Villages	**Well No.**	**WQI**	**Category**		**Villages**	**Well No.**	**WQI**	**Category**		**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)					**2009 (Without Fe)**					**Data for 2008 Not Available (Without Fe) and 2010 and 2011 Not Available (With Fe)**			
Bodwad	T/JG-014	**82**	**GW**		Bodwad	T/JG-014	**101**	**PW**					

Taluka : Chalisgaon					Taluka : Chalisgaon					Taluka : Chalisgaon			
Villages	**Well No.**	**WQI**	**Category**		**Villages**	**Well No.**	**WQI**	**Category**		**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)					**2008 (Without Fe)**					**2009 (Without Fe)**			
Chalisgaon	T/JG-009	**182**	**PW**		Chalisgaon	T/JG-009	**104**	**PW**		Chalisgaon	T/JG-009	**110**	**PW**
Mahunbare	T/JG-018	**95**	**GW**		Mahunbare	T/JG-018	**62**	**GW**		Mahunbare	T/JG-018	**89**	**GW**
2011 (With Fe)	**Data for 2010 Not Available (With Fe)**												
*Kharjai	JGOWB105	**69**	**GW**		*Adgaon	JGOWB154	**70**	**GW**		*Sevanagar	JGOWB163	**72**	**GW**
*Mehunbare	JGOWB137	**61**	**GW**		*Patne	JGOWB156	**77**	**GW**		*Pimpalgaon	JGOWB167	**96**	**GW**
*Bhoras bk.	JGOWB139	**67**	**GW**		*Hirapur	JGOWB157	**59**	**GW**		*Bhoraj	JGWQN025	**51**	**GW**
*Wakdi	JGOWB142	**62**	**GW**										

Taluka : Chopda					Taluka : Chopda					Taluka : Chopda			
Villages	**Well No.**	**WQI**	**Category**		**Villages**	**Well No.**	**WQI**	**Category**		**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)					**2008 (Without Fe)**					**2009 (Without Fe)**			
Chopda	T/JG-006	**46**	**EXLT**		Dhanora	T/JG-020	**134**	**PW**		Chopda	T/JG-006	**54**	**GW**
2010 (With Fe)													
Deoziri	JGOBW054	**117**	**PW**		Maratha	JGOWB089	**114**	**PW**		Chopda	JGPZ013	**82**	**GW**
Karjane	JGOBW075	**68**	**GW**		Adgaon	JGOWB092	**150**	**PW**		Chahardi	JGWQN005	**145**	**PW**
Adawad	JGOBW077	**110**	**PW**		Lahasur	JGOWB114	**98**	**GW**		Chopda	JGWQN006	**185**	**PW**
Mitawali	JGOBW079	**107**	**PW**		Hated .bk.	JGOWB115	**130**	**PW**					
2011 (With Fe)													
Maratha	JGOWB089	**66**	**GW**		*Deoziri	JGOBW054	**74**	**GW**		*Lahasur	JGOWB114	**75**	**GW**
Lahasur	JGOWB114	**54**	**GW**		*Karjane	JGOBW075	**67**	**GW**		*Hated .bk.	JGOWB115	**82**	**GW**
Hated .bk.	JGOWB115	**104**	**PW**		*Adawad	JGOBW077	**54**	**GW**		*Chopda	JGPZ013	**87**	**GW**
Chopda	JGPZ013	**78**	**GW**		*Mitawali	JGOBW079	**63**	**GW**		*Chahardi	JGWQN005	**84**	**GW**
Chahardi	JGWQN005	**86**	**GW**		*Maratha	JGOWB089	**78**	**GW**		*Chopda	JGWQN006	**122**	**PW**
Chopda	JGWQN006	**132**	**PW**		*Adgaon	JGOWB092	**64**	**GW**					

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.13(Contd..) Jalgaon District

Taluka : Dharangaon				Taluka : Dharangaon				Taluka : Dharangaon			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Dharangaon	T/JG-019	**239**	**VPW**	Pimpalkotha	T/JG-049	**117**	**PW**	Dharangaon	T/JG-019	**111**	**PW**
Pimpalkotha	T/JG-049	**147**	**PW**					Pimpalkotha	T/JG-049	**104**	**PW**
Data for 2010 and 2011 Not Available (With Fe)											

Taluka : Erandol				Taluka : Erandol				Taluka : Erandol			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Erandol	T/JG-010	**66**	**GW**	Erandol	T/JG-010	**50**	**GW**	Erandol	T/JG-010	**49**	**EXLT**
Nagduli	T/JG-038	**83**	**GW**	Nagduli	T/JG-038	**66**	**GW**	Kasoda	T/JG-028	**175**	**PW**
Kasoda	T/JG-028	**248**	**VPW**	Kasoda	T/JG-028	**172**	**PW**				
2010 (With Fe)				**2011 (With Fe)**							
Chandsar	JGOBW081	**152**	**PW**	*Paldhi kh.	JGOBW080	**97**	**GW**	*Pastane .kh	JGPZ031	**80**	**GW**
Pimpri seem.	JGOWB084	**70**	**GW**	*Chandsar	JGOBW081	**69**	**GW**	*Erandol	JGWQN018	**73**	**GW**
Adgaon	JGPZ006	**95**	**GW**	*Pimpri seem.	JGOWB084	**90**	**GW**	*Kavhal	JGWQN019	**70**	**GW**
Eklagna	JGPZ007	**167**	**PW**	*Zurkheda	JGOWB096	**78**	**GW**	*Vankothe	JGWQN020	**56**	**GW**
Pastane .kh	JGPZ031	**64**	**GW**	*Kharchi bk.	JGPZ005	**85**	**GW**				
Kavhal	JGWQN019	**65**	**GW**	*Adgaon	JGPZ006	**65**	**GW**				
Vankothe	JGWQN020	**94**	**GW**	*Eklagna	JGPZ007	**70**	**GW**				

Taluka : Jamner				Taluka : Jamner				Taluka : Jamner			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Jamner	T/JG-004	**184**	**PW**	Jamner	T/JG-004	**124**	**PW**	Jamner	T/JG-004	**114**	**PW**
Shendurni	T/JG-027	**84**	**GW**	Kekat Nimbhora	T/JG-050	**74**	**GW**	Kekat Nimbhora	T/JG-050	**75**	**GW**
Shengola	T/JG-048	**88**	**GW**	Neri	T/JG-017	**128**	**PW**	Neri	T/JG-017	**94**	**GW**
				Shendurni	T/JG-027	**57**	**GW**	Shendurni	T/JG-027	**54**	**GW**
Data for 2010 and 2011 Not Available (With Fe)											

Taluka : Mukainagar				Taluka : Mukainagar				Taluka : Mukainagar			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**Data for 2008 to 2009 Not Available (Without Fe) and also 2010 & 2011 Not Available (With Fe)**							
Narvel	T/JG-045	**156**	**PW**								

Table x.13(Contd..) Jalgaon District

Taluka : Parola				Taluka : Parola				Taluka : Parola			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2008 (Without Fe)				**2009 (Without Fe)**				**Data for 2007 Not Available (Without Fe)**			
Adgaon	T/JG-032	**126**	**PW**	Adgaon	T/JG-032	**130**	**PW**				
2010 (With Fe)											
Titvishiv	JGOWB097	**75**	**GW**	Adgaon	JGOWB133	**79**	**GW**	Undirkheda	JGPZ044	**101**	**PW**
Rajwad	JGOWB120	**116**	**PW**	Karadi	JGPZ025	**52**	**GW**	Parola	JGWQN022	**85**	**GW**
Mhasve	JGOWB126	**104**	**PW**								
2011 (With Fe)											
*Sarve. bk.	JGOWB123	**56**	**GW**	*Adgaon	JGOWB133	**59**	**GW**	*Karadi	JGPZ025	**68**	**GW**
*Titvishiv	JGOWB097	**63**	**GW**	*Jamde	JGOWB147	**84**	**GW**	*Undirkheda	JGPZ044	**55**	**GW**
*Rajwad	JGOWB120	**65**	**GW**	*Dholi	JGOWB150	**69**	**GW**	*Parola	JGWQN022	**73**	**GW**
*Mhasve	JGOWB126	**79**	**GW**								

Taluka : Raver				Taluka : Raver				Taluka : Raver			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Balvadi	T/JG-043	**52**	**GW**	Balvadi	T/JG-043	**58**	**GW**	Balvadi	T/JG-043	**71**	**GW**
Raver	T/JG-066	**125**	**PW**	Raver	T/JG-066	**110**	**PW**	Talwade Kd	T/JG-036	**102**	**PW**
Talwade Kd	T/JG-036	**64**	**GW**	Talwade Kd	T/JG-036	**82**	**GW**				
2010 (With Fe)				**2011 (With Fe)**							
Lalmati	JGOBW004	**97**	**GW**	*Savkheda kh.	JGOBW023	**54**	**GW**	*Padle bk.	JGOBW007	**57**	**GW**
Bhokri	JGOBW009	**81**	**GW**	*Lalmati	JGOBW004	**52**	**GW**	*Savkheda kh.	JGOBW023	**54**	**GW**
Lohara	JGOBW017	**76**	**GW**	*Bhokri	JGOBW009	**47**	**EXLT**	*Rasalpur	JGPZ018	**75**	**GW**
Savkheda kh.	JGOBW023	**69**	**GW**	*Lohara	JGOBW017	**58**	**GW**	*Managalwadi	JGWQN016	**63**	**GW**
Raver	JGWQN017	**76**	**GW**	*Ahirwadi	JGPZ024	**55**	**GW**	*Raver	JGWQN017	**51**	**GW**

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.13(Contd..) Jalgaon District

Taluka : Yaval				Taluka : Yaval				Taluka : Yaval			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Faizpur	T/JG-030	**62**	**GW**	Faizpur	T/JG-030	**46**	**EXLT**	Faizpur	T/JG-030	**52**	**GW**
2010 (With Fe)				**2011 (With Fe)**							
Viroda	JGOBW024	**74**	**GW**	*Viroda	JGOBW024	**76**	**GW**	*Dujkheda	JGWQN011	**70**	**GW**
Viroda	JGOBW038	**56**	**GW**	*Nimgaon	JGOBW038	**83**	**GW**	*Gahukheda	JGWQN012	**71**	**GW**
Mohrale	JGOBW055	**42**	**EXLT**	*Mohrale	JGOBW055	**62**	**GW**	*Navi	JGWQN013	**62**	**GW**
Bamnod	JGWQN010	**104**	**PW**	*Chincholi	JGPZ019	**61**	**GW**	*Ridhiri	JGWQN014	**60**	**GW**
Dujkheda	JGWQN011	**99**	**GW**	*Waghoda	JGPZ035	**70**	**GW**	*Yawal	JGWQN015	**90**	**GW**
Navi	JGWQN013	**44**	**EXLT**	*Bamnod	JGWQN010	**48**	**EXLT**				
Ridhiri	JGWQN014	**92**	**GW**								
Yawal	JGWQN015	**85**	**GW**								

Taluka : Jalgaon				Taluka : Jalgaon				Taluka : Jalgaon			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Naseerabad	T/JG-023	**261**	**VPW**	Naseerabad	T/JG-023	**274**	**VPW**	Abhora Bk	T/JG-044	**61**	**GW**
Bodar	T/JG-037	**80**	**GW**	Bodar	T/JG-037	**57**	**GW**	Naseerabad	T/JG-023	**170**	**PW**
Dangarda	T/JG-041	**67**	**GW**	Dangarda	T/JG-041	**60**	**GW**	Bodar	T/JG-037	**67**	**GW**
Hated Budruk	T/JG-026	**81**	**GW**	Hated Budruk	T/JG-026	**90**	**GW**	Dangarda	T/JG-041	**61**	**GW**
Higone	T/JG-047	**141**	**PW**	Mendhoda	T/JG-046	**114**	**PW**	Mendhoda	T/JG-046	**94**	**GW**
Mendhoda	T/JG-046	**140**	**PW**	Pimpri Akarant	T/JG-015	**79**	**GW**	Pimpri Akarant	T/JG-015	**74**	**GW**
Vakdi	T/JG-034	**104**	**PW**	Vakdi	T/JG-034	**75**	**GW**	Vakdi	T/JG-034	**79**	**GW**
2010 (With Fe)	**Data for 2011 Not Available (With Fe)**										
Chincholi	JGOBW039	**54**	**GW**	Dapore	JGOBW065	**100**	**GW**	Jalgaon	JGPZ012	**70**	**GW**
Kusumbe kh.	JGOBW061	**89**	**GW**	Jalke	JGOBW067	**86**	**GW**	Khedi	JGWQN030	**92**	**GW**

Taluka : Pachora				Taluka : Pachora				Taluka : Pachora			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2011 (With Fe)	**Data for 2007 to 2009 (Without Fe) Not Available and also 2010 (With Fe)**										
Vadgaon ambe.	JGOBW070	**123**	**PW**	Nagardeola bk	JGOWB112	**58**	**GW**	Neri	JGPZ026	**81**	**GW**
Satgaon	JGOBW073	**67**	**GW**	Khurad bk.	JGPZ003	**153**	**PW**	Pachora	JGWQN024	**64**	**GW**
Bambrud	JGOWB110	**60**	**GW**								

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.14: Water Quality Index of Groundwater of Jalna District

Taluka : Ambad				Taluka : Ambad				Taluka : Ambad			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Ambad	G/JL-001	**118**	**PW**	Ambad	G/JL-001	**95**	**GW**	Ambad	G/JL-001	**138**	**PW**
Dungaon	G/JL-040	**92**	**GW**	Dungaon	G/JL-040	**77**	**GW**	Dungaon	G/JL-040	**112**	**PW**
Shahagad	G/JL-033	**223**	**VPW**	Shahagad	G/JL-033	**184**	**PW**	Shahagad	G/JL-033	**204**	**VPW**
2010 (With Fe)											
Rohilagad	JLOBW066	**116**	**PW**	Ambad	JLWQN013	**101**	**PW**	*Nalewadi	JLWQN006	**128**	**PW**
Shevga	JLOBW069	**55**	**GW**	*Rohilagad	JLOBW066	**160**	**PW**	*Renapuri	JLWQN007	**105**	**PW**
Dungaon	JLOBW074	**65**	**GW**	*Shevga	JLOBW069	**143**	**PW**	*Shahagad	JLWQN008	**132**	**PW**
Pangarkheda	JLOBW076	**65**	**GW**	*Zirpi	JLOBW072	**135**	**PW**	*Churmapuri	JLWQN010	**164**	**PW**
Tahadgaon	JLOBW077	**93**	**GW**	*Dungaon	JLOBW074	**120**	**PW**	*Mahakalwasti	JLWQN011	**157**	**PW**
Shahapur	JLWQN005	**70**	**GW**	*Pangarkheda	JLOBW076	**134**	**PW**	*Ambad	JLWQN013	**150**	**PW**
Shahagad	JLWQN008	**124**	**PW**	*Tahadgaon	JLOBW077	**161**	**PW**				
Mahakalwasti	JLWQN011	**112**	**PW**	*Shahapur	JLWQN005	**190**	**PW**				
2011 (With Fe)											
Shahapur	JLWQN005	**66**	**GW**	Renapuri	JLWQN007	**118**	**PW**	Mahakalwasti	JLWQN011	**78**	**GW**
Nalewadi	JLWQN006	**88**	**GW**	Shahagad	JLWQN008	**101**	**PW**	Ambad	JLWQN013	**68**	**GW**

Taluka : Badnapur				Taluka : Badnapur				Taluka : Badnapur			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2009 (Without Fe) Data for 2008 Not Avail.**				**2011 (With Fe)**			
Badnapur	G/JL-055	**94**	**GW**	Badnapur	G/JL-055	**92**	**GW**	Pangarkheda	JLOBW076	**73**	**GW**
Silegaon	G/JL-008	**169**	**PW**					Tahadgaon	JLOBW077	**62**	**GW**
2010 (With Fe)											
Dhabadi	JLOBW043	**56**	**GW**	Dhopteshwar	JLOBW049	**114**	**PW**	*Kandari kh.	JLOBW044	**62**	**GW**
Kandari kh.	JLOBW044	**48**	**EXLT**	Georai bazar	JLPZ002	**56**	**GW**	*Matrewadi	JLOBW045	**59**	**GW**
Matrewadi	JLOBW045	**74**	**GW**	*Deogaon kusali	JLOBW040	**140**	**PW**	*Chanegaon	JLOBW046	**145**	**PW**
Chanegaon	JLOBW046	**100**	**GW**	*Roshangaon	JLOBW041	**127**	**PW**	*Badnapur	JLOBW048	**53**	**GW**
Badnapur	JLOBW048	**96**	**GW**	*Dhabadi	JLOBW043	**108**	**PW**	*Dhopteshwar	JLOBW049	**154**	**PW**

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.14(Contd..) : Jalna District

Taluka : Bhokardan				Taluka : Bhokardan				Taluka : Bhokardan			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Hasnabad	G/JL-006	**325**	**UNSUT**	Hasnabad	G/JL-006	**132**	**PW**	Longaon	G/JL-022	**318**	**UNSUT**
Talegaon	G/JL-038	**106**	**PW**	Longaon	G/JL-022	**221**	**VPW**				
Talni	G/JL-043	**174**	**PW**	Talegaon	G/JL-038	**128**	**PW**				
2010 (With Fe)											
Khandala	JLOBW004	**105**	**PW**	Borgaon jahagir	JLOBW009	**82**	**GW**	*Wakadi	JLOBW007	**163**	**PW**
Gosegaon	JLOBW014	**58**	**GW**	*Walsadawargaon	JLOBW003	**140**	**PW**	*Borgaon jahagir	JLOBW009	**93**	**GW**
Latifpur	JLOBW022	**85**	**GW**	*Khandala	JLOBW004	**68**	**GW**	*Malkapur	JLOBW010	**230**	**VPW**
Walsadawargaon	JLOBW003	**73**	**GW**	*Walsa khalsa	JLOBW006	**72**	**GW**	*Malkheda	JLOBW012	**124**	**PW**
Walsa khalsa	JLOBW006	**91**	**GW**	*Gosegaon	JLOBW014	**137**	**PW**	*Pimpalgaon Renukai	JLOBW018	**98**	**GW**
Malkapur	JLOBW010	**56**	**GW**	*Takli kolte	JLOBW016	**98**	**GW**	*Kedar kheda	JLOBW025	**92**	**GW**
Baranjala lokhande	JLOBW020	**83**	**GW**	*Baranjala lokhande	JLOBW020	**76**	**GW**	*Bhokardan	JLPZ003	**86**	**GW**
Kedar kheda	JLOBW025	**55**	**GW**	*Latifpur	JLOBW022	**128**	**PW**				
Pimpalgaon	-	**66**	**GW**	*Muthad	JLOBW001	**81**	**GW**				
2011 (With Fe)											
Walsadawargaon	JLOBW003	**95**	**GW**	Borgaon jahagir	JLOBW009	**54**	**GW**	Bharadkheda	JLOBW034	**63**	**GW**
Walsa khalsa	JLOBW006	**92**	**GW**	Gosegaon	JLOBW014	**61**	**GW**	Kandari kh.	JLOBW044	**85**	**GW**
Malkapur	JLOBW010	**87**	**GW**	Takli kolte	JLOBW016	**66**	**GW**	Matrewadi	JLOBW045	**63**	**GW**
Malkheda	JLOBW012	**78**	**GW**	Latifpur	JLOBW022	**70**	**GW**	Chanegaon	JLOBW046	**55**	**GW**
Pimpalgaon Renukai	JLOBW018	**78**	**GW**	Mahora	JLOBW026	**76**	**GW**	Badnapur	JLOBW048	**65**	**GW**
Kedar kheda	JLOBW025	**76**	**GW**	Jafrabad	JLOBW027	**53**	**GW**	Dhopteshwar	JLOBW049	**110**	**PW**
Muthad	JLOBW001	**59**	**GW**	Kumbhari	JLOBW029	**124**	**PW**				
Khandala	JLOBW004	**62**	**GW**	Bhutkheda	JLOBW030	**76**	**GW**				

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.14(Contd..) : Jalna District

Taluka : Ghansawangi				Taluka : Ghansawangi				Taluka : Ghansawangi			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Categor**
2007 (Without Fe)				**2008 (Without Fe)**				**Data for 2009 Not Available (Without Fe)**			
Ranjani	G/JL-037	**76**	**GW**	Raniunchagaon	G/JL-027	**179**	**PW**				
2010 (With Fe)											
Tirthpuri	TS-16	**86**	**GW**	*Kumbharpimpalgaon	TS-18	**89**	**GW**	*Ghansawangi	T-06	**72**	**GW**
Ghonshi bk.	BS-27	**107**	**PW**	*Ravna	BS-23	**93**	**GW**	*Paradgaon	BS-25	**77**	**GW**
Murma Kh.	TS-17	**54**	**GW**	*Rani unchegaon	BS-24	**87**	**GW**	*Rajani	TS-15	**124**	**PW**
Kumbharpimpalgaon	TS-18	**69**	**GW**	*Tirthpuri	TS-16	**165**	**PW**	*Masegaon	BS-26	**114**	**PW**
Masegaon	BS-26	**91**	**GW**	*Jambsamarth	BS-28	**70**	**GW**	*Ghonshi bk.	BS-27	**169**	**PW**
Rani unchegaon	BS-24	**83**	**GW**	*Murma Kh.	TS-17	**89**	**GW**				
2011 (With Fe)											
Rani unchegaon	BS-24	**94**	**GW**	Jambsamarth	BS-28	**50**	**GW**	Masegaon	BS-26	**76**	**GW**
Ghansawangi	T-06	**57**	**GW**	Kumbharpimpalgaon	TS-18	**92**	**GW**	Tirthpuri	TS-16	**99**	**GW**
Ravna	BS-23	**55**	**GW**	Paradgaon	BS-25	**47**	**EXLT**	Ghonshi bk.	BS-27	**44**	**EXLT**
Rajani	TS-15	**60**	**GW**								

Taluka : Jafrabad				Taluka : Jafrabad				Taluka : Jafrabad			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Jafrabad	G/JL-004	**704**	**UNSUT**	Jafrabad	G/JL-004	**1311**	**UNSUT**	Jafrabad	G/JL-004	**1229**	**UNSUT**
Kalegaon	G/JL-010	**65**	**GW**					Kalegaon	G/JL-010	**66**	**GW**
2010 (With Fe)											
Mahora	JLOBW026	**45**	**EXLT**	*Mahora	JLOBW026	**61**	**GW**	*Bhutkheda	JLOBW030	**198**	**PW**
Jafrabad	JLOBW027	**58**	**GW**	*Jafrabad	JLOBW027	**90**	**GW**	*Bharadkheda	JLOBW034	**167**	**PW**
Bhutkheda	JLOBW030	**94**	**GW**	*Kumbhari	JLOBW029	**132**	**PW**	*Deoulzari	JLOBW035	**174**	**PW**
2011 (With Fe)											
Gola pangri	JLOBW051	**122**	**PW**	Pokhari (singade)	JLOBW063	**79**	**GW**	Rohilagad	JLOBW066	**93**	**GW**
Pimpalgaon	JLOBW052	**77**	**GW**	Dhagi	JLOBW064	**51**	**GW**	Zirpi	JLOBW072	**74**	**GW**
Revgaon	JLOBW053	**41**	**EXLT**	Shevga	JLOBW069	**66**	**GW**	Dungaon	JLOBW074	**88**	**GW**
Viregaon	JLOBW058	**217**	**VPW**								

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.14(Contd..) : Jalna District

Taluka : Jalna				Taluka : Jalna				Taluka : Jalna			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Jalna	G/JL-002	**267**	**VPW**	Tirthpuri	G/JL-028	**138**	**PW**	Ner	G/JL-048	**83**	**GW**
Tirthpuri	G/JL-028	**110**	**PW**	Samangaon	G/JL-032	**93**	**GW**	Tirthpuri	G/JL-028	**117**	**PW**
Samangaon	G/JL-032	**73**	**GW**					Samangaon	G/JL-032	**79**	**GW**
2010 (With Fe)											
Pokhari (singade)	JLOBW063	**66**	**GW**	*Pimpalgaon	JLOBW052	**72**	**GW**	*Ramnagar	JLWQN003	**117**	**PW**
Gola pangri	JLOBW051	**95**	**GW**	*Sarwadi	JLWQN001	**72**	**GW**	*Viregaon	JLOBW058	**376**	**UNSUT**
Revgaon	JLOBW053	**60**	**GW**	*Rohanwadi	JLWQN002	**84**	**GW**	*Pokhari (singade)	JLOBW063	**125**	**PW**
Viregaon	JLOBW058	**108**	**PW**	*Badnapur	JLWQN004	**111**	**PW**	*Dhagi	JLOBW064	**170**	**PW**
Dhagi	JLOBW064	**100**	**PW**	*Maujpuri	JLOBW057	**68**	**GW**	*Revgaon	JLOBW053	**133**	**PW**
Rohanwadi	JLWQN002	**114**	**PW**	*Ner	JLOBW060	**98**	**GW**				
*Gola pangri	JLOBW051	**89**	**GW**	*Seoli	JLOBW065	**128**	**PW**				
2011 (With Fe)											
Sarwadi	JLWQN001	**53**	**GW**	Ramnagar	JLWQN003	**124**	**PW**				
Rohanwadi	JLWQN002	**86**	**GW**	Badnapur	JLWQN004	**76**	**GW**				

Taluka : Mantha				Taluka : Mantha				Taluka : Mantha			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Watur	G/JL-034	**135**	**PW**	Mantha	G/JL-011	**192**	**PW**	Watur	G/JL-034	**73**	**GW**
				Wakdi	G/JL-017	**388**	**UNSUT**				
2010 (With Fe)											
*Wadgaon saradh	JLOBW101	**103**	**PW**	*Patoda kh	JLOBW109	**73**	**GW**	*Talni	JLOBW102	**179**	**PW**
*Pangri wayal	JLOBW107	**138**	**PW**	*Mantha	JLWQN019	**138**	**PW**	*Dhoksal	JLOBW105	**142**	**PW**
*Helas	JLOBW108	**98**	**GW**								
2011 (With Fe)											
Wadgaon saradh	JLOBW101	**59**	**GW**	Pangri wayal	JLOBW107	**120**	**PW**	Patoda kh	JLOBW109	**45**	**EXLT**
Talni	JLOBW102	**55**	**GW**	Helas	JLOBW108	**41**	**EXLT**	Mantha	JLWQN019	**59**	**GW**

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.14(Contd..) : Jalna District

Taluka : Partur					Taluka : Partur					Taluka : Partur			
Villages	**Well No.**	**WQI**	**Category**		**Villages**	**Well No.**	**WQI**	**Category**		**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)					**2008 (Without Fe)**					**2009 (Without Fe)**			
Shreshti	G/JL-015	**152**	**PW**		Parthur	G/JL-014	**146**	**PW**		Shreshti	G/JL-015	**166**	**PW**
					Shreshti	G/JL-015	**167**	**PW**					
2010 (With Fe)													
Singona	JLOBW093	**51**	**GW**		Shristi	JLOBW096	**69**	**GW**		*Shristi	JLOBW096	**146**	**PW**
Shristi	JLOBW096	**93**	**GW**		*Watur	JLOBW097	**142**	**PW**		*Asangaon	JLOBW098	**82**	**GW**
Asangaon	JLOBW098	**67**	**GW**		*Partur	JLWQN018	**138**	**PW**		*Loni kh.	JLOBW099	**161**	**PW**
Loni kh.	JLOBW099	**59**	**GW**		*Singona	JLOBW093	**74**	**GW**					
Partur	JLWQN018	**96**	**GW**		*Satona kh	JLOBW094	**103**	**PW**					
2011 (With Fe)													
Singona	JLOBW093	**103**	**PW**		Shristi	JLOBW096	**94**	**GW**		Loni kh.	JLOBW099	**64**	**GW**
Satona kh	JLOBW094	**37**	**EXLT**		Asangaon	JLOBW098	**69**	**GW**		Partur	JLWQN018	**60**	**GW**

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.15: Water Quality Index of Groundwater of Kolhapur District

Taluka : Ajra				Taluka : Ajra				Taluka : Ajra			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Ajra	K/KL-001	**78**	**GW**	Ajra	K/KL-001	**55**	**GW**	Ajra	K/KL-001	**64**	**GW**
2010 (With Fe)	**Data for 2011 Not Available (With Fe)**										
*Ajara	KPWQN020	**77**	**GW**	*Uttur	KPWQN019	**87**	**GW**	Kowade	KPOBW107	**36**	**EXLT**
*Gavase	KPWQN018	**71**	**GW**	*Uttur	KPOBW070	**90**	**GW**	Maligre	KPOBW075	**53**	**GW**
*Harur	KPOBW088	**41**	**EXLT**	*Lakudwadi	KPOBW087	**81**	**GW**	Sulgaon	KPOBW073	**34**	**EXLT**
*Kowade	KPOBW107	**55**	**GW**	Ajara	KPWQN020	**59**	**GW**	Uttur	KPWQN019	**47**	**EXLT**
*Maligre	KPOBW075	**54**	**GW**	Gavase	KPWQN018	**43**	**EXLT**	Uttur	KPOBW070	**47**	**EXLT**
*Sulgaon	KPOBW073	**84**	**GW**	Harur	KPOBW088	**34**	**EXLT**	Lakudwadi	KPOBW087	**47**	**EXLT**

Taluka : Bhudargad				Taluka : Bhudargad				Taluka : Bhudargad			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Nitawade	K/KL-018	**38**	**EXLT**	Pimpalgaon	K/KL-030	**66**	**GW**	Naganwadi	K/KL-007	**19**	**EXLT**
Naganwadi	K/KL-007	**17**	**EXLT**					Pimpalgaon	K/KL-030	**60**	**GW**
2010 (With Fe)	**Data for 2011 Not Available (With Fe)**										
*Gargoti	KPWQN017	**47**	**EXLT**	*Pimpalgaon	KPOBW057	**85**	**GW**	Nilpan	KPOBW062	**56**	**GW**
*Helewadi	KPOBW099	**65**	**GW**	*Tiravade	KPOBW059	**46**	**EXLT**	Patgaon	KPPZ016	**37**	**EXLT**
*Karadwadi	KPOBW056	**41**	**EXLT**	*Vengrul	KPPZ015	**55**	**GW**	Pimpalgaon	KPOBW057	**35**	**EXLT**
*Madilge Bk	KPOBW053	**83**	**GW**	Gargoti	KPWQN017	**36**	**EXLT**	Tiravade	KPOBW059	**28**	**EXLT**
*Madur	KPOBW55	**71**	**GW**	Helewadi	KPOBW099	**50**	**GW**	Vengrul	KPPZ015	**63**	**GW**
*Minche kh.	KPPZ014	**77**	**GW**	Karadwadi	KPOBW056	**45**	**EXLT**	Madilge Bk	KPOBW053	**56**	**GW**
*Nilpan	KPOBW062	**65**	**GW**	Madur	KPOBW55	**52**	**GW**				
*Patgaon	KPPZ016	**59**	**GW**	Minche kh.	KPPZ014	**57**	**GW**				

Taluka : Gaganbawada				Taluka : Gaganbawada				Taluka : Gaganbawada			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Aslaj	K/KL-039	**17**	**EXLT**	Gagan bauda	K/KL-016	**25**	**EXLT**	Gagan bauda	K/KL-016	**18**	**EXLT**
				Aslaj	K/KL-039	**21**	**EXLT**	Aslaj	K/KL-039	**16**	**EXLT**
2010 (With Fe)	**Data for 2011 Not Available (With Fe)**										
*Asandoli	KPPZ008	**39**	**EXLT**	Asandoli	KPPZ008	**22**	**EXLT**	Gaganbawada	KPWQN004	**24**	**EXLT**
*Gaganbawada	KPWQN004	**44**	**EXLT**	Gaganbawada	KPOBW041	**23**	**EXLT**	Tisagiwadi	KPOBW040	**36**	**EXLT**
*Tisagiwadi	KPOBW040	**43**	**EXLT**								

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.15 (Contd..) Kolhapur District

Taluka : Chandgad				Taluka : Chandgad				Taluka : Chandgad			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2009 (Without Fe)**				**Data for 2008 Not Available (Without Fe)**			
Karve	K/KL-023	**27**	**EXLT**	Karve	K/KL-023	**30**	**EXLT**	**2010 Contd.. (With Fe)**			
Patne	K/KL-033	**18**	**EXLT**	Patne	K/KL-033	**18**	**EXLT**	*Kodali	KPOBW084	**44**	**EXLT**
				Surute	K/KL-035	**20**	**EXLT**	Kodali	KPOBW084	**34**	**EXLT**
2010 (With Fe) Data for 2011 Not Available (With Fe)								*Porewadi	KPOBW086	**58**	**GW**
*Adkur	KPOBW080	**50**	**GW**	Gulumb K.	KPPZ021	**31**	**EXLT**	Porewadi	KPOBW086	**43**	**EXLT**
Adkur	KPOBW080	**35**	**EXLT**	*Hajgoli	KPOBW083	**56**	**GW**	*Saroli	KPPZ020	**33**	**EXLT**
*Chandgad	KPWQN023	**41**	**EXLT**	Hajgoli	KPOBW083	**39**	**EXLT**	Saroli	KPPZ020	**34**	**EXLT**
Chandgad	KPWQN023	**32**	**EXLT**	*Halkarni	KPWQN022	**52**	**GW**	*Shinoli Bk.	KPWQN021	**43**	**EXLT**
*Date	KPOBW078	**62**	**GW**	Halkarni	KPWQN022	**28**	**EXLT**	Shinoli Bk.	KPWQN021	**52**	**GW**
Date	KPOBW078	**39**	**EXLT**	*Kanhur Kh	KPOBW076	**50**	**EXLT**	*Surute	KPOBW109	**28**	**EXLT**
*Gudavale Kh.	KPPZ019	**75**	**GW**	Kanhur Kh	KPOBW076	**45**	**EXLT**	Surute	KPOBW109	**40**	**EXLT**
Gudavale Kh.	KPPZ019	**32**	**EXLT**	*Karve	KPOBW081	**39**	**EXLT**	*Tambulwadi	KPOBW079	**60**	**GW**
*Gulumb K.	KPPZ021	**63**	**GW**	Karve	KPOBW081	**36**	**EXLT**	Tambulwadi	KPOBW079	**45**	**EXLT**

Taluka : Gadinglaj				Taluka : Gadinglaj				Taluka : Gadinglaj			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Gadinglaj	K/KL-010	**60**	**GW**	Gadinglaj	K/KL-010	**66**	**GW**	Gadinglaj	K/KL-010	**60**	**GW**
Nesari	K/KL-022	**34**	**EXLT**	Nesari	K/KL-022	**28**	**EXLT**	Nesari	K/KL-022	**30**	**EXLT**
2010 (With Fe) Data for 2011 Not Available (With Fe)											
*Gadhinglaj	KPWQN024	**92**	**GW**	*Nilaji	KPOBW063	**92**	**GW**	Harali Bk.	KPWQN026	**34**	**EXLT**
*Halkarni	KPWQN027	**98**	**GW**	*Donewadi	KPWQN025	**71**	**GW**	Hebbal Jaldyal	KPPZ018	**52**	**GW**
*Halkarni	KPOBW066	**132**	**PW**	*HebbalJaldyal	KPPZ018	**77**	**GW**	Hidaduggi	KPPZ017	**55**	**GW**
*Harali Bk.	KPWQN026	**76**	**GW**	Donewadi	KPWQN025	**41**	**EXLT**	Kasba Nool	KPOBW064	**92**	**GW**
*Hidaduggi	KPPZ017	**60**	**GW**	Gadhinglaj	KPWQN024	**34**	**EXLT**	Mahagaon	KPOBW067	**50**	**EXLT**
*Kasba Nool	KPOBW064	**103**	**PW**	Halkarni	KPWQN027	**63**	**GW**	Nangnur	KPOBW065	**73**	**GW**
*Mahagaon	KPOBW067	**125**	**PW**	Halkarni	KPOBW066	**82**	**GW**	Nilaji	KPOBW063	**62**	**GW**
*Nangnur	KPOBW065	**99**	**GW**								

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.15 (Contd..) Kolhapur District

Taluka : Hatkanangale				Taluka : Hatkanangale				Taluka : Hatkanangale			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Kini wathar	K/KL-012	**94**	**GW**	Kini wathar	K/KL-012	**92**	**GW**	Kini wathar	K/KL-012	**79**	**GW**
2010 (With Fe) Data for 2011 Not Available (With Fe)											
*Chokak	KPOBW0101	**91**	**GW**	*Rukadi	KPWQN007	**78**	**GW**	Pargaon	KPPZ023	**50**	**GW**
*Halondi	KPOBW017	**159**	**PW**	*Shiroli	KPOBW016	**85**	**GW**	Rendal	KPOBW020	**118**	**PW**
*Hatkanangale	KPOBW0103	**78**	**GW**	*Vadgoan	KPWQN009	**77**	**GW**	Yalgud	KPOBW021	**64**	**GW**
*Ichalkarnji (Chugulemala)	KPWQN010	**158**	**PW**	*Wathar T. Wadgaon	KPWQN008	**86**	**GW**	Halondi	KPOBW017	**143**	**PW**
*Ichalkarnji (Surve mala)	KPWQN005	**137**	**PW**	*Yalgud	KPOBW021	**101**	**PW**	Ichalkarnji (Chugulemala)	KPWQN010	**61**	**GW**
*Kabnoor	KPWQN006	**127**	**PW**	*Chokak	KPOBW0101	**84**	**GW**	Ichalkarnji (Surve mala)	KPWQN005	**90**	**GW**
*Korochi	KPOBW019	**146**	**PW**	*Hatkanangale	KPOBW0103	**91**	**GW**	Kabnoor	KPWQN006	**81**	**GW**
*Majale	KPOBW014	**85**	**GW**	*Nej	KPOBW012	**57**	**GW**	Korochi	KPOBW019	**96**	**GW**
*Nej	KPOBW012	**78**	**GW**	*Shiroli	KPOBW016	**84**	**GW**	Majale	KPOBW014	**55**	**GW**
*Pargaon	KPPZ023	**112**	**PW**	*Vadgoan	KPWQN009	**102**	**PW**	Rukadi	KPWQN007	**94**	**GW**
*Rendal	KPOBW020	**121**	**PW**	*Wathar T. Wadgaon	KPWQN008	**66**	**GW**				

Taluka : Kagal				Taluka : Kagal				Taluka : Kagal			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Surupali	K/KL-029	**64**	**GW**	Surupali	K/KL-029	**80**	**GW**	Murgud	K/KL-004	**57**	**GW**
2010 (With Fe) Data for 2011 Not Available (With Fe)											
*Kagal	KPWQN030	**63**	**GW**	*Murud	KPWQN028	**51**	**GW**	Kurukali	KPOBW050	**89**	**GW**
*Kurukali	KPOBW050	**77**	**GW**	*Murud	KPOBW052	**66**	**GW**	Murud	KPWQN028	**40**	**EXLT**
*Undarwadi	KPOBW002	**63**	**GW**	*Yamage	KPPZ029	**53**	**GW**	Murud	KPOBW052	**50**	**GW**
*Walve Kh.	KPPZ013	**45**	**EXLT**	Galgale	KPOBW051	**86**	**GW**	Undarwadi	KPOBW002	**46**	**EXLT**
*Galgale	KPOBW051	**82**	**GW**	Ka. Sangaon	KPWQN031	**58**	**GW**	Walve Kh.	KPPZ013	**46**	**EXLT**
*Ka. Sangaon	KPWQN031	**90**	**GW**	Kagal	KPWQN030	**73**	**GW**	Yamage	KPPZ029	**82**	**GW**
*Kapashi	KPWQN032	**110**	**PW**	Kapashi	KPWQN032	**79**	**GW**				
*Khadakewada	KPWQN029	**121**	**PW**	Khadakewada	KPWQN029	**50**	**GW**				

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.15 (Contd..) Kolhapur District

Taluka : Kolhapur				Taluka : Kolhapur				Taluka : Kolhapur			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Gokul shirgaon	K/KL-017	**65**	**GW**	Gokul Shirgaon	K/KL-017	**65**	**GW**	Khupire	K/KL-025	**53**	**GW**
Khupire	K/KL-025	**59**	**GW**	Khupire	K/KL-025	**65**	**GW**	Shiradwad	K/KL-005	**98**	**GW**
Shiradwad	K/KL-005	**100**	**GW**	Shiradwad	K/KL-005	**94**	**GW**	Washi	K/KL-034	**51**	**GW**
Washi	K/KL-034	**52**	**GW**	Washi	K/KL-034	**55**	**GW**	Shiroli	K/KL-002	**71**	**GW**
Shiroli	K/KL-002	**125**	**PW**	Shiroli	K/KL-002	**107**	**PW**	Authur	K/KL-019	**78**	**GW**
Authur	K/KL-019	**101**	**PW**	Partangale	K/KL-008	**46**	**EXLT**	Khindi Varvade	K/KL-038	**30**	**EXLT**
Halkarne	K/KL-036	**134**	**PW**					Partangale	K/KL-008	**41**	**EXLT**
Khindi Varvade	K/KL-038	**29**	**EXLT**	**2010 Contd.. (With Fe)**				**Data for 2011 Not Available (With Fe)**			
Madlgi Budrukh	K/KL-021	**19**	**EXLT**	*Khupire	KPOBW035	**61**	**GW**	*Parite	KPWQN013	**59**	**GW**
Partangale	K/KL-008	**46**	**EXLT**	*Kogli Bk.	KPOBW090	**43**	**EXLT**	*Jaital	KPOBW001	**83**	**GW**
Solankuv	K/KL-043	**36**	**EXLT**	*Kolhapur	KPWQN014	**38**	**EXLT**	*Kogli Bk.	KPOBW090	**44**	**EXLT**
2010 (With Fe)				*Kuditre	KPWQN015	**53**	**GW**	*Kolhapur	KPWQN014	**58**	**GW**
Kerli	KPOBW036	**39**	**EXLT**	*Kuditre	KPWQN015	**80**	**GW**	Kurukali	KPOBW039	**48**	**EXLT**
Nigave Du.	KPPZ022	**80**	**GW**	*Sangwade	KPPZ027	**65**	**GW**	Parite	KPWQN013	**45**	**EXLT**
*Sangwade	KPPZ027	**86**	**GW**	*Kerli	KPOBW036	**54**	**GW**	Nigave Du.	KPPZ022	**70**	**GW**
*Girgaon	KPOBW092	**58**	**GW**	*Girgaon	KPOBW092	**62**	**GW**	Jaital	KPOBW001	**37**	**EXLT**
*Khupire	KPOBW035	**57**	**GW**	*Kurukali	KPOBW039	**79**	**GW**				

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.15 (Contd..) Kolhapur District

Taluka : Panhala				Taluka : Panhala				Taluka : Panhala			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Panhala	K/KL-006	**26**	**EXLT**	Panhala	K/KL-006	**32**	**EXLT**	Panhala	K/KL-006	**24**	**EXLT**
Pimpli Tarf Thane	K/KL-027	**50**	**EXLT**					Undri	K/KL-024	**25**	**EXLT**
Undri	K/KL-024	**22**	**EXLT**								
2010 (With Fe) Data for 2011 Not Available (With Fe)											
Panhala	KPWQN001	**51**	**GW**	*Kisrool	KPPZ004	**46**	**EXLT**	*Punal	KPOBW032	**97**	**GW**
Pimplethane	KPOBW030	**50**	**EXLT**	*Marali	KPOBW096	**35**	**EXLT**	*Asurle	KPWQN002	**65**	**GW**
*Asurle	KPWQN002	**52**	**GW**	*Marali	KPOBW096	**63**	**GW**	*Panhala	KPWQN001	**67**	**GW**
*Kisrool	KPPZ004	**37**	**EXLT**	*Pimplethane	KPOBW030	**44**	**EXLT**	Punal	KPOBW032	**57**	**GW**

Taluka : Radhanagari				Taluka : Radhanagari				Taluka : Radhanagari			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Radhanagari	K/KL-032	**41**	**EXLT**	Radhanagari	K/KL-032	**42**	**EXLT**	Radhanagari	K/KL-032	**42**	**EXLT**
Shelewadi	K/KL-037	**65**	**GW**	Shelewadi	K/KL-037	**24**	**EXLT**				
2010 (With Fe) Data for 2011 Not Available (With Fe)											
*Mhasurli	KPOBW097	**38**	**EXLT**	*Dhmod	KPOBW042	**48**	**EXLT**	Pungaon	KPOBW043	**47**	**EXLT**
*Hasane	KPOBW110	**47**	**EXLT**	*Pungaon	KPOBW043	**47**	**EXLT**	Solankur	KPOBW104	**35**	**EXLT**
*Kasarwada	KPOBW047	**50**	**EXLT**	Chande	KPWQN016	**33**	**EXLT**	Kasarwada	KPOBW047	**51**	**GW**
*Shelewadi	KPOBW044	**49**	**EXLT**	Dhmod	KPOBW042	**40**	**EXLT**	Shelewadi	KPOBW044	**48**	**EXLT**
*Solankur	KPOBW104	**43**	**EXLT**	Hasane	KPOBW110	**41**	**EXLT**				
*Chande	KPWQN016	**43**	**EXLT**	Mhasurli	KPOBW097	**34**	**EXLT**				

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.15 (Contd..) Kolhapur District

Taluka : Shahuwadi				Taluka : Shahuwadi				Taluka : Shahuwadi			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Amba	K/KL-013	**22**	**EXLT**	Amba	K/KL-013	**24**	**EXLT**	Amba	K/KL-013	**19**	**EXLT**
Paijarwadi	K/KL-015	**45**	**EXLT**	Wadicharan	K/KL-028	**94**	**GW**	Paijarwadi	K/KL-015	**24**	**EXLT**
								*Wadicharan	K/KL-028	**95**	**GW**
2010 (With Fe)	**Data for 2011 Not Available (With Fe)**										
Amba	KPOBW004	**32**	**EXLT**	*Jambur	KPPZ002	**50**	**GW**	*Ukhalu	KPPZ001	**59**	**GW**
*Amba	KPOBW004	**41**	**EXLT**	Jambur	KPPZ002	**45**	**EXLT**	Ukhalu	KPPZ001	**60**	**GW**
Chandoli	KPPZ003	**47**	**EXLT**	*Malkapur	KPWQN003	**64**	**GW**	*Wadgaon	KPOBW005	**52**	**GW**
*Chandoli	KPPZ003	**45**	**EXLT**	Malkapur	KPWQN003	**52**	**GW**	Wadgaon	KPOBW005	**61**	**GW**

Taluka : Shirol				Taluka : Shirol				Taluka : Shirol			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2010 (With Fe)	**Data for 2007 to 2009 (Without Fe) Not Available and also 2011 (With Fe)**										
Chipri	KPOBW022	**90**	**GW**	Shiroli Shahunagar	KPOBW025	**45**	**EXLT**	*Jaysingpur	KPWQN012	**120**	**PW**
Danwad Nave	KPOBW100	**143**	**PW**	Takali	KPOBW028	**152**	**PW**	*Kondigre	KPOBW023	**92**	**GW**
Ganeshwadi	KPOBW091	**100**	**GW**	Udgaon	KPWQN011	**126**	**PW**	*Kurundwad	KPOBW026	**150**	**PW**
Ghosarwad	KPOBW105	**102**	**PW**	*Chipri	KPOBW022	**143**	**PW**	*Shirol	KPPZ025	**81**	**GW**
Jambhali	KPPZ026	**152**	**PW**	*Danwad Nave	KPOBW100	**145**	**PW**	*Shiroli Shahunagar	KPOBW025	**136**	**PW**
Jaysingpur	KPWQN012	**84**	**GW**	*Ganeshwadi	KPOBW091	**137**	**PW**	*Takali	KPOBW028	**139**	**PW**
Kondigre	KPOBW023	**91**	**GW**	*Ghosarwad	KPOBW105	**113**	**PW**	*Udgaon	KPWQN011	**159**	**PW**
Kurundwad	KPOBW026	**112**	**PW**	*Jambhali	KPPZ026	**112**	**PW**				
Shirol	KPPZ025	**154**	**PW**								

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.16: Water Quality Index of Groundwater of Latur District

Taluka : Ahmadpur				Taluka : Ahmadpur				Taluka : Ahmadpur			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Ahmadpur	G/LT-015	**122**	**PW**	Ahmadpur	G/LT-015	**104**	**PW**	Ahmadpur	G/LT-015	**88**	**GW**
								Kingaon	G/LT-019	**128**	**PW**
2010 (With Fe)											
Ahmadpur	LTOBW033	**145**	**PW**	*Dhalegaon	LTPZ007	**80**	**GW**	*Sangvi [s]	LTOBW037	**82**	**GW**
Hipparga kopdev	LTOBW040	**98**	**GW**	*Khandali	LTOBW030	**44**	**EXLT**	*Sindgi bk.	LTOBW109	**50**	**GW**
Waigaon	LTOBW049	**72**	**GW**	*Khandali	LTPZ006	**70**	**GW**	*Tambatsangvi	LTOBW034	**43**	**EXLT**
*Walsangi	LTOBW041	**50**	**EXLT**	*Kolwadi	LTOBW031	**73**	**GW**				
*Andhori	LTOBW035	**49**	**EXLT**	*Mankhed	LTOBW039	**45**	**EXLT**				
2011 (With Fe)											
Ahmadpur	LTOBW033	**35**	**EXLT**	Khandali	LTPZ006	**50**	**EXLT**	Sindgi bk.	LTOBW109	**67**	**GW**
Andhori	LTOBW035	**71**	**GW**	Kolwadi	LTOBW031	**36**	**EXLT**	Tambatsangvi	LTOBW034	**78**	**GW**
Dhalegaon	LTPZ007	**72**	**GW**	Mankhed	LTOBW039	**39**	**EXLT**	Waigaon	LTOBW049	**57**	**GW**
Hipparga kopdev	LTOBW040	**50**	**GW**	Sangvi [s]	LTOBW037	**49**	**EXLT**	Walsangi	LTOBW041	**51**	**GW**
Khandali	LTOBW030	**49**	**EXLT**								

Taluka : Nilanga				Taluka : Nilanga				Taluka : Nilanga			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Kasar Sirs	G/LT-025	**80**	**GW**	Kasar Sirsi	G/LT-025	**95**	**GW**	Kasar Sirsi	G/LT-025	**116**	**PW**
Panchincholi	G/LT-018	**79**	**GW**	Kelgaon	G/LT-031	**71**	**GW**	Kelgaon	G/LT-031	**92**	**GW**
				Panchincholi	G/LT-018	**77**	**GW**	Panchincholi	G/LT-018	**74**	**GW**
2010 (With Fe)											
Shelgi	LTOBW076	**68**	**GW**	*Kelgaon	LTPZ011	**74**	**GW**	*Halsi [t]	LTOBW074	**41**	**EXLT**
Nilanga	LTOBW072	**42**	**EXLT**	*Ambulga (bk)	LTOBW088	**54**	**GW**	*Sarwadi	LTPZ013	**43**	**EXLT**
*Gaur	LTOBW091	**56**	**GW**	*Ambulga (v)	LTOBW078	**59**	**GW**	*Shelgi	LTOBW076	**53**	**GW**
*Kelgaon	LTOBW084	**87**	**GW**	*Aurad (shahjani)	LTOBW077	**63**	**GW**	*Shivni kothal	LTOBW090	**43**	**EXLT**
				*Barmachiwadi	LTOBW079	**44**	**EXLT**	*Sindkhed	LTPZ012	**70**	**GW**
2011 (With Fe)											
Ambulga (bk)	LTOBW088	**61**	**GW**	Barmachiwadi	LTOBW079	**65**	**GW**	Nilanga	LTOBW072	**57**	**GW**
Ambulga (v)	LTOBW078	**48**	**EXLT**	Gaur	LTOBW091	**48**	**EXLT**	Sarwadi	LTPZ013	**64**	**GW**
Aurad (shahjani)	LTOBW077	**53**	**GW**	Halsi [t]	LTOBW074	**83**	**GW**	Shivni kothal	LTOBW090	**47**	**EXLT**
Kelgaon	LTOBW084	**58**	**GW**	Kelgaon	LTPZ011	**39**	**EXLT**	Sindkhed	LTPZ012	**117**	**PW**
* Pre- Monsoon Season								Mal Hipparga	LTPZ014	**70**	**GW**

Table x.16(Contd..) Latur District

Taluka : Ausa				Taluka : Ausa				Taluka : Ausa			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**20098 (Without Fe)**			
Belkund	G/LT-036	**179**	**PW**	Ausa	G/LT-014	**90**	**GW**	Belkund	G/LT-036	**56**	**GW**
				Lamjana Phata	G/LT-022	**61**	**GW**	Bhada	G/LT-032	**61**	**GW**
								Budhoda	G/LT-003	**87**	**GW**
2010 (With Fe)	**Data for 2011 Not Available (With Fe)**										
Ausa	LTOBW094	**96**	**GW**	*Killari	LTOBW102	**48**	**EXLT**	Khuntegaon	LTPZ004	**62**	**GW**
Borgaon (n)	LTOBW106	**72**	**GW**	*Talni	LTOBW098	**75**	**GW**	Killari	LTOBW102	**64**	**GW**
Khuntegaon	LTPZ004	**102**	**PW**	*Dapegaon	LTPZ005	**58**	**GW**	Nandurga	LTOBW099	**62**	**GW**
Selu	LTOBW095	**92**	**GW**	Aashiv	LTOBW105	**69**	**GW**	Selu	LTOBW095	**55**	**GW**
Shivali	LTOBW103	**104**	**PW**	Ausa	LTOBW094	**45**	**EXLT**	Shivali	LTOBW103	**126**	**PW**
Taka	LTOBW104	**85**	**GW**	Borgaon (n)	LTOBW106	**47**	**EXLT**	Taka	LTOBW104	**61**	**GW**
Aashiv	LTOBW105	**50**	**GW**	Dapegaon	LTPZ005	**59**	**GW**	Talni	LTOBW098	**48**	**EXLT**
*Karla	LTOBW101	**70**	**GW**	Karla	LTOBW101	**58**	**GW**				
*Kharosa	LTOBW108	**42**	**EXLT**	Kharosa	LTOBW108	**43**	**EXLT**				

Taluka : Chakur				Taluka : Chakur				Taluka : Chakur			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Mahalangra	G/LT-027	**65**	**GW**	Ashta	G/LT-034	**87**	**GW**	Ashta	G/LT-034	**74**	**GW**
Ashta	G/LT-034	**128**	**PW**	Chapoli	G/LT-008	**108**	**PW**	Chapoli	G/LT-008	**106**	**PW**
Chapoli	G/LT-008	**118**	**PW**								
Nalegaon	G/LT-013	**65**	**GW**								
2010 (With Fe)	**Data for 2011 Not Available (With Fe)**										
Ashta	LTOBW047	**60**	**GW**	*Deokara	LTWQN003	**79**	**GW**	Kabansangvi	LTOBW071	**39**	**EXLT**
Gharni	LTOBW046	**56**	**GW**	*Nandgaon	LTOBW043	**77**	**GW**	Latur road.	LTPZ009	**50**	**EXLT**
Kabansangvi	LTOBW071	**92**	**GW**	Ashta	LTOBW047	**35**	**EXLT**	Nandgaon	LTOBW043	**40**	**EXLT**
Nandgaon	LTOBW043	**72**	**GW**	DEOKARA	LTWQN003	**53**	**GW**	Shivankhed	LTPZ008	**113**	**PW**
Shivankhed	LTPZ008	**73**	**GW**	Gharni	LTOBW046	**60**	**GW**	Sugaon	LTPZ010	**97**	**GW**
Sugaon	LTPZ010	**48**	**EXLT**								

* Pre- Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.16(Contd..) Latur District

Taluka : Jalkot				Taluka : Jalkot				Taluka : Jalkot			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2008 (Without Fe)	**Data for 2007 Not Avail.**			**2009 (Without Fe)**				**2010 (With Fe) Data for 2011 Not Available**			
Patoda	G/LT-030	**54**	**GW**	Patoda	G/LT-030	**58**	**GW**	Kolnoor	LTOBW054	**79**	**GW**
								Kolnoor	LTOBW054	**50**	**GW**

Taluka : Latur				Taluka : Latur				Taluka : Latur			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Borgaon Kale	G/LT-029	**143**	**PW**	Borgaon Kale	G/LT-029	**114**	**PW**	Borgaon Kale	G/LT-029	**99**	**GW**
Murud-Akola	G/LT-007	**93**	**GW**	Murud	G/LT-017	**104**	**PW**	Murud	G/LT-017	**100**	**PW**
Panderwadi	G/LT-035	**66**	**GW**	Murud-Akola	G/LT-007	**173**	**PW**	Murud-Akola	G/LT-007	**123**	**PW**
				Panderwadi	G/LT-035	**59**	**GW**	Panderwadi	G/LT-035	**101**	**PW**
								Patroli	G/LT-054	**69**	**GW**
2010 (With Fe)	**Data for 2011 Not Available (With Fe)**										
Bhadi	BS-08	**75**	**GW**	*Chikurda	BS-01	**67**	**GW**	Chikurda	BS-01	**54**	**GW**
Bhatkheda	BS-06	**48**	**EXLT**	*Chincholirao	T-01	**47**	**EXLT**	Chincholi Rao	T-01	**56**	**GW**
Latur road.	BS-18	**65**	**GW**	*Karsa	BS-10	**42**	**EXLT**	Karsa	BS-10	**36**	**EXLT**
*Babalgoan	BS-05	**54**	**GW**	*Latur	T-02	**47**	**EXLT**	Latur	T-02	**50**	**EXLT**
*Murud bk	BS-03	**51**	**GW**	Babalgoan	BS-05	**44**	**EXLT**	Mamdapur	BS-09	**45**	**EXLT**
*Nandgaon	TS-01	**64**	**GW**	Bhadi	BS-08	**67**	**GW**	Murud bk	BS-03	**78**	**GW**
*Neoli	BS-07	**48**	**EXLT**	Bhatkheda	BS-06	**69**	**GW**	Nandgaon	TS-01	**39**	**EXLT**
*Bhisewagholi	BS-02	**37**	**EXLT**	Bhisewagholi	BS-02	**79**	**GW**	Neoli	BS-07	**79**	**GW**
*Borgaon bk	BS-04	**42**	**EXLT**	Borgaon bk	BS-04	**81**	**GW**				

Taluka : Renapur				Taluka : Renapur				Taluka : Renapur			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**Data for 2009 Not Available (Without Fe)**			
Pangaon	G/LT-020	**67**	**GW**	Renapur	G/LT-026	**45**	**EXLT**				
2010 (With Fe)	**Data for 2011 Not Available (With Fe)**										
Mamdapur	LTOBW018	**57**	**GW**	*Pangaon	LTOBW027	**62**	**GW**	Garsuli	LTOBW019	**45**	**EXLT**
*Dawangaon	LTOBW024	**54**	**GW**	*Renapur	LTOBW026	**55**	**GW**	Palshi	LTOBW021	**55**	**GW**
*Garsuli	LTOBW019	**50**	**GW**	*Sindgoan	LTOBW022	**39**	**EXLT**	Pangaon	LTOBW027	**52**	**GW**
*Palshi	LTOBW021	**62**	**GW**	Dawangaon	LTOBW024	**37**	**EXLT**	Renapur	LTOBW026	**51**	**GW**
								Sindgoan	LTOBW022	**104**	**PW**

* Pre- Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.16(Contd..) Latur District

Taluka : Udgir				Taluka : Udgir				Taluka : Udgir			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2009 (Without Fe)**							
Mogha	G/LT-028	**61**	**GW**	Mogha	G/LT-028	**51**	**GW**	**Data for 2008 Not Available (Without Fe)**			
Udgir	G/LT-052	**83**	**GW**	Udgir	G/LT-052	**73**	**GW**				
2010 (With Fe)	**Data for 2011 Not Available (With Fe)**										
Arasnal	LTPZ017	**55**	**GW**	Togari	LTOBW070	**64**	**GW**	Kodli	LTOBW052	**64**	**GW**
Haibatpur	LTPZ015	**71**	**GW**	Kiniyalladevi	LTOBW068	**90**	**GW**	Somnathpur	LTOBW050	**105**	**PW**
Kodli	LTOBW052	**118**	**PW**	Arasnal	LTPZ017	**31**	**EXLT**	Tiruka	LTOBW066	**56**	**GW**
Somnathpur	LTOBW050	**58**	**GW**	Haibatpur	LTPZ015	**72**	**GW**	Togari	LTOBW070	**66**	**GW**
Tiruka	LTOBW066	**45**	**EXLT**	Kiniyalladevi	LTOBW068	**47**	**EXLT**	Udgir	LTPZ016	**50**	**GW**

Taluka : Deoni				Taluka : Deoni				Taluka : Deoni			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2010 (With Fe)	**Data for 2007 to 2009 (Without Fe) Not Available and also 2011 (With Fe)**										
Achola	LTOBW056	**60**	**GW**	Hanchnal	LTOBW061	**117**	**PW**	Deoni bk	LTOBW060	**75**	**GW**
Deoni bk	LTOBW060	**43**	**EXLT**	Achola	LTOBW056	**69**	**GW**	Hanchnal	LTOBW061	**42**	**EXLT**

Taluka : Shirur Anantpal				Taluka : Shirur Anantpal				Taluka : Shirur Anantpal			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2010 (With Fe)	**Data for 2007 to 2009 (Without Fe) Not Available and also 2011 (With Fe)**										
Sakol	LTOBW093	**74**	**GW**	*Shivpur	LTOBW081	**67**	**GW**	*Yerol	LTOBW092	**69**	**GW**
Sakol	LTOBW093	**34**	**EXLT**	Shivpur	LTOBW081	**71**	**GW**	Yerol	LTOBW092	**44**	**EXLT**

* Pre- Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.17 : Water Quality Index of Groundwater of Mumbai District

Taluka : Church Gate			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe)			
Church Gate	C/BB-002	**75**	**GW**

Taluka : Church Gate			
Villages	**Well No.**	**WQI**	**Category**
2008 (Without Fe)			
Church Gate	C/BB-002	**90**	**GW**

Taluka : Church Gate			
Villages	**Well No.**	**WQI**	**Category**
2009 (Without Fe)			
Church Gate	C/BB-002	**70**	**GW**

Taluka : Colaba			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe)			
Colaba	C/BB-005	**58**	**GW**

Taluka : Colaba			
Villages	**Well No.**	**WQI**	**Category**
2008 (Without Fe)			
Colaba	C/BB-005	**76**	**GW**

Taluka : Colaba			
Villages	**Well No.**	**WQI**	**Category**
2009 (Without Fe)			
Colaba	C/BB-005	**58**	**GW**

Taluka : Mahim			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe)			
Mahim	C/BB-006	**49**	**EXLT**

Taluka : Mahim			
Villages	**Well No.**	**WQI**	**Category**
2008 (Without Fe)			
Mahim	C/BB-006	**54**	**GW**

Taluka : Mahim			
Villages	**Well No.**	**WQI**	**Category**
2009 (Without Fe)			
Mahim	C/BB-006	**37**	**EXLT**

Taluka : Goregaon -Andheri			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe)			
A.M.C.Colony	C/BB-001	**38**	**EXLT**

Taluka : Goregaon –Andheri			
Villages	**Well No.**	**WQI**	**Category**
2008 (Without Fe)			
A.M.C.Colony	C/BB-001	**60**	**GW**

Taluka : Goregaon -Andheri			
Villages	**Well No.**	**WQI**	**Category**
2009 (Without Fe)			
A.M.C.Colony	C/BB-001	**38**	**EXLT**

Taluka : Deulwadi			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe) 2008 & 2009 Not Available			
Deulwadi	C/BB-007	**63**	**GW**

Taluka : Chembur			
Villages	**Well No.**	**WQI**	**Category**
2009 (Without Fe) 2007 & 2008 Not Available			
Mahroli	C/BB-004	**73**	**GW**

Taluka : Kurla			
Villages	**Well No.**	**WQI**	**Category**
2008 (Without Fe) 2007 & 2009 Not Available			
Chembur	C/BB-004	**25**	**EXLT**

Taluka : Borivali			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe) Data for 2008 Not Available			
Dahisar	C/BB-003	**109**	**PW**

Taluka : Borivali			
Villages	**Well No.**	**WQI**	**Category**
2009 (Without Fe)			
Dahisar	C/BB-003	**46**	**EXLT**

Data for 2010 and 2011 Not Available

Table x.18 : Water Quality Index of Groundwater of Nagpur District

Taluka : Bhivapur				Taluka : Bhivapur				Taluka : Bhivapur			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Nawegaon	G/NG-038	**65**	**GW**	Nawegaon	G/NG-038	**53**	**GW**	Nawegaon	G/NG-038	**61**	**GW**
2010 (With Fe) Data for 2011 Not Available (With Fe)											
*Besur	NGOBW119	**144**	**PW**	Zamkoli	NGOBW126	**102**	**PW**	Zamkoli	NGPZ021	**89**	**GW**
*Kargaon	NGOBW121	**120**	**PW**	Kargaon	NGPZ016	**108**	**PW**	*Panjrepar	NGWQN003	**80**	**GW**
Naxhi	NGOBW122	**140**	**PW**	Bordikala	NGPZ020	**143**	**PW**				

Taluka : Hingna				Taluka : Hingna				Taluka : Hingna			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Amgaon	G/NG-061	**53**	**GW**	Amgaon	G/NG-061	**64**	**GW**	Amgaon	G/NG-061	**51**	**GW**
2010 (With Fe) Data for 2011 Not Available (With Fe)											
Kanholibora	NGOBW027	**108**	**PW**	Adegaon	NGPZ024	**84**	**GW**	Shivmadka	NGOBW032	**184**	**PW**
Pipaldhara	NGOBW029	**58**	**GW**	Mangli	NGPZ041	**140**	**PW**	Takalghat	NGPZ005	**181**	**PW**
Saongi Deoli	NGOBW030	**121**	**PW**	*SaongiDeoli	NGOBW030	**118**	**PW**	Adegaon	NGPZ024	**123**	**PW**
Shivmadka	NGOBW032	**158**	**PW**	*Wandongri	NGOBW033	**78**	**GW**	Mangli	NGPZ041	**179**	**PW**
Wandongri	NGOBW033	**75**	**GW**	Kanholibora	NGOBW027	**150**	**PW**				
Takalghat	NGPZ005	**113**	**PW**	Pipaldhara	NGOBW029	**80**	**GW**				

Taluka : Kalmeshwar				Taluka : Kalmeshwar				Taluka : Kalmeshwar			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Kalmeshwar	G/NG-013	**442**	**UNSUT**	Kalmeshwar	G/NG-013	**516**	**UNSUT**	Dhapewada	G/NG-064	**129**	**PW**
Dhaewada	G/NG-064	**124**	**PW**	Dhapewada	G/NG-064	**109**	**PW**				
2010 (With Fe) Data for 2011 Not Available (With Fe)											
Ghorad	NGPZ003	**75**	**GW**	Telkamthi	NGOBW066	**73**	**GW**	*Telkamthi	NGOBW066	**133**	**PW**
Tishti bk.	NGPZ032	**110**	**PW**	Kalmeshwar	NGWQN008	**235**	**VPW**	Ghogli	NGOBW063	**136**	**PW**
Khumari	NGPZ036	**102**	**PW**	*Kalmeshwar	NGWQN008	**213**	**VPW**	Mohli	NGOBW064	**106**	**PW**
Mohpa	NGOBW065	**78**	**GW**	*Mohpa	NGOBW065	**82**	**GW**	Tishti Bk.	NGPZ032	**130**	**PW**

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.18 (Contd..) Nagpur District

Taluka : Kamptee				Taluka : Kamptee				Taluka : Kamptee			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Kamptee	G/NG-059	**136**	**PW**	Kamptee	G/NG-059	**123**	**PW**	Koradi	G/NG-065	**110**	**PW**
Koradi	G/NG-065	**130**	**PW**	Koradi	G/NG-065	**97**	**GW**				
2010 (With Fe) Data for 2011 Not Available (With Fe)											
Adka	NGOBW015	**115**	**PW**	Khaparkheda	NGWQN006	**69**	**GW**	*Kadholi	NGWQN005	**89**	**GW**
Gumthala	NGOBW017	**99**	**GW**	*Adka	NGOBW015	**107**	**PW**	*Khaparkheda	NGWQN006	**78**	**GW**
Sawali	NGOBW022	**77**	**GW**	*Sawali	NGOBW022	**82**	**GW**	Wadoda	NGOBW023	**92**	**GW**
Wadoda	NGOBW023	**83**	**GW**	*Kamthi	NGOBW018	**97**	**GW**	Gumthala	NGPZ025	**122**	**PW**

Taluka : Kuhi				Taluka : Kuhi				Taluka : Kuhi			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**Data for 2009 Not Available (Without Fe)**			
Kuhi	G/NG-044	**49**	**EXLT**	Kuhi	G/NG-044	**40**	**EXLT**				
2010 (With Fe) Data for 2011 Not Available (With Fe)											
*Gothangaon	NGOBW129	**140**	**PW**	Mandhal	NGOBW133	**131**	**PW**	Gothangaon	NGPZ014	**153**	**PW**
Kanheri (Dongar]	NGOBW131	**72**	**GW**	Kuhi	NGPZ013	**107**	**PW**	Weltur	NGPZ015	**132**	**PW**
*Kuhi	NGOBW132	**69**	**GW**								

Taluka : Mouda				Taluka : Mouda				Taluka : Mouda			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Khat	G/NG-030	**64**	**GW**	Khat	G/NG-030	**63**	**GW**	Chacher	G/NG-021	**66**	**GW**
Chacher	G/NG-021	**92**	**GW**	Chacher	G/NG-021	**67**	**GW**				
2010 (With Fe) Data for 2011 Not Available (With Fe)											
Chacher	NGOBW094	**179**	**PW**	Mauda	NGOBW100	**66**	**GW**	Charbha	NGOBW095	**158**	**PW**
Charbha	NGOBW095	**90**	**GW**	*Mauda	NGOBW100	**74**	**GW**	Dharmapuri	NGOBW096	**59**	**GW**
Dharmapuri	NGOBW096	**63**	**GW**	Chacher	NGOBW094	**98**	**GW**	Mathni	NGOBW143	**143**	**PW**

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.18 (Contd..) Nagpur District

Taluka : Nagpur				Taluka : Nagpur				Taluka : Nagpur			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Deolapar	G/NG-009	**80**	**GW**	Deolapar	G/NG-009	**61**	**GW**	Deolapar	G/NG-009	**64**	**GW**
Makardhokda	G/NG-043	**65**	**GW**	Makardhokda	G/NG-043	**51**	**GW**	Makardhokda	G/NG-043	**52**	**GW**
Panchgaon	G/NG-011	**69**	**GW**	Panchgaon	G/NG-011	**83**	**GW**	Borkhedi	G/NG-031	**83**	**GW**
Nagpur City	G/NG-035	**85**	**GW**	NagpurCity	G/NG-035	**81**	**GW**	Mangli1	G/NG-060	**57**	**GW**
Nagpur City	G/NG-066	**93**	**GW**	NagpurCity	G/NG-066	**86**	**GW**	Chorbaoli	G/NG-014	**70**	**GW**
Borkhedi	G/NG-031	**90**	**GW**	Borkhedi	G/NG-031	**74**	**GW**	Kanholi bara	G/NG-041	**110**	**PW**
Mangli	G/NG-060	**191**	**PW**	Gumgaon	G/NG-008	**62**	**GW**	Nara	G/NG-058	**133**	**PW**
Chorbaoli	G/NG-014	**75**	**GW**	Mangli	G/NG-060	**199**	**PW**	Sathnaori	G/NG-025	**96**	**GW**
Kanholi bara	G/NG-041	**116**	**PW**	Chorbaoli	G/NG-014	**67**	**GW**	Sirpur Toli	G/NG-029	**43**	**EXLT**
Sathnaori	G/NG-025	**110**	**PW**	Sathnaori	G/NG-025	**96**	**GW**	Sivani	G/NG-018	**77**	**GW**
Sirpur Toli	G/NG-029	**43**	**EXLT**	Sirpur Toli	G/NG-029	**51**	**GW**	Wagholi	G/NG-028	**232**	**VPW**
Sivani	G/NG-018	**73**	**GW**	Sivani	G/NG-018	**61**	**GW**				
Wagholi	G/NG-028	**72**	**GW**	Wagholi	G/NG-028	**57**	**GW**				
2010 (With Fe) Data for 2011 Not Available (With Fe)											
Bokhara	NGOBW145	**119**	**PW**	*Bokhara	NGOBW145	**110**	**PW**	Gonhi	NGPZ003	**171**	**PW**
Makardhokra	NGOBW146	**74**	**GW**	*Wanjra	NGWQN004	**62**	**GW**	Makardhokra	NGOBW146	**70**	**GW**
Gonhi	NGPZ002	**105**	**PW**	*Bahadura	NGOBW135	**120**	**PW**	Tamaswadi	NGPZ004	**97**	**GW**
Bahadura	NGOBW135	**89**	**GW**	*Bhandewadi	NGWQN001	**114**	**PW**	Kalamna	NGPZ022	**97**	**GW**
Wanjra	NGWQN004	**63**	**GW**	*Pardi	NGWQN002	**74**	**GW**	Sonegaon L	NGPZ042	**79**	**GW**

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.18 (Contd..) Nagpur District

Taluka : Narkhed				Taluka : Narkhed				Taluka : Narkhed			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Narkhed	G/NG-007	**179**	**PW**	Narkhed	G/NG-007	**128**	**PW**	Narkhed	G/NG-007	**173**	**PW**
Sawargaon	G/NG-062	**89**	**GW**	Sawargaon	G/NG-062	**70**	**GW**	Sawargaon	G/NG-062	**81**	**GW**
Wardhamna	G/NG-012	**106**	**PW**	Wardhamna	G/NG-012	**61**	**GW**	Wardhamna	G/NG-012	**56**	**GW**
2010 (With Fe) Data for 2011 Not Available (With Fe)											
Rohana	NGOBW049	**172**	**PW**	Belona	NGOBW042	**147**	**PW**	Sawargaon	NGOBW051	**116**	**PW**
Sawargaon	NGOBW051	**144**	**PW**	Saonga Loh..	NGOBW050	**76**	**GW**	Jamgaon (bk)	NGPZ034	**95**	**GW**
Jamgaon (bk)	NGPZ034	**58**	**GW**	Lohara	NGOBW048	**79**	**GW**	Wadvihara	NGPZ035	**114**	**PW**
Wadvihara	NGPZ035	**69**	**GW**	*Belona	NGOBW042	**65**	**GW**	Kharala	NGPZ037	**73**	**GW**
Kharala	NGPZ037	**56**	**GW**	*Lohara	NGOBW048	**89**	**GW**	Sawargaon	NGPZ038	**130**	**PW**
Sawargaon	NGPZ038	**97**	**GW**	*SaongaLoh.	NGOBW050	**69**	**GW**	Belona	NGPZ040	**153**	**PW**
Belona	NGPZ040	**160**	**PW**	*Yeni Koni	NGWQN009	**98**	**GW**				
Yeni Koni	NGWQN009	**107**	**PW**	Rohana	NGOBW049	**192**	**PW**				

Taluka : Parseoni				Taluka : Parseoni				Taluka : Parseoni			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Parseoni	G/NG-016	**76**	**GW**	Parseoni	G/NG-016	**55**	**GW**	Parseoni	G/NG-016	**80**	**GW**
Chargaon (Punarwasi)	G/NG-032	**99**	**GW**	Chargaon (Punarwasi)	G/NG-032	**78**	**GW**	Nayakund	G/NG-026	**59**	**GW**
Nayakund	G/NG-026	**73**	**GW**	Nayakund	G/NG-026	**57**	**GW**				
2010 (With Fe) Data for 2011 Not Available (With Fe)											
Chargaon	NGOBW080	**114**	**PW**	Gahuhiwra	NGPZ012	**79**	**GW**	Parseoni	NGPZ011	**56**	**GW**
Ghukshi	NGOBW082	**86**	**GW**	Dhawalapur	NGPZ028	**94**	**GW**	Gahuhiwra	NGPZ012	**80**	**GW**
Nimba	NGOBW083	**87**	**GW**	*Karambhad	NGOBW083	**90**	**GW**	Chargaon	NGOBW080	**135**	**PW**
Khandala (ghatate)	NGOBW085	**62**	**GW**	*Kandri (kanhan)	NGWQN011	**81**	**GW**	Ghukshi	NGOBW082	**95**	**GW**
Nayakund	NGPZ010	**65**	**GW**	Amdi	NGPZ001	**84**	**GW**	Khandala (ghatate)	NGOBW085	**75**	**GW**
Parseoni	NGPZ011	**49**	**EXLT**	Nayakund	NGPZ010	**84**	**GW**	Dhawalapur	NGPZ028	**91**	**GW**

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.18 (Contd..) Nagpur District

Taluka : Ramtek				Taluka : Ramtek				Taluka : Ramtek			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**Data for 2009 Not Available (Without Fe)**			
Ramtek	G/NG-004	**175**	**PW**	Ramtek	G/NG-004	**169**	**PW**				
2010 (With Fe) Data for 2011 Not Available (With Fe)											
*Mansar	NGWQN010	**61**	**GW**	Deolapar	NGPZ007	**93**	**GW**	Salai	NGOBW075	**157**	**PW**
*Armtek	NGOBW074	**56**	**GW**	Karwahi	NGPZ008	**158**	**PW**	Sillari	NGOBW076	**82**	**GW**
Chorbaoli	NGPZ006	**160**	**PW**	Bhandarbodi	NGOBW068	**127**	**PW**	Tangla	NGPZ009	**77**	**GW**

Taluka : Saoner				Taluka : Saoner				Taluka : Saoner			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Kelod	G/NG-023	**112**	**PW**	Kelod	G/NG-023	**93**	**GW**	Kelod	G/NG-023	**97**	**GW**
Khubala	G/NG-027	**64**	**GW**	Khubala	G/NG-027	**48**	**EXLT**	Khubala	G/NG-027	**56**	**GW**
Manegaon Tek	G/NG-022	**144**	**PW**	Manegaon Tek	G/NG-022	**136**	**PW**	Mohpa	G/NG-063	**78**	**GW**
Mohpa	G/NG-063	**79**	**GW**	Mohpa	G/NG-063	**62**	**GW**	Nagalwadi	G/NG-017	**63**	**GW**
Nagalwadi	G/NG-017	**68**	**GW**	Nagalwadi	G/NG-017	**53**	**GW**	Kothulna	G/NG-039	**133**	**PW**
Kothulna	G/NG-039	**229**	**VPW**	Kothulna	G/NG-039	**190**	**PW**				
2010 (With Fe) Data for 2011 Not Available (With Fe)											
Chhatrapur	NGOBW055	**62**	**GW**	Kelwad	NGPZ030	**102**	**PW**	Chhatrapur	NGOBW055	**74**	**GW**
Kelod	NGOBW056	**93**	**GW**	Salai	NGPZ031	**142**	**PW**	Khairi (p)	NGOBW057	**106**	**PW**
Khairi (p)	NGOBW057	**71**	**GW**	Chandkapur	NGWQN007	**70**	**GW**	Kothulna	NGOBW060	**137**	**PW**
Kothulna	NGOBW060	**123**	**PW**	*Kelod	NGOBW056	**101**	**PW**	Sironji	NGPZ029	**70**	**GW**
Saoner	NGOBW061	**89**	**GW**	*Saoner	NGOBW061	**115**	**PW**	Kelwad	NGPZ030	**87**	**GW**
Sironji	NGPZ029	**60**	**GW**	*Chandkapur	NGWQN007	**83**	**GW**	Salai	NGPZ031	**91**	**GW**

Taluka : Umred				Taluka : Umred				Taluka : Umred			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2008 (Without Fe)				**2010 (With Fe) Data for 2011 Not Available (With Fe)**							
Umred	G/NG-002	**48**	**EXLT**	*Umred	NGOBW114	**79**	**GW**	Thana	NGOBW112	**85**	**GW**
Data for 2007 & 2009 Not Available (Without Fe)				Pachgaon	NGOBW106	**68**	**GW**	Bela	NGOBW153	**93**	**GW**
				Sawangi Kh.	NGOBW108	**79**	**GW**	AmgaonDeol..	NGPZ018	**104**	**PW**
				Sirsi	NGOBW111	**97**	**GW**				

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.18 (Contd..) Nagpur District

Taluka : Katol					Taluka : Katol					Taluka : Katol			
Villages	**Well No.**	**WQI**	**Category**		**Villages**	**Well No.**	**WQI**	**Category**		**Villages**	**Well No.**	**WQI**	**Category**
2010 (With Fe) Data for 2007 to 2009 (Without Fe) and also 2011 (With Fe) Not Available													
Katol	NGPZ033	**89**	**GW**		Ringnabodi	NGOBW041	**75**	**GW**		Ringnabodi	NGOBW041	**86**	**GW**
Dhotiwada	NGPZ039	**67**	**GW**		*Katol	NGOBW037	**145**	**PW**		Katol	NGPZ033	**75**	**GW**
Katol	NGOBW037	**108**	**PW**		*Khangaon	NGOBW038	**90**	**GW**		Dhotiwada	NGPZ039	**123**	**PW**
Nandora	NGOBW040	**80**	**GW**		Nandora	NGOBW040	**98**	**GW**					

Taluka : Nagpur (Rural)					Taluka : Nagpur (Rural)					Taluka : Nagpur (Rural)			
Villages	**Well No.**	**WQI**	**Category**		**Villages**	**Well No.**	**WQI**	**Category**		**Villages**	**Well No.**	**WQI**	**Category**
2010 (With Fe) Data for 2007 to 2009 (Without Fe) and also 2011 (With Fe) Not Available													
Borkhedi	NGOBW004	**59**	**GW**		Bothli	NGOBW005	**81**	**GW**		Mohgaon	NGOBW012	**69**	**GW**

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.19 : Water Quality Index of Groundwater of Nanded District

Taluka : Bhokar					Taluka : Bhokar					Taluka : Bhokar			
Villages	**Well No.**	**WQI**	**Category**		**Villages**	**Well No.**	**WQI**	**Category**		**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)					**2008 (Without Fe)**					**2010 (With Fe)**			
Bhokar	G/ND-008	**168**	**PW**		Bhokar	G/ND-008	**136**	**PW**		Wakad	NDOBW020	**60**	**GW**
2011 (With Fe) Data for 2009 Not Available (Without Fe)													
*Bhokar	NDWQN002	**75**	**GW**		*Kinipalaj	NDPZ006	**55**	**GW**		*Somthana (Bhokar)	NDOBW026	**57**	**GW**
*Divshi Kh	NDOBW028	**100**	**PW**		*Nanda Bk	NDOBW029	**73**	**GW**		*Wakad	NDOBW020	**68**	**GW**

Taluka : Hadgaon					Taluka : Hadgaon					Taluka : Hadgaon			
Villages	**Well No.**	**WQI**	**Category**		**Villages**	**Well No.**	**WQI**	**Category**		**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)					**2008 (Without Fe)**					**2010 (With Fe)**			
Dorli	G/ND-033	**68**	**GW**		Dorli	G/ND-033	**148**	**PW**		Dongargaon	NDPZ018	**94**	**GW**
2011 (With Fe) Data for 2009 (Without Fe) Not Available										Ghogari	NDOBW107	**50**	**GW**
Taroda kh	NDPZ001	**82**	**GW**		*Dongargaon	NDPZ018	**93**	**GW**		Shivpuri	NDOBW103	**74**	**GW**
Ghogari	NDOBW107	**51**	**GW**		*Hadgaon	NDOBW101	**85**	**GW**		Umri p.k	NDOBW091	**96**	**GW**
Shivpuri	NDOBW103	**68**	**GW**		*Sibdara (j)	NDOBW098	**75**	**GW**					
Tamsa	NDOBW104	**71**	**GW**		*Umri p.k	NDOBW091	**79**	**GW**					
*Talni	NDOBW042	**57**	**GW**		*Walki Kh.	NDOBW106	**70**	**GW**					
*Dhanora(hastara)	NDOBW096	**61**	**GW**										

Taluka : Himayat Nagar					Taluka : Himayat Nagar					Taluka : Himayat Nagar			
Villages	**Well No.**	**WQI**	**Category**		**Villages**	**Well No.**	**WQI**	**Category**		**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe) Data for 2008 & 09 Not Avail.					**2011 (With Fe) Data for 2010 Not Available (With Fe)**								
Himayat Nagar	G/ND-014	**173**	**PW**		Dabdhari tanda	NDOBW110	**52**	**GW**		Khairgaon(j)	NDOBW114	**94**	**GW**
					Himayatnagar	NDOBW111	**96**	**GW**		Palaspur	NDOBW112	**73**	**GW**

Taluka : Mahur					Taluka : Mahur					Taluka : Mahur			
Villages	**Well No.**	**WQI**	**Category**		**Villages**	**Well No.**	**WQI**	**Category**		**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe) Data 2008 & 09 Not Available					**2011 (With Fe) Data 2010 Not Available**								
Anjankhed	G/ND-063	**84**	**GW**		Datta manjri	NDOBW127	**47**	**EXLT**		Sindkhed	NDPZ021	**51**	**GW**

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.19 (Contd..) Nanded District

Taluka : Kinwat				Taluka : Kinwat				Taluka : Kinwat			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (With Fe)				**2008 (With Fe)**							
Bothroad (Bodhadi)	G/ND-030	**42**	**EXLT**					**Data for 2009 Not Available**			
Unkeshwar	G/ND-051	**79**	**GW**	Unkeshwar	G/ND-051	**83**	**GW**				
2011 (With Fe) Data for 2010 Not Available (With Fe)											
Apprao peth	NDOBW048	**65**	**GW**	Kinwat	NDOBW122	**58**	**GW**	Pradhnsangvi	NDOBW121	**93**	**GW**
Bodhadi Bk	NDPZ019	**51**	**GW**	Kosmet	NDOBW113	**65**	**GW**	Sarkhani	NDOBW129	**60**	**GW**
Chikhali	NDOBW120	**86**	**GW**	Kuncholi	NDOBW047	**51**	**GW**	Talaiguda	NDOBW133	**85**	**GW**
Islapur	NDOBW115	**43**	**EXLT**	Malbrogaon	NDPZ020	**81**	**GW**				
Kamthala	NDOBW125	**66**	**GW**	Pardi	NDWQN004	**59**	**GW**				

Taluka : Mukhed				Taluka : Mukhed				Taluka : Mukhed			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Sikarghat (Amdura)	G/ND-003	**103**	**PW**	Sikarghat (Amdura)	G/ND-003	**121**	**PW**	Lahan	G/ND-037	**110**	**PW**
Gojegaon	G/ND-004	**51**	**GW**	Gojegaon	G/ND-004	**61**	**GW**	Malegaon (I)	G/ND-017	**45**	**EXLT**
Barad	G/ND-029	**90**	**GW**	Lahan	G/ND-037	**97**	**GW**	Mudkhed	G/ND-056	**100**	**GW**
Lahan	G/ND-037	**121**	**PW**	Mudkhed	G/ND-056	**102**	**PW**				
Mudkhed	G/ND-056	**101**	**PW**	**2010 (With Fe)**							
Mukrambad (Kharka)	G/ND-021	**64**	**GW**	*Mandlapur	NDPZ013	**90**	**GW**	*Barhali	NDOBW060	**98**	**GW**
2011 (With Fe)											
*Barhali	NDOBW060	**62**	**GW**	Khatgaon	NDOBW076	**78**	**GW**	Barhali	NDOBW060	**101**	**PW**
Halni	NDPZ012	**61**	**GW**	Mandlapur	NDPZ013	**68**	**GW**	Mukhed	NDOBW072	**54**	**GW**

Taluka : Dharmabad				Taluka : Dharmabad				Taluka : Dharmabad			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2010 (With Fe)				**2011 (With Fe)**							
*Yeoti	NDOBW074	**66**	**GW**	Dharmabad	NDPZ009	**64**	**GW**	Yeoti	NDOBW074	**69**	**GW**
Data for 2007 to 2009 (Without Fe) Not Avail.				Pataoda b.k	NDOBW045	**74**	**GW**	*Karegaon	NDOBW038	**80**	**GW**

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.19 (Contd..) Nanded District

Taluka : Nanded				Taluka : Nanded				Taluka : Nanded			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Jamb Buzurg	G/ND-012	**101**	**PW**	Dhawari Buzurg	G/ND-027	**75**	**GW**	Dhawari Buzurg	G/ND-027	**65**	**GW**
Jhalakwadi	G/ND-047	**58**	**GW**	Jhalakwadi	G/ND-047	**86**	**GW**	Kamtala	G/ND-041	**78**	**GW**
Kamtala	G/ND-041	**74**	**GW**	Kamtala	G/ND-041	**81**	**GW**	Narwat	G/ND-015	**138**	**PW**
Karadkher	G/ND-024	**105**	**PW**	Narwat	G/ND-015	**123**	**PW**	**2010 (With Fe)**			
Narwat	G/ND-015	**99**	**GW**					*Nanded	NDOBW019	**120**	**PW**
Waranga	G/ND-049	**74**	**GW**	**2011 (With Fe)**							
				Wadi Bk	NDPZ002	**62**	**GW**	Tuppa	NDOBW015	**51**	**GW**
				Markand	NDOBW019	**113**	**PW**	*Adampur	NDOBW068	**101**	**PW**

Taluka : Biloli				Taluka : Biloli				Taluka : Biloli			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**Data for 2009 (Without Fe) Not Available and also 2010 -11 (With Fe)**			
Narsi	G/ND-038	**53**	**GW**	Narsi	G/ND-038	**73**	**GW**				

Taluka : Ardhapur				Taluka : Ardhapur				Taluka : Ardhapur			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2011 (With Fe)	**Data for 2007 to 2009 (Without Fe) and 2010 (With Fe) Not Available**										
Dour	NDPZ003	**66**	**GW**	Lahan	NDPZ004	**66**	**GW**	*Pardim	NDOBW005	**58**	**GW**

Taluka : Deglur				Taluka : Deglur				Taluka : Deglur			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2010 (With Fe)	**Data for 2007 to 2009 (Without Fe) Not Available**										
*Amdapur	NDOBW077	**75**	**GW**	*Deglur	NDOBW086	**117**	**PW**	*Tadkhel	NDOBW082	**54**	**GW**
*Dawangir	NDOBW085	**63**	**GW**	*Hanegaon	NDOBW088	**88**	**GW**	*Wazarga	NDPZ014	**74**	**GW**
2011 (With Fe)											
Amdapur	NDOBW077	**79**	**GW**	Halli	NDPZ017	**84**	**GW**	Tadkhel	NDOBW082	**52**	**GW**
Dawangir	NDOBW085	**65**	**GW**	Hanegaon	NDOBW088	**76**	**GW**	Wazarga	NDPZ014	**84**	**GW**
Deglur	NDOBW086	**113**	**PW**	Narangal Bk	NDPZ016	**55**	**GW**				

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.19 (Contd..) Nanded District

Taluka : Kandhar				Taluka : Kandhar				Taluka : Kandhar			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2010 (With Fe)											
*Kandhar	NDOBW066	**102**	**PW**	*Osmanagar	NDOBW017	**58**	**GW**	*Pethwadaj	NDOBW057	**62**	**GW**
Data for 2007 to 2009 Not Available (Without Fe)								*Warwant	NDPZ011	**80**	**GW**
2011 (With Fe)											
Bamni p.k	NDOBW023	**54**	**GW**	*Nagalgaon	NDOBW053	**49**	**EXLT**	*Shekapur	NDOBW055	**54**	**GW**
Bhadurpura	NDPZ010	**86**	**GW**	*Osmanagar	NDOBW017	**96**	**GW**	*Warwant	NDPZ011	**79**	**GW**
*Bachoti	NDOBW066	**84**	**GW**	*Pethwadaj	NDOBW057	**89**	**GW**				

Taluka : Loha				Taluka : Loha				Taluka : Loha			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2010 (With Fe)				**2011 (With Fe)**							
Janapuri	NDOBW018	**127**	**PW**	*Janapuri	NDOBW018	**86**	**GW**	*Malakoli (khedkarwadi)	NDOBW050	**91**	**GW**
*Shambergaon	NDOBW014	**100**	**PW**	Loha	NDPZ005	**66**	**GW**	Savargaon	NDOBW010	**86**	**GW**
Data for 2007 to 2009 Not Avail. (Without Fe)				Shambergaon	NDOBW014	**98**	**GW**				

Taluka : Mudkhed				Taluka : Mudkhed				Taluka : Mudkhed			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2010 (Without Fe)				**2011 (Without Fe)**				**Data for 2007 to 2009 Not Available (Without Fe)**			
*Mudkhed	NDOBW021	**62**	**GW**	Mudkhed	NDOBW021	**81**	**GW**				
*Mugat	NDOBW012	**89**	**GW**	Mugat	NDOBW012	**57**	**GW**				

Taluka : Umri				Taluka : Umri				Taluka : Umri			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2010 (With Fe)								**2011 (With Fe)**			
Waghalwada	NDWQN003	**53**	**GW**	*Kawalguda	NDOBW040	**58**	**GW**	Gortha	NDOBW034	**58**	**GW**
*Gortha	NDOBW034	**74**	**GW**	Somthana J.	NDOBW039	**83**	**GW**	Karla	NDOBW032	**49**	**EXLT**
*Karla	NDOBW032	**48**	**EXLT**					Somthana J.	NDOBW039	**80**	**GW**
Data for 2007 to 2009 Not Available (Without Fe); * Monsoon Season								Kawalguda	NDOBW040	**138**	**PW**
								*Waghalwada	NDWQN003	**88**	**GW**

Taluka : Naigaon				Taluka : Naigaon				Taluka : Naigaon			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2011 (With Fe)											
Badbada	NDOBW025	**134**	**PW**	*Yesgi	NDOBW081	**110**	**PW**	Billoli	NDPZ008	**54**	**GW**
Degaon	NDPZ007	**62**	**GW**	*Biloli	NDPZ015	**90**	**GW**	*Kondalwadi	NDWQN006	**68**	**GW**
*Naigaon Bazar	NDOBW036	**64**	**GW**	**Data for 2007 to 2009 (Without Fe) and 2010 (With Fe) Not Available**							

Table x.20 : Water Quality Index of Groundwater of Nandurbar District

Taluka : Akkalkuva				Taluka : Akkalkuva				Taluka : Akkalkuva			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Akkalkuva	T/NR-011	**58**	**GW**	Akkalkuva	T/NR-011	**53**	**GW**	Akkalkuva	T/NR-011	**60**	**GW**
2010 (With Fe)											
*Kathi	NBOBW001	**64**	**GW**	*Digiamba	NBOBW049	**59**	**GW**	*Raisingpur	NBOBW057	**63**	**GW**
*Khapar	NBOBW003	**147**	**PW**	*Karanpada	NBOBW050	**51**	**GW**	*Moramba	NBPZ010	**92**	**GW**
*Akkalkuva	NBOBW009	**88**	**GW**								
2011 (With Fe)											
Akkalkuva	NBOBW009	**32**	**EXLT**	Raisingpur	NBOBW057	**36**	**EXLT**	Digiamba	NBOBW049	**59**	**GW**
Digiamba	NBOBW049	**52**	**GW**	Moramba	NBPZ010	**32**	**EXLT**	Karanpada	NBOBW050	**37**	**EXLT**
Kathi	NBOBW001	**35**	**EXLT**	Kathi	NBOBW001	**38**	**EXLT**	Raisingpur	NBOBW057	**42**	**EXLT**
Khapar	NBOBW003	**53**	**GW**	Khapar	NBOBW003	**75**	**GW**	Moramba	NBPZ010	**94**	**GW**
Karanpada	NBOBW050	**27**	**EXLT**	Akkalkuva	NBOBW009	**50**	**EXLT**				

Taluka : Taloda				Taluka : Taloda				Taluka : Taloda			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Taloda	T/NR-026	**72**	**GW**	Rozwe	T/NR-025	**45**	**EXLT**	Rozwe	T/NR-025	**53**	**GW**
				Taloda	T/NR-026	**74**	**GW**	Taloda	T/NR-026	**75**	**GW**
2010 (With Fe)				**2011 (With Fe)**							
*Gopalpur	NBOBW047	**50**	**GW**	Talode	NBOBW026	**56**	**GW**	Talode	NBOBW026	**43**	**EXLT**
				Mod	NBOBW043	**67**	**GW**	Mod	NBOBW043	**71**	**GW**
				Umari	NBOBW044	**54**	**GW**	Umari	NBOBW044	**45**	**EXLT**
				Kothar	NBOBW046	**44**	**EXLT**	Gopalpur	NBOBW047	**44**	**EXLT**
				Gopalpur	NBOBW047	**30**	**EXLT**	Taloda	NBPZ001	**61**	**GW**
				Taloda	NBPZ001	**54**	**GW**				

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.20(Contd..) Nandurbar District

Taluka : Nandurbar				Taluka : Nandurbar				Taluka : Nandurbar			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Nandurbar	T/NR-001	**99**	**GW**	Nandurbar	T/NR-001	**79**	**GW**	Ranala	T/NR-007	**76**	**GW**
Ranala	T/NR-007	**68**	**GW**	Ranala	T/NR-007	**70**	**GW**	Bhadavad	T/NR-016	**139**	**PW**
Bhadavad	T/NR-016	**133**	**PW**	Bhadavad	T/NR-016	**91**	**GW**	Khuntamwadi	T/NR-024	**49**	**EXLT**
Kuntumwadi	T/NR-024	**47**	**EXLT**	Khuntamwadi	T/NR-024	**46**	**EXLT**	Loy	T/NR-020	**82**	**GW**
Loy	T/NR-020	**66**	**GW**	Loy	T/NR-020	**56**	**GW**	Vadkolambi	T/NR-015	**41**	**EXLT**
Rajhava	T/NR-025	**48**	**EXLT**	`							
Vadkolambi	T/NR-015	**49**	**EXLT**								
Wadali S.	T/NR-022	**106**	**PW**								
2010 (With Fe)											
*Shanimandal	NBOBW027	**46**	**EXLT**	Nimboni	NBOBW006	**59**	**GW**	Shanimandal	NBOBW027	**108**	**PW**
*Patharai	NBOBW030	**45**	**EXLT**	Nandurbar	NBOBW010	**109**	**PW**	Dhandane	NBOBW048	**69**	**GW**
*Dhandane	NBOBW048	**61**	**GW**	Samsherpur	NBOBW029	**79**	**GW**	Akrale	NBOBW051	**70**	**GW**
*Akrale	NBOBW051	**69**	**GW**	Patharai	NBOBW030	**61**	**GW**	Akarale	NBOBW064	**55**	**GW**
*Dhekwad	NBOBW052	**90**	**GW**	Dhekwad	NBOBW052	**73**	**GW**	Shanimandal	NBPZ004	**97**	**GW**
*Dhanora	NBOBW053	**79**	**GW**	Nimboni	NBPZ005	**45**	**EXLT**	Nandurbar	NBPZ007	**54**	**GW**
*Samsherpur	NBPZ006	**66**	**GW**	Samsherpur	NBPZ006	**70**	**GW**				
2011 (With Fe)											
Dhanora	NBOBW053	**69**	**GW**	Patharai	NBOBW030	**94**	**GW**	Shanimandal	NBPZ004	**273**	**VPW**
Nimboni	NBOBW006	**62**	**GW**	Dhandane	NBOBW048	**62**	**GW**	Samsherpur	NBPZ006	**86**	**GW**
Nandurbar	NBOBW010	**82**	**GW**	Akrale	NBOBW051	**55**	**GW**	Nandurbar	NBPZ007	**89**	**GW**
Shanimandal	NBOBW027	**116**	**PW**	Dhekwad	NBOBW060	**65**	**GW**				
Samsherpur	NBOBW029	**78**	**GW**	Akarale	NBOBW064	**43**	**EXLT**				

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.20(Contd..) Nandurbar District

Taluka : Navapur				Taluka : Navapur				Taluka : Navapur			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Viasarwadi	T/NR-004	**68**	**GW**	Viasarwadi	T/NR-004	**69**	**GW**	Nawapur	T/NR-023	**83**	**GW**
Nawapur	T/NR-023	**89**	**GW**	Nawapur	T/NR-023	**88**	**GW**				
2010 (With Fe)											
*Shravani	NBOBW011	**86**	**GW**	Vadkhut	NBOBW025	**47**	**EXLT**	Navapur	NBPZ009	**43**	**EXLT**
*Visarwadi	NBOBW012	**62**	**GW**	Dokare	NBOBW032	**72**	**GW**	Shravani	NBOBW011	**51**	**GW**
*Sonkhamb	NBOBW031	**63**	**GW**	Kamod	NBOBW045	**53**	**GW**	Sonkhamb	NBOBW031	**40**	**EXLT**
*Mograni	NBOBW055	**59**	**GW**	Vadkalambi	NBOBW056	**41**	**EXLT**	Anjane	NBOBW033	**68**	**GW**
*Navapur	NBPZ009	**66**	**GW**	Nijampur	NBOBW035	**44**	**EXLT**	Nijampur	NBOBW035	**52**	**GW**
Navapur	NBOBW002	**70**	**GW**	Jamtalav	NBOBW036	**37**	**EXLT**	Kamod	NBOBW045	**48**	**EXLT**
Visarwadi	NBOBW012	**55**	**GW**	Navapur	NBOBW002	**35**	**EXLT**	Kolvihir	NBOBW054	**46**	**EXLT**
Anjane	NBOBW033	**52**	**GW**	Visarwadi	NBOBW012	**49**	**EXLT**	Sonkhamb	NBPZ008	**59**	**GW**
Kolvihir	NBOBW054	**50**	**GW**	Jamtalav	NBOBW036	**39**	**EXLT**				
Kadwan	NBOBW013	**95**	**GW**	Vadkalambi	NBOBW056	**36**	**EXLT**				
2011 (With Fe)											
Nijampur	NBOBW035	**50**	**GW**	Sonkhamb	NBPZ008	**85**	**GW**	Shravani	NBOBW011	**52**	**GW**
Jamtalav	NBOBW036	**59**	**GW**	Navapur	NBPZ009	**81**	**GW**	Sonkhamb	NBOBW031	**48**	**EXLT**
Kamod	NBOBW045	**49**	**EXLT**	Visarwadi	NBOBW012	**48**	**EXLT**	Anjane	NBOBW033	**56**	**GW**
Vadkalambi	NBOBW056	**57**	**GW**	Navapur	NBOBW002	**62**	**GW**				
Khokarwade	NBOBW058	**53**	**GW**								

Taluka : Dhadgaon				Taluka : Dhadgaon				Taluka : Dhadgaon			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2010 (With Fe)											
*Chinalkuva	NBOBW014	**51**	**GW**	*Umarani	NBOBW038	**45**	**EXLT**	*Dhadgaon	NBOBW039	**62**	**GW**
*Mandvi Bk	NBOBW015	**61**	**GW**	**Data for 2007 to 2009 (Without Fe) Not Available**							
2011 (With Fe)											
Chinalkuva	NBOBW014	**39**	**EXLT**	Bijari	NBOBW061	**33**	**EXLT**	Dhadgaon	NBOBW059	**41**	**EXLT**
Mandvi Bk	NBOBW015	**39**	**EXLT**	Mandavi bk	NBPZ011	**46**	**EXLT**	Bijari	NBOBW061	**48**	**EXLT**
Umarani kh	NBOBW038	**34**	**EXLT**	Chinalkuva	NBOBW014	**43**	**EXLT**	Mandavi bk	NBPZ011	**54**	**GW**
Dhadgaon	NBOBW039	**44**	**EXLT**	Mandvi Bk	NBOBW015	**46**	**EXLT**				
Dhadgaon	NBOBW059	**45**	**EXLT**	Umarani kh	NBOBW038	**47**	**EXLT**				

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.20(Contd..) Nandurbar District

Taluka : Shahada					Taluka : Shahada					Taluka : Shahada			
Villages	**Well No.**	**WQI**	**Category**		**Villages**	**Well No.**	**WQI**	**Category**		**Villages**	**Well No.**	**WQI**	**Category**
2010 (With Fe)													
*Mandane	NBOBW005	**36**	**EXLT**		Sarangkheda	NBOBW019	**46**	**EXLT**		Khaparkheda	NBPZ002	**84**	**GW**
*Khaparkheda	NBPZ002	**38**	**EXLT**		Kukwal	NBOBW020	**96**	**GW**		Sonwad	NBPZ003	**45**	**EXLT**
*Sonwad	NBPZ003	**47**	**EXLT**		Kakarde kh	NBOBW021	**49**	**EXLT**		**Data for 2007 to 2009 (Without Fe) Not Available**			
Sonwad	NBOBW018	**42**	**EXLT**		Shahada	NBOBW040	**102**	**PW**					
2011 (With Fe)													
Mandane	NBOBW005	**91**	**GW**		Mandane	NBOBW005	**61**	**GW**		Prakashe	NBOBW022	**41**	**EXLT**
Dongargaon	NBOBW007	**75**	**GW**		Dongargaon	NBOBW007	**62**	**GW**		Hol	NBOBW023	**54**	**GW**
Gogapur	NBOBW017	**32**	**EXLT**		Ubhadagad	NBOBW016	**37**	**EXLT**		Fattepur	NBOBW024	**34**	**EXLT**
Prakashe	NBOBW022	**44**	**EXLT**		Gogapur	NBOBW017	**56**	**GW**		Shahada	NBOBW040	**83**	**GW**
Hol	NBOBW023	**106**	**PW**		Sonwad	NBOBW018	**100**	**PW**		Manmodya	NBOBW041	**48**	**EXLT**
Fattepur	NBOBW024	**42**	**EXLT**		Sarangkheda	NBOBW019	**47**	**EXLT**		Khaparkheda	NBPZ002	**52**	**GW**
Manmodya	NBOBW041	**56**	**GW**		Kukwal	NBOBW020	**98**	**GW**					
Jayanagar	NBOBW065	**54**	**GW**		Kakarde kh	NBOBW021	**54**	**GW**					

* Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.21 : Water Quality Index of Groundwater of Nashik District

Taluka : Chandwad				Taluka : Chandwad				Taluka : Chandwad			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2008 (Without Fe)				**2010 (With Fe)**							
Sogras	G/NS-047	**38**	**EXLT**	Kanmandale	NKOBW067	**58**	**GW**	Nimgavhan	NKPZ043	**96**	**GW**
Data for 2007 and 2009 Not Available (Without Fe)				Chandvad	NKOBW076	**70**	**GW**	Chikhalambe	NKOBW041	**56**	**GW**
				Vadbare	NKOBW199	**70**	**GW**	Chandvad	NKOBW076	**58**	**GW**
				Varadi	NKPZ002	**75**	**GW**	Vadbare	NKOBW199	**58**	**GW**
2011 (With Fe)											
Chikhalambe	NKOBW041	**80**	**GW**	Chandvad	NKOBW076	**64**	**GW**	Varadi	NKPZ002	**76**	**GW**
Kanmandale	NKOBW067	**85**	**GW**	Vadbare	NKOBW199	**41**	**EXLT**	Nimgavhan	NKPZ043	**43**	**EXLT**

Taluka : Deola				Taluka : Deola				Taluka : Deola			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2009 (Without Fe)				**2010 (With Fe)**				**2011 (With Fe)**			
Deola	T/NS-037	**124**	**PW**	Deola	NKOBW194	**116**	**PW**	Deola	NKOBW194	**86**	**GW**
Data for 2007 and 2008 Not Available (Without Fe)				Gunjalnagar	NKPZ038	**62**	**GW**	*Deola	NKOBW194	**115**	**PW**
								*Gunjalnagar	NKPZ038	**117**	**PW**

Taluka : Dindori				Taluka : Dindori				Taluka : Dindori			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Dindori	G/NS-019	**62**	**GW**	Dindori	G/NS-019	**65**	**GW**	Dindori	G/NS-019	**83**	**GW**
Kokanwadi	T/NS-006	**73**	**GW**	Karanjali	G/NS-042	**50**	**GW**	Mhasrul	G/NS-044	**76**	**GW**
Mhasrul	G/NS-044	**60**	**GW**	Kona	T/NS-035	**39**	**EXLT**				
Nalegaon	G/NS-041	**44**	**EXLT**	Mhasrul	G/NS-044	**71**	**GW**				
2010 (With Fe)											
Mokhnal	NKOBW219	**111**	**PW**	Dindori	NKOBW005	**98**	**GW**	Awankhed	NKPZ017	**42**	**EXLT**
Chausale	NKPZ020	**47**	**EXLT**	Talegaon Dindori	NKOBW019	**54**	**GW**	Dhakambe	NKOBW020	**60**	**GW**
Nanashi	NKOBW001	**38**	**EXLT**	Jambutake	NKPZ012	**68**	**GW**	Dhakambe	NKOBW020	**84**	**GW**
Umrale Bk	NKOBW004	**48**	**EXLT**								
2011 (With Fe)											
Mokhnal	NKOBW219	**51**	**GW**	Dindori	NKOBW005	**47**	**EXLT**	*Dindori	NKOBW005	**109**	**PW**
Awankhed	NKPZ017	**66**	**GW**	Dhakambe	NKOBW020	**63**	**GW**	*TalegaonD.	NKOBW019	**59**	**GW**
Nanashi	NKOBW001	**37**	**EXLT**	Jambutake	NKPZ012	**80**	**GW**	*Dhakambe	NKOBW020	**67**	**GW**
Umrale Bk	NKOBW004	**47**	**EXLT**	*Umrale Bk	NKOBW004	**45**	**EXLT**	*Chausale	NKPZ020	**47**	**EXLT**

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.21 (Contd..) Nashik District

Taluka : Igatpuri				Taluka : Igatpuri				Taluka : Igatpuri			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Vasali	G/NS-022	**63**	**GW**	Vasali	G/NS-022	**71**	**GW**	Igatpuri	G/NS-077	**61**	**GW**
2010 (With Fe)											
Mundegaon	NKOBW036	**53**	**GW**	Khed	NKOBW053	**54**	**GW**	Igatpuri	NKOBW202	**28**	**EXLT**
Kanchangaon	NKOBW039	**64**	**GW**	Take harsha	NKOBW204	**50**	**GW**	Take harsha	NKOBW204	**34**	**EXLT**
Igatpuri	NKOBW202	**69**	**GW**	Wadi Varhe	NKOBW032	**41**	**EXLT**	Take Deogaon	NKOBW206	**30**	**EXLT**
Take Deogaon	NKOBW206	**52**	**GW**	Mundegaon	NKOBW036	**26**	**EXLT**	Gonde	NKWQN002	**52**	**GW**
Gonde	NKWQN002	**87**	**GW**	Kanchangaon	NKOBW039	**33**	**EXLT**	Talegaon	NKWQN003	**29**	**EXLT**
Talegaon	NKWQN003	**90**	**GW**	Khed	NKOBW053	**31**	**EXLT**				
2011 (With Fe)											
Talegaon	NKWQN003	**65**	**GW**	Gonde	NKWQN002	**36**	**EXLT**	Igatpuri	NKOBW202	**42**	**EXLT**
Wadi Varhe	NKOBW032	**26**	**EXLT**	Talegaon	NKWQN003	**39**	**EXLT**	Take harsha	NKOBW204	**53**	**GW**
Mundegaon	NKOBW036	**58**	**GW**	Khed	NKOBW053	**51**	**GW**	Take Deogaon	NKOBW206	**45**	**EXLT**
Kanchangaon	NKOBW039	**57**	**GW**	Wadi Varhe	NKOBW032	**44**	**EXLT**	Gonde	NKWQN002	**53**	**GW**
Igatpuri	NKOBW202	**48**	**EXLT**	Mundegaon	NKOBW036	**39**	**EXLT**	Talegaon	NKWQN003	**49**	**EXLT**
Take harsha	NKOBW204	**42**	**EXLT**	Kanchangaon	NKOBW039	**43**	**EXLT**				
Take Deogaon	NKOBW206	**44**	**EXLT**	Khed	NKOBW053	**50**	**EXLT**				

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.21 (Contd..) Nashik District

Taluka : Niphad				Taluka : Niphad				Taluka : Niphad			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Categor**	**Villages**	**Well No.**	**WQI**	**Categor**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Pimpalgaon Baswant	G/NS-013	**111**	**PW**	Pimpalgaon Baswant	G/NS-013	**106**	**PW**	Pimpalgaon Baswant	G/NS-013	**154**	**PW**
Savargaon	G/NS-053	**45**	**EXLT**	Savargaon	G/NS-053	**183**	**PW**	Savargaon	G/NS-053	**90**	**GW**
2010 (With Fe)											
Kotamgaon	NKOBW079	**235**	**VPW**	Pimpalgaon Basvant	NKOBW042	**84**	**GW**	Thergaon	NKPZ004	**95**	**GW**
Wakad	NKOBW081	**81**	**GW**	Pachorewani	NKOBW055	**60**	**GW**	Antarweli	NKPZ039	**127**	**PW**
Gajarwadi	NKOBW083	**126**	**PW**	Ahergaon	NKOBW057	**49**	**EXLT**	Kasbesukene	NKWQN019	**47**	**EXLT**
Mhalsakore	NKOBW059	**227**	**VPW**	Ozar mig	NKOBW021	**89**	**GW**	Niphad	NKOBW068	**41**	**EXLT**
Katargaon	NKWQN020	**73**	**GW**	Umbarkhed	NKOBW043	**68**	**GW**	Sarole Thadi	NKPZ025	**151**	**PW**
Rui	NKWQN021	**140**	**PW**	Sakore	NKOBW044	**76**	**GW**				
20101 (With Fe)											
Ozar mig	NKOBW021	**61**	**GW**	Kotamgaon	NKOBW079	**148**	**PW**	Rui	NKWQN021	**71**	**GW**
Pimpalgaon Basvant	NKOBW042	**73**	**GW**	Wakad	NKOBW081	**72**	**GW**	*Antarweli	NKPZ039	**65**	**GW**
Umbarkhed	NKOBW043	**147**	**PW**	Gajarwadi	NKOBW083	**150**	**PW**	*Thergaon	NKPZ004	**69**	**GW**
Sakore	NKOBW044	**63**	**GW**	Thergaon	NKPZ004	**104**	**PW**	*Lonwadi	NKPZ006	**111**	**PW**
Pachorewani	NKOBW055	**77**	**GW**	Sarole Thadi	NKPZ025	**74**	**GW**				
Ahergaon	NKOBW057	**69**	**GW**	Kasbesukene	NKWQN019	**86**	**GW**				
Niphad	NKOBW068	**65**	**GW**	Katargaon	NKWQN020	**117**	**PW**				

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.21 (Contd..) Nashik District

Taluka : Kalwan				Taluka : Kalwan				Taluka : Kalwan			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Dalwat	T/NS-038	**60**	**GW**	Dalwat	T/NS-038	**65**	**GW**	Dalwat	T/NS-038	**68**	**GW**
2010 (With Fe)											
Pilakos	NKOBW173	**57**	**GW**	Bhagurdi	NKOBW188	**55**	**GW**	Visapur	NKWQN006	**67**	**GW**
Inshi	NKOBW178	**48**	**EXLT**	Jamle Pale	NKPZ033	**59**	**GW**	Sakore	NKOBW191	**70**	**GW**
Desgaon	NKOBW186	**56**	**GW**	Abhona	NKWQN004	**58**	**GW**	Matane	NKOBW193	**83**	**GW**
2011 (With Fe)											
Pilakos	NKOBW173	**88**	**GW**	Visapur	NKWQN006	**51**	**GW**	*Desgaon	NKOBW186	**34**	**EXLT**
Inshi	NKOBW178	**150**	**PW**	*Sakore	NKOBW191	**116**	**PW**	*Bhagurdi	NKOBW188	**37**	**EXLT**
Desgaon	NKOBW186	**64**	**GW**	*Visapur	NKWQN006	**66**	**GW**	*Jamle Pale	NKPZ033	**57**	**GW**
Abhona	NKWQN004	**57**	**GW**	*Pilakos	NKOBW173	**124**	**PW**	*Abhona	NKWQN004	**56**	**GW**
Kalwan	NKWQN005	**87**	**GW**	*Inshi	NKOBW178	**54**	**GW**	*Kalwan	NKWQN005	**85**	**GW**
								*Matane	NKOBW193	**43**	**EXLT**

Taluka : Malegaon				Taluka : Malegaon				Taluka : Malegaon			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Jalgaon	T/NS-028	**163**	**PW**	Jalgaon	T/NS-028	**125**	**PW**	Ravalgaon	T/NS-009	**90**	**GW**
Karanjagavan	T/NS-023	**99**	**GW**	Jhodga	T/NS-051	**65**	**GW**				
Ravalgaon	T/NS-009	**85**	**GW**	Karanjagavan	T/NS-023	**105**	**PW**				
				Ravalgaon	T/NS-009	**82**	**GW**				
2010 (With Fe)											
Zodge	NKOBW110	**47**	**EXLT**	Ajang	NKOBW139	**88**	**GW**	Agar.bk	NKWQN007	**48**	**EXLT**
Dapur	NKOBW113	**63**	**GW**	Gilane	NKOBW176	**136**	**PW**	Dhane	NKWQN008	**54**	**GW**
Daregaon	NKOBW121	**119**	**PW**	Ajande	NKOBW177	**198**	**PW**	Malegaon	NKWQN009	**51**	**GW**
Nagzari	NKOBW133	**105**	**PW**	Jalgaon (Nimbait)	NKOBW182	**85**	**GW**	Ravalgaon	NKWQN010	**133**	**PW**
Virane	NKOBW136	**87**	**GW**	Chikhalohal	NKPZ035	**96**	**GW**	Vajirkhede	NKPZ027	**50**	**EXLT**
2011 (With Fe)											
Virane	NKOBW136	**86**	**GW**	*Daregaon	NKOBW121	**118**	**PW**	*Umarane	NKOBW200	**135**	**PW**
Agar.bk	NKWQN007	**150**	**PW**	*Nagzari	NKOBW133	**88**	**GW**	*Saudane	NKPZ008	**109**	**PW**
Ravalgaon	NKWQN010	**107**	**PW**	*Ajang	NKOBW139	**87**	**GW**	*Agar.bk	NKWQN007	**151**	**PW**
*Zodge	NKOBW110	**99**	**GW**	*Gilane	NKOBW176	**52**	**GW**	*Dhane	NKWQN008	**62**	**GW**
*Dapur	NKOBW113	**50**	**GW**	*Ajande	NKOBW177	**41**	**EXLT**	*Malegaon	NKWQN009	**112**	**PW**

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.21 (Contd..) Nashik District

Taluka : Nandgaon				Taluka : Nandgaon				Taluka : Nandgaon			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**Data for 2009 (Without Fe) Not Available**			
Nandgaon	T/NS-054	**226**	**VPW**	Nandgaon	T/NS-054	**174**	**PW**				
2010 (With Fe)				**2011 (With Fe)**							
Jawalki	NKOBW104	**84**	**GW**	Jawalki	NKOBW104	**128**	**PW**	Hiswal Kh	NKOBW161	**88**	**GW**
Naydongari	NKOBW117	**50**	**GW**	Bolthan	NKOBW107	**131**	**PW**	Dhotane Bk	NKOBW165	**42**	**EXLT**
Talwade	NKOBW124	**50**	**EXLT**	Pardhadi	NKOBW115	**78**	**GW**	Muldongari	NKPZ028	**43**	**EXLT**
Jamdari	NKOBW143	**50**	**GW**	Naydongari	NKOBW117	**62**	**GW**	Jalgaon Bk	NKPZ029	**134**	**PW**
Jalgaon Bk	NKPZ029	**72**	**GW**	Talwade	NKOBW124	**69**	**GW**	Khadgaon	NKWQN011	**141**	**PW**
Bolthan	NKOBW107	**101**	**PW**	Chandore	NKOBW127	**78**	**GW**	Manmad	NKWQN012	**97**	**GW**
Nandgaon	NKOBW147	**117**	**PW**	Jamdari	NKOBW143	**54**	**GW**	Panewadi	NKWQN013	**152**	**PW**
Bolthan	NKOBW107	**98**	**GW**	Nandgaon	NKOBW147	**67**	**GW**				
Talwade	NKOBW124	**75**	**GW**	Sakore	NKOBW148	**79**	**GW**				
Jamdari	NKOBW143	**57**	**GW**	Nandur	NKOBW159	**36**	**EXLT**				

Taluka : Peinth				Taluka : Peinth				Taluka : Peinth			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Categor**
2007 (Without Fe)				**2008 (Without Fe)**				**Data for 2009 (Without Fe) Not Available**			
Peinth	G/NS-050	**77**	**GW**	Peinth	G/NS-050	**71**	**GW**				
2010 (With Fe)											
Nirgude (Harsul)	NKOBW214	**35**	**EXLT**	Peth	NKWQN023	**33**	**EXLT**	Harsul	NKOBW212	**41**	**EXLT**
Ambe	NKOBW218	**43**	**EXLT**	Goldari	NKOBW210	**43**	**EXLT**	Adgaon Harsul	NKWQN022	**44**	**EXLT**
2011 (With Fe)											
Goldari	NKOBW210	**36**	**EXLT**	Nirgude (Harsul)	NKOBW214	**34**	**EXLT**	Adgaon Harsul	NKWQN022	**56**	**GW**
Harsul	NKOBW212	**36**	**EXLT**	Ambe	NKOBW218	**54**	**GW**	Peth	NKWQN023	**44**	**EXLT**

Taluka : Satana				Taluka : Satana				Taluka : Satana			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Categor**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Nampur	T/NS-024	**94**	**GW**	Nampur	T/NS-024	**100**	**GW**	Lakhampur	T/NS-076	**55**	**GW**
Satana	T/NS-010	**270**	**VPW**	Satana	T/NS-010	**256**	**VPW**	Nampur	T/NS-024	**105**	**PW**
Data for 2010 and 2011 Not Available											

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.21 (Contd..) Nashik District

Taluka : Nashik				Taluka : Nashik				Taluka : Nashik			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Deolali	G/NS-002	**82**	**GW**	Deolali	G/NS-002	**85**	**GW**	Deolali	G/NS-002	**98**	**GW**
Shinde	G/NS-052	**46**	**EXLT**	Shinde	G/NS-052	**48**	**EXLT**	Shinde	G/NS-052	**63**	**GW**
Botgaon Pimpri	G/NS-079	**112**	**PW**	Borgaon Pimpri	G/NS-079	**118**	**PW**	Borgaon Pimpri	G/NS-079	**97**	**GW**
Chikhalohol	T/NS-005	**75**	**GW**	Chikhalohol	T/NS-005	**77**	**GW**	Dhundegaon	G/NS-056	**53**	**GW**
Dhundegaon	G/NS-056	**43**	**EXLT**	Dhundegaon	G/NS-056	**48**	**EXLT**	Raslapur	G/NS-017	**163**	**PW**
Ghagbari	T/NS-040	**45**	**EXLT**	Ghagbari	T/NS-040	**47**	**EXLT**				
Nandur Shirgate	G/NS-021	**75**	**GW**	Nandur Shirgate	G/NS-021	**67**	**GW**				
Raslapur	G/NS-017	**197**	**PW**	Raslapur	G/NS-017	**196**	**PW**				
2010 (With Fe)											
Devargaon	NKOBW011	**47**	**EXLT**	Lohashingwe	NKOBW034	**67**	**GW**	Vadala	NKPZ021	**80**	**GW**
Villoli	NKWQN018	**76**	**GW**	Jakhori	NKOBW048	**66**	**GW**	Eklahara	NKWQN014	**73**	**GW**
Gangapur/someshvar	NKOBW015	**49**	**EXLT**	Shevge Darna	NKOBW051	**43**	**EXLT**	Nashik	NKWQN015	**51**	**GW**
Mhasrul	NKOBW022	**46**	**EXLT**	Kotamgaon	NKPZ011	**61**	**GW**	Pimpri Sayad	NKWQN016	**85**	**GW**
Bhagur	NKOBW033	**80**	**GW**	Lahvit	NKPZ023	**71**	**GW**	Satpur	NKWQN017	**78**	**GW**
Lohashingwe	NKOBW034	**39**	**EXLT**	Gangapur/someshvar	NKOBW015	**62**	**GW**	Villoli	NKWQN018	**29**	**EXLT**
Jakhori	NKOBW048	**116**	**PW**	Ambebahula	NKOBW030	**71**	**GW**				
Shevge Darna	NKOBW051	**57**	**GW**	Bhagur	NKOBW033	**62**	**GW**				
Kotamgaon	NKPZ011	**98**	**GW**	Dudgaon	NKOBW014	**70**	**GW**	Dudgaon	NKOBW014	**65**	**GW**
Eklahara	NKWQN014	**86**	**GW**	Pimpalgaon Khamb	NKPZ022	**53**	**GW**	Mhasrul	NKOBW022	**57**	**GW**
Pimpri Sayad	NKWQN016	**56**	**GW**	Satpur	NKWQN017	**81**	**GW**				
2011 (With Fe)											
Mhasrul	NKOBW022	**65**	**GW**	Gangapur/someshvar	NKOBW015	**46**	**EXLT**	*Eklahara	NKWQN014	**92**	**GW**
Ambebahula	NKOBW030	**44**	**EXLT**	Bhagur	NKOBW033	**48**	**EXLT**	*Nashik	NKWQN015	**66**	**GW**
Devargaon	NKOBW011	**37**	**EXLT**	Satpur	NKWQN017	**44**	**EXLT**	*Pimpri Sayad	NKWQN016	**72**	**GW**
Dudgaon	NKOBW014	**46**	**EXLT**	*Lohashingwe	NKOBW034	**57**	**GW**	*Satpur	NKWQN017	**60**	**GW**
Gangapur/someshvar	NKOBW015	**36**	**EXLT**	*Jakhori	NKOBW048	**87**	**GW**				
Bhagur	NKOBW033	**133**	**PW**	*Shevge Darna	NKOBW051	**50**	**GW**				
Dudgaon	NKOBW014	**41**	**EXLT**	*Lahvit	NKPZ023	**71**	**GW**				

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.21 (Contd..) Nashik District

Taluka : Trimbakeshwar				Taluka : Trimbakeshwar				Taluka : Trimbakeshwar			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Categor**	**Villages**	**Well No.**	**WQI**	**Categor**
2007 (Without Fe)				**2008 (Without Fe) , Data for 2010 & 11 (WF) NA**				**+2008 Contd.**	**#2009 (Without Fe)**		
Dahalewadi	G/NS-045	**36**	**EXLT**	Dahalewadi	G/NS-045	**39**	**EXLT**	+Trimbakeswar	G/NS-018	**75**	**GW**
Harsul	G/NS-043	**39**	**EXLT**	Harsul	G/NS-043	**38**	**EXLT**	# Harsul	G/NS-043	**41**	**EXLT**

Taluka : Yeola				Taluka : Yeola				Taluka : Yeola			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Categor**	**Villages**	**Well No.**	**WQI**	**Categor**
2007 (Without Fe)				**2011 (With Fe)**							
Yeola	G/NS-020	**61**	**GW**	Nagarsal	NKWQN028	**38**	**EXLT**	Ankai	NKOBW094	**40**	**EXLT**
2010 (With Fe)				Ankai	NKOBW094	**115**	**PW**	Andarsul	NKOBW097	**60**	**GW**
Mukhed	NKWQN027	**44**	**EXLT**	Mahalkheda	NKWQN026	**146**	**PW**	Bokate	NKOBW099	**86**	**GW**
Nagarsal	NKWQN028	**93**	**GW**	Mukhed	NKWQN027	**107**	**PW**	Bharam	NKPZ010	**150**	**PW**
Ankai	NKOBW094	**47**	**EXLT**	Nagarsal	NKWQN028	**73**	**GW**	Satali	NKPZ026	**35**	**EXLT**
Andarsul	NKOBW097	**83**	**GW**	**Data for 2007 to 2009 Not Available (Without Fe)**							
Satali	NKPZ026	**50**	**EXLT**								
Andarsul	NKOBW097	**59**	**GW**								

Taluka : Sinnar				Taluka : Sinnar				Taluka : Sinnar			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Categor**	**Villages**	**Well No.**	**WQI**	**Categor**
2008 (Without Fe)				**2009 (Without Fe)**				**Data for 2007 (Without Fe) Not Available**			
Sinnar	G/NS-015	**207**	**VPW**	Sinnar	G/NS-015	**229**	**VPW**				
2010 (With Fe)											
Mohdari	NKOBW046	**53**	**GW**	Kirtangali	NKWQN024	**111**	**PW**	Chondhi	NKOBW071	**138**	**PW**
Baragaon Pimpri	NKOBW058	**52**	**GW**	Musalgaon	NKWQN025	**82**	**GW**	Dodi kh	NKOBW073	**77**	**GW**
Dubere	NKOBW061	**80**	**GW**	Dodi kh	NKOBW073	**71**	**GW**	Ujjani	NKOBW086	**129**	**PW**
Sinnar	NKOBW062	**48**	**EXLT**	Sonewadi	NKOBW066	**62**	**GW**	Nirhale	NKOBW088	**123**	**PW**
Chondhi	NKOBW071	**79**	**GW**	Mohdari	NKOBW046	**25**	**EXLT**	Atkawade	NKPZ001	**57**	**GW**
Ujjani	NKOBW086	**127**	**PW**	Baragaon Pimpri	NKOBW058	**78**	**GW**	Kirtangali	NKWQN024	**122**	**PW**
Nirhale	NKOBW088	**87**	**GW**	Dubere	NKOBW061	**60**	**GW**				
Atkawade	NKPZ001	**81**	**GW**	Sinnar	NKOBW062	**51**	**GW**				
Borkhind	NKPZ016	**85**	**GW**	Sonewadi	NKOBW066	**71**	**GW**				
2011 (With Fe)											
*Baragaon Pimpri	NKOBW058	**91**	**GW**	*Mohdari	NKOBW046	**65**	**GW**	*Ujjani	NKOBW086	**148**	**PW**
*Dubere	NKOBW061	**76**	**GW**	*Sinnar	NKOBW062	**61**	**GW**	*Nirhale	NKOBW088	**153**	**PW**
*Atkawade	NKPZ001	**75**	**GW**	*Sonewadi	NKOBW066	**71**	**GW**	*Musalgaon	NKWQN025	**159**	**PW**
*Kirtangali	NKWQN024	**39**	**EXLT**	*Chondhi	NKOBW071	**162**	**PW**				
*Agaskhind	NKPZ015	**81**	**GW**	*Dodi kh	NKOBW073	**94**	**GW**				

Table x.21 (Contd..) Nashik District

Taluka : Baglan				Taluka : Baglan				Taluka : Baglan			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Categor**	**Villages**	**Well No.**	**WQI**	**Categor**
2010 (With Fe)											
Varche Tembhe	NKOBW118	**92**	**GW**	Deopurpada	NKOBW198	**138**	**PW**	Deopurpada	NKOBW198	**43**	**EXLT**
Mahad	NKOBW134	**51**	**GW**	Jad	NKPZ031	**60**	**GW**	Utrane	NKPZ013	**60**	**GW**
Karanjad	NKOBW152	**121**	**PW**	Avhati	NKPZ032	**60**	**GW**	Surane	NKPZ030	**62**	**GW**
Nampur	NKOBW154	**64**	**GW**	Varche Tembhe	NKOBW118	**47**	**EXLT**	Jad	NKPZ031	**87**	**GW**
Utrane	NKPZ013	**52**	**GW**	Mahad	NKOBW134	**54**	**GW**	Avhati	NKPZ032	**91**	**GW**
Avhati	NKPZ032	**80**	**GW**	Vaygaon	NKOBW138	**86**	**GW**	Dhandripada	NKPZ042	**83**	**GW**
Satana	NKWQN001	**119**	**PW**	Karanjad	NKOBW152	**87**	**GW**	Satana	NKWQN001	**44**	**EXLT**
Vaygaon	NKOBW138	**78**	**GW**	Nampur	NKOBW154	**66**	**GW**	**Data for 2007 to 2009 Not Available**			
Vasol	NKOBW195	**102**	**PW**	Vasol	NKOBW195	**54**	**GW**	**(Without Fe)**			
2011 (With Fe)											
Vasol	NKOBW195	**75**	**GW**	Jad	NKPZ031	**81**	**GW**	*Jad	NKPZ031	**40**	**EXLT**
Varche Tembhe	NKOBW118	**87**	**GW**	Avhati	NKPZ032	**70**	**GW**	*Avhati	NKPZ032	**53**	**GW**
Mahad	NKOBW134	**52**	**GW**	Dhandripada	NKPZ042	**95**	**GW**	*Satana	NKWQN001	**72**	**GW**
Vaygaon	NKOBW138	**63**	**GW**	Satana	NKWQN001	**44**	**EXLT**	*Mahad	NKOBW134	**38**	**EXLT**
Karanjad	NKOBW152	**168**	**PW**	*Varche Tembhe	NKOBW118	**77**	**GW**	*Vaygaon	NKOBW138	**45**	**EXLT**
Nampur	NKOBW154	**41**	**EXLT**	*Karanjad	NKOBW152	**75**	**GW**	*Vasol	NKOBW195	**48**	**EXLT**
Utrane	NKPZ013	**102**	**PW**	*Nampur	NKOBW154	**91**	**GW**	*Deopurpada	NKOBW198	**45**	**EXLT**
Surane	NKPZ030	**140**	**PW**	*Utrane	NKPZ013	**82**	**GW**				

Taluka : Surgana				Taluka : Surgana				Taluka : Surgana			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Categor**	**Villages**	**Well No.**	**WQI**	**Categor**
2010 (With Fe)				**2011 (With Fe)**							
Chikadi	NKOBW185	**40**	**EXLT**	Chikadi	NKOBW185	**45**	**EXLT**	**Data for 2007 to 2009 Not Available**			
Surgana	NKOBW220	**38**	**EXLT**	Surgana	NKOBW220	**67**	**GW**	**(Without Fe)**			
Kothule	NKOBW225	**67**	**GW**	Kothule	NKOBW225	**59**	**GW**				

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.22 : Water Quality Index of Groundwater of Osmanabad District

Taluka : Bhum				Taluka : Bhum				Taluka : Bhum			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Bhum	G/OS-042	**104**	**PW**	Bhum	G/OS-042	**74**	**GW**	Bhum	G/OS-042	**68**	**GW**
2010 (With Fe)								**2011 (With Fe)**			
Bhoom	OSOBW060	**79**	**GW**	Hatola	OSOBW006	**65**	**GW**	Dahiphal	OSOBW004	**53**	**GW**
Wakwad	OSOBW059	**35**	**EXLT**	Rui	OSOBW003	**69**	**GW**	Rui	OSOBW003	**65**	**GW**
Dahiphal	OSOBW004	**39**	**EXLT**					*Dahiphal	OSOBW004	**71**	**GW**
								*Rui	OSOBW003	**77**	**GW**

Taluka : Kalambh				Taluka : Kalambh				Taluka : Kalambh			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2011 (With Fe)**			
Pimpalwandi	K/OS-030	**274**	**VPW**	Pimpalwandi	K/OS-030	**238**	**VPW**	Deodhanaora	OSOBW016	**136**	**PW**
2010 (With Fe)								Diksal	OSOBW012	**57**	**GW**
Deodhanaora	OSOBW016	**80**	**GW**	Ratnapur	OSWQN020	**74**	**GW**	Ghargaon	OSOBW027	**56**	**GW**
Ghargaon	OSOBW027	**64**	**GW**	Shiradhone	OSOBW017	**59**	**GW**	Gour	OSOBW015	**60**	**GW**
Gour	OSOBW015	**79**	**GW**	Stra	OSWQN021	**81**	**GW**	Hawargaon	OSWQN018	**82**	**GW**
Hawargaon	OSWQN018	**68**	**GW**					Malkaranja	OSOBW019	**43**	**EXLT**
2011 Contd.. (With Fe)								Mohar	OSWQN019	**58**	**GW**
Shiradhone	OSOBW017	**48**	**EXLT**	Ratnapur	OSWQN020	**63**	**GW**	*Stra	OSWQN021	**70**	**GW**
Stra	OSWQN021	**37**	**EXLT**	*Ghargaon	OSOBW027	**90**	**GW**	*Stra	OSWQN021	**49**	**EXLT**
Watwada	OSOBW025	**57**	**GW**	*Diksal	OSOBW012	**170**	**PW**	*Yermala	OSOBW066	**46**	**EXLT**
Yermala	OSOBW066	**36**	**EXLT**	*Hawargaon	OSWQN018	**53**	**GW**	**Data for 2009 (Without Fe) Not Available**			
Lakhangaon	OSOBW005	**50**	**EXLT**	*Shiradhone	OSOBW017	**70**	**GW**				

Taluka : Lohara				Taluka : Lohara				Taluka : Lohara			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Lohara Buzurg	G/OS-036	**97**	**GW**	Lohara Buzurg	G/OS-036	**80**	**GW**	Lohara Buzurg	G/OS-036	**72**	**GW**
Data for 2010 and 2011 Not Available (With Fe)											

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.22 (Contd..) Osmanabad District

Taluka : Osmanabad				Taluka : Osmanabad				Taluka : Osmanabad			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Mouje Barul	K/OS-034	**68**	**GW**	Mouje Barul	K/OS-034	**85**	**GW**	Mouje Barul	K/OS-034	**66**	**GW**
Dhoki	G/OS-046	**120**	**PW**	Dhoki	G/OS-046	**172**	**PW**	Dhoki	G/OS-046	**99**	**GW**
Vadgaon Siddheswar	G/OS-037	**66**	**GW**	Vadgaon Siddheswar	G/OS-037	**79**	**GW**	Vadgaon Siddheswar	G/OS-037	**65**	**GW**
Wakwad	K/OS-040	**64**	**GW**	Wakwad	K/OS-040	**91**	**GW**	Wakwad	K/OS-040	**88**	**GW**
				Yedshi	G/OS-059	**137**	**PW**	Yedshi	G/OS-059	**134**	**PW**
				Yedshi	G/OS-060	**65**	**GW**				
2010 (With Fe)				**2011 Contd.. (With Fe)**							
Anandwadi	OSOBW053	**72**	**GW**	Kawalewadi	OSWQN011	**124**	**PW**	*Wanewadi	OSOBW033	**54**	**GW**
Takwala	OSWQN007	**79**	**GW**	Kanagara	OSOBW040	**35**	**EXLT**	*Arni	OSOBW029	**61**	**GW**
Kanagara	OSOBW040	**80**	**GW**	*Kanagara	OSOBW040	**64**	**GW**	*Borewadi	OSWQN012	**122**	**PW**
2011 (With Fe)				*Chilwadi	OSWQN006	**74**	**GW**	*Goverdhanwadi	OSOBW021	**125**	**PW**
Irla	OSWQN009	**58**	**GW**	*Dhola	OSWQN010	**119**	**PW**	*Irla	OSWQN009	**89**	**GW**
Jagji	OSOBW028	**46**	**EXLT**	*Jagji	OSOBW028	**82**	**GW**	*Kolhegaon	OSWQN008	**120**	**PW**
Rajuri	OSOBW032	**78**	**GW**	*Rajuri	OSOBW032	**97**	**GW**	*Osmanabad	OSWQN013	**75**	**GW**
Dhoki	OSOBW020	**96**	**GW**	*Ruibhar	OSOBW039	**54**	**GW**				
Goverdhanwadi	OSOBW021	**87**	**GW**								

Taluka : Omegra				Taluka : Omegra				Taluka : Omegra			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Turori	K/OS-010	**97**	**GW**	Turori	K/OS-010	**115**	**PW**	Turori	K/OS-010	**92**	**GW**
2010 (With Fe)				**2010 Contd.. (With Fe)**				**2011 (With Fe)**			
Aloor	OSOBW104	**63**	**GW**	Kawatha	OSOBW049	**65**	**GW**	Diggi	OSOBW109	**47**	**EXLT**
Babalsoor	OSWQN015	**55**	**GW**	Kawatha	OSWQN014	**67**	**GW**	Kawatha	OSWQN014	**59**	**GW**
Diggi	OSOBW109	**60**	**GW**	Naichakur	OSWQN016	**59**	**GW**	Sawalsoor	OSWQN017	**54**	**GW**
Gunjoti	OSOBW108	**762**	**UNSUT**	Sastur	OSOBW046	**57**	**GW**				
Holi	OSOBW045	**52**	**GW**	Sawalsoor	OSWQN017	**48**	**EXLT**				
Jakekur	OSOBW107	**61**	**GW**	Kanegaon	OSOBW043	**60**	**GW**				
Kader	OSOBW103	**53**	**GW**								

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.22 (Contd..) Osmanabad District

Taluka : Paranda				Taluka : Paranda				Taluka : Paranda			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2009 (Without Fe)**				**2011 (With Fe)**			
Sonari	K/OS-039	**85**	**GW**	Sonari	K/OS-039	**67**	**GW**	Wangi (kd)	OSOBW061	**133**	**PW**
2010 (With Fe)	**Data for 2008 (Without Fe) Not Available**										
Asu	OSOBW068	**58**	**GW**	Mankeshwar	OSOBW067	**59**	**GW**	Wakdi	OSOBW063	**72**	**GW**
Bavchi	OSOBW064	**63**	**GW**	Shelgaon	OSWQN005	**57**	**GW**	Wangi (kd)	OSOBW061	**85**	**GW**
Kapilapuri	OSOBW070	**55**	**GW**								

Taluka : Tuljapur				Taluka : Tuljapur				Taluka : Tuljapur			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2008 (Without Fe)				**2009 (Without Fe)**				**Data for 2007 (Without Fe) Not Available**			
Gandora	K/OS-003	**68**	**GW**	Gandora	K/OS-003	**57**	**GW**				
2010 (With Fe)											
Andoor	OSWQN002	**112**	**PW**	Mangrul	OSOBW087	**90**	**GW**	Tamalwadi	OSOBW083	**70**	**GW**
Bolegaon	OSOBW105	**81**	**GW**	Naldurg	OSOBW093	**71**	**GW**	Tambatwadi	OSWQN003	**72**	**GW**
Kati	OSOBW079	**74**	**GW**	Naldurg	OSWQN004	**61**	**GW**	Keshegaon	OSOBW092	**61**	**GW**
Kemwadi	OSOBW080	**83**	**GW**	Sangvi(m)	OSOBW077	**101**	**PW**				
Kunsawali	OSOBW100	**78**	**GW**	Tailor nagar	OSOBW089	**81**	**GW**				
2011 (With Fe)											
Kati	OSOBW079	**59**	**GW**	*Kunsawali	OSOBW100	**47**	**EXLT**	*Mangrul	OSOBW087	**46**	**EXLT**
Kemwadi	OSOBW080	**47**	**EXLT**	*Naldurg	OSWQN004	**44**	**EXLT**	*Naldurg	OSOBW093	**41**	**EXLT**
Kunsawali	OSOBW100	**57**	**GW**	*Tamalwadi	OSOBW083	**67**	**GW**	*Tailor nagar	OSOBW089	**47**	**EXLT**
*Andoor	OSWQN002	**46**	**EXLT**	*Kati	OSOBW079	**74**	**GW**	*Tambatwadi	OSWQN003	**63**	**GW**
*Hatola	OSWQN001	**41**	**EXLT**	*Kemwadi	OSOBW080	**103**	**PW**	*Sangvi(m)	OSOBW077	**68**	**GW**
*Keshegaon	OSOBW092	**51**	**GW**								

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.23 : Water Quality Index of Groundwater of Parbhani District

Taluka : Jintur				Taluka : Jintur				Taluka : Jintur			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2011 (With Fe)**			
Jintur	G/PB-004	**116**	**PW**	Mankeswar	G/PB-022	**52**	**GW**	Borkini	PBWQN014	**96**	**GW**
Mankeswar	G/PB-022	**51**	**GW**	**Data for 2009 (Without Fe) Not Available**				Ambarwadi	PBOBW016	**109**	**PW**
2010 (With Fe)								Asegaon	PBOBW036	**133**	**PW**
*Ambarwadi	PBOBW016	**65**	**GW**	*Nagapur	PBOBW032	**62**	**GW**	Bhogaon	PBOBW029	**127**	**PW**
*Bhogaon	PBOBW029	**95**	**GW**	*Pokharni	PBOBW034	**58**	**GW**	Dhanora bk	PBOBW007	**83**	**GW**
*Dhanora bk	PBOBW007	**62**	**GW**	*Asegaon	PBOBW036	**64**	**GW**	Dudhgaon	PBOBW037	**127**	**PW**
*Jintur	PBOBW030	**77**	**GW**	*Dudhgaon	PBOBW037	**78**	**GW**	Jintur	PBOBW030	**107**	**PW**
*Kawada	PBOBW012	**64**	**GW**	*Borkini	PBWQN014	**79**	**GW**	Kawada	PBOBW012	**146**	**PW**
								Nagapur	PBOBW032	**104**	**PW**
								Pokharni	PBOBW034	**150**	**PW**

Taluka : Manwat				Taluka : Manwat				Taluka : Manwat			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2008 (Without Fe)				**2009 (Without Fe)**				**2010 (With Fe)**			
Manwat	G/PB-005	**141**	**PW**	Manwat	G/PB-005	**139**	**PW**	*Kekarjawla	PBPZ012	**73**	**GW**
2011 (With Fe)	**Data for 2007 (Without Fe) Not Available**							*Kolha	PBPZ003	**74**	**GW**
Kekarjawla	PBPZ012	**69**	**GW**	Kolha	PBPZ003	**74**	**GW**				

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.23 (Contd..) Parbhani District

Taluka : Parbhani				Taluka : Parbhani				Taluka : Parbhani			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2011 (With Fe)**			
Kotamwadi	G/PB-002	**57**	**GW**	Kotamwadi	G/PB-002	**67**	**GW**	Asola	PBOBW044	**77**	**GW**
Todkalas	G/PB-024	**127**	**PW**	Todkalas	G/PB-024	**129**	**PW**	Tadlimla	PBOBW052	**52**	**GW**
Gojegaon	G/PB-006	**60**	**GW**	Gojegaon	G/PB-006	**64**	**GW**	Daithana	PBPZ011	**82**	**GW**
Pedgaon	G/PB-027	**92**	**GW**	**2009 (Without Fe)**				Barwandi	PBWQN003	**56**	**GW**
Singanapur	G/PB-010	**145**	**PW**	Kotamwadi	G/PB-002	**62**	**GW**	Borwand bk	PBOBW066	**66**	**GW**
2010 (With Fe)								Pedgaon	PBOBW048	**58**	**GW**
*Balas Kh	PBWQN002	**62**	**GW**	*Daithana	PBPZ011	**76**	**GW**	Pingali kothala	PBOBW039	**60**	**GW**
*Barwandi	PBWQN003	**79**	**GW**	*Asola	PBOBW044	**105**	**PW**	Takli kumbharna	PBOBW042	**61**	**GW**
*Parbhani	PBPZ001	**81**	**GW**	*Borwand *bk	PBOBW066	**75**	**GW**	Zari	PBPZ006	**55**	**GW**
*Parbhani	PBWQN001	**70**	**GW**	*Tadlimla	PBOBW052	**118**	**PW**	Balas Kh	PBWQN002	**174**	**PW**
*Pingali	PBOBW049	**82**	**GW**	*Zari	PBPZ006	**156**	**PW**	Parbhani	PBPZ001	**107**	**PW**
*Takli kumbharna	PBOBW042	**90**	**GW**	*Pingali kothala	PBOBW039	**69**	**GW**	Parbhani	PBWQN001	**60**	**GW**
				*Pedgaon	PBOBW048	**81**	**GW**	Pingali	PBOBW049	**82**	**GW**

Taluka : Palam				Taluka : Palam				Taluka : Palam			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2011 (With Fe)**			
Kerwadi	G/PB-021	**75**	**GW**	Kerwadi	G/PB-021	**75**	**GW**	Barbhani	PBWQN013	**59**	**GW**
2010 (With Fe)				**Data for 2009 (Wihout Fe) Not Available**				Palam	PBPZ008	**83**	**GW**
*Barbhani	PBWQN013	**89**	**GW**	*Palam	PBPZ008	**147**	**PW**	Palam	PBWQN012	**90**	**GW**
*Pendu bk	PBOBW087	**97**	**GW**	*Palam	PBWQN012	**149**	**PW**	Parwa	PBOBW085	**86**	**GW**
*Pharkanda	PBOBW088	**75**	**GW**	*Parwa	PBOBW085	**99**	**GW**	Pendu bk	PBOBW087	**80**	**GW**
								Pharkanda	PBOBW088	**76**	**GW**

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.23 (Contd..) Parbhani District

Taluka : Pathari				Taluka : Pathari				Taluka : Pathari			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2009 (Without Fe)**				**2011 (With Fe)**			
Babulgaon	G/PB-009	**222**	**VPW**	Pathari	G/PB-023	**74**	**GW**	Banegaon	PBOBW058	**104**	**PW**
2010 (With Fe)								Depandara	PBWQN004	**78**	**GW**
*Banegaon	PBOBW058	**125**	**PW**	*Pathargavhan	PBOBW057	**62**	**GW**	Kansur	PBWQN005	**79**	**GW**
*Depandara	PBWQN004	**61**	**GW**	*Pathri	PBOBW059	**124**	**PW**	Niwali	PBOBW061	**74**	**GW**
*Kansur	PBWQN005	**48**	**EXLT**	*Pathri	PBPZ005	**61**	**GW**	Pathargavhan	PBOBW057	**92**	**GW**
*Niwali	PBOBW061	**66**	**GW**	*Zari	PBOBW060	**63**	**GW**	Pathri	PBOBW059	**68**	**GW**
Data for 2008 (Without Fe) Not Available								Pathri	PBPZ005	**103**	**PW**
								Zari	PBOBW060	**56**	**GW**

Taluka : Sailu				Taluka : Sailu				Taluka : Sailu			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Chikhalthana	G/PB-001	**53**	**GW**	Chikhalthana	G/PB-001	**65**	**GW**	Chikhalthana	G/PB-001	**58**	**GW**
Selu	G/PB-025	**91**	**GW**	Selu	G/PB-025	**98**	**GW**	Selu	G/PB-025	**94**	**GW**
2010 (With Fe)								**2011 (With Fe)**			
*Dasala	PBOBW008	**78**	**GW**	*Raipur	PBWQN007	**70**	**GW**	Dasala	PBOBW008	**78**	**GW**
*Dhengali pimpalgaon	PBOBW006	**64**	**GW**	*Selu	PBPZ004	**63**	**GW**	Dhengali pimpalgaon	PBOBW006	**127**	**PW**
*Gulkhand	PBOBW023	**72**	**GW**	*Sindhe	PBWQN006	**79**	**GW**	Gulkhand	PBOBW023	**87**	**GW**
								Raipur	PBWQN007	**145**	**PW**
								Selu	PBPZ004	**95**	**GW**
								Sindhe	PBWQN006	**147**	**PW**

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.23 (Contd..) Parbhani District

Taluka : Gangakhed				Taluka : Gangakhed				Taluka : Gangakhed			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2010 (With Fe)	**Data for 2007 to 2009 (Without Fe) Not Available**										
*Akoli	PBPZ002	**85**	**GW**	*Dongar pimpla	PBOBW090	**61**	**GW**	*Ban pimpla	PBOBW076	**66**	**GW**
*Chinch takli	PBOBW067	**96**	**GW**	*Gangakhed	PBWQN011	**67**	**GW**	*Dharkheda	PBOBW074	**57**	**GW**
*Chukar	PBWQN010	**76**	**GW**	*Golegaon	PBWQN008	**89**	**GW**	*Mahatpuri	PBOBW077	**62**	**GW**
*Dhangar moha	PBOBW079	**90**	**GW**	*Sonpeth	PBWQN009	**75**	**GW**	*Muli	PBOBW073	**63**	**GW**
2011 (With Fe)											
Ban pimpla	PBOBW076	**57**	**GW**	Dharkheda	PBOBW074	**79**	**GW**	Mahatpuri	PBOBW077	**55**	**GW**
Chinch takli	PBOBW067	**93**	**GW**	Dongar pimpla	PBOBW090	**50**	**GW**	Muli	PBOBW073	**78**	**GW**
Chukar	PBWQN010	**49**	**EXLT**	Gangakhed	PBWQN011	**101**	**PW**	Sonpeth	PBWQN009	**62**	**GW**
Dhangar moha	PBOBW079	**53**	**GW**	Golegaon	PBWQN008	**74**	**GW**	Akoli	PBPZ002	**91**	**GW**

Taluka : Purna				Taluka : Purna				Taluka : Purna			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2010 (With Fe)								**2011 (With Fe)**			
*Nila	PBPZ009	**95**	**GW**	*Ekrukhat gangakhed	PBOBW051	**55**	**GW**	Nila	PBPZ009	**58**	**GW**
*Chudawa	PBOBW081	**53**	**GW**	*Tadkalas	PBPZ010	**53**	**GW**	Ekrukha gangakhed	PBOBW051	**56**	**GW**
Data for 2007 to 2009 (Without Fe) Not Available								Tadkalas	PBPZ010	**75**	**GW**
								Chudawa	PBOBW081	**62**	**GW**

Taluka : Sonpeth				Taluka : Sonpeth				Taluka : Sonpeth			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2010 (With Fe)				**2011 (With Fe)**							
*Khadka	PbOBW080	**105**	**PW**	Digol islampur	PBOBW070	**58**	**GW**	**Data for 2007 to 2009 (Without Fe) Not Possible**			
*Digol islampur	PBOBW070	**92**	**GW**	Khadka	PbOBW080	**48**	**EXLT**				

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.24 : Water Quality Index of Groundwater of Pune District

Taluka : Ambegaon				Taluka : Ambegaon				Taluka : Ambegaon			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Chinchle (Bk) Karanjv	K/PN-035	**57**	**GW**	Chinchle Bk Karanjv	K/PN-035	**41**	**EXLT**	Chinchle (Bk) Karanjv	K/PN-035	**46**	**EXLT**
Kalamb	K/PN-011	**131**	**PW**	Kalamb	K/PN-011	**146**	**PW**	Kalamb	K/PN-011	**118**	**PW**
Loni (Ambegaon)	K/PN-062	**114**	**PW**	Loni (Ambegaon)	K/PN-062	**91**	**GW**	Loni (Ambegaon)	K/PN-062	**88**	**GW**
2010 (With Fe)											
*Kalamb	PNOBW123	**106**	**PW**	*Manchar	PNWQN001	**39**	**EXLT**	Ranjani	PNOBW211	**57**	**GW**
*Ranjani	PNOBW211	**63**	**GW**	Loni	PNOBW129	**103**	**PW**	Kalamb	PNOBW123	**90**	**GW**
*Khadaki	PNOBW121	**57**	**GW**	Manchar	PNWQN001	**78**	**GW**	Khadaki	PNOBW212	**53**	**GW**
*Loni	PNOBW129	**71**	**GW**	**Data for 2011 (With Fe) Not Available**							

Taluka : Baramati				Taluka : Baramati				Taluka : Baramati			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Dhumalwadi	K/PN-044	**142**	**PW**	Dhumalwadi	K/PN-044	**122**	**PW**	Dhumalwadi	K/PN-044	**77**	**GW**
Dorlewadi	K/PN-043	**83**	**GW**	Dorlewadi	K/PN-043	**81**	**GW**	Dorlewadi	K/PN-043	**108**	**PW**
Karanje	K/PN-063	**196**	**PW**	Karanje	K/PN-063	**206**	**VPW**	Karanje	K/PN-063	**170**	**PW**
2010 (With Fe)											
*Karhati	PNPZ031	**59**	**GW**	*Vadgaon Nimbalkar	PNPZ019	**53**	**GW**	Medad	PNWQN002	**469**	**UNSUT**
*Loni Bhapkar	PNPZ032	**335**	**UNSUT**	*Baramati	PNOBW075	**80**	**GW**	Katewadi	PNWQN003	**71**	**GW**
*Morgaon	PNOBW076	**448**	**UNSUT**	*Medad	PNWQN002	**70**	**GW**	Sangavi	PNOBW254	**178**	**PW**
*Mawadi kp.	PNOBW257	**50**	**EXLT**	*Katewadi	PNWQN003	**99**	**GW**	Morgaon	PNOBW253	**408**	**UNSUT**
*Jogawadi	PNOBW182	**85**	**GW**	*Ambi bk.	PNWQN004	**70**	**GW**	Jogwadi	PNOBW182	**126**	**PW**
*Nira	PNOBW063	**125**	**PW**	Karhati	PNPZ031	**164**	**PW**	Pandare	PNOBW078	**102**	**PW**
*Pandare	PNOBW078	**131**	**PW**	Loni bhapkar	PNPZ032	**181**	**PW**	Baramati	PNOBW075	**94**	**GW**
*Pandare	PNPZ038	**99**	**GW**	Pandare	PNPZ038	**85**	**GW**	Vadgaon Nimbalkar	PNPZ019	**77**	**GW**
*Sangvi	PNOBW254	**138**	**PW**	Korale Kh	PNPZ041	**94**	**GW**	Ambi Bk	PNWQN004	**328**	**UNSUT**
*Korhale kh.	PNPZ041	**56**	**GW**	**Data for 2011 (With Fe) Not Available**							

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.24 (Contd..) Pune District

Taluka : Daund				Taluka : Daund				Taluka : Daund			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Patas	K/PN-001	**119**	**PW**	Patas	K/PN-001	**97**	**GW**	Patas	K/PN-001	**87**	**GW**
Yavat	K/PN-014	**58**	**GW**	Yavat	K/PN-014	**53**	**GW**				
2010 (With Fe)											
*Patas	PNOBW163	**84**	**GW**	*Kalewadi	PNOBW226	**51**	**GW**	*Pargaon Satumala	PNOBW050	**77**	**GW**
*Warwand	PNPZ047	**85**	**GW**	*Sonawade	PNOBW047	**45**	**EXLT**	*Rahu	PNOBW162	**78**	**GW**
*Yavat	PNPZ023	**52**	**GW**	*Girim	PNOBW046	**90**	**GW**	*Kasurdi	PNWQN006	**87**	**GW**
*Ravangaon	PNOBW053	**151**	**PW**	*Gar	PNOBW164	**72**	**GW**	Rahu	PNOBW162	**124**	**PW**
*Daund	PNWQN005	**95**	**GW**								
2011 (With Fe)											
Gar	PNOBW164	**102**	**PW**	Daund	PNWQN005	**267**	**VPW**	Kalewadiu	PNOBW226	**108**	**PW**
Sonawade	PNOBW047	**230**	**VPW**	Gar	PNOBW164	**102**	**PW**	Daund	PNWQN005	**267**	**VPW**
Kasurdi Bk.	PNWQN006	**79**	**GW**	Sonawade	PNOBW047	**230**	**VPW**	Patas	PNOBW163	**129**	**PW**
Pargoan Satumala	PNOBW050	**263**	**VPW**	Kasurdi Bk.	PNWQN006	**79**	**GW**	Warwand	PNPZ047	**89**	**GW**
Yavat	PZ023	**51**	**GW**	Pargoan Satumala	PNOBW050	**263**	**VPW**	Ravangaon	PNOBW053	**82**	**GW**
Girirm	PNOBW046	**52**	**GW**	Yavat	PZ023	**51**	**GW**				
Kalewadiu	PNOBW226	**108**	**PW**	Girirm	PNOBW046	**52**	**GW**				

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.24 (Contd..) Pune District

Taluka : Pune (Haveli)				Taluka : Pune (Haveli)				Taluka : Pune (Haveli)			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Chinchwad	K/PN-051	**73**	**GW**	Chinchwad	K/PN-051	**53**	**GW**	Chinchwad	K/PN-051	**60**	**GW**
Kasarwadi	K/PN-049	**46**	**EXLT**	Kasarwadi	K/PN-049	**42**	**EXLT**	Kasarwadi	K/PN-049	**57**	**GW**
Pimpri (Kh) Malvasti	K/PN-032	**79**	**GW**	Pimpri (Kh) Malvasti	K/PN-032	**93**	**GW**	Pimpri (Kh) Malvasti	K/PN-032	**96**	**GW**
Pune	K/PN-065	**57**	**GW**	Pune	K/PN-065	**51**	**GW**	Pune	K/PN-065	**53**	**GW**
Shivpur Khed	K/PN-023	**72**	**GW**	Shivpur Khed	K/PN-023	**49**	**EXLT**	Shivpur Khed	K/PN-023	**53**	**GW**
Uruli Kanchan	K/PN-041	**177**	**PW**	Uruli Kanchan	K/PN-041	**108**	**PW**	Uruli Kanchan	K/PN-041	**109**	**PW**
Wagholi	K/PN-037	**172**	**PW**	Wagholi	K/PN-037	**146**	**PW**	Wagholi	K/PN-037	**98**	**GW**
Bukum	K/PN-059	**52**	**GW**	Bukum	K/PN-059	**50**	**GW**	Bukum	K/PN-059	**50**	**EXLT**
Parne	K/PN-055	**149**	**PW**	Parne	K/PN-055	**120**	**PW**	Parne	K/PN-055	**120**	**PW**
Undavri Kade Pathar	K/PN-054	**118**	**PW**	Undavri Kade Pathar	K/PN-054	**248**	**VPW**	Undavri Kade Pathar	K/PN-054	**164**	**PW**
2010 (With Fe)											
*Donje	PNWQN007	**79**	**GW**	*Alandi Mhatobachi	PNOBW224	**83**	**GW**	Uralikanchan	PNWQN 008	**98**	**GW**
*Bhosari	PNOBW222	**49**	**EXLT**	*Lonikalbhor	PNOBW225	**78**	**GW**	Alandi Mhatobachi	PNOBW224	**103**	**PW**
*Moshi	PNOBW152	**81**	**GW**	Wagholi	PNOBW040	**126**	**PW**	Pimpari Sandas	PNOBW150	**90**	**GW**
*Chrholi Bk.	PNOBW153	**77**	**GW**	Donje	PNWQN007	**54**	**GW**	Bhosari	PNOBW222	**56**	**GW**
*Wagholi	PNOBW040	**116**	**PW**	Koregoan Mul.	PNWQN009	**186**	**PW**	Charholi Bk.	PNOBW153	**79**	**GW**
*Pimpari Sandas	PNOBW150	**77**	**GW**	Wadebolai	PNWQN011	**87**	**GW**	Dhanori	PNOBW223	**66**	**GW**
*Uralikanchan	PNWQN008	**89**	**GW**	Moshi	PNOBW152	**66**	**GW**	**Data for 2011 Not Available (With Fe)**			
*Koregaon Mul	PNWQN009	**71**	**GW**	Lonikalbhor	PNOBW225	**90**	**GW**				

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.24 (Contd..) Pune District

Taluka : Indapur				Taluka : Indapur				Taluka : Indapur			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Bhadalwadi	K/PN-036	**129**	**PW**	Bhadalwadi	K/PN-036	**64**	**GW**	Bhadalwadi	K/PN-036	**77**	**GW**
Nimbgaon-Ketke	K/PN-019	**129**	**PW**	Nimbgaon-Ketke	K/PN-019	**151**	**PW**	Nimbgaon-Ketke	K/PN-019	**89**	**GW**
2010 (With Fe)	**Data for 2011 Not Available (With Fe)**										
*Shetphal gade	PNOBW087	**62**	**GW**	*Rui	PNOBW0246	**54**	**GW**	Lasurne	PNWQN020	**65**	**GW**
*Tawashi	PNOBW090	**141**	**PW**	*Rui	PNWQN018	**68**	**GW**	Nirgude	PNWQN021	**96**	**GW**
*Lasurne	PNWQN020	**50**	**GW**	*Bhigvan	PNOBW183	**89**	**GW**	Bhigvan	PNWQN051	**93**	**GW**
*Kalamb	PNWQN012	**122**	**PW**	*Bhigvan	PNWQN051	**187**	**PW**	Kauthali	PNOBW082	**96**	**GW**
*Reda	PNWQN013	**65**	**GW**	*Balpudi	PNWQN017	**181**	**PW**	Warkute bk.	PNOBW084	**131**	**PW**
*Reda	PNWQN016	**403**	**UNSUT**	*Nirgude	PNWQN021	**90**	**GW**	Loni Deokar	PNOBW083	**125**	**PW**
*Hingangaon	PNWQN015	**218**	**VPW**	Bhigvan	PNOBW183	**86**	**GW**	Shetphalgade	PNOBW087	**102**	**PW**
*Indapur	PNWQN019	**80**	**GW**	Rui	PNOBW246	**92**	**GW**	Tavashi	PNOBW090	**73**	**GW**
*Indapur	PNWQN014	**102**	**PW**	Reda	PNWQN016	**62**	**GW**	Kalamb	PNWQN012	**87**	**GW**
*Warkute bk.	PNOBW084	**116**	**PW**	Balpudi	PNWQN017	**88**	**GW**	Reda	PNWQN013	**180**	**PW**
*Loni Deokar	PNOBW083	**139**	**PW**	Rui	PNWQN018	**88**	**GW**	Indapur	PNWQN014	**82**	**GW**
*Kauthali	PNOBW082	**123**	**PW**	Indapur	PNWQN019	**92**	**GW**	Hingangaon	PNWQN015	**70**	**GW**

Taluka : Wehle				Taluka : Wehle				Taluka : Wehle			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2010 (With Fe)**			
Wehle	K/PN-034	**31**	**EXLT**	Wehle	K/PN-034	**29**	**EXLT**	Velhe	BS	**48**	**EXLT**
2009 (Without Fe)								**Data for 2011 (With Fe) Not Available**			
Wehle	K/PN-034	**27**	**EXLT**								

Taluka : Bhor				Taluka : Bhor				Taluka : Bhor			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2010 (With Fe)	**Data for 2007 to 2009 Not Available and also 2011 (With Fe)**										
Nasarapur	PNOBW179	**70**	**GW**	Bholawade	PNOBW065	**55**	**GW**	Bhor	PNOBW071	**51**	**GW**

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.24 (Contd..) Pune District

Taluka : Junnar				Taluka : Junnar				Taluka : Junnar			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Ale	K/PN-003	**37**	**EXLT**	Ale	K/PN-003	**137**	**PW**	Ale	K/PN-003	**95**	**GW**
Ane	K/PN-027	**62**	**GW**	Ane	K/PN-027	**52**	**GW**	Ane	K/PN-027	**59**	**GW**
Belhe	K/PN-015	**75**	**GW**	Belhe	K/PN-015	**66**	**GW**	Belhe	K/PN-015	**68**	**GW**
Junnar	K/PN-056	**59**	**GW**	Junnar	K/PN-056	**46**	**EXLT**	Junnar	K/PN-056	**57**	**GW**
Narayangaon	K/PN-016	**61**	**GW**	Narayangaon	K/PN-016	**80**	**GW**	Narayangaon	K/PN-016	**86**	**GW**
Narayanpur	K/PN-039	**83**	**GW**	Narayanpur	K/PN-039	**55**	**GW**	Narayanpur	K/PN-039	**38**	**EXLT**
				Otur	K/PN-010	**171**	**PW**	Otur	K/PN-010	**87**	**GW**
2010 (With Fe) Data for 2011 Not Available (With Fe)											
*Narayangoan	PNOBW009	**56**	**GW**	*Ale	PNWQN023	**107**	**PW**	Sakori	PNWQN022	**41**	**EXLT**
*Arvi	PNWQN024	**52**	**GW**	*Bori.Bk.	PNOBW005	**70**	**GW**	Ale	PNWQN023	**92**	**GW**
*Khanapur	PNOBW202	**63**	**GW**	Sakori	PNWQN022	**73**	**GW**	Arvi	PNWQN024	**55**	**GW**
*Tejwadi	PNOBW103	**60**	**GW**	Otur	PNOBW195	**79**	**GW**	Bori Bk	PNOBW005	**109**	**PW**
*Otur	PNOBW195	**107**	**PW**	Dholwad	PNOBW196	**59**	**GW**	Narayan gaon Vaiduwadi	PNOBW009	**60**	**GW**
*Dholwad	PNOBW196	**66**	**GW**	Tejewadi	PNOBW103	**56**	**GW**	Pimpalwandi	PNOBW105	**98**	**GW**
*Pimpalwandi	PNOBW105	**47**	**EXLT**	Khanapur	PNOBW202	**59**	**GW**				

Taluka : Mawal				Taluka : Mawal				Taluka : Mawal			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Talegaon	K/PN-002	**85**	**GW**	Talegaon	K/PN-002	**73**	**GW**	Talegaon	K/PN-002	**77**	**GW**
Lonawala	K/PN-061	**40**	**EXLT**					Lonawala	K/PN-061	**32**	**EXLT**
2010 (With Fe) Data for 2011 Not Available (With Fe)											
*Somatane Fata	PNWQN043	**45**	**EXLT**	*Malavali	PNOBW148	**32**	**EXLT**	Kanhe	PNWQN042	**44**	**EXLT**
*Talegoan Dabhade	PNWQN044	**45**	**EXLT**	Somatane Fata	PNWQN043	**42**	**EXLT**	Karla	PNOBW035	**47**	**EXLT**
*Kanhe	PNWQN042	**47**	**EXLT**	Talegoan Dabhade	PNWQN044	**37**	**EXLT**	Malavali	PNOBW148	**36**	**EXLT**
*Karala	PNOBW035	**50**	**EXLT**								

Lonawala is coming under Wadgaon (Maval) taluka Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.24 (Contd..) Pune District

Taluka : Mulshi				Taluka : Mulshi				Taluka : Mulshi			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Kolwan	K/PN-058	**45**	**EXLT**	Kolwan	K/PN-058	**46**	**EXLT**	Kolwan	K/PN-058	**38**	**EXLT**
Mulshi	K/PN-060	**28**	**EXLT**	Mulshi	K/PN-060	**23**	**EXLT**	Mulshi	K/PN-060	**28**	**EXLT**
2010 (With Fe) Data for 2011 Not Available (With Fe)											
*Bhugoan	PNOBW173	**38**	**EXLT**	*Nere	PNOBW229	**46**	**EXLT**	Paud	PNOBW172	**39**	**EXLT**
*Paud	PNOBW172	**46**	**EXLT**	Bhugaon	PNOBW173	**39**	**EXLT**	Sus	PNWQN040	**33**	**EXLT**
*Kharawade	PNWQN041	**44**	**EXLT**	Kharawade	PNWQN041	**41**	**EXLT**	Nere	PNOBW229	**63**	**GW**
*Sus	PNWQN040	**38**	**EXLT**								

Taluka : Purandar				Taluka : Purandar				Taluka : Purandar			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Pangre Sailar Basti	K/PN-052	**62**	**GW**	Pangre Sailar Basti	K/PN-052	**41**	**EXLT**	Pangre Sailar Basti	K/PN-052	**61**	**GW**
Zendewadi	K/PN-048	**79**	**GW**	Zendewadi	K/PN-048	**78**	**GW**	Zendewadi	K/PN-048	**70**	**GW**
Jejuri	K/PN-046	**67**	**GW**	Jejuri	K/PN-046	**56**	**GW**	Jejuri	K/PN-046	**67**	**GW**
Sakurde	K/PN-008	**99**	**GW**	Sakurde	K/PN-008	**59**	**GW**	Sakurde	K/PN-008	**72**	**GW**
2010 (With Fe)											
*Dive	PNWQN033	**72**	**GW**	*Khalad	PNWQN039	**190**	**PW**	*Nira	PNOBW063	**120**	**PW**
*Jejuri	PNOBW059	**49**	**EXLT**	*Pargoan	PNWQN038	**94**	**GW**	*Chambli	PNWQN037	**60**	**GW**
*Belsar	PNWQN035	**147**	**PW**	*Valha	PNWQN036	**80**	**GW**	Mawadi Kp.	PNOBW257	**155**	**PW**
*Khanawadi	PNWQN034	**90**	**GW**	*Mawadi	PNOBW257	**146**	**PW**				
2011 (With Fe)											
Dive	PNWQN033	**64**	**GW**	Chambali	PNWQN037	**36**	**EXLT**	Belsar	PNWQN035	**111**	**PW**
Khanwadi	PNWQN034	**92**	**GW**	Pargaon	PNWQN038	**126**	**PW**	Nira	PNOBW063	**54**	**GW**
Jejuri	PNOBW059	**43**	**EXLT**	Khalad	PNWQN039	**48**	**EXLT**	Valha	PNWQN036	**115**	**PW**
Belsar	PNWQN035	**111**	**PW**	Dive	PNWQN033	**64**	**GW**	Chambali	PNWQN037	**36**	**EXLT**
Nira	PNOBW063	**54**	**GW**	Khanwadi	PNWQN034	**92**	**GW**	Pargaon	PNWQN038	**126**	**PW**
Valha	PNWQN036	**115**	**PW**	Jejuri	PNOBW059	**43**	**EXLT**	Khalad	PNWQN039	**48**	**EXLT**

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.24 (Contd..) Pune District

Taluka : Rajgurnagar (Khed)				Taluka : Rajgurnagar (Khed)				Taluka : Rajgurnagar (Khed)			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Rajgurnagar	K/PN-012	**47**	**EXLT**	Rajgurnagar	K/PN-012	**44**	**EXLT**	Rajgurnagar	K/PN-012	**53**	**GW**
				Kharabwadi	K/PN-0	**29**	**EXLT**	Kharabwadi	K/PN-	**108**	**PW**
2010 (With Fe) Data for 2011 Not Available (With Fe)											
*Chakan	PNWQN031	**81**	**GW**	*Alandi	PNWQN032	**40**	**EXLT**	Bahul	PNOBW027	**92**	**GW**
*Nimgaon	PNWQN029	**66**	**GW**	Bhorgiri	PNWQN025	**67**	**GW**	Solu	PNOBW032	**104**	**PW**
*Kadus	PNWQN026	**103**	**PW**	Chakan	PNWQN031	**44**	**EXLT**	Alandi	PNWQN032	**95**	**GW**
*Koye	PNWQN030	**73**	**GW**	Nimgoan	PNWQN029	**103**	**PW**	Chas	PNWQN027	**64**	**GW**
*Khed	PNWQN028	**52**	**GW**	Kadus	PNWQN026	**125**	**PW**	Bhorgiri	PNWQN025	**49**	**EXLT**
*Bahul	PNOBW027	**76**	**GW**	Koye	PNWQN030	**69**	**GW**				
*Solu	PNOBW032	**103**	**PW**	Khed	PNWQN028	**70**	**GW**				

Taluka : Shirur				Taluka : Shirur				Taluka : Shirur			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Ranjangaon	K/PN-066	**58**	**GW**	Pabal	K/PN-0	**64**	**GW**	Pabal	K/PN-	**69**	**GW**
Ravangaon	K/PN-020	**55**	**GW**	Ravangaon	K/PN-020	**47**	**EXLT**	Ravangaon	K/PN-020	**44**	**EXLT**
Shirur	K/PN-006	**140**	**PW**	Shikrapur	K/PN-0	**111**	**PW**	Shikrapur	K/PN-	**127**	**PW**
				Shirur	K/PN-006	**103**	**PW**	Shirur	K/PN-006	**110**	**PW**
2010 (With Fe) Data for 2011 Not Available (With Fe)											
*Inamgaon	PNWQN047	**90**	**GW**	*Shirur	PNWQN049	**75**	**GW**	Inamgaon	PNWQN047	**124**	**PW**
*Shikrapur	PNOBW014	**93**	**GW**	*Nimgaondude	PNOBW113	**92**	**GW**	Shirur	PNWQN049	**86**	**GW**
*Pilmple Jagtap	PNOBW015	**64**	**GW**	*Kavathe	PNOBW205	**82**	**GW**	Dhamari	PNOBW013	**93**	**GW**
*Kondhapuri	PNOBW016	**62**	**GW**	*Knhur Mesai	PNWQN045	**101**	**PW**	Nimgaon	PNOBW113	**124**	**PW**
*Nhavara	PNOBW208	**42**	**EXLT**	*Dhamari	PNOBW013	**81**	**GW**	Kavathe	PNOBW205	**133**	**PW**
*Nhavara	PNWQN046	**105**	**PW**	Kanhur Mesai	PNWQN045	**94**	**GW**	Kondhanpuri	PNOBW016	**90**	**GW**
*Andalgaon	PNOBW021	**65**	**GW**	Pimple Jagtap	PNOBW015	**163**	**PW**	Navara	PNOBW208	**102**	**PW**
*Tandali	PNWQN048	**85**	**GW**	Shikrapur	PNOBW014	**166**	**PW**	Shirsgoan kata	PNOBW122	**110**	**PW**
*Shirasgaon kata	PNOBW122	**50**	**GW**	Nahavara	PNWQN046	**107**	**PW**	Gunat	PNOBW121	**192**	**PW**
*Gunat	PNOBW121	**90**	**GW**	Andalgaon	PNOBW021	**225**	**VPW**	Tandali	PNWQN048	**281**	**VPW**

* Pre-Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.25 : Water Quality Index of Groundwater of Raigad District

Taluka : Alibag				Taluka : Alibag				Taluka : Alibag			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Chinchwad	C/RG-014	**39**	**EXLT**	Bilji (Umta)	C/RG-012	**30**	**EXLT**	Bilji (Umta)	C/RG-012	**29**	**EXLT**
Poynad	C/RG-032	**42**	**EXLT**	Chinchwad	C/RG-014	**32**	**EXLT**	Nagaon	C/RG-033	**59**	**GW**
Veshwi	C/RG-001	**58**	**GW**	Poynad	C/RG-032	**82**	**GW**	Poynad	C/RG-032	**74**	**GW**
				Veshwi	C/RG-001	**66**	**GW**				
2010 (With Fe)											
Alibag	RDOBW001	**65**	**GW**	Penzari	RDOBW036	**28**	**EXLT**	Belkade	RDOBW005	**27**	**EXLT**
Belkade	RDOBW005	**52**	**GW**	Zirad	RDOBW050	**55**	**GW**	Umate	RDOBW007	**43**	**EXLT**
Gunjes	RDWQN029	**50**	**GW**	Revadande	RDWQN002	**40**	**EXLT**	*Alibag	RDOBW001	**66**	**GW**
2011 (With Fe)											
Alibaug	RDPZOO8	**30**	**EXLT**	Belwade	RDOBW005	**53**	**GW**	Revadanda	RDWQN002	**53**	**GW**
Dokawade		**73**	**GW**	Gunjis	RDWQN029	**51**	**GW**	Umate	RDOBW007	**38**	**EXLT**
Alibaug	RDOBW001	**62**	**GW**	Pezari	RDOBW036	**38**	**EXLT**	Zirad	RDOBW050	**47**	**EXLT**

Taluka : Karjat				Taluka : Karjat				Taluka : Karjat			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Neral	C/RG-018	**46**	**EXLT**	Hudhre Budruk	C/RG-010	**56**	**GW**	Hudhre Budruk	C/RG-010	**57**	**GW**
				Neral	C/RG-018	**39**	**EXLT**	Neral	C/RG-018	**41**	**EXLT**
2010 (With Fe)											
Kalamb	RDOBW015	**48**	**EXLT**	Neral		**37**	**EXLT**	Mangaon-varedi		**50**	**GW**
Kashele	RDOBW018	**47**	**EXLT**	Uambarkhand	RDWQN026	**34**	**EXLT**	Vadavali	RDOBW055	**35**	**EXLT**
Khandas	RDOBW020	**119**	**PW**	Varai Tf V	RDOBW049	**37**	**EXLT**				
2011 (With Fe)											
Kalamb	RDOBW015	**42**	**EXLT**	+Karjat	RDOBW017	**52**	**GW**	+Kalamb	RDOBW015	**65**	**GW**
Kashele	RDOBW018	**48**	**EXLT**	+MangaonTf Waredi		**37**	**EXLT**	+Kashele	RDOBW018	**63**	**GW**
Vadavali	RDOBW055	**33**	**EXLT**	+Wadavali	RDOBW055	**34**	**EXLT**	+Khandas	RDOBW020	**34**	**EXLT**
Varai Tf V	RDOBW049	**32**	**EXLT**	+Ambivali	RDOBW003	**63**	**GW**	+Neral	RDWQN017	**30**	**EXLT**
Khandas	RDOBW020	**51**	**GW**								

* Pre-Monsoon, + Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.25 (Contd..) Raigad District

Taluka : Khalapur				Taluka : Khalapur				Taluka : Khalapur			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Kargaon	C/RG-023	**34**	**EXLT**	Khalapur	C/RG-036	**44**	**EXLT**	Kargaon	C/RG-023	**36**	**EXLT**
Khalapur	C/RG-036	**45**	**EXLT**					Khalapur	C/RG-036	**41**	**EXLT**
Khopoli	C/RG-013	**27**	**EXLT**								
2010 (With Fe)											
Hal-Khurdh	RDWQN010	**44**	**EXLT**	Chowk		**19**	**EXLT**	Khalapur	RDOBW019	**58**	**GW**
2011 (With Fe)											
Chowk		**33**	**EXLT**	*Hall kh	RDWQN010	**59**	**GW**	*Khalapur	RDOBW019	**43**	**EXLT**
*Chowk	RDOBW011	**31**	**EXLT**	*Khopoli	RDWQN011	**73**	**GW**				

Taluka : Mahad				Taluka : Mahad				Taluka : Mahad			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Dapoli	C/RG-024	**252**	**VPW**	Dapoli	C/RG-024	**480**	**UNSUT**	Varandha	C/RG-003	**27**	**EXLT**
Jite	C/RG-020	**33**	**EXLT**	Varandha	C/RG-003	**30**	**EXLT**				
2010 (With Fe)											
Birvadi	RDWQN018	**43**	**EXLT**	Konzar	RDOBW022	**51**	**GW**	Varandha	RDOBW048	**20**	**EXLT**
chimbave	RDOBW008	**36**	**EXLT**	Mangharun	RDOBW027	**34**	**EXLT**	Vinhere	RDOBW046	**54**	**GW**
Kharavali	RDWQN027	**33**	**EXLT**	Nate	RDOBW031	**40**	**EXLT**	Konzar	RDOBW022	**39**	**EXLT**
2011 (With Fe)											
Chimbhave	RDOBW008	**42**	**EXLT**	Vinhere	RDOBW046	**26**	**EXLT**	*Mahad	RDOBW025	**28**	**EXLT**
Mangrun	RDOBW027	**26**	**EXLT**	Konzar	RDOBW022	**38**	**EXLT**	Mahad	RDOBW025	**46**	**EXLT**
Varandha	RDOBW048	**36**	**EXLT**	Talkies near	RDWQN019	**25**	**EXLT**	Mangrun	RDOBW027	**49**	**EXLT**

Taluka : Mangaon				Taluka : Mangaon				Taluka : Mangaon			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Chandore	C/RG-011	**22**	**EXLT**	Indapur	C/RG-022	**37**	**EXLT**	Indapur	C/RG-022	**39**	**EXLT**
Indapur	C/RG-022	**37**	**EXLT**	**2011 (With Fe)**							
2010 (With Fe)				Mangaon	RDOBW026	**37**	**EXLT**	Goregaon	RDOBW012	**49**	**EXLT**
Indapur	RDOBW013	**40**	**EXLT**	Indapur	RDOBW013	**43**	**EXLT**	Indapur	RDOBW013	**54**	**GW**
*Goregaon	RDOBW012	**43**	**EXLT**	Mangaon	RDOBW026	**34**	**EXLT**	Mangaon	RDOBW026	**39**	**EXLT**
*Indapur	RDOBW013	**48**	**EXLT**								
*Mangaon	RDOBW026	**49**	**EXLT**								

* Pre-Monsoon, + Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.25 (Contd..) Raigad District

Taluka : Mhasala				Taluka : Mhasala				Taluka : Mhasala			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Kelte	C/RG-027	**26**	**EXLT**	Kelte	C/RG-027	**24**	**EXLT**	Kelte	C/RG-027	**16**	**EXLT**
2010 (With Fe)				**2011 (With Fe)**							
Mharula		**40**	**EXLT**	+Ambet	RDOBW002	**41**	**EXLT**	Konzar	RDOBW022	**44**	**EXLT**
Lipani	RDOBW024	**41**	**EXLT**	+Lipani	RDOBW024	**27**	**EXLT**	Kumbale	RDOBW023	**42**	**EXLT**
Bhandarane		**46**	**EXLT**	+Magothane	RDWQN022	**31**	**EXLT**	Nate	RDOBW031	**52**	**GW**
				+Mhasala	RDOBW053	**35**	**EXLT**	Pangari	RDWQN021	**61**	**GW**
				Birwadi	RDWQN018	**35**	**EXLT**	Varandha	RDOBW048	**35**	**EXLT**
				Chimbhave	RDOBW008	**42**	**EXLT**	Vinhere	RDOBW046	**36**	**EXLT**
				kharivali	RDWQN027	**46**	**EXLT**	Vinhere	RDPZ002	**38**	**EXLT**

Taluka : Panvel				Taluka : Panvel				Taluka : Panvel			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Ajivali	C/RG-038	**53**	**GW**	Navade	C/RG-031	**28**	**EXLT**	Ajivali	C/RG-038	**57**	**GW**
2010 (With Fe)											
Barpada	RDOBW004	**36**	**EXLT**	Bambavi	RDWQN008	**37**	**EXLT**	Palaspe	RDWQN025	**44**	**EXLT**
*Barapade	RDOBW004	**35**	**EXLT**	Barapada	RDOBW004	**67**	**GW**	Taloje	RDOBW041	**110**	**PW**
*Palaspe	RDWQN025	**61**	**GW**	Nere		**69**	**GW**	Vaje	RDOBW047	**37**	**EXLT**
*Palaspe	RDWQN025	**27**	**EXLT**								
2011 (With Fe)											
Barapada	RDOBW004	**40**	**EXLT**	Panvel	RDOBW033	**47**	**EXLT**	Palspe	RDWQN025	**68**	**GW**
Nete		**45**	**EXLT**	Barapada	RDOBW004	**59**	**GW**	Taloja	RDOBW041	**90**	**GW**
Vaje	RDOBW047	**42**	**EXLT**	Nere	RDOBW032	**60**	**GW**	Wanje	RDOBW047	**51**	**GW**

Taluka : Poladpur				Taluka : Poladpur				Taluka : Poladpur			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Poladpur	C/RG-006	**54**	**GW**	Poladpur	C/RG-006	**48**	**EXLT**	Poladpur	C/RG-006	**41**	**EXLT**
2010 (With Fe)				**2011 (With Fe)**							
Parli	BS-54	**23**	**EXLT**	Parli	BS-54	**29**	**EXLT**				

* Pre-Monsoon, + Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.25 (Contd..) Raigad District

Taluka : Pen				Taluka : Pen				Taluka : Pen			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Kumbharcha Kosta Bk	C/RG-029	**36**	**EXLT**	Vadkhal	C/RG-037	**241**	**VPW**	Kumbharcha Kosta Bk	C/RG-029	**35**	**EXLT**
Saigaon Govalwadi	C/RG-028	**39**	**EXLT**					Vadkhal	C/RG-037	**208**	**VPW**
Vadkhal	C/RG-037	**73**	**GW**								
2010 (With Fe)											
Umbarde	RDOBW042	**45**	**EXLT**	+Gagote Bk	RDOBW014	**42**	**EXLT**	+Kamarli	RDOBW016	**43**	**EXLT**
Vadkhal	RDWQN003	**80**	**GW**	+GogendeBK	RDOBW014	**43**	**EXLT**	+Rameshwar		**44**	**EXLT**
Kamarli	RDOBW016	**33**	**EXLT**	+Kamarli	RDOBW016	**43**	**EXLT**	+Vadkhal	RDWQN003	**50**	**GW**
2011 (With Fe)											
Gogate	RDOBW014	**43**	**EXLT**	Umbarde	RDOBW042	**41**	**EXLT**	*Vadkhal	RDWQN003	**79**	**GW**
Karmili	RDOBW016	**70**	**GW**	Wadakhal	RDWQN003	**58**	**GW**	Pen		**42**	**EXLT**
Pen	RDOBW035	**54**	**GW**	*Pen	RDOBW035	**37**	**EXLT**	Gagote Bk	RDOBW014	**41**	**EXLT**
Salinde	RDOBW039	**29**	**EXLT**	*Umberde	RDOBW042	**46**	**EXLT**	Kamarli	RDOBW016	**33**	**EXLT**

Taluka : Raigad				Taluka : Raigad				Taluka : Raigad			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Phugaon	C/RG-025	**68**	**GW**	Phugaon	C/RG-025	**73**	**GW**	Sochinde	C/RG-016	**65**	**GW**
Sochinde	C/RG-016	**49**	**EXLT**	Sochinde	C/RG-016	**38**	**EXLT**	**Data for 2010 and 2011 (With Fe) Not Available**			
Temple	C/RG-034	**35**	**EXLT**	Temple	C/RG-034	**47**	**EXLT**				

Taluka : Roha				Taluka : Roha				Taluka : Roha			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Kharapati	C/RG-005	**44**	**EXLT**	Kharapati	C/RG-005	**50**	**EXLT**	Kharapati	C/RG-005	**50**	**EXLT**
Khutal	C/RG-017	**44**	**EXLT**	Khutal	C/RG-017	**38**	**EXLT**	Nagothan	C/RG-007	**44**	**EXLT**
Nagothan	C/RG-007	**41**	**EXLT**	Nagothan	C/RG-007	**42**	**EXLT**				
2010 (With Fe)				**2011 (With Fe)**							
Nagothane	RDWQN007	**49**	**EXLT**	Nagotne	RDOBW030	**28**	**EXLT**	Kolad	RDOBW021	**38**	**EXLT**
*Kolad	RDOBW021	**38**	**EXLT**	+Nagothane	RDPZ004	**32**	**EXLT**	Nagothane	RDOBW030	**42**	**EXLT**
*Nagotane	RDWQN007	**29**	**EXLT**	+Roha	RDOBW038	**42**	**EXLT**	Roha	RDPZ003	**36**	**EXLT**
D .Sutarwadi	RDOBW010	**30**	**EXLT**	+Savanewadi	RDWQN016	**36**	**EXLT**	Savanewadi	RDWQN016	**40**	**EXLT**
Roha	RDOBW038	**42**	**EXLT**	D.Sutarwadi	RDOBW010	**38**	**EXLT**				

Table x.25 (Contd..) Raigad District

Taluka : Sudhgad			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe)			
Pali	C/RG-035	**52**	**GW**
2010 (With Fe)			
Varad Jambhulpada	RDOBW045	**38**	**EXLT**

Taluka : Sudhgad			
Villages	**Well No.**	**WQI**	**Category**
2008 (Without Fe)			
Pali	C/RG-035	**56**	**GW**
Jambhulpada	C/RG-039	**58**	**GW**
Data for 2011 (With Fe) Not Available			

Taluka : Sudhgad			
Villages	**Well No.**	**WQI**	**Category**
2009 (Without Fe)			
Pali	C/RG-035	**29**	**EXLT**

Taluka : Murud			
Villages	**Well No.**	**WQI**	**Category**
2010 (With Fe)			
Barshiv	RDWQN004	**44**	**EXLT**
Dongari	RDWQN006	**52**	**GW**
Nandgaon	RDWQN007	**19**	**EXLT**
Chordhe	RDWQN005	**35**	**EXLT**
Dongari	RDWQN006	**53**	**GW**

Taluka : Murud			
Villages	**Well No.**	**WQI**	**Category**
2011 (With Fe)			
Barshiv	RDWQN004	**58**	**GW**
Chikani	RDPZO24	**37**	**EXLT**
Chordhe	RDWQN005	**33**	**EXLT**
Dongari	RDWQN006	**63**	**GW**
Data for 2007 to 2009 (Without Fe) Not Available			

Taluka : Murud			
Villages	**Well No.**	**WQI**	**Category**
Murud	RDOBW029	**43**	**EXLT**
Nandagaon	RDWQN007	**47**	**EXLT**
Chorde	RDWQN005	**36**	**EXLT**
Murud		**30**	**EXLT**

Taluka : Shrivardhan			
Villages	**Well No.**	**WQI**	**Category**
2010 (With Fe)			
Aadagaon	RDWQN023	**46**	**EXLT**
Bharudkhol	RDWQN024	**39**	**EXLT**
Borle	RDOBW006	**34**	**EXLT**
Shrivardhan	RDOBW040	**24**	**EXLT**
Borle	RDOBW006	**33**	**EXLT**

Taluka : Shrivardhan			
Villages	**Well No.**	**WQI**	**Category**
2011 (With Fe)			
+Adagoan	RDWQN023	**51**	**GW**
+Bhanrdakol	RDWQN024	**52**	**GW**
Data for 2007 to 2009 (Without Fe) Not Available			

Taluka : Shrivardhan			
Villages	**Well No.**	**WQI**	**Category**
+Borli	RDOBW006	**69**	**GW**
+Shrivardhan	RDOBW040	**61**	**GW**

Taluka : Tala			
Villages	**Well No.**	**WQI**	**Category**
2010 (With Fe)			
Mandad	RDWQN015	**49**	**EXLT**
padawan		**53**	**GW**

Taluka : Tala			
Villages	**Well No.**	**WQI**	**Category**
2011 (With Fe)			
Mandad	RDWQN015	**75**	**GW**
Data for 2007 to 2009 (Without Fe) Not Available			

Taluka : Tala			
Villages	**Well No.**	**WQI**	**Category**
Padhavan	RDWQN028	**44**	**EXLT**

Taluka : Uran			
Villages	**Well No.**	**WQI**	**Category**
2010 (With Fe)			
Jasai	RDOBW054	**35**	**EXLT**
Uran	RDOBW043	**46**	**EXLT**

Taluka : Uran			
Villages	**Well No.**	**WQI**	**Category**
2011 (With Fe)			
*Jasai	RDOBW054	**45**	**EXLT**
Data for 2007 to 2009 (Without Fe) Not Available			

Taluka : Uran			
Villages	**Well No.**	**WQI**	**Category**
*Karanja	RDWQN009	**42**	**EXLT**
*Uran	RDOBW043	**43**	**EXLT**

* Pre-Monsoon, + Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.26 : Water Quality Index of Groundwater of Ratnagiri District

Taluka : Chiplun				Taluka : Chiplun				Taluka : Chiplun			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Agave	C/RN-012	**25**	**EXLT**	Agave	C/RN-012	**29**	**EXLT**	Agave	C/RN-012	**24**	**EXLT**
Chiplun	C/RN-033	**39**	**EXLT**	Chiplun	C/RN-033	**38**	**EXLT**	Chiplun	C/RN-033	**37**	**EXLT**
Khandala Satwade	C/RN-027	**23**	**EXLT**	Khandala Satwade	C/RN-027	**22**	**EXLT**	Kamathe	C/RN-007	**32**	**EXLT**
Niwali	C/RN-026	**39**	**EXLT**	Niwali	C/RN-026	**40**	**EXLT**	Khandala Satwade	C/RN-027	**29**	**EXLT**
				Pophali	C/RN-014	**25**	**EXLT**	Pophali	C/RN-014	**25**	**EXLT**
2010 (With Fe)											
Bamnoli	RTOBW004	**31**	**EXLT**	Kalkavane	RTOBW019	**31**	**EXLT**	*Mervi	RTOBW040	**21**	**EXLT**
Bhom	RTOBW007	**39**	**EXLT**	Sawarde		**35**	**EXLT**	*Lanja	RTOBW034	**23**	**EXLT**
*Murtavada		**18**	**EXLT**	Kutare	RTOBW034	**28**	**EXLT**	*Veer	RTOBW061	**24**	**EXLT**
*Veer	RTOBW061	**24**	**EXLT**	Bamnoli		**32**	**EXLT**	*Bhom	RTOBW007	**26**	**EXLT**
*Sawarde		**19**	**EXLT**	Bhom	RTOBW007	**40**	**EXLT**	Valope	RTOBW059	**35**	**EXLT**
*Bamnoli	RTOBW004	**29**	**EXLT**	Valope	RTOBW059	**51**	**GW**	Kamthe	RTOBW020	**29**	**EXLT**
*Bhom	RTOBW007	**25**	**EXLT**	Murtvada		**37**	**EXLT**	Kolambe	RTWQN020	**26**	**EXLT**
*Margtamhane		**27**	**EXLT**	Veer	RTOBW061	**29**	**EXLT**				
Kamthe	RTOBW020	**40**	**EXLT**	*Kalkavane	RTOBW019	**26**	**EXLT**				
2011 (With Fe)											
*Bamnoli	RTOBW004	**21**	**EXLT**	*Margtamhane	RTOBW038	**23**	**EXLT**	*Owali	RTWQN013	**25**	**EXLT**
*Sawarde	RTOBW014	**20**	**EXLT**	*Veer	RTOBW061	**20**	**EXLT**	Yegaon	RTWQN014	**32**	**EXLT**
*Kamathe	RTOBW020	**29**	**EXLT**	*Chiplun	RTWQN011	**47**	**EXLT**				

* Monsoon, + Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.26 (Contd..) Ratnagiri District

Taluka : Dapoli					Taluka : Dapoli					Taluka : Dapoli			
Villages	**Well No.**	**WQI**	**Category**		**Villages**	**Well No.**	**WQI**	**Category**		**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)					**2008 (Without Fe)**					**2009 (Without Fe)**			
Dabhol	C/RN-029	**71**	**GW**		Dabhol	C/RN-029	**80**	**GW**		Dapoli	C/RN-022	**18**	**EXLT**
Dabhol	C/RN-035	**26**	**EXLT**		Dapoli	C/RN-022	**19**	**EXLT**		Karanjani	C/RN-039	**18**	**EXLT**
Karanjani	C/RN-039	**19**	**EXLT**		Karanjali	C/RN-049	**19**	**EXLT**		Kumble	C/RN-040	**28**	**EXLT**
Kumble	C/RN-040	**29**	**EXLT**		Karanjani	C/RN-039	**17**	**EXLT**		Oni	C/RN-025	**18**	**EXLT**
Oni	C/RN-025	**18**	**EXLT**		Kumble	C/RN-040	**29**	**EXLT**					
2010 (With Fe)													
Dapoli	RTOBW011	**28**	**EXLT**		Nante		**18**	**EXLT**		Kumbhave		**28**	**EXLT**
Kavdoli	RTOBW022	**45**	**EXLT**		Kavadoli	RTOBW022	**27**	**EXLT**		Dabhol		**32**	**EXLT**
Harni	RTOBW016	**26**	**EXLT**		Kumbhave		**17**	**EXLT**		Nante		**21**	**EXLT**
Dabhol	RTOBW009	**30**	**EXLT**		Dapoli	RTOBW011	**27**	**EXLT**		Harni	RTOBW016	**22**	**EXLT**
Harnai	RTOBW016	**22**	**EXLT**		Kavadoti	RTOBW022	**40**	**EXLT**		Dapoli	RTOBW011	**20**	**EXLT**
Dabhol	RTOBW009	**25**	**EXLT**		Palgad		**28**	**EXLT**		Kavdoli	RTOBW022	**26**	**EXLT**
Dapoli	RTOBW011	**21**	**EXLT**		Harnai	RTOBW016	**41**	**EXLT**					
2011 (With Fe)													
Dabhol	RTOBW009	**32**	**EXLT**		Kavadoli	RTOBW022	**34**	**EXLT**		Palgad	RTOBW049	**29**	**EXLT**
Dapoli	RTOBW011	**29**	**EXLT**		Kumbhave	RTOBW032	**26**	**EXLT**		Unhavare	RTWQN001	**27**	**EXLT**
Harnai	RTOBW016	**35**	**EXLT**		Nante	RTOBW046	**26**	**EXLT**					

* Monsoon, + Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.26 (Contd..) Ratnagiri District

Taluka : Guhagar				Taluka : Guhagar				Taluka : Guhagar			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Abloli	C/RN-047	**19**	**EXLT**	Abloli	C/RN-047	**18**	**EXLT**	Abloli	C/RN-047	**16**	**EXLT**
Kotluk	C/RN-052	**22**	**EXLT**	Pimper	C/RN-031	**35**	**EXLT**	Pimper	C/RN-031	**23**	**EXLT**
Pimper	C/RN-031	**47**	**EXLT**	Pomendi (Kh)	C/RN-034	**27**	**EXLT**	Pomendi (Kh)	C/RN-034	**26**	**EXLT**
Pomendi	C/RN-034	**28**	**EXLT**	Vankhed	C/RN-048	**27**	**EXLT**	Shingartale	C/RN-037	**18**	**EXLT**
Shingartale	C/RN-037	**20**	**EXLT**					Vankhed	C/RN-048	**26**	**EXLT**
Vankhed	C/RN-048	**30**	**EXLT**								
2010 (With Fe)											
Valop	RTOBW059	**35**	**EXLT**	*Velamb	RTOBW064	**23**	**EXLT**	Pimpar	RTOBW052	**24**	**EXLT**
Kamathe	RTOBW020	**28**	**EXLT**	*Koundar	RTWQN016	**26**	**EXLT**	Palshet	RTOBW050	**31**	**EXLT**
Kalkavane	RTOBW019	**29**	**EXLT**	Guhagar	RTOBW015	**30**	**EXLT**	*Guhaghar	RTOBW015	**30**	**EXLT**
Kutare	RTOBW034	**31**	**EXLT**	Velamb		**24**	**EXLT**	*Jambhari	RTOBW018	**27**	**EXLT**
*Guhagar	RTOBW015	**26**	**EXLT**	Pimpar		**26**	**EXLT**	*Palshet	RTOBW050	**26**	**EXLT**
*Pimpar	RTOBW052	**20**	**EXLT**	Jambhari	RTOBW018	**34**	**EXLT**	*Kaundher	RTWQN016	**44**	**EXLT**
*Jambhari	RTOBW018	**21**	**EXLT**	Palshet	RTOBW050	**37**	**EXLT**				
*Palshet	RTOBW050	**34**	**EXLT**	Velamb	RTOBW064	**17**	**EXLT**				
2011 (With Fe)											
*Jambhari	RTOBW018	**20**	**EXLT**	*Pimpar	RTOBW052	**20**	**EXLT**	*Dhopave	RTWQN015	**26**	**EXLT**
*Palshet	RTOBW050	**22**	**EXLT**	*Velamb	RTOBW064	**27**	**EXLT**				

* Monsoon, + Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.26 (Contd..) Ratnagiri District

Taluka : Khed				Taluka : Khed				Taluka : Khed			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Awashi	C/RN-001	**20**	**EXLT**	Dasturi	C/RN-038	**34**	**EXLT**	Awashi	C/RN-001	**60**	**GW**
Dasturi	C/RN-038	**36**	**EXLT**	Devghar	C/RN-010	**18**	**EXLT**	Devghar	C/RN-010	**16**	**EXLT**
Devghar	C/RN-010	**18**	**EXLT**	Kalvane	C/RN-018	**19**	**EXLT**	Kalvane	C/RN-018	**18**	**EXLT**
Kalvane	C/RN-018	**19**	**EXLT**	Khopi	C/RN-043	**22**	**EXLT**	Khopi	C/RN-043	**21**	**EXLT**
Khopi	C/RN-043	**25**	**EXLT**	Wave	C/RN-044	**22**	**EXLT**				
Wave	C/RN-044	**25**	**EXLT**								
2010 (With Fe)											
Khavati	RTOBW026	**28**	**EXLT**	Dabhil	RTWQN003	**24**	**EXLT**	Khari	RTOBW024	**24**	**EXLT**
Khari	RTOBW024	**35**	**EXLT**	Lavel	RTOBW035	**21**	**EXLT**	Karji	RTOBW025	**31**	**EXLT**
Karji	RTOBW025	**20**	**EXLT**	Veral	RTOBW063	**26**	**EXLT**	Shivthar	RTOBW057	**26**	**EXLT**
Shivthar	RTOBW057	**26**	**EXLT**	Bhelsai	RTOBW006	**25**	**EXLT**	Asthan	RTOBW003	**25**	**EXLT**
Asthan	RTOBW003	**25**	**EXLT**	Khari	RTOBW024	**33**	**EXLT**	Lavel	RTOBW035	**36**	**EXLT**
lavel	RTOBW035	**37**	**EXLT**	Karji	RTOBW025	**31**	**EXLT**	Verel	RTOBW063	**30**	**EXLT**
Veral	RTOBW063	**27**	**EXLT**	Shivthar	RTOBW057	**28**	**EXLT**	Tisangi	RTOBW058	**26**	**EXLT**
Tisangi	RTOBW058	**22**	**EXLT**	Asthan	RTOBW003	**26**	**EXLT**	Chinchghar	RTOBW008	**29**	**EXLT**
Chinchghar	RTOBW008	**28**	**EXLT**	Tisangi	RTOBW058	**22**	**EXLT**	Bhelsai	RTOBW006	**28**	**EXLT**
Khavati	RTOBW026	**26**	**EXLT**	Khavati		**35**	**EXLT**	Dabhil	RTWQN003	**213**	**VPW**
Bhelsai	RTOBW006	**27**	**EXLT**	*Jakadevi	RTWQN018	**31**	**EXLT**				
2011 (With Fe)											
*Asthan	RTOBW003	**26**	**EXLT**	*Shirthar	RTOBW057	**26**	**EXLT**	*Lavel	RTWQN006	**21**	**EXLT**
*Bhelsai	RTOBW006	**22**	**EXLT**	*Tisangi	RTOBW058	**21**	**EXLT**	*Lavel	RTWQN007	**29**	**EXLT**
Chichghar	RTOBW008	**36**	**EXLT**	*Veral	RTOBW063	**23**	**EXLT**	*Lote	RTWQN008	**22**	**EXLT**
Khari	RTOBW024	**22**	**EXLT**	*Avashi	RTWQN002	**26**	**EXLT**	*Wave T.	RTWQN010	**22**	**EXLT**
Kharji	RTOBW025	**24**	**EXLT**	*Dabhil	RTWQN003	**26**	**EXLT**	Gunade	RTWQN004	**32**	**EXLT**
*Khavati	RTOBW026	**24**	**EXLT**	*Gunade	RTWQN004	**24**	**EXLT**				
*Lavel	RTOBW035	**22**	**EXLT**	*Khed	RTWQN005	**25**	**EXLT**				

* Monsoon, + Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.26 (Contd..) Ratnagiri District

Taluka : Mandangad				Taluka : Mandangad				Taluka : Mandangad			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Mandangarh	C/RN-041	**25**	**EXLT**	Mandangarh	C/RN-041	**25**	**EXLT**	Mahapral	C/RN-021	**26**	**EXLT**
								Mandangarh	C/RN-041	**29**	**EXLT**
2010 (With Fe)								**2011 (With Fe)**			
Shipole	RTOBW055	**25**	**EXLT**	Kumbale		**29**	**EXLT**	Devhare	RTOBW012	**29**	**EXLT**
Velas	RTOBW062	**25**	**EXLT**	Velas	RTOBW062	**22**	**EXLT**	Kumbale	RTOBW031	**40**	**EXLT**
Devhare		**18**	**EXLT**	Devhare		**31**	**EXLT**	Mhapral	RTOBW041	**30**	**EXLT**
Shipole	RTOBW055	**25**	**EXLT**	Shipole	RTOBW055	**26**	**EXLT**	Shipole	RTOBW055	**34**	**EXLT**
				Velas	RTOBW062	**27**	**EXLT**	Velas	RTOBW062	**28**	**EXLT**

Taluka : Rajapur				Taluka : Rajapur				Taluka : Rajapur			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (With Fe)				**2008 (With Fe)**				**2009 (With Fe)**			
Raipatan	C/RN-006	**25**	**EXLT**	Raipatan	C/RN-006	**21**	**EXLT**	Raipatan	C/RN-006	**20**	**EXLT**
Rajapur	C/RN-019	**20**	**EXLT**	Rajapur	C/RN-019	**21**	**EXLT**	Rajapur	C/RN-019	**21**	**EXLT**
Solgaon	C/RN-036	**22**	**EXLT**	Solgaon	C/RN-036	**18**	**EXLT**	Solgaon	C/RN-036	**23**	**EXLT**
2010 (With Fe)											
Date	RTWQN028	**33**	**EXLT**	Nate	RTWQN028	**39**	**EXLT**	*Pachd	RTWQN032	**24**	**EXLT**
Nate	RTWQN028	**21**	**EXLT**	Jaitapur		**174**	**PW**	*Mandrul	RTWQN030	**25**	**EXLT**
Shede	RTWQN031	**32**	**EXLT**	Moroshi	RTOBW043	**40**	**EXLT**	*Konde	RTOBW029	**31**	**EXLT**
Rajapur	RTWQN003	**33**	**EXLT**	Pachal	RTWQN032	**36**	**EXLT**	*Moroshi	RTOBW043	**24**	**EXLT**
Karel		**43**	**EXLT**	Tamhane		**33**	**EXLT**	Date	RTWQN028	**108**	**PW**
Kondye T.S	RTOBW029	**32**	**EXLT**	*Yerdav	RTOBW065	**24**	**EXLT**	Sade	RTWQN031	**25**	**EXLT**
2011 (With Fe)											
*Aravali	RTOBW002	**25**	**EXLT**	*Moroshi	RTOBW043	**32**	**EXLT**	*Nate	RTWQN028	**35**	**EXLT**
*Bhom	RTOBW007	**29**	**EXLT**	*Murtvade	RTOBW045	**24**	**EXLT**	*Jaitapur	RTWQN029	**37**	**EXLT**
*Guhaghar	RTOBW015	**36**	**EXLT**	*Volape	RTOBW059	**35**	**EXLT**	*Mandrul	RTWQN030	**29**	**EXLT**
*Kalkavane	RTOBW019	**33**	**EXLT**	*Yerdav	RTOBW065	**24**	**EXLT**	*Shede/Sade	RTWQN031	**30**	**EXLT**
*Karel	RTOBW021	**24**	**EXLT**	*Dervan	RTWQN012	**29**	**EXLT**	*Pachal	RTWQN032	**28**	**EXLT**
*Kandye T.S.	RTOBW029	**22**	**EXLT**	*Yegaon	RTWQN014	**32**	**EXLT**	*Rajapur	RTWQN033	**33**	**EXLT**
*Kutare	RTOBW033	**27**	**EXLT**	*Koundar	RTWQN016	**29**	**EXLT**	*Tamhane	RTWQN035	**30**	**EXLT**

* Monsoon, + Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.26 (Contd..) Ratnagiri District

Taluka : Ratanagiri				Taluka : Ratanagiri				Taluka : Ratanagiri			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Ambed Budruk	C/RN-015	**21**	**EXLT**	Ambed Budruk	C/RN-015	**20**	**EXLT**	Dugvay	C/RN-032	**16**	**EXLT**
Dugvay	C/RN-032	**18**	**EXLT**	Dugvay	C/RN-032	**16**	**EXLT**	Kasheli	C/RN-023	**27**	**EXLT**
Kasheli	C/RN-023	**22**	**EXLT**	Kasheli	C/RN-023	**23**	**EXLT**	Valops Pudhwadi	C/RN-024	**59**	**GW**
Ratnagiri	C/RN-058	**24**	**EXLT**	Jaigarh	C/RN-003	**22**	**EXLT**	Jaigarh	C/RN-003	**24**	**EXLT**
Ratnagiri	C/RN-059	**21**	**EXLT**	Jakadevi	C/RN-017	**20**	**EXLT**	Jakadevi	C/RN-017	**20**	**EXLT**
Vakarli	C/RN-011	**21**	**EXLT**	Jalgaon	C/RN-028	**22**	**EXLT**	Jalgaon	C/RN-028	**23**	**EXLT**
Valops Pudhwadi	C/RN-024	**23**	**EXLT**								
Jaigarh	C/RN-003	**23**	**EXLT**								
Jakadevi	C/RN-017	**21**	**EXLT**								
Jalgaon	C/RN-028	**23**	**EXLT**								
2010 (With Fe)											
Kolmbe	RTWQN020	**21**	**EXLT**	*Kotavade	RTWQN021	**26**	**EXLT**	Malgund	RTWQN022	**22**	**EXLT**
Kasarveli	RTWQN019	**45**	**EXLT**	*Sadye	RTWQN26	**30**	**EXLT**	Nevare	RTWQN023	**25**	**EXLT**
Sadye	RTWQN26	**30**	**EXLT**	Kasarveli	RTWQN019	**29**	**EXLT**	Sadye	RTWQN26	**31**	**EXLT**
Mervi	RTOBW040	**30**	**EXLT**	Jakadevi	RTWQN018	**23**	**EXLT**	Kasarveli	RTWQN019	**55**	**GW**
*Kotavade	RTOBW030	**28**	**EXLT**	Jaigad		**21**	**EXLT**	Ratnagiri		**44**	**EXLT**
*Malgund	RTOBW036	**32**	**EXLT**	Kothawade	RTOBW030	**25**	**EXLT**	Ratnagiri		**31**	**EXLT**
*Varvade	RTWQN27	**27**	**EXLT**	Malgund	RTOBW036	**30**	**EXLT**	Khedshi		**25**	**EXLT**
*Malgund	RTWQN022	**22**	**EXLT**	Varvade	RTWQN27	**22**	**EXLT**				
*Nevare	RTWQN023	**161**	**PW**								
2011 (With Fe)											
*Jaigad	RTOBW017	**25**	**EXLT**	*Vandri	RTOBW060	**25**	**EXLT**	*Malgund	RTWQN022	**24**	**EXLT**
*Khedashi	RTOBW027	**21**	**EXLT**	*Golap	RTWQN017	**26**	**EXLT**	*Ratnagiri	RTWQN24	**31**	**EXLT**
*Kothawade	RTOBW030	**30**	**EXLT**	*Jakevadi	RTWQN018	**23**	**EXLT**	*Ratnagiri	RTWQN25	**42**	**EXLT**
*Malgund	RTOBW036	**31**	**EXLT**	*Kasarveli	RTWQN019	**47**	**EXLT**	*Sadye	RTWQN26	**33**	**EXLT**
*Mervi	RTOBW040	**20**	**EXLT**	*Kolmbe	RTWQN020	**24**	**EXLT**	*Varoade	RTWQN27	**24**	**EXLT**
*Ratnagiri	RTOBW053	**42**	**EXLT**	*Kotaewade	RTWQN021	**23**	**EXLT**				

* Monsoon, + Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.26 (Contd..) Ratnagiri District

Taluka : Sangameshwar				Taluka : Sangameshwar				Taluka : Sangameshwar			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Sakarpa	C/RN-020	**34**	**EXLT**	Sakarpa	C/RN-020	**36**	**EXLT**	Dhamni	C/RN-008	**21**	**EXLT**
				Devrukh	C/RN-058	**19**	**EXLT**				
				Muchari (Bhatadewadi)	C/RN-042	**24**	**EXLT**				
2010 (With Fe)											
Vandri		**20**	**EXLT**	Maral	RTOBW037	**34**	**EXLT**	*Maral	RTOBW037	**23**	**EXLT**
Dabhol	RTOBW010	**22**	**EXLT**	Nayari	RTOBW048	**30**	**EXLT**	*Nayari	RTOBW048	**21**	**EXLT**
Devrukh	RTOBW013	**29**	**EXLT**	Ambed Bk	RTOBW001	**29**	**EXLT**	*Ambed	RTOBW001	**18**	**EXLT**
Maral	RTOBW037	**24**	**EXLT**	Murshi	RTOBW044	**32**	**EXLT**	*Murshi	RTOBW044	**23**	**EXLT**
Ambed. B.k	RTOBW001	**21**	**EXLT**	Dabhole	RTOBW010	**33**	**EXLT**	*Aravali	RTOBW002	**23**	**EXLT**
Murshi	RTOBW044	**21**	**EXLT**	*Dabhole	RTOBW010	**19**	**EXLT**	Aravali		**23**	**EXLT**
Aravali		**28**	**EXLT**	*Devrukh	RTOBW013	**22**	**EXLT**	*Vandri		**46**	**EXLT**
Dabhole Bk.	RTOBW010	**34**	**EXLT**								
Devrukh	RTOBW013	**41**	**EXLT**								
2011 (With Fe)											
*Ambed Bk	RTOBW001	**25**	**EXLT**	*Devrukh	RTOBW013	**35**	**EXLT**	*Murshi	RTOBW044	**20**	**EXLT**
*Dabhole Bk.	RTOBW010	**34**	**EXLT**	*Maral	RTOBW037	**26**	**EXLT**	*Nayari	RTOBW048	**22**	**EXLT**

Taluka : Lanja				Taluka : Lanja				Taluka : Lanja			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2010 (With Fe)								**2011 (With Fe)**			
Lanja	RTOBW034	**30**	**EXLT**	Bhambed	RTOBW005	**41**	**EXLT**	*Bhambed	RTOBW005	**25**	**EXLT**
Math	RTOBW039	**26**	**EXLT**	*Math	RTOBW039	**21**	**EXLT**	*Lanja	RTOBW034	**21**	**EXLT**
Data for 2007 to 2009 (Without Fe) Not Available								*Math	RTOBW039		

* Monsoon, + Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.27 : Water Quality Index of Groundwater of Sangli District

Taluka : Atpadi				Taluka : Atpadi				Taluka : Atpadi			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Atpadi	K/SN-021	**62**	**GW**	Atpadi	K/SN-021	**144**	**PW**	Gomewadi	K/SN-024	**119**	**PW**
Umbargaon	K/SN-015	**88**	**GW**	Vibhutwadi	K/SN-025	**48**	**EXLT**	Umbargaon	K/SN-015	**69**	**GW**
Vibhutwadi	K/SN-025	**57**	**GW**								
2010 (With Fe)								**2011 (With Fe)**			
*Atpadi	SNOBW072	**59**	**GW**	*Pimpri Kh.	SNOBW 067	**102**	**PW**	Balewade	SNOBW0	**62**	**GW**
*Dhvadwadi	SNOBW073	**97**	**GW**	*Pujarwadi	SNOBW 063	**68**	**GW**	Atapadi	SNOBW072	**70**	**GW**
*Dighanchi	SNWQN017	**78**	**GW**	*Ramnagara	SNWQN018	**58**	**GW**	Dhavadwadi	SNOBW073	**68**	**GW**
*Ghanand	SNOBW 071	**113**	**PW**	*Shetphale	SNOBW 075	**103**	**PW**	Hivathad	SNPZ017	**64**	**GW**
*Hivthad	SNPZ 017	**77**	**GW**	*Umbargaon	SNOBW 061	**76**	**GW**	Kharsundi	SNOBW070	**78**	**GW**
*Kargani	SNWQN 016	**85**	**GW**	*Vithalpur	SNOBW 066	**93**	**GW**	Parekarwadi	SNOBW064	**79**	**GW**
*Kharsindi	SNOBW 070	**63**	**GW**	*Zare	SNPZ 018	**89**	**GW**	Pimpri Kh.	SNOBW067	**71**	**GW**
*Parekarwadi	SNOBW 064	**85**	**GW**					Shetphale	SNOBW075	**114**	**PW**
								Umbargaon	SNOBW061	**65**	**GW**
								Vithlapur	SNOBW066	**58**	**GW**

Taluka : Islampur				Taluka : Islampur				Taluka : Islampur			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2008 (Without Fe)				**2009 (Without Fe)**				**Data for 2007 (Without Fe) and 2010 -2011 Not Available (With Fe)**			
Takari	K/SN-034	**114**	**PW**	Takari	K/SN-034	**103**	**PW**				

Taluka : Palus				Taluka : Palus				Taluka : Palus			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2008 (Without Fe)				**2009 (Without Fe)**				**2010 (Without Fe)**			
Bambwade	K/SN-033	**62**	**GW**	Bambwade	K/SN-033	**93**	**GW**	Bhilwadi/Palus	SNPZ 001	**132**	**PW**
Data for 2007 (Without Fe) and 2011 (With Fe) Not Available								*Bhilwadi/Palus	SNWQN010	**81**	**GW**
								*Kundal	SNWQN013	**87**	**GW**
								*Wasagade		**172**	**PW**

* Pre-Monsoon, + Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.27 (Contd..) Sangli District

Taluka : Jath				Taluka : Jath				Taluka : Jath			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Shegaon	K/SN-031	**122**	**PW**	Shegaon	K/SN-031	**143**	**PW**	Jath	K/SN-004	**212**	**VPW**
Jath	K/SN-004	**206**	**VPW**	Jath	K/SN-004	**180**	**PW**	Kumbhari	K/SN-026	**98**	**GW**
Kumbhari	K/SN-026	**145**	**PW**	Kumbhari	K/SN-026	**127**	**PW**	Bilur	K/SN-027	**91**	**GW**
Bilur	K/SN-027	**151**	**PW**	Bilur	K/SN-027	**65**	**GW**				
Daphlapur	K/SN-029	**152**	**PW**	Daphlapur	K/SN-029	**99**	**GW**				
2010 (With Fe)											
*Lavangui	SNOBW 093	**77**	**GW**	*Bilur	SNWQN035	**56**	**GW**	*Karanjani	SNWQN042	**121**	**PW**
*Morbagi	SNOBW 094	**121**	**PW**	*Borgi.Bk	SNWQN040	**79**	**GW**	*Khojanwadi	SNWQN036	**165**	**PW**
*Muchandi	SNOBW 097	**126**	**PW**	*Dafalapur	SNOBW 029	**71**	**GW**	*Singhpur	SNPZ 013	**77**	**GW**
*Nigdi kh	SNOBW 069	**93**	**GW**	*Deonal	SNWQN041	**91**	**GW**	*Tippehalli	SNWQN043	**71**	**GW**
*Sankh	SNOBW 098	**136**	**PW**	*Deonal	SNPZ 019	**93**	**GW**	*Utgi	SNWQN039	**171**	**PW**
*Bagewadi	SNOBW 084	**117**	**PW**	*Dhavadwadi	SNOBW 082	**79**	**GW**	*Vaspet	SNWQN038	**97**	**GW**
*Bavnoor	SNOBW 079	**75**	**GW**	*Jadarboblad	SNOBW 087	**65**	**GW**	*Waifal	SNWQN037	**64**	**GW**
2010 (With Fe)											
Bagewadi	SNOBW084	**80**	**GW**	Jadarbablad	SNOBW089	**348**	**UNSUT**	Sankh	SNOBW098	**148**	**PW**
Bevnoor	SNOBW079	**71**	**GW**	Karanjanji	SNWQN042	**196**	**PW**	Sinhgnapur	SNPZ013	**88**	**GW**
Bilur	SNWQN035	**80**	**GW**	Khojanwadi	SNWQN036	**99**	**GW**	Tippehalli	SNWQN043	**65**	**GW**
Borgi bk.	SNWQN040	**384**	**UNSUT**	Morbagi	SNOBW094	**69**	**GW**	Utagi	SNWQN039	**190**	**PW**
Daflapur	SNOBW029	**51**	**GW**	Muchandi	SNOBW097	**104**	**PW**	Vaspet	SNWQN038	**67**	**GW**
Deonal	SNWQN041	**96**	**GW**	Nigdi Kh.	SNOBW087	**60**	**GW**	Lavangi	SNOBW093	**74**	**GW**
Dhavadwadi	SNPZ	**112**	**PW**								

Taluka : Kadegaon				Taluka : Kadegaon				Taluka : Kadegaon			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2008 (Without Fe)				**2009 (Without Fe)**				**2011 (With Fe)**			
Kadepur	K/SN-009	**76**	**GW**	Kadepur	K/SN-009	**102**	**PW**	Khambale	SNOBW0	**48**	**EXLT**
2010 (With Fe)								Sonasal	SNOBW0	**75**	**GW**
*KhambaleA.	SNOBW001	**48**	**EXLT**	*Soholi	SNPZ 014	**52**	**GW**	**Data for 2007 (Without Fe) Not Available**			
*Kumbhargaon	SNOBW010	**60**	**GW**	*Sonsali	SNOBW013	**32**	**EXLT**				
				*Wangi		**49**	**EXLT**				

* Pre-Monsoon, + Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.27 (Contd..) Sangli District

Taluka : Kavathemahankal				Taluka : Kavathemahankal				Taluka : Kavathemahankal			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Alkud	K/SN-020	**55**	**GW**	Alkud	K/SN-020	**82**	**GW**	Alkud	K/SN-020	**114**	**PW**
Kavathe mahankal	K/SN-040	**205**	**VPW**	Kavathe mahankal	K/SN-039	**121**	**PW**				
2010 (With Fe)								**2011 (With Fe)**			
*Kokle	SNOBW 030	**305**	**UNSUT**	*K'Mahankal	SNWQN033	**82**	**GW**	Chorochi	SNOBW081	**76**	**GW**
*Nagaj	SNOBW 077	**142**	**PW**	*Kerewadi	SNOBW 028	**60**	**GW**	Deshinge	SNOBW032	**53**	**GW**
*Nimaj	SNOBW 078	**93**	**GW**	*Kuchi	SNOBW 026	**130**	**PW**	Dhulgaon	SNWQN034	**62**	**GW**
*Alkud M	SNOBW 031	**90**	**GW**	*Kundalpur	SNOBW 025	**90**	**GW**	Dudhebhavi	SNOBW080	**65**	**GW**
*Chorochi	SNOBW 081	**80**	**GW**	*Ranjani	SNPZ 006	**106**	**PW**	Hingangaon	SNOBW033	**103**	**PW**
*Deshing	SNOBW 032	**87**	**GW**	*Sarati	SNPZ 019	**68**	**GW**	Karewadi	SNOBW028	**66**	**GW**
*Dhulagaon	SNWQN034	**73**	**GW**	*Shirdon	SNWQN032	**192**	**PW**	K'mahankal	SNWQN033	**126**	**PW**
*Dhudhebhavi	SNOBW 080	**80**	**GW**					Kokale	SNOBW030	**41**	**EXLT**
*Haingangaon	SNOBW 033	**359**	**UNSUT**					Nagaj	SNOBW077	**72**	**GW**
								Nimaj	SNOBW078	**97**	**GW**
								Shirdhon	SNWQN032	**88**	**GW**

Taluka : Khanapur				Taluka : Khanapur				Taluka : Khanapur			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Belavade	K/SN-022	**89**	**GW**	Belavade	K/SN-022	**57**	**GW**	Belavade	K/SN-022	**77**	**GW**
Palashi	K/SN-013	**70**	**GW**	Palashi	K/SN-013	**60**	**GW**	Wangi	K/SN-008	**148**	**PW**
Vita	K/SN-001	**63**	**GW**								
Wangi	K/SN-008	**31**	**EXLT**								
2010 (With Fe)				**2011 (With Fe)**							
*BhaurachiWadi	SNOBW004	**68**	**GW**	Bhaurachiwadi	SNOBW04	**60**	**GW**	Vejegaon	SNOBW0	**68**	**GW**
*Bhood	SNOBW006	**58**	**GW**	Bhood	SNOBW06	**52**	**GW**	Welkhad	SNOBW015	**49**	**EXLT**
*Ghoti Kh	SNOBW019	**66**	**GW**	Ghoti (Kh.)	SNOBW19	**66**	**GW**	Bombewadi	SNOBW0	**72**	**GW**
*Hanumantwadi	SNPZ 011	**96**	**GW**	Karve	SNOBW0	**65**	**GW**	Mitaki	SNOBW0	**57**	**GW**
*Karanje	SNPZ 022	**64**	**GW**	Mahuli	SNOBW0	**120**	**PW**	Pandharewadi	SNOBW0	**133**	**PW**
*Khanapur	SNOBW022	**50**	**GW**	Sulewadi	SNOBW16	**46**	**EXLT**	Zare	SNOBW0	**84**	**GW**
*Nagewadi	SNWQN019	**92**	**GW**	* Pre-Monsoon, + Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.							
*Salshinge	SNWQN020	**50**	**EXLT**								
*Walkhed	SNPZ 015	**29**	**EXLT**								

Table x.27 (Contd..) Sangli District

Taluka : Miraj				Taluka : Miraj				Taluka : Miraj			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2008 (Without Fe)				**2009 (Without Fe)**				**Data for 2007 (Without Fe) Not Available**			
Arag	K/SN-032	**56**	**GW**	Arag	K/SN-032	**71**	**GW**				
2010 (With Fe)											
*Dhavali	SNWQN030	**261**	**VPW**	*Samdoli		**115**	**PW**	*Kavathepiran	SNWQN032	**44**	**EXLT**
*Dudhgaon	SNWQN021	**173**	**PW**	*Sangli	SNWQN025	**91**	**GW**	*Kupwad	SNWQN031	**109**	**PW**
*Kalambi	SNWQN022	**50**	**EXLT**	*Sawalwadi	SNWQN029	**99**	**GW**	*Madhavanagar	SNWQN026	**170**	**PW**
*Kasbe Digraj	SNWQN028	**119**	**PW**	*Belanki	SNPZ 008	**107**	**PW**	*Tung	SNPZ 007	**93**	**GW**
*Kavalapur	SNOBW036	**172**	**PW**	*Tisangi	SNOBW 076	**105**	**PW**	*Soholi	SNWQN027	**75**	**GW**
*Maisal	SNOBW054	**191**	**PW**	*Arag	SNOBW056	**97**	**GW**	*Walkhed		**64**	**GW**
*Nandre	SNWQN024	**91**	**GW**								
2011 (With Fe)											
Kupwad	SNWQN030	**103**	**PW**	Dudhagaon	SNWQN021	**106**	**PW**	Savalwadi	SNWQN028	**39**	**EXLT**
Mahdavanagara	SNWQN026	**136**	**PW**	Mahaishal	SNOBW054	**87**	**GW**	Arag	SNOBW056	**105**	**PW**

Taluka : Shirala				Taluka : Shirala				Taluka : Shirala			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2008 (Without Fe)				**2010 (With Fe)**							
Chikhalwadi	K/SN-040	**48**	**EXLT**	*Bilashi	SNOBW048	**77**	**GW**	*Mangle	SNPZ 002	**55**	**GW**
Data for 2007 and 2009 (Wihout Fe) and 2011 (With Fe) Not Available				*Biur/ Wakurde Bk.	SNOBW043	**59**	**GW**	*Rile	SNPZ 012	**85**	**GW**
				*Chikhali	SNWQN001	**49**	**EXLT**	*Sawantwadi	SNOBW046	**64**	**GW**
				*Chikhalwadi	SNWQN002	**101**	**PW**	*Shirala	SNOBW044	**61**	**GW**
				*Mandur	SNOBW009	**42**	**EXLT**	*Sirshi	SNWQN003	**61**	**GW**

Taluka : South Solapur				Taluka : South Solapur				Taluka : South Solapur			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (With Fe)				**2008 (With Fe)**				**2009 (With Fe)**			
Valsang	**K/SN-028**	**166**	**PW**	**Valsang**	**K/SN-028**	**159**	**PW**	**Valsang**	**K/SN-028**	**67**	**GW**
Data was not available for 2010-2011 (With Fe)											

* Pre-Monsoon, + Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.27 (Contd..) Sangli District

Taluka : Tasgaon				Taluka : Tasgaon				Taluka : Tasgaon			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2008 (Without Fe)				**2009 (Without Fe)**							
Yevali	K/SN-019	**216**	**VPW**	Panmalewadi	K/SN-018	**61**	**GW**	**2011 (With Fe)**			
				Yevali	K/SN-019	**247**	**VPW**	Waifale	SNWQN037	**61**	**GW**
2010 (With Fe)								Kamathe	SNOBW0	**57**	**GW**
*Tasgaon	SNPZ 003	**110**	**PW**	*Tasgoan	SNPZ 003	**140**	**PW**	Yogewadi	SNWQN011	**119**	**PW**
*Buruli	SNWQN014	**40**	**EXLT**	*Turchi	SNWQN012	**43**	**EXLT**	**Data for 2007 (Without Fe) Not Available**			
*Gavan	SNWQN015	**75**	**GW**	*Yogewadi	SNWQN011	**138**	**PW**				

Taluka : Walwa				Taluka : Walwa				Taluka : Walwa			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Ashta	K/SN-016	**59**	**GW**	Ashta	K/SN-016	**62**	**GW**	Ashta	K/SN-016	**90**	**GW**
Peth	K/SN-017	**66**	**GW**	Peth	K/SN-017	**75**	**GW**	Peth	K/SN-017	**87**	**GW**
Wategaon	K/SN-003	**51**	**GW**	Wategaon	K/SN-003	**49**	**EXLT**	Wategaon	K/SN-003	**68**	**GW**
				Yednipani	K/SN-035	**116**	**PW**				
2010 (With Fe)	**Data for 2011 (With Fe) Not Available**										
*Ashta	SNOBW038	**64**	**GW**	*Itkare	SNOBW049	**41**	**EXLT**	*Shivapuri	SNOBW037	**49**	**EXLT**
*Bahe	SNWQN009	**74**	**GW**	*Nave khed	SNWQN006	**69**	**GW**	*Tandulwadi	SNOBW050	**46**	**EXLT**
*Bavachi	SNWQN007	**41**	**EXLT**	*Nerle	SNOBW041	**56**	**GW**	*Tujarpur	SNWQN008	**44**	**EXLT**
*Borgaon	SNPZ005	**41**	**EXLT**	*Rethre	SNOBW040	**32**	**EXLT**	*Walwa	SNWQN005	**40**	**EXLT**
*Hubalwadi	SNOBW042	**75**	**GW**	*Sakharale	SNWQN004	**103**	**PW**	*Yellur	SNPZ006	**49**	**EXLT**

* Pre-Monsoon, + Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.28 : Water Quality Index of Groundwater of Satara District

Taluka : Javali				Taluka : Javali				Taluka : Javali			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2008 (Without Fe)				**2009 (Without Fe)**				**2011 (With Fe)**			
Javali	K/ST-045	**47**	**EXLT**	Javali	K/ST-045	**99**	**GW**	Medha	STOBW008	**48**	**EXLT**
Data for 2007 (Without Fe) and 2010 (With Fe) Not Available								Medha	STWQN022	**97**	**GW**

Taluka : Karad				Taluka : Karad				Taluka : Karad			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Malkapur	K/ST-024	**23**	**EXLT**	Malkapur	K/ST-024	**23**	**EXLT**	Malkapur	K/ST-024	**46**	**EXLT**
Undale	K/ST-038	**83**	**GW**	Undale	K/ST-038	**62**	**GW**	Undale	K/ST-038	**80**	**GW**
Varade	K/ST-015	**64**	**GW**	**Data for 2010 (With Fe) Not Available**				Varade	K/ST-015	**64**	**GW**
2011 (With Fe)											
Saudapur /Sadashivgad	STOBW054	**106**	**PW**	Korti	STOBW051	**78**	**GW**	Kale	STOBW074	**78**	**GW**
Gote	STOBW066	**56**	**GW**	Mhapre	STOBW065	**70**	**GW**	Savade	STOBW072	**55**	**GW**
Umbraj	STOBW048	**63**	**GW**	Kambirwadi		**111**	**PW**	Khadakwadi	STOBW070	**53**	**GW**
Talbeed	STWQN017	**52**	**GW**	Beldare	STOBW064	**54**	**GW**	Padali	STOBW052	**62**	**GW**
Wanvasmachi	STOBW046	**52**	**GW**	Talgaon	STWQN017	**73**	**GW**	Rethare bk.	STWQN019	**47**	**EXLT**
Karad	STWQN018	**60**	**GW**								

Taluka : Khandala				Taluka : Khandala				Taluka : Khandala			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Bhade	K/ST-043	**106**	**PW**	Bhade	K/ST-043	**102**	**PW**	Bhade	K/ST-043	**85**	**GW**
Shirwal	K/ST-019	**90**	**GW**	Shirwal	K/ST-019	**96**	**GW**	Shirwal	K/ST-019	**103**	**PW**
Data for 2010 (With Fe) Not Available				Surur	K/ST-039	**94**	**GW**	Surur	K/ST-039	**100**	**PW**
2011 (Without Fe)											
Khed Bk.	STOBW079	**75**	**GW**	Ghadagewadi		**42**	**EXLT**	Khandala	STWQN007	**49**	**EXLT**
Koparde		**50**	**EXLT**	Shirval	STWQN006	**66**	**GW**	Naigaon	STOBW076	**46**	**EXLT**
Lonand	STWQN008	**43**	**EXLT**	Shirval		**74**	**GW**	Ghadagewadi		**39**	**EXLT**
Khandala	STWQN007	**49**	**EXLT**	Khed Bk.	STOBW079	**75**	**GW**	Ghadagewadi		**42**	**EXLT**
Naigaon	STOBW076	**46**	**EXLT**	Koparde		**50**	**EXLT**	Shirval	STWQN006	**66**	**GW**
Ghadagewadi		**39**	**EXLT**	Lonand	STWQN008	**43**	**EXLT**	Shirval		**74**	**GW**

* All values are in Pre-Monsoon, Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.28(Contd..) Satara District

Taluka : Khatav				Taluka : Khatav				Taluka : Khatav			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Khatav	K/ST-021	**48**	**EXLT**	Khatav	K/ST-021	**101**	**PW**	Khatav	K/ST-021	**138**	**PW**
Pusegaon	K/ST-011	**68**	**GW**	Manjarvadi	K/ST-035	**53**	**GW**	Manjarvadi	K/ST-035	**94**	**GW**
				Pusegaon	K/ST-011	**58**	**GW**	Pusegaon	K/ST-011	**102**	**PW**
2011 (With FE)											
Budh		**89**	**GW**	Kokrale	STOBW030	**60**	**GW**	Waduj Satewadi	STWQN019	**52**	**GW**
Bhushangad	STOBW058	**45**	**EXLT**	Chitali	STOBW063	**50**	**GW**	Wardhangad	STOBW029	**46**	**EXLT**
Yeliv	STOBW056	**47**	**EXLT**	Katarkhatav	STOBW027	**180**	**PW**	Mayani	STOBW062	**76**	**GW**
Aundh	STOBW055	**38**	**EXLT**	Kuroli S	STOBW031	**66**	**GW**	Mol	STOBW023	**52**	**GW**
Musandwadi		**46**	**EXLT**	Datewadi	STOBW061	**41**	**EXLT**	Lalgun	STOBW025	**63**	**GW**
Pusesavali		**31**	**EXLT**	Wakeshwar	STOBW028	**38**	**EXLT**	**Data for 2010 (With Fe) Not Available**			

Taluka : Koregaon				Taluka : Koregaon				Taluka : Koregaon			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Koregaon	K/ST-010	**60**	**GW**	Koregaon	K/ST-010	**100**	**PW**	Koregaon	K/ST-010	**102**	**PW**
Wathar	K/ST-013	**60**	**GW**	Rehmatpur	K/ST-026	**87**	**GW**	Rehmatpur	K/ST-026	**85**	**GW**
				Wathar	K/ST-013	**67**	**GW**	Wathar	K/ST-013	**94**	**GW**
2011 (With Fe)											
Koregaon	STOBW022	**122**	**PW**	Satara Rd		**61**	**GW**	Jamb Kh.	STOBW020	**52**	**GW**
Rahimatpur	STOBW033	**122**	**PW**	Pimpode Bk.		**46**	**EXLT**	Surli	STOBW034	**59**	**GW**
Eksal	STOBW032	**56**	**GW**	Koregaon	STOBW022	**122**	**PW**	Wathar station	STOBW017	**89**	**GW**
Chanchali	STOBW021	**102**	**PW**	Rahimatpur	STOBW033	**122**	**PW**	Satara Rd		**61**	**GW**
Jamb Kh.	STOBW020	**52**	**GW**	Eksal	STOBW032	**56**	**GW**	Pimpode Bk.		**46**	**EXLT**
Surli	STOBW034	**59**	**GW**	Chanchali	STOBW021	**102**	**PW**				
Wathar station	STOBW017	**89**	**GW**	**Data for 2010 (With Fe) Not Available**							

* All values are in Pre-Monsoon, Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.28(Contd..) Satara District

Taluka : Mahabaleswar				Taluka : Mahabaleswar				Taluka : Mahabaleswar			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Mahabaleswar	K/ST-006	**31**	**EXLT**	Mahabaleswar	K/ST-006	**29**	**EXLT**	Mahabaleswar	K/ST-006	**29**	**EXLT**
Panchagani	K/ST-018	**20**	**EXLT**	Panchagani	K/ST-018	**22**	**EXLT**	Panchagani	K/ST-018	**26**	**EXLT**
2011 (With Fe)Data for 2010 (With Fe) Not Available											
Mahabaleshwar	STOBW0007	**74**	**GW**	Bhose	STOBW0011	**35**	**EXLT**	Panchgani	STOBW004	**45**	**EXLT**

Taluka : Man (Dahivadi)				Taluka : Man (Dahivadi)				Taluka : Man (Dahivadi)			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Pingli	K/ST-002	**40**	**EXLT**	Pingli	K/ST-002	**39**	**EXLT**	Mhaswad	K/ST-005	**162**	**PW**
Shenwadi	K/ST-016	**59**	**GW**	Shenwadi	K/ST-016	**73**	**GW**	Pingli	K/ST-002	**67**	**GW**
								Shenwadi	K/ST-016	**82**	**GW**
2011 (With Fe)											
Diwad	STOBW100	**94**	**GW**	Kasarwadi	STOBW102	**73**	**GW**	Wavarhire	STOBW094	**84**	**GW**
Dhuldeo	STOBW103	**192**	**PW**	Pandharwadi	STOBW026	**112**	**PW**	Malwadi		**80**	**GW**
Mhasvad	STOBW104	**172**	**PW**	Bidal	STOBW097	**100**	**PW**	Shinganapur	STOBW093	**66**	**GW**
Walai	STOBW99	**76**	**GW**	Dahiwadi	STWQN014	**89**	**GW**	Ranand		**102**	**PW**
Shenawadi	STOBW105	**86**	**GW**	Takewadi		**80**	**GW**	Shinde kh.	STOBW096	**65**	**GW**
Shirtav	STOBW101	**90**	**GW**	Mograle	STOBW090	**79**	**GW**	Dhuldeo	STOBW103	**71**	**GW**
Warkute Malwadi	STOBW106	**176**	**PW**	**Data for 2010 (With Fe) Not Available**							

Taluka : Medha				Taluka : Medha				Taluka : Medha			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Medha	K/ST-020	**55**	**GW**	Medha	K/ST-020	**43**	**EXLT**	Medha	K/ST-020	**55**	**GW**
Varoshi	K/ST-054	**29**	**EXLT**	Varoshi	K/ST-054	**34**	**EXLT**	**Data for 2010 and 2011 (With Fe) Not Available**			

* All values are in Pre-Monsoon, Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.28(Contd..) Satara District

Taluka : Satara				Taluka : Satara				Taluka : Satara			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Atit	K/ST-023	**64**	**GW**	Atit	K/ST-023	**59**	**GW**	Atit	K/ST-023	**76**	**GW**
Kondve	K/ST-046	**36**	**EXLT**	Aundh	K/ST-027	**100**	**PW**	Aundh	K/ST-027	**88**	**GW**
Vaduth	K/ST-036	**35**	**EXLT**	Kondve	K/ST-046	**47**	**EXLT**	Pimpalwadi	K/ST-042	**132**	**PW**
Manainagar	K/ST-031	**25**	**EXLT**	Pimpalwadi	K/ST-042	**220**	**VPW**	Vaduth	K/ST-036	**38**	**EXLT**
Manure	K/ST-033	**25**	**EXLT**	Vaduth	K/ST-036	**36**	**EXLT**	Manure	K/ST-033	**29**	**EXLT**
Shendri	K/ST-014	**58**	**GW**	Manainagar	K/ST-031	**21**	**EXLT**	Mogarle	K/ST-034	**59**	**GW**
2008 Contd.. (Without Fe)				Manure	K/ST-033	**28**	**EXLT**	Shendri	K/ST-014	**58**	**GW**
Mogarle	K/ST-034	**58**	**GW**					Tathvade	K/ST-040	**57**	**GW**
Mutlavadi	K/ST-030	**64**	**GW**	**2011 (With Fe)**							
Shendri	K/ST-014	**52**	**GW**	Phadatarwadi		**47**	**EXLT**	Warne	STOBW035	**47**	**EXLT**
Tathvade	K/ST-040	**53**	**GW**	Waduth	STOBW016	**55**	**GW**	Nandgaon	STOBW037	**47**	**EXLT**
Udtara	K/ST-001	**126**	**PW**	Warye		**48**	**EXLT**	Nune	STOBW009	**48**	**EXLT**
Data for 2010 (With Fe) Not Available				Karanje	STWQN001	**78**	**GW**	Shendre	STOBW039	**100**	**GW**
				Atit	STOBW040	**62**	**GW**	Kuran	STOBW038	**43**	**EXLT**
				Nagewadi	STOBW012	**59**	**GW**	Mardhe	STWQN002	**86**	**GW**

Taluka : Patan				Taluka : Patan				Taluka : Patan			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Dhebevadi	K/ST-028	**59**	**GW**	Dhebevadi	K/ST-028	**52**	**GW**	Dhebevadi	K/ST-028	**68**	**GW**
Morgir (Shivpurpeth)	K/ST-032	**48**	**EXLT**	Malharpeth	K/ST-025	**47**	**EXLT**	Malharpeth	K/ST-025	**50**	**GW**
Nimbore	K/ST-017	**227**	**VPW**	Mirgaon	K/ST-012	**161**	**PW**	Mirgaon	K/ST-012	**192**	**PW**
Velkhandwadi (Tarli)	K/ST-037	**57**	**GW**	Morgir (Shivpurpeth)	K/ST-032	**65**	**GW**	Morgir (Shivpurpeth)	K/ST-032	**83**	**GW**
				Nimbore	K/ST-017	**269**	**VPW**	Nimbore	K/ST-017	**226**	**VPW**
				Patan	K/ST-009	**44**	**EXLT**	Patan	K/ST-009	**46**	**EXLT**
				Velkhandwadi (Tarli)	K/ST-037	**48**	**EXLT**	**Data for 2010 (With Fe) Not Available**			
2011 (With Fe)											
Helwak	STOBW042	**53**	**GW**	Marali	STOBW068	**84**	**GW**	Sakhari	STOBW044	**47**	**EXLT**
Girewadi		**89**	**GW**	Dhebewadi	STPZ012	**87**	**GW**	Ghot	STOBW049	**65**	**GW**
Morgiri	STOBW067	**59**	**GW**	Yerphale	STOBW043	**66**	**GW**	Tarale	STOBW050	**103**	**PW**
Goshatwadi		**60**	**GW**	Patan	STWQN021	**42**	**EXLT**				

Table x.28(Contd..) Satara District

Taluka :Phaltan				Taluka :Phaltan				Taluka :Phaltan			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Nimblak	K/ST-008	**60**	**GW**	Nimblak	K/ST-008	**53**	**GW**	Nimblak	K/ST-008	**74**	**GW**
Rajale	K/ST-041	**114**	**PW**	Rajale	K/ST-041	**113**	**PW**	Rajale	K/ST-041	**145**	**PW**
Savanthwadi (Jinti)	K/ST-029	**60**	**GW**	**Data for 2010 (With Fe) Not Available**				Savanthwadi (Jinti)	K/ST-029	**35**	**EXLT**
								Taradgaon	K/ST-003	**173**	**PW**
2011 (With Fe)											
Phaltan	STWQN009	**155**	**PW**	Dudhebavi	STOBW087	**88**	**GW**	Rajuri	STWQN011	**107**	**PW**
Murum	STOBW083	**76**	**GW**	Tathavade	STOBW084	**93**	**GW**	Padegaon	STOBW080	**79**	**GW**
Gokhali	STOBW092	**86**	**GW**	Somanthali	STOBW089	**117**	**PW**	Adarki Kh.	STOBW081	**82**	**GW**
Khunte	STOBW086	**79**	**GW**	Wadale	STWQN010	**92**	**GW**	Adarki bk.	STOBW082	**104**	**PW**
Nimbalak	STWQN012	**73**	**GW**	Tambave	STWQN012	**141**	**PW**				

Taluka : Wai				Taluka : Wai				Taluka : Wai			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (With Fe)				**2008 (With Fe)**				**2009 (With Fe)**			
Wai	K/ST-007	**63**	**GW**	Wai	K/ST-007	**69**	**GW**	Wai	K/ST-007	**73**	**GW**
2011 (With Fe)											
Asare	STOBW001	**131**	**PW**	Kadegaon		**60**	**GW**	Udtare	STOBW013	**52**	**GW**
Wai(U)	STOBW003	**58**	**GW**	Anawadi	STOBW015	**59**	**GW**	Vele	STOBW014	**68**	**GW**
Wai(R)		**109**	**PW**	Chindhavali	STWQN004	**60**	**GW**	**Data for 2010 (With Fe) Not Available**			
Dhom		**48**	**EXLT**								

* All values are in Pre-Monsoon, Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.29 : Water Quality Index of Groundwater of Sindhdurg District

Taluka : Devgad				Taluka : Devgad				Taluka : Devgad			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Deogarh	C/SD-008	**21**	**EXLT**	Deogarh	C/SD-008	**36**	**EXLT**	Wareri	C/SD-026	**23**	**EXLT**
Hadi	C/SD-027	**42**	**EXLT**	Hadi	C/SD-027	**29**	**EXLT**	**2011 (With Fe)**			
Kunkaule	C/SD-021	**31**	**EXLT**	Kunkaule	C/SD-021	**24**	**EXLT**	Dahibav	SDPZ005	**38**	**EXLT**
Phanasgaon	C/SD-014	**29**	**EXLT**	Phanasgaon	C/SD-014	**19**	**EXLT**	Jamsande	SDOBW010	**33**	**EXLT**
Wareri	C/SD-026	**23**	**EXLT**					Kotkamte	SDOBW019	**32**	**EXLT**
2009 Contd.. (With Fe)				Wada	SDPZ003	**39**	**EXLT**	Padel	SDPZ002	**28**	**EXLT**
Kunkeshwar	SDWQN007	**38**	**EXLT**	Welgive		**34**	**EXLT**	Devagad	SDWQN006	**34**	**EXLT**
Devgad	SDWQN006	**40**	**EXLT**	Jamsande	SDOBW010	**32**	**EXLT**	Kunkeshawar	SDWQN007	**28**	**EXLT**
Padel	SDPZ002	**39**	**EXLT**	Dhaibav		**36**	**EXLT**	Welgive	SDOBW038	**27**	**EXLT**
Data for 2010 (With Fe) Not Available								Dahibav	SDOBW009	**35**	**EXLT**
								Wada	SDOBW014	**42**	**EXLT**

Taluka : Dodamarg				Taluka : Dodamarg				Taluka : Dodamarg			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Adali	C/SD-019	**19**	**EXLT**	Adali	C/SD-019	**23**	**EXLT**	Adali	C/SD-019	**27**	**EXLT**
Dodamarga	C/SD-005	**28**	**EXLT**	**2010 (With Fe)**				Dodamarga	C/SD-005	**27**	**EXLT**
Shirgaon	C/SD-011	**19**	**EXLT**	*Kasai Doda	SDWQN036	**26**	**EXLT**	Shirgaon	C/SD-011	**22**	**EXLT**
2011 (With Fe)				**2009 Contd.. (With Fe)**				**2009 Contd.. (With Fe)**			
Talkat	SDOBW036	**27**	**EXLT**	Sasoli	SDWQN020	**18**	**EXLT**	Konal	SDWQN035	**25**	**EXLT**
Vazare	SDPZ029	**22**	**EXLT**	Kasaidoda	SDPZ018	**29**	**EXLT**	Kherkand	SDWQN036	**28**	**EXLT**
Sasoli	SDWQN020	**33**	**EXLT**	Vazare	SDPZ029	**23**	**EXLT**				
Konal	SDWQN035	**47**	**EXLT**	Kotkamte		**24**	**EXLT**				
Kasai Doda	SDWQN036	**32**	**EXLT**	Kolzar	SDPZ017	**24**	**EXLT**				

* Pre-Monsoon, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.29 (Contd..) Sindhdurg District

Taluka : Kankavali			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe)			
Kanedi Bazar	C/SD-033	**25**	**EXLT**
Kankavalli	C/SD-012	**23**	**EXLT**
Khare Patan	C/SD-002	**39**	**EXLT**
Narange	C/SD-020	**22**	**EXLT**
Phonda	C/SD-001	**24**	**EXLT**
2010 (With Fe)			
*Nadgive	SDOBW027	**31**	**EXLT**
*Sivdav	SDWQN034	**18**	**EXLT**
2011 (With Fe)			
Kalsuli	SDOBW012	**29**	**EXLT**
Nadgive	SDOBW027	**28**	**EXLT**
Nandgaon	SDOBW028	**35**	**EXLT**
Nardave	SDOBW030	**27**	**EXLT**

Taluka : Kankavali			
Villages	**Well No.**	**WQI**	**Category**
2008 (Without Fe)			
Kankavalli	C/SD-012	**28**	**EXLT**
Nandgaon	C/SD-022	**33**	**EXLT**
Narange	C/SD-020	**18**	**EXLT**
Phonda	C/SD-001	**25**	**EXLT**
2011 Contd.. (With Fe)			
Wargaon	SDOBW042	**22**	**EXLT**
Harkul Kh	SDWQN030	**55**	**GW**
Janavali	SDWQN031	**30**	**EXLT**
Kankavali	SDWQN032	**32**	**EXLT**
Karanje	SDWQN033	**55**	**GW**
Savdav	SDWQN034	**35**	**EXLT**
Phonda	SDPZ007	**22**	**EXLT**
Kankavali		**32**	**EXLT**

Taluka : Kankavali			
Villages	**Well No.**	**WQI**	**Category**
2009 (Without Fe)			
Kanedi Bazar	C/SD-033	**24**	**EXLT**
Kankavalli	C/SD-012	**30**	**EXLT**
Khare Patan	C/SD-002	**33**	**EXLT**
Nandgaon	C/SD-022	**29**	**EXLT**
Narange	C/SD-020	**22**	**EXLT**
Phonda	C/SD-001	**25**	**EXLT**
2009 Contd.. (With Fe)			
Harkul	SDWQN030	**35**	**EXLT**
Janavali	SDWQN031	**27**	**EXLT**
Savdav	SDWQN034	**26**	**EXLT**
Karanje	SDWQN033	**32**	**EXLT**
Kankavli		**67**	**GW**
Nardave	SDOBW030	**64**	**GW**
Kalsuli	SDOBW012	**39**	**EXLT**
Nadgive	SDOBW026	**38**	**EXLT**
Nandgaon	SDPZ006	**27**	**EXLT**

* Pre-Monsoon, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.29 (Contd..) Sindhdurg District

Taluka : Kudal				Taluka : Kudal				Taluka : Kudal			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Chendwan	C/SD-035	**21**	**EXLT**	Chendwan	C/SD-035	**22**	**EXLT**	Mangaon B.	C/SD-028	**82**	**GW**
Kudal	C/SD-013	**31**	**EXLT**	Mangaon B.	C/SD-028	**88**	**GW**	Ramgarh	C/SD-023	**25**	**EXLT**
Mangaon B.	C/SD-028	**78**	**GW**	Ramgarh	C/SD-023	**27**	**EXLT**	Vados	C/SD-030	**26**	**EXLT**
Ramgarh	C/SD-023	**26**	**EXLT**	Sawarwad	C/SD-034	**30**	**EXLT**	Zarap	C/SD-025	**48**	**EXLT**
Sawarwad	C/SD-034	**30**	**EXLT**	Vados	C/SD-030	**23**	**EXLT**	Kasal	C/SD-004	**24**	**EXLT**
Vados	C/SD-030	**23**	**EXLT**	Zarap	C/SD-025	**57**	**GW**	**2009 (With Fe)**			
Zarap	C/SD-025	**62**	**GW**	Kasal	C/SD-004	**25**	**EXLT**	Awalegaon	SDWQN023	**132**	**PW**
Kasal	C/SD-004	**26**	**EXLT**	Kudal	C/SD-013	**31**	**EXLT**	Sonavde	SDWQN029	**29**	**EXLT**
2011 (With Fe)								Ambadpal	SDWQN022	**25**	**EXLT**
Kasal	SDOBW016	**42**	**EXLT**	Goveri	SDWQN025	**42**	**EXLT**	Goveri	SDWQN025	**26**	**EXLT**
Nirukhe	SDOBW031	**28**	**EXLT**	Kervade	SDWQN027	**35**	**EXLT**	Keravade	SDWQN027	**29**	**EXLT**
Pundur	SDOBW032	**26**	**EXLT**	Kudal	SDWQN028	**56**	**GW**	Kudal	SDWQN028	**48**	**EXLT**
Pagrad	SDPZ011	**41**	**EXLT**	Sonavade	SDWQN029	**34**	**EXLT**	Kasal	SDOBW017	**39**	**EXLT**
Pavashi	SDPZ012	**31**	**EXLT**	Kervade	SDOBW017	**35**	**EXLT**	Pandur	SDOBW032	**34**	**EXLT**
Awalegaon	SDWQN023	**115**	**PW**	**Data for 2010 Not Available (With Fe)**				Nirukhe	SDOBW031	**27**	**EXLT**
Chendavan	SDWQN024	**33**	**EXLT**					Keravade		**36**	**EXLT**

Taluka : Malvan				Taluka : Malvan				Taluka : Malvan			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Achra	C/SD-024	**40**	**EXLT**	Achra	C/SD-024	**30**	**EXLT**	Achra	C/SD-024	**18**	**EXLT**
Math	C/SD-036	**21**	**EXLT**	Math	C/SD-036	**20**	**EXLT**	Math	C/SD-036	**21**	**EXLT**
Palsamb	C/SD-029	**20**	**EXLT**	Palsamb	C/SD-029	**19**	**EXLT**	Terela	C/SD-016	**40**	**EXLT**
Terela	C/SD-016	**35**	**EXLT**	Terela	C/SD-016	**26**	**EXLT**	Vagothan	C/SD-017	**22**	**EXLT**
Vagothan	C/SD-017	**18**	**EXLT**	Vagothan	C/SD-017	**20**	**EXLT**	Malwan	C/SD-006	**62**	**GW**
Vijayadurga	C/SD-009	**27**	**EXLT**	Vijayadurga	C/SD-009	**48**	**EXLT**	**2009 (With Fe)**			
Malwan	C/SD-006	**60**	**GW**	Malwan	C/SD-006	**49**	**EXLT**	Mogarne	SDWQN012	**23**	**EXLT**
2011 (With Fe)								Kolamb	SDWQN010	**54**	**GW**
Achara	SDOBW001	**27**	**EXLT**	Kolamb	SDWQN010	**35**	**EXLT**	Malwan	SDWQN011	**55**	**GW**
Kumbharmath	SDOBW020	**34**	**EXLT**	Malwan	SDWQN011	**56**	**GW**	Achara	SDOBW001	**29**	**EXLT**
Math Bk.	SDOBW023	**29**	**EXLT**	Mogarne	SDWQN012	**30**	**EXLT**	Math.bk	SDOBW023	**33**	**EXLT**
Nandrukh	SDOBW029	**28**	**EXLT**	Achara	SDPZ008	**31**	**EXLT**	Kandelgaon		**27**	**EXLT**
Gothane	SDPZ009	**40**	**EXLT**	Kandelgaon	SDOBW013	**28**	**EXLT**	Kumbharmath	SDOBW020	**34**	**EXLT**
Bandivade BK	SDWQN008	**27**	**EXLT**	Kumbharmath	SDPZ010	**38**	**EXLT**	Nandrukh	SDOBW029	**25**	**EXLT**
Khewand	SDWQN009	**33**	**EXLT**	**Data for 2010 (With Fe) Not Available**							

Table x.29 (Contd..) Sindhdurg District

Taluka : Sawantwadi			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe)			
Amboli	C/SD-010	**23**	**EXLT**
Danoli	C/SD-015	**24**	**EXLT**
Insuli	C/SD-003	**26**	**EXLT**
2010 (With Fe)			
*Malgaonn	SDOBW021	**20**	**EXLT**
*Sawantwadi	SDOBW035	**22**	**EXLT**
2011 (With Fe)			
Ajgaon	SDOBW004	**29**	**EXLT**
Amboli	SDOBW005	**27**	**EXLT**
Banda	SDOBW006	**26**	**EXLT**
Choukul	SDOBW007	**30**	**EXLT**
Kalmbist	SDOBW011	**28**	**EXLT**

Taluka : Sawantwadi			
Villages	**Well No.**	**WQI**	**Category**
2008 (Without Fe)			
Danoli	C/SD-015	**34**	**EXLT**
Insuli	C/SD-003	**36**	**EXLT**
2009 Contd.. (With Fe)			
Banda	SDOBW006	**28**	**EXLT**
*Kalmbist	SDOBW011	**23**	**EXLT**
*Amboli	SDPZ016	**27**	**EXLT**
*Choukal	SDOBW007	**26**	**EXLT**
Talkat	SDOBW036	**49**	**EXLT**
2011 Contd.. (With Fe)			
Malgaon	SDOBW021	**33**	**EXLT**
Sawantwadi	SDOBW035	**24**	**EXLT**
Talvade	SDWQN021	**36**	**EXLT**

Taluka : Sawantwadi			
Villages	**Well No.**	**WQI**	**Category**
2009 (Without Fe)			
Sawanthwadi	C/SD-031	**26**	**EXLT**
Amboli	C/SD-010	**19**	**EXLT**
Danoli	C/SD-015	**30**	**EXLT**
Insuli	C/SD-003	**20**	**EXLT**
2009 (With Fe)			
Telvade	SDWQN021	**27**	**EXLT**
Insuli		**26**	**EXLT**
Sawantwadi	SDOBW035	**24**	**EXLT**
Malgaon	SDOBW021	**45**	**EXLT**
Ajgaon	SDOBW004	**25**	**EXLT**

Taluka : Vaibhavwadi			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe)			
Kokisare	C/SD-032	**31**	**EXLT**
2010 (With Fe)			
*Nim Arule	SDWQN003	**45**	**EXLT**
2011 (With Fe)			
Achirne	SDOBW002	**26**	**EXLT**
Bhuibavda	SDPZ001	**59**	**GW**
Achirne	SDPZ004	**35**	**EXLT**

Taluka : Vaibhavwadi			
Villages	**Well No.**	**WQI**	**Category**
2009 (With Fe)			
Mangavli	SDWQN001	**86**	**GW**
Sonali	SDWQN004	**51**	**GW**
Navale	SDWQN002	**78**	**GW**
Nim.arule	SDWQN003	**46**	**EXLT**
Vaibhawadi	SDWQN0005	**31**	**EXLT**
Mangavali	SDWQN001	**26**	**EXLT**
Navale	SDWQN002	**50**	**EXLT**

Taluka : Vaibhavwadi			
Villages	**Well No.**	**WQI**	**Category**
Vaibhavwadi	SDWQN0005	**29**	**EXLT**
Bhuibavda	SDPZ001	**25**	**EXLT**
Achime	SDPZ004	**27**	**EXLT**
Data for 2008 & 2009 (Without Fe) Not Aavail.			
Nim -arule	SDWQN003	**47**	**EXLT**
Sonali	SDWQN004	**128**	**PW**
Bhuibavda	SDOBW007	**38**	**EXLT**

* Pre-Monsoon, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.29 (Contd..) Sindhdurg District

Taluka : Vengurla				Taluka : Vengurla				Taluka : Vengurla			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Vengurla	C/SD-007	**25**	**EXLT**	Vengurla	C/SD-007	**26**	**EXLT**	Vengurla	C/SD-007	**20**	**EXLT**
Adeli	C/SD-018	**28**	**EXLT**	Adeli	C/SD-018	**23**	**EXLT**	Adeli	C/SD-018	**27**	**EXLT**
				Dodamarga	C/SD-005	**28**	**EXLT**				
2009 Contd.. (With Fe) Data for 2010 (With Fe) Not Available											
Khanole	SDWQN015	**19**	**EXLT**	Redi	SDWQN016	**114**	**PW**	Math.	SDOBW024	**55**	**GW**
Vajrat	SDWQN019	**52**	**GW**	Vetore	SDPZ014	**23**	**EXLT**	Vengurla	SDOBW038	**54**	**GW**
Hodavde	SDWQN014	**25**	**EXLT**	Mhapan	SDOBW026	**58**	**GW**	Wargaon	SDOBW042	**57**	**GW**
Dabhole	SDWQN013	**21**	**EXLT**								
2011 (With Fe)											
Math	SDOBW024	**32**	**EXLT**	Vetore	SDOBW040	**24**	**EXLT**	Redi	SDWQN016	**37**	**EXLT**
Mhapan	SDOBW026	**31**	**EXLT**	Dhaoli	SDWQN013	**27**	**EXLT**	Shirode	SDWQN017	**41**	**EXLT**
Vengurla	SDOBW038	**24**	**EXLT**	Hodavade	SDWQN014	**34**	**EXLT**	Varat	SDWQN019	**42**	**EXLT**
Vengurla	SDOBW039	**38**	**EXLT**	Khanoli	SDWQN015	**30**	**EXLT**				

Table x.30 : Water Quality Index of Groundwater of Solapur District

Taluka : Akkalkot			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe)			
Akkalkot	K/SH-025	**110**	**PW**
Kegaon	K/SH-069	**74**	**GW**

Taluka : Akkalkot			
Villages	**Well No.**	**WQI**	**Category**
2008 (Without Fe)			
Akkalkot	K/SH-025	**109**	**PW**
Kegaon	K/SH-069	**83**	**GW**
Nagansur	K/SH-026	**315**	**UNSUT**
Wagdhari	K/SH-002	**101**	**PW**

Taluka : Akkalkot			
Villages	**Well No.**	**WQI**	**Category**
2009 (Without Fe)			
Nagansur	K/SH-026	**184**	**PW**
Data for 2010 and 2011 Not Available (With Fe)			

Taluka : Barshi			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe)			
Rople	K/SH-022	**195**	**PW**
Data for 2010 and 2011 Not Available (With Fe)			

Taluka : Barshi			
Villages	**Well No.**	**WQI**	**Category**
2008 (Without Fe)			
Dhanore	K/SH-066	**46**	**EXLT**
Rople	K/SH-022	**175**	**PW**
Manegaon	K/SH-070	**142**	**PW**
Pangri	K/SH-078	**88**	**GW**
Shelgaon	K/SH-005	**67**	**GW**

Taluka : Barshi			
Villages	**Well No.**	**WQI**	**Category**
2009 (Without Fe)			
Dhanore	K/SH-066	**47**	**EXLT**
Nari	K/SH-065	**125**	**PW**
Rople	K/SH-022	**149**	**PW**
Manegaon	K/SH-070	**129**	**PW**
Pangri	K/SH-078	**87**	**GW**
Shelgaon	K/SH-005	**65**	**GW**

Taluka : Karmala			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe)			
Kandar	K/SH-074	**84**	**GW**
Karmala	K/SH-012	**136**	**PW**

Taluka : Karmala			
Villages	**Well No.**	**WQI**	**Category**
2008 (Without Fe)			
Kandar	K/SH-074	**82**	**GW**
Data for 2009 (Wihout Fe) and 2010 and 2011 Not Available (With Fe)			

Taluka : Karmala			
Villages	**Well No.**	**WQI**	**Category**
2008 (Without Fe)			
Karmala	K/SH-012	**151**	**PW**
Varkute	K/SH-071	**60**	**GW**

Taluka : Madha			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe)			
Tembhurni	K/SH-034	**130**	**PW**
Data for 2010 and 2011 Not Available (With Fe)			

Taluka : Madha			
Villages	**Well No.**	**WQI**	**Category**
2008 (Without Fe)			
Bitergaon	K/SH-080	**90**	**GW**
Parite	K/SH-073	**128**	**PW**

Taluka : Madha			
Villages	**Well No.**	**WQI**	**Category**
2009 (Without Fe)			
Bitergaon	K/SH-080	**73**	**GW**
Parite	K/SH-073	**137**	**PW**
Tembhurni	K/SH-034	**112**	**PW**

Table x.30 (Contd..) Solapur District

Taluka : Malshirs			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe)			
Malsiras	K/SH-013	**143**	**PW**
Natepute	K/SH-031	**63**	**GW**
Salmukh	K/SH-082	**115**	**PW**

Taluka : Malshirs			
Villages	**Well No.**	**WQI**	**Category**
2008 (Without Fe)			
Piliv	K/SH-068	**127**	**PW**
Salmukh	K/SH-082	**59**	**GW**
Velapur	K/SH-029	**127**	**PW**

Taluka : Malshirs			
Villages	**Well No.**	**WQI**	**Category**
2009 (Without Fe)			
Dharmapuri	K/SH-079	**94**	**GW**
Velapur	K/SH-029	**135**	**PW**
Data for 2010 and 2011 Not Available (With Fe)			

Taluka : Mangalwedha			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe)			
Mangalvedha	K/SH-001	**136**	**PW**
Data for 2010 and 2011Not Available (With Fe)			

Taluka : Mangalwedha			
Villages	**Well No.**	**WQI**	**Category**
2008 (Without Fe)			
Mangalvedha	K/SH-001	**145**	**PW**

Taluka : Mangalwedha			
Villages	**Well No.**	**WQI**	**Category**
2009 (Without Fe)			
Pout	K/SH-036	**88**	**GW**
Junoni	K/SH-061	**79**	**GW**
Marwade	K/SH-076	**56**	**GW**

Taluka : Mohol			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe)			
Sohole	K/SH-017	**179**	**PW**
Ichgaon	K/SH-018	**100**	**GW**
Kurul	K/SH-016	**143**	**PW**
Data for 2010 and 2011 Not Available (With Fe)			

Taluka : Mohol			
Villages	**Well No.**	**WQI**	**Category**
2008 (Without Fe)			
Sohole	K/SH-017	**198**	**PW**
Ichgaon	K/SH-018	**97**	**GW**
Chincholi	K/SH-020	**84**	**GW**

Taluka : Mohol			
Villages	**Well No.**	**WQI**	**Category**
2009 (Without Fe)			
Sohole	K/SH-017	**188**	**PW**
Ichgaon	K/SH-018	**83**	**GW**
Narayan Chincholi	K/SH-020	**94**	**GW**

Taluka : N.Solapur			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe)			
Vadval	K/SH-010	**63**	**GW**
Data for 2010 and 2011 Not Available (With Fe)			

Taluka : N.Solapur			
Villages	**Well No.**	**WQI**	**Category**
2008 (Without Fe)			
Vadval	K/SH-010	**151**	**PW**
Nannaj	K/SH-077	**110**	**PW**
Soregaon	K/SH-072	**130**	**PW**
Shivni	K/SH-062	**84**	**GW**

Taluka : N.Solapur			
Villages	**Well No.**	**WQI**	**Category**
2009 (Without Fe)			
Nannaj	K/SH-077	**138**	**PW**
Soregaon	K/SH-072	**129**	**PW**
Shivni	K/SH-062	**63**	**GW**

Table x.30 (Contd..) Solapur District

Taluka : Pandharpur			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe)			
Pandharpur	K/SH-033	**64**	**GW**
Data for 2010 and 2011 Not Available (With Fe)			

Taluka : Pandharpur			
Villages	**Well No.**	**WQI**	**Category**
2008 (Without Fe)			
Ajoti	K/SH-063	**148**	**PW**
Chale	K/SH-019	**137**	**PW**
Pandharpur	K/SH-033	**285**	**VPW**
Shegaon	K/SH-028	**110**	**PW**
Eklaspur	K/SH-023	**97**	**GW**
Karkamb	K/SH-035	**65**	**GW**
Ranzani	K/SH-021	**242**	**VPW**

Taluka : Pandharpur			
Villages	**Well No.**	**WQI**	**Category**
2009 (Without Fe)			
Ajoti	K/SH-063	**197**	**PW**
Chale	K/SH-019	**106**	**PW**
Pandharpur	K/SH-033	**220**	**VPW**
Shegaon	K/SH-028	**106**	**PW**
Eklaspur	K/SH-023	**115**	**PW**
Karkamb	K/SH-035	**59**	**GW**
Ranzani	K/SH-021	**260**	**VPW**

Taluka : Sangoola			
Villages	**Well No.**	**WQI**	**Category**
2007 (Without Fe)			
Sangola	K/SH-009	**73**	**GW**
Data for 2010 and 2011 Not Available (With Fe)			

Taluka : Sangoola			
Villages	**Well No.**	**WQI**	**Category**
2008 (Without Fe)			
Manjri	K/SH-081	**66**	**GW**
Sangola	K/SH-009	**82**	**GW**

Taluka : Sangoola			
Villages	**Well No.**	**WQI**	**Category**
2009 (Without Fe)			
Chincholi	K/SH-024	**120**	**PW**
Sangola	K/SH-009	**79**	**GW**

Taluka : Solapur			
Villages	**Well No.**	**WQI**	**Category**
2008 (Without Fe)			
Nandni	K/SH-064	**84**	**GW**
Hivre	K/SH-032	**50**	**GW**

Taluka : Solapur			
Villages	**Well No.**	**WQI**	**Category**
2009 (Without Fe)			
Nagaj	K/SH-011	**167**	**PW**
Data for 2007 (Wihout Fe) and 2010 and 2011Not Available (With Fe)			

Taluka : Solapur			
Villages	**Well No.**	**WQI**	**Category**
2009 (Without Fe)Contd..			
Nandni	K/SH-064	**95**	**GW**
Hivre	K/SH-032	**52**	**GW**

Taluka : S. Solapur			
Villages	**Well No.**	**WQI**	**Category**
Data for 2007 and 2009 (Without Fe) and 2010 and 2011 (With Fe)Not Available			

Taluka : S. Solapur			
Villages	**Well No.**	**WQI**	**Category**
2008 (Without Fe)			
Ule	K/SH-008	**129**	**PW**

Table x.31 : Water Quality Index of Groundwater of Thane District

Taluka : Ambernath				Taluka : Ambernath				Taluka : Ambernath			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2010 (With Fe)				**2011 (With Fe)**							
Nevale		**39**	**EXLT**	Badalapur	TNOBW090	**47**	**EXLT**	Nevale		**34**	**EXLT**
*Badlapur		**40**	**EXLT**	Katrap	TNOBW083	**38**	**EXLT**	Katrap	TNOBW083	**45**	**EXLT**
*Karav	TNOBW085	**71**	**GW**	Karav	TNOBW085	**141**	**PW**	Badalapur	TNOBW090	**50**	**GW**
*Badlapur Katrap	TNOBW083	**54**	**GW**					Newali		**83**	**GW**
*Nevale		**53**	**GW**	**Data for 2007 to 2009 (With and Without Fe) Not Available**							

Taluka : Bhiwandi				Taluka : Bhiwandi				Taluka : Bhiwandi			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Gothanpada	C/TN-011	**49**	**EXLT**	Gothanpada	C/TN-011	**53**	**GW**	Gothanpada	C/TN-011	**49**	**EXLT**
Karahe	C/TN-016	**31**	**EXLT**	Angaon	C/TN-013	**110**	**PW**	Padghe	C/TN-026	**69**	**GW**
Padghe	C/TN-026	**46**	**EXLT**	Karahe	C/TN-016	**35**	**EXLT**	Saravali	C/TN-007	**35**	**EXLT**
				Padghe	C/TN-026	**61**	**GW**	Gothanpada	C/TN-011	**49**	**EXLT**
				Saravali	C/TN-007	**43**	**EXLT**				
2010 (With Fe)											
*Chavindra		**67**	**GW**	Bhinar	TNOBW059	**36**	**EXLT**	*Karavali	TNOBW080	**43**	**EXLT**
*Junandurvi	TNWQN014	**80**	**GW**	Khoni	TNWQN017	**34**	**EXLT**	*Junadurkhi	TNWQN014	**50**	**EXLT**
*Khoni	TNWQN017	**108**	**PW**	Bhivandi	TNWQN013	**44**	**EXLT**	*Bhinar	TNOBW058	**48**	**EXLT**
Khoni	TNWQN017	**66**	**GW**	Karivali	TNWQN016	**67**	**GW**	Junardurkhi	TNWQN014	**55**	**GW**
*Bhinar	TNOBW058	**36**	**EXLT**	Karivali	TNWQN016	**32**	**EXLT**	Bhinar	TNOBW058	**49**	**EXLT**
*Bhivandi	TNWQN015	**46**	**EXLT**	*Chavindra		**67**	**GW**	Bhiwandi	TNWQN013	**48**	**EXLT**
*Junandukhi	TNWQN014	**36**	**EXLT**	*Katai	TNWQN015	**46**	**EXLT**	Katai	TNWQN015	**54**	**GW**
Khoni	TNWQN017	**37**	**EXLT**								
2011 (With Fe)											
Khoni	TNWQN017	**51**	**GW**	Dapode	TNOBW064	**62**	**GW**	Karivali	TNWQN016	**63**	**GW**
Bhinar	TNOBW058	**42**	**EXLT**	Bhivandi	TNWQN013	**78**	**GW**	Khoni	TNWQN017	**77**	**GW**
Sange	TNOBW062	**40**	**EXLT**	Katai	TNWQN015	**69**	**GW**				

* Pre-Monsoon, +Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.31 (Contd..) Thane District

Taluka : Dahanu				Taluka : Dahanu				Taluka : Dahanu			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Bramhanwadi	C/TN-047	**121**	**PW**	Bramhanwadi	C/TN-047	**108**	**PW**	Bramhanwadi	C/TN-047	**115**	**PW**
Dahanu	C/TN-009	**67**	**GW**	Dahanu	C/TN-009	**63**	**GW**	Dahanu	C/TN-009	**76**	**GW**
Gunjad	C/TN-037	**36**	**EXLT**	Gunjad	C/TN-037	**39**	**EXLT**	Gunjad	C/TN-037	**33**	**EXLT**
Kasa	C/TN-002	**43**	**EXLT**	Kasa	C/TN-002	**44**	**EXLT**	Kasa	C/TN-002	**41**	**EXLT**
Saiwan	C/TN-038	**34**	**EXLT**	Saiwan	C/TN-038	**31**	**EXLT**	Dapchari	C/TN-008	**35**	**EXLT**
Udhwa	C/TN-020	**47**	**EXLT**	Udhwa	C/TN-020	**47**	**EXLT**				
Dapchari	C/TN-008	**38**	**EXLT**	Dapchari	C/TN-008	**31**	**EXLT**				
2010 (With Fe)											
Sariwali	TNOBW013	**40**	**EXLT**	Saravali Sawata	TNOBW013	**47**	**EXLT**	Dhaniwari		**34**	**EXLT**
*Sawata		**39**	**EXLT**	Dhaniwari		**36**	**EXLT**	sawata		**45**	**EXLT**
*Dhaniwari		**53**	**GW**	Sariwali	TNPZ005	**48**	**EXLT**	Dhanoshi	TNOBW019	**31**	**EXLT**
2011 (With Fe)											
Sariwali	TNPZ005	**42**	**EXLT**	*Dhanivari		**23**	**EXLT**	Sawata		**35**	**EXLT**
Sarawali	TNOBW013	**42**	**EXLT**	*Sawata		**22**	**EXLT**	Dhaniwari		**34**	**EXLT**

Taluka : Jawahar				Taluka : Jawahar				Taluka : Jawahar			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Vikramgadh	C/TN-022	**66**	**GW**	Sarsun	C/TN-023	**38**	**EXLT**	Sarsun	C/TN-023	**34**	**EXLT**
				Vikramgadh	C/TN-022	**71**	**GW**	Vikramgadh	C/TN-022	**70**	**GW**
2010 (With Fe)											
Javahar		**30**	**EXLT**	Dhanoshi	TNOBW019	**28**	**EXLT**	*Javahar		**27**	**EXLT**
Javahar		**51**	**GW**					*Dhanoshi	TNOBW019	**32**	**EXLT**
2011 (With Fe)											
Javahar		**29**	**EXLT**	*Dhanoshi	TNOBW019	**35**	**EXLT**	Chalatwad	TNPZ001	**50**	**EXLT**
Dhanoshi	TNOBW019	**47**	**EXLT**	Talawada	TNPZ006	**62**	**GW**	Sukhasale	TNPZ007	**47**	**EXLT**
*Jawhar		**22**	**EXLT**								

* Pre-Monsoon, +Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.31 (Contd..) Thane District

Taluka : Mokhada				Taluka : Mokhada				Taluka : Mokhada			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2007 (Without Fe)**				**2009 (Without Fe)**			
Khodala	C/TN-014	**90**	**GW**	Khodala	C/TN-014	**95**	**GW**	Khodala	C/TN-014	**80**	**GW**
2010 (With Fe)											
Talasari Mal	TNOBW003	**31**	**EXLT**	*Talasarimala	TNOBW003	**30**	**EXLT**	Talasari	TNOBW003	**33**	**EXLT**
Mokhada	TNOBW001	**48**	**EXLT**	*Dolhare	TNOBW020	**44**	**EXLT**	Dolhare	TNOBW020	**25**	**EXLT**
Dolhare	TNOBW020	**44**	**EXLT**	Mokhada	TNOBW001	**25**	**EXLT**	Devali	TNOBW041	**56**	**GW**
*Mokhada	TNOBW001	**49**	**EXLT**	Mokhada	TNOBW001	**42**	**EXLT**				
2011 (With Fe)											
Mokhada	TNOBW001	**44**	**EXLT**	Dolhare	TNOBW020	**34**	**EXLT**	Talasari	TNOBW003	**26**	**EXLT**
Talasari Mal	TNOBW003	**49**	**EXLT**	Mokhada	TNOBW001	**31**	**EXLT**	Dolhara	TNOBW020	**32**	**EXLT**

Taluka : Murbad				Taluka : Murbad				Taluka : Murbad			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Murbad	C/TN-012	**79**	**GW**	Kolimb	C/TN-018	**35**	**EXLT**	Kolimb	C/TN-018	**36**	**EXLT**
				Murbad	C/TN-012	**56**	**GW**	Murbad	C/TN-012	**90**	**GW**
				Tokavade	C/TN-027	**53**	**GW**	Tokavade	C/TN-027	**46**	**EXLT**
2010 (With Fe)											
Tokawade	TNOBW073	**48**	**EXLT**	*Burshunge	TNOBW074	**40**	**EXLT**	*Talegaon	TNOBW072	**41**	**EXLT**
Bursunge	TNOBW074	**54**	**GW**	*Shivale	TNOBW087	**40**	**EXLT**	Thune phata	TNOBW075	**48**	**EXLT**
Thunepada	TNOBW075	**40**	**EXLT**	*Talegaon	TNOBW072	**33**	**EXLT**	Tokawade	TNOBW073	**30**	**EXLT**
Shivale	TNOBW087	**72**	**GW**	*Thune phata	TNOBW075	**40**	**EXLT**	Bursunge	TNOBW074	**32**	**EXLT**
*Tokwade	TNPZ022	**100**	**PW**	*Tokavde	TNOBW073	**50**	**EXLT**	Talegaon	TNOBW072	**68**	**GW**
*Tokavade	TNPZ022	**67**	**GW**	*Burshinge	TNOBW074	**52**	**GW**	Tokwade	TNPZ022	**135**	**PW**
*Tokavade	TNOBW073	**66**	**GW**	*Shiwale	TNOBW087	**82**	**GW**				
2011 (With Fe)											
Tokwade	TNPZ022	**72**	**GW**	Burshinge	TNOBW074	**28**	**EXLT**	Talegaon	TNOBW072	**34**	**EXLT**
Tokavade	TNOBW073	**27**	**EXLT**	Shivale	TNOBW087	**38**	**EXLT**	Thune phata	TNOBW075	**33**	**EXLT**

* Pre-Monsoon, +Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.31 (Contd..) Thane District

Taluka : Palghar				Taluka : Palghar				Taluka : Palghar			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Devkop	C/TN-006	**38**	**EXLT**	Devkop	C/TN-006	**55**	**GW**	Dhekale	C/TN-036	**39**	**EXLT**
Manor	C/TN-017	**86**	**GW**	Dhekale	C/TN-036	**34**	**EXLT**	Manor	C/TN-017	**62**	**GW**
Somata	C/TN-050	**49**	**EXLT**	Manor	C/TN-017	**79**	**GW**	Somata	C/TN-050	**50**	**GW**
				Nishanpada	C/TN-024	**43**	**EXLT**				
				Somata	C/TN-050	**44**	**EXLT**				
2010 (With Fe)											
Karavale	TNWQN009	**56**	**GW**	+Shirgaon	TNOBW031	**33**	**EXLT**	Shirgaon	TNOBW031	**58**	**GW**
Shirgaon	TNOBW031	**35**	**EXLT**	*Kajali	TNOBW007	**58**	**GW**	Mukunsar	TNOBW029	**67**	**GW**
Makunsar	TNOBW029	**42**	**EXLT**	Yeur	TNOBW030	**59**	**GW**	Dahisar	TNWQN008	**51**	**GW**
Vedhi	TNOBW034	**34**	**EXLT**	Shirgaon	TNOBW031	**55**	**GW**	Karavale	TNWQN009	**41**	**EXLT**
Safale	TNOBW033	**40**	**EXLT**	Karvale	TNWQN009	**39**	**EXLT**	Vedhi	TNOBW034	**37**	**EXLT**
+Makunsar	TNOBW029	**42**	**EXLT**	Vedhi	TNOBW034	**44**	**EXLT**	Safale	TNOBW033	**51**	**GW**
+Dahisar	TNWQN008	**37**	**EXLT**	Yeur	TNOBW030	**72**	**GW**	Safale	TNOBW033	**52**	**GW**
+Vedhi	TNOBW034	**33**	**EXLT**	Vedhi	TNOBW034	**44**	**EXLT**	Yeur	TNOBW030	**55**	**GW**
+Safale	TNOBW033	**45**	**EXLT**	Yeur	TNOBW030	**54**	**GW**				
2011 (With Fe)											
Yeur	TNOBW030	**70**	**GW**	Mahim	TNPZ008	**235**	**VPW**	Vedhi	TNOBW034	**33**	**EXLT**
Dahisar	TNWQN008	**63**	**GW**	Kolgaon	TNPZ009	**67**	**GW**	Safale	TNOBW033	**46**	**EXLT**
Karavale	TNWQN009	**60**	**GW**	Vedi	TNOBW034	**71**	**GW**	Yeur	TNOBW030	**34**	**EXLT**
Makunsar	TNOBW029	**59**	**GW**	Makunsar	TNOBW029	**38**	**EXLT**	Shirgaon	TNOBW031	**39**	**EXLT**
Shirgaon	TNOBW031	**69**	**GW**	Dhahisar	TNWQN008	**34**	**EXLT**				
Safale	TNOBW033	**83**	**GW**	Karwali	TNWQN009	**40**	**EXLT**				

Taluka : Kalyan				Taluka : Kalyan				Taluka : Kalyan			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2010 (With Fe)											
Kambe	TNOBW084	**45**	**EXLT**	*Kambe	TNOBW084	**45**	**EXLT**	Goveli	TNPZ004	**77**	**GW**
Titwala	TNOBW076	**43**	**EXLT**	*Titwala	TNOBW076	**43**	**EXLT**	Titwala	TNOBW076	**44**	**EXLT**
*Kambe	TNOBW084	**38**	**EXLT**	Kambe	TNOBW084	**49**	**EXLT**	Newali		**45**	**EXLT**
*Titwala	TNOBW076	**36**	**EXLT**	Titwala	TNOBW076	**53**	**GW**				
2011 (With Fe)	**Data for 2007 to 2009 (Without Fe) Not Available**										
Goveli	TNPZ004	**47**	**EXLT**	Kambe	TNOBW084	**51**	**GW**	Titwala	TNOBW076	**52**	**GW**
Kambe	TNOBW084	**36**	**EXLT**								

* Pre-Monsoon, +Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.31 (Contd..) Thane District

Taluka : Shahapur				Taluka : Shahapur				Taluka : Shahapur			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Talempada	C/TN-019	**38**	**EXLT**	Sathgaon	C/TN-025	**37**	**EXLT**	Talempada	C/TN-019	**41**	**EXLT**
				Talempada	C/TN-019	**44**	**EXLT**				
2010 (With Fe)											
Bhatsai	TNPZ020	**51**	**GW**	*Shendrun	TNOBW070	**55**	**GW**	*Washind		**33**	**EXLT**
Washind		**50**	**EXLT**	*Vihigaon	TNOBW043	**70**	**GW**	*Vehlole	TNOBW069	**25**	**EXLT**
Washind		**46**	**EXLT**	*Varaskol	TNOBW054	**41**	**EXLT**	*Vihigaon	TNOBW043	**29**	**EXLT**
Shendrun	TNOBW070	**31**	**EXLT**	*Washind		**62**	**GW**	*Varaskol	TNOBW054	**41**	**EXLT**
*Shendrun	TNOBW070	**51**	**GW**	*Vehlole	TNOBW069	**39**	**EXLT**				
2011 (With Fe)											
Washind		**38**	**EXLT**	Titwala	TNOBW076	**47**	**EXLT**	Washind	TNOBW091	**57**	**GW**
Shendrup	TNOBW070	**35**	**EXLT**	Virskol	TNOBW054	**35**	**EXLT**	Vihigaon	TNOBW043	**47**	**EXLT**
Vehlole	TNOBW069	**34**	**EXLT**	Bhinar	TNOBW058	**76**	**GW**	Shendrun	TNOBW070	**40**	**EXLT**
Vihigaon	TNOBW043	**43**	**EXLT**	Bapgaon	TNOBW065	**22**	**EXLT**	Bhatasai	TNPZ020	**51**	**GW**
Varaskol	TNOBW054	**38**	**EXLT**	Velholi	TNOBW069	**41**	**EXLT**				

Taluka : Ulhasnagar				Taluka : Ulhasnagar				Taluka : Ulhasnagar			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Wasar	TNPZ021	**55**	**GW**	Wasar	TNPZ021	**53**	**GW**	Karav	TNOBW085	**60**	**GW**
Wasar	TNPZ021	**125**	**PW**	Badlapur	TNOBW090	**54**	**GW**	Wasar	TNPZ021	**108**	**PW**
*Katrap	TNOBW083	**53**	**GW**	Katrap	TNOBW083	**36**	**EXLT**	Katrap	TNOBW083	**72**	**GW**
Badalapur	TNOBW090	**39**	**EXLT**								
				2011 (With Fe)				**Data for 2007 to 2009 (Without Fe) Not Available**			
				Wasar	TNPZ021	**35**	**EXLT**				

* Pre-Monsoon, +Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.31 (Contd..)Thane District

Taluka : Thane				Taluka : Thane				Taluka : Thane			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Balkhapara	C/TN-010	**30**	**EXLT**	Balkhapara	C/TN-010	**28**	**EXLT**	Bindarpada	C/TN-001	**43**	**EXLT**
Bindarpada	C/TN-001	**28**	**EXLT**	Bindarpada	C/TN-001	**51**	**GW**	Cherfully	C/TN-004	**42**	**EXLT**
Cherfully	C/TN-004	**46**	**EXLT**	Cherfully	C/TN-004	**45**	**EXLT**	Dahisar N.	C/TN-055	**65**	**GW**
Dahisar	C/TN-028	**73**	**GW**	Dahisar	C/TN-028	**70**	**GW**	Kajli	C/TN-021	**41**	**EXLT**
Giraj	C/TN-048	**47**	**EXLT**	Giraj	C/TN-048	**47**	**EXLT**	Shiravane	C/TN-031	**64**	**GW**
Kajli	C/TN-021	**43**	**EXLT**	Kajli	C/TN-021	**43**	**EXLT**				
Shiravane	C/TN-031	**68**	**GW**	Shiravane	C/TN-031	**61**	**GW**				
Wafana	C/TN-035	**142**	**PW**	Wafana	C/TN-035	**50**	**EXLT**				
2010 (With Fe)											
K.khairne	TNOBW080	**61**	**GW**	Khairne	TNWQN010	**44**	**EXLT**	Turbha	TNWQN012	**48**	**EXLT**
Gansoli		**62**	**GW**	Koperkhairne	TNOBW080	**40**	**EXLT**	*Rabale	TNWQN011	**63**	**GW**
Koperkhairane	TNOBW080	**45**	**EXLT**	Rabale	TNWQN011	**66**	**GW**	*Rabale	TNWQN011	**62**	**GW**
Koparkhairne	TNOBW080	**45**	**EXLT**	Turbhe	TNWQN012	**33**	**EXLT**	Rabale	TNWQN011	**68**	**GW**
Koparkhairne	TNOBW080	**48**	**EXLT**	Gansali	TNPZ023	**62**	**GW**	Khirane	TNWQN010	**45**	**EXLT**
Rabale	TNWQN011	**55**	**GW**	Khairne	TNWQN010	**198**	**PW**	Koperkhairane	TNOBW080	**33**	**EXLT**
Turbhe	TNWQN012	**87**	**GW**	Koperkhairne	TNOBW080	**60**	**GW**	Turbhe	TNWQN012	**35**	**EXLT**
Gansali	TNPZ023	**65**	**GW**								
2011 (With Fe)											
+Ghansoli		**55**	**GW**	P avane	TNOBW078	**73**	**GW**	Khirane	TNWQN010	**58**	**GW**
Ghansali	TNPZ023	**66**	**GW**	Koperkhairane	TNOBW080	**61**	**GW**	Turbhe	TNWQN012	**72**	**GW**
Rabale	TNWQN011	**58**	**GW**								

* Pre-Monsoon, +Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.31 (Contd..) Thane District

Taluka : Vasai				Taluka : Vasai				Taluka : Vasai			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Khanivade	C/TN-003	**50**	**EXLT**	Khanivade	C/TN-003	**60**	**GW**	Khanivade	C/TN-003	**55**	**GW**
Sandor	C/TN-045	**137**	**PW**	Sandor	C/TN-045	**121**	**PW**	Sandor	C/TN-045	**142**	**PW**
Sativli	C/TN-049	**81**	**GW**	Waliv	C/TN-041	**53**	**GW**	Waliv	C/TN-041	**54**	**GW**
Waliv	C/TN-041	**68**	**GW**	Agashi	C/TN-046	**90**	**GW**	Agashi	C/TN-046	**98**	**GW**
Agashi	C/TN-046	**151**	**PW**	Ambadi	C/TN-029	**65**	**GW**	Katolwadi	C/TN-039	**38**	**EXLT**
Ambadi	C/TN-029	**51**	**GW**	Katolwadi	C/TN-039	**46**	**EXLT**				
Katolwadi	C/TN-039	**34**	**EXLT**								
2010 (With Fe)											
Gokhivare	TNPZ019	**42**	**EXLT**	Virar	TNWQN007	**71**	**GW**	+Nalasopara	TNWQN008	**37**	**EXLT**
Vasai	TNWQN006	**52**	**GW**	Aghashi	TNOBW030	**118**	**PW**	+Gokhivare	TNPZ019	**34**	**EXLT**
Sansoonghar	TNWQN004	**88**	**GW**	Boling	TNOBW031	**39**	**EXLT**	+Aagashi	TNOBW030	**48**	**EXLT**
Agashi	TNOBW048	**113**	**PW**	Nalasopara	TNWQN003	**30**	**EXLT**	+Tuling	TNWQN005	**31**	**EXLT**
Nalasopara	TNWQN003	**29**	**EXLT**	Virar	TNWQN007	**70**	**GW**	Agashi	TNOBW048	**46**	**EXLT**
2011 (With Fe)											
Gokhivare	TNPZ019	**50**	**EXLT**	+Virar	TNWQN007	**57**	**GW**	Boling	TNWQN002	**77**	**GW**
Agashi	TNOBW030	**50**	**GW**	Vasai	TNWQN006	**56**	**GW**	Nalasopara	TNWQN003	**95**	**GW**
Nalasopara	TNWQN008	**32**	**EXLT**	Agashi	TNOBW048	**72**	**GW**	Sasunghar	TNWQN004	**37**	**EXLT**
Sasoonavghar	TNWQN004	**47**	**EXLT**	Chandansar	TNPZ014	**68**	**GW**	Tuling	TNWQN005	**73**	**GW**
+Gokhivare	TNOBW059	**52**	**GW**	Gokhiware	TNPZ019	**47**	**EXLT**				

Taluka : Murud				Taluka : Murud				Taluka : Murud			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2011 (With Fe) Data for 2007 to 2009 (Without Fe) Not Available and also 2010 (With Fe)											
Talegaon	TNOBW072	**26**	**EXLT**	Bursange	TNOBW074	**30**	**EXLT**	Karav	TNOBW085	**32**	**EXLT**
Tokawade	TNOBW073	**30**	**EXLT**	Tunepada	TNOBW075	**33**	**EXLT**	Shivale	TNOBW087	**27**	**EXLT**

* Pre-Monsoon, +Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.31 (Contd..) Thane District

Taluka : Wada				Taluka : Wada				Taluka : Wada			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Rinzadpada	C/TN-042	**41**	**EXLT**	Jogamargepada	C/TN-043	**39**	**EXLT**	Jogamargepada	C/TN-043	**45**	**EXLT**
				Rinzadpada	C/TN-042	**32**	**EXLT**	Rinzadpada	C/TN-042	**40**	**EXLT**
2010 (With Fe)											
Kanchad	TNOBW21	**70**	**GW**	Wada	TNOBW072	**43**	**EXLT**	*Parali	TNOBW042	**36**	**EXLT**
Khachad	TNOBW21	**70**	**GW**	Khachad	TNOBW21	**46**	**EXLT**	*Devali	TNOBW041	**54**	**GW**
Kudus	TNOBW055	**92**	**GW**	Kudus	TNOBW055	**70**	**GW**	*Wada	TNOBW044	**53**	**GW**
Parali	TNOBW042	**46**	**EXLT**	*Parali	TNOBW042	**41**	**EXLT**	Kudus	TNOBW055	**26**	**EXLT**
Devali	TNOBW041	**36**	**EXLT**	*Devali	TNOBW041	**31**	**EXLT**	Parli	TNOBW042	**37**	**EXLT**
Wada	TNOBW044	**63**	**GW**	*Kudus	TNOBW055	**74**	**GW**	Devali	TNOBW041	**52**	**GW**
Devali		**34**	**EXLT**	*Kanchad	TNOBW21	**43**	**EXLT**	Wada	TNOBW044	**46**	**EXLT**
Parli	TNOBW042	**41**	**EXLT**	*Kudus	TNOBW055	**29**	**EXLT**				
2011 (With Fe)											
Kanchad	TNOBW21	**38**	**EXLT**	Nehroli	TNPZ013	**57**	**GW**	Nimbawali	TNPZ015	**44**	**EXLT**
Parali	TNOBW042	**38**	**EXLT**	Devali	TNOBW041	**33**	**EXLT**	Ambiste Kh		**89**	**GW**
Devali	TNOBW041	**44**	**EXLT**	Parli	TNOBW042	**24**	**EXLT**	Nehroli		**78**	**GW**
Wada	TNOBW044	**38**	**EXLT**	Wada	TNOBW044	**57**	**GW**	Kanchad	TNOBW21	**44**	**EXLT**
Kurdus	TNOBW055	**41**	**EXLT**	Kudus	TNOBW055	**52**	**GW**	Kanchad	TNPZ012	**68**	**GW**
Aambiste	TNPZ010	**49**	**EXLT**								

Taluka : Talasari				Taluka : Talasari				Taluka : Talasari			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2010 (With Fe)											
Zhari		**72**	**GW**	+Vadoli	TNOBW006	**45**	**EXLT**	Zari		**30**	**EXLT**
Zai	TNOBW012	**49**	**EXLT**	Zai	TNOBW012	**43**	**EXLT**	Zai	TNOBW012	**39**	**EXLT**
Talasari	TNOBW009	**54**	**GW**	Kajali	TNOBW007	**58**	**GW**	Talasari	TNOBW009	**43**	**EXLT**
Vadoli	TNOBW006	**31**	**EXLT**	Zai	TNOBW012	**41**	**EXLT**	Vadoli	TNOBW006	**37**	**EXLT**
Kajali	TNOBW007	**42**	**EXLT**	Talasary	TNOBW009	**40**	**EXLT**				
+Zai	TNOBW012	**41**	**EXLT**	**Data for 2007 to 2009 (Without Fe) Not Available**							
2011 (With Fe)											
Zai	TNOBW012	**31**	**EXLT**	+Talasari	TNOBW009	**46**	**EXLT**	Kajali	TNOBW007	**42**	**EXLT**
Talasari	TNOBW009	**33**	**EXLT**	+Uadhwa	TNPZ002	**43**	**EXLT**	Zai	TNOBW012	**39**	**EXLT**
Vadoli	TNOBW006	**38**	**EXLT**	Vadoli	TNOBW006	**43**	**EXLT**	Zari	TNPZ0003	**39**	**EXLT**
Kajali	TNOBW007	**38**	**EXLT**								

* Pre-Monsoon, +Monsoon Season, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.32 : Water Quality Index of Groundwater of Wardha District

Taluka : Arvi			
Villages	**Well No.**	**WQI**	**Categor**
2007 (Without Fe)			
Alipur	G/WD-035	**210**	**VPW**
Sukli	G/WD-016	**81**	**GW**
2010 (With Fe)			
Marga	WDOBW091	**134**	**PW**
Arvi.	WDOBW084	**91**	**GW**
Danapur	WDOBW086	**73**	**GW**
Kachnoor	WDOBW087	**67**	**GW**
Kharangna	WDOBW089	**97**	**GW**
Nandpur	WDOBW093	**281**	**VPW**

Taluka : Arvi			
Villages	**Well No.**	**WQI**	**Categor**
2007 (Without Fe)Contd..			
Talegaon	G/WD-003	**88**	**GW**
Wadhona	G/WD-023	**88**	**GW**
Pachod (virul)	WDOBW095	**83**	**GW**
Rohana.	WDOBW098	**96**	**GW**
Panjra Gondi	WDOBW107	**84**	**GW**
Wadhona bk	WDPZ012	**81**	**GW**
Mandla.	WDOBW090	**60**	**GW**
Borgaon(gondi)	WDOBW102	**92**	**GW**
Arvi	WDWQN014	**103**	**PW**

Taluka : Arvi			
Villages	**Well No.**	**WQI**	**Category**
2008 (Without Fe)			
Alipur	G/WD-035	**365**	**UNSUT**
Sukli	G/WD-016	**87**	**GW**
Wadhona	G/WD-023	**62**	**GW**
2011 (With Fe)			
Mandla.	WDOBW090	**68**	**GW**
Borgaon(gondi)	WDOBW102	**99**	**GW**
Arvi	WDWQN014	**152**	**PW**
Data for 2009 (Without Fe) Not Available			

Taluka : Ashti			
Villages	**Well No.**	**WQI**	**Categor**
2007 (Without Fe)			
Ashti	G/WD-015	**80**	**GW**
Sahur	G/WD-009	**110**	**PW**
Dhadi	G/WD-047	**72**	**GW**
2011 (With Fe)			
Antora	WDOBW114	**215**	**VPW**
Choti Arvi.	WDOBW115	**156**	**PW**
Data for 2009 (Without Fe) Not Available			

Taluka : Ashti			
Villages	**Well No.**	**WQI**	**Categor**
2008 (Without Fe)			
Ashti	G/WD-015	**59**	**GW**
Sahur	G/WD-009	**99**	**GW**
Dhadi	G/WD-047	**86**	**GW**
Sirsoli	WDOBW120	**124**	**PW**
Kakaddara	WDWQN015	**120**	**PW**
Ahsti	WDWQN016	**166**	**PW**

Taluka : Ashti			
Villages	**Well No.**	**WQI**	**Category**
2010 (With Fe)			
Drugwada	WDOBW116	**153**	**PW**
Sindvihira	WDOBW119	**60**	**GW**
Talegaon	WDOBW121	**107**	**PW**
Borgaon tumni	WDPZ015	**171**	**PW**
Antora	WDOBW114	**69**	**GW**
Choti Arvi.	WDOBW115	**153**	**PW**
Sirsoli	WDOBW120	**90**	**GW**
Kakaddara	WDWQN015	**74**	**GW**
Ahsti	WDWQN016	**70**	**GW**

* Pre-MonsoonSeason, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.32(Contd..) Wardha District

Taluka : Deoli				Taluka : Deoli				Taluka : Deoli			
Villages	**Well No.**	**WQI**	**Categor**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Adegaon	G/WD-031	**77**	**GW**	Bhidi	G/WD-044	**100**	**PW**	Bhidi	G/WD-044	**102**	**PW**
Bhidi	G/WD-044	**107**	**PW**	Dahegaon	G/WD-020	**63**	**GW**	Dahegaon	G/WD-020	**67**	**GW**
Dahegaon	G/WD-020	**67**	**GW**	Dahigaon	G/WD-033	**96**	**GW**	Dahigaon	G/WD-033	**85**	**GW**
Dahigaon	G/WD-033	**85**	**GW**	Deoli	G/WD-019	**156**	**PW**	Deoli	G/WD-019	**164**	**PW**
Deoli	G/WD-019	**169**	**PW**	Muradgaon	G/WD-054	**187**	**PW**	Murudgaon	G/WD-054	**76**	**GW**
Sarul	G/WD-030	**103**	**PW**								
2010 (With Fe)											
Bhidi.	WDOBW036	**87**	**GW**	Bhidi	WDPZ008	**102**	**PW**	*Kolhapur	WDOBW043	**90**	**GW**
Kolhapur	WDOBW043	**106**	**PW**	Agargaon	WDOBW033	**111**	**PW**	*Kolona	WDWQN005	**93**	**GW**
Kolona	WDWQN005	**93**	**GW**	Andhori	WDOBW034	**118**	**PW**	*Deoli	WDWQN006	**215**	**VPW**
Deoli	WDWQN006	**99**	**GW**	Giroli.	WDOBW041	**350**	**UNSUT**	*Pulgaon	WDWQN007	**97**	**GW**
Pulgaon	WDWQN007	**76**	**GW**	Nachangaon	WDOBW044	**77**	**GW**	*Giroli	WDOBW041	**105**	**PW**
Bhidi	WDPZ008	**99**	**GW**	Rohini	WDOBW045	**65**	**GW**				
				*Bhidi	WDOBW036	**79**	**GW**				
2011 (With Fe)											
Bhidi	WDOBW036	**166**	**PW**	Kolona	WDWQN005	**79**	**GW**	Deoli	WDWQN006	**204**	**VPW**
Kolhapur	WDOBW043	**111**	**PW**					Pulgaon	WDWQN007	**86**	**GW**

* Pre-MonsoonSeason, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.32(Contd..) Wardha District

Taluka : Hinganghat				Taluka : Hinganghat				Taluka : Hinganghat			
Villages	**Well No.**	**WQI**	**Categor**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Hinganghat	G/WD-004	**77**	**GW**	Hinganghat	G/WD-004	**65**	**GW**	Hinganghat	G/WD-004	**72**	**GW**
Selu	G/WD-018	**67**	**GW**	Selu	G/WD-018	**59**	**GW**	Daroda	G/WD-014	**57**	**GW**
Daroda	G/WD-014	**49**	**EXLT**	Daroda	G/WD-014	**74**	**GW**				
2010 (With Fe)											
Bhaiyapur	WDOBW047	**86**	**GW**	Chincholi	WDOBW049	**135**	**PW**	*Gadegaon	WDOBW002	**266**	**VPW**
Inzala	WDOBW042	**73**	**GW**	Daroda	WDOBW050	**61**	**GW**	*Burkoni	WDOBW048	**167**	**PW**
Dhanora	WDOBW051	**92**	**GW**	Kanchangaon	WDOBW055	**99**	**GW**	*Chincholi	WDOBW049	**115**	**PW**
Inzala	WDOBW053	**127**	**PW**	Kangaon	WDOBW056	**181**	**PW**	*Daroda	WDOBW050	**157**	**PW**
Hinganghat	WDWQN012	**87**	**GW**	Mankapur	WDOBW059	**89**	**GW**	*Kanchangaon	WDOBW055	**246**	**VPW**
Wela	WDWQN013	**86**	**GW**	Wadner	WDOBW067	**206**	**VPW**	*Kangaon	WDOBW056	**236**	**VPW**
Dhamangaon	WDOBW072	**69**	**GW**	*Inzala	WDOBW042	**154**	**PW**	*Mankapur	WDOBW059	**106**	**PW**
Manora	WDPZ009	**131**	**PW**	*Dhanora	WDOBW051	**136**	**PW**	*Parsoda	WDOBW061	**115**	**PW**
Gadegaon	WDOBW002	**176**	**PW**	*Inzala	WDOBW053	**170**	**PW**	*Wadner	WDOBW067	**253**	**VPW**
Allipur	WDOBW046	**237**	**VPW**	*Hinganghat	WDWQN012	**98**	**GW**	*Dhamangaon	WDOBW072	**143**	**PW**
Burkoni	WDOBW048	**125**	**PW**	*Wela	WDWQN013	**80**	**GW**	*Manora	WDPZ009	**165**	**PW**
2011 (With Fe)											
Inzala	WDOBW042	**151**	**PW**	Inzala	WDOBW053	**177**	**PW**	Wela	WDWQN013	**122**	**PW**

Taluka : Karanja				Taluka : Karanja				Taluka : Karanja			
Villages	**Well No.**	**WQI**	**Categor**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2007 (Without Fe) Contd..**				**2008 (Without Fe)**			
Junapani	G/WD-034	**116**	**PW**	Thanegaon	G/WD-012	**83**	**GW**	Nagalwadi	G/WD-013	**50**	**GW**
Nagalwadi	G/WD-013	**61**	**GW**								
2010 (With Fe)											
Sawli Kh.	WDOBW110	**54**	**GW**	Ladgad	WDOBW105	**59**	**GW**	Methirji	WDOBW106	**55**	**GW**
Thanegaon	WDOBW112	**64**	**GW**	Sindhvihira	WDOBW111	**77**	**GW**	Karanja	WDWQN017	**112**	**PW**
Karanja	WDOBW104	**116**	**PW**	Junapani	WDPZ013	**48**	**EXLT**	**Data for 2009 (Without Fe) Not Available**			
2011 (With Fe)											
Methirji	WDOBW106	**154**	**PW**	Karanja	WDWQN017	**110**	**PW**				

* Pre-MonsoonSeason, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.32(Contd..) Wardha District

Taluka : Samudrapur				Taluka : Samudrapur				Taluka : Samudrapur			
Villages	**Well No.**	**WQI**	**Categor**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Ajda	G/WD-042	**57**	**GW**	Ajda	G/WD-042	**43**	**EXLT**	Ajda	G/WD-042	**57**	**GW**
Girad	G/WD-007	**92**	**GW**	Girad	G/WD-007	**82**	**GW**	Girad	G/WD-007	**93**	**GW**
Sakhra	G/WD-040	**97**	**GW**	Nandori	G/WD-043	**47**	**EXLT**	Sakhra	G/WD-040	**155**	**PW**
Samudrapur	G/WD-025	**100**	**PW**	Sakhra	G/WD-040	**132**	**PW**	Samudrapur	G/WD-025	**100**	**PW**
Sirpur	G/WD-002	**109**	**PW**	Samudrapur	G/WD-025	**81**	**GW**	Sirpur	G/WD-002	**98**	**GW**
Wasi	G/WD-048	**150**	**PW**	Sirpur	G/WD-002	**81**	**GW**	Vaygaon	G/WD-026	**61**	**GW**
				Wasi	G/WD-048	**118**	**PW**	Wasi	G/WD-048	**127**	**PW**
2010 (With Fe)											
Khek	WDOBW076	**59**	**GW**	Kori	WDOBW078	**119**	**PW**	*Nandori	WDOBW060	**106**	**PW**
Sawangi Zade	WDOBW080	**64**	**GW**	Renkapur	WDOBW079	**96**	**GW**	*Burfa	WDOBW070	**152**	**PW**
Shedgaon	WDOBW081	**133**	**PW**	Barfa	WDPZ010	**121**	**PW**	*Chikhli	WDOBW071	**244**	**VPW**
Waigaon Gond	WDOBW082	**76**	**GW**	Khursapar	WDPZ011	**109**	**PW**	*Dhumankheda	WDOBW073	**73**	**GW**
Samudrapur	WDWQN010	**78**	**GW**	*Shedgaon	WDOBW081	**103**	**PW**	*Kankati	WDOBW075	**96**	**GW**
Mohogaon	WDWQN011	**102**	**PW**	*WaigaonGond	WDOBW082	**101**	**PW**	*Kori	WDOBW078	**140**	**PW**
Nandori	WDOBW060	**61**	**GW**	*Khek	WDOBW076	**107**	**PW**	*Renkapur	WDOBW079	**91**	**GW**
Chikhli	WDOBW071	**100**	**PW**	*Sawangi Zade	WDOBW080	**65**	**GW**	*Barfa	WDPZ010	**168**	**PW**
Dhumankheda	WDOBW073	**81**	**GW**	*Samudrapur	WDWQN010	**115**	**PW**	*Khursapar	WDPZ011	**158**	**PW**
Kankati	WDOBW075	**88**	**GW**	Mohogaon	WDWQN011	**159**	**PW**				
2011 (With Fe)											
Khek	WDOBW076	**170**	**PW**	Shedgaon	WDOBW081	**111**	**PW**	Samudrapur	WDWQN010	**122**	**PW**
Sawangi Zade	WDOBW080	**59**	**GW**	Waigaon Gond	WDOBW082	**104**	**PW**	Mohogaon	WDWQN011	**140**	**PW**

* Pre-MonsoonSeason, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.32(Contd..) Wardha District

Taluka : Seloo				Taluka : Seloo				Taluka : Seloo			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Giroli	G/WD-036	**205**	**VPW**	Giroli	G/WD-036	**218**	**VPW**	Madni	G/WD-022	**83**	**GW**
Hingni	G/WD-041	**104**	**PW**	Hingni	G/WD-041	**135**	**PW**				
Madni	G/WD-022	**104**	**PW**	Keljhar	G/WD-006	**105**	**PW**				
Yelakeli	G/WD-045	**103**	**PW**	Madni	G/WD-022	**92**	**GW**				
				Yelakeli	G/WD-045	**149**	**PW**				
2010 (With Fe)											
Mahabala	WDPZ005	**94**	**GW**	Seloo	WDOBW029	**127**	**PW**	*Kopra	WDOBW025	**349**	**UNSUT**
Palasgaon	WDPZ006	**54**	**GW**	Sindi Kh.(Rly).	WDOBW030	**108**	**PW**	*Ramna	WDOBW026	**213**	**VPW**
Wanarvihira	WDPZ007	**159**	**PW**	Surgaon	WDOBW031	**134**	**PW**	*Salaipewat	WDOBW027	**145**	**PW**
Anjangaon	WDOBW015	**58**	**GW**	*Gondapur	WDOBW021	**108**	**PW**	*Seloo	WDOBW029	**179**	**PW**
Chanki	WDOBW017	**144**	**PW**	*Kelzar	WDOBW024	**137**	**PW**	*SindiKh(Rly)	WDOBW030	**122**	**PW**
Dindoda	WDOBW019	**189**	**PW**	*Seldoh	WDOBW028	**136**	**PW**	*Antargaon	WDPZ003	**164**	**PW**
Janglapur	WDOBW023	**86**	**GW**	*Seloo	WDWQN008	**144**	**PW**	*Bondsula	WDPZ004	**164**	**PW**
Kopra	WDOBW025	**354**	**UNSUT**	*Anjangaon	WDOBW015	**73**	**GW**	*Mahabala	WDPZ005	**91**	**GW**
Ramna	WDOBW026	**218**	**VPW**	*Chanki	WDOBW017	**322**	**UNSUT**	*Palasgaon	WDPZ006	**93**	**GW**
Salaipewat	WDOBW027	**100**	**PW**	*Dindoda	WDOBW019	**188**	**PW**	*Wanarvihira	WDPZ007	**90**	**GW**
2011 (With Fe)											
Akoli	WDOBW014	**154**	**PW**	Gondapur	WDOBW021	**113**	**PW**	Seldoh	WDOBW028	**127**	**PW**
Babapur	WDOBW016	**88**	**GW**	Kelzar	WDOBW024	**82**	**GW**	Jamni	WDWQN009	**95**	**GW**
Garamsur	WDOBW020	**78**	**GW**	Zadsi	WDOBW032	**353**	**UNSUT**				

* Pre-MonsoonSeason, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.32(Contd..) Wardha District

Taluka : Wardha				Taluka : Wardha				Taluka : Wardha			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Categor**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Anji	G/WD-017	**149**	**PW**	Khandali	G/WD-024	**222**	**VPW**	Pipri	G/WD-038	**110**	**PW**
Arvi	G/WD-021	**74**	**GW**	Kharangana	G/WD-010	**75**	**GW**	Pulgaon	G/WD-011	**98**	**GW**
Khandali	G/WD-024	**361**	**UNSUT**	Paragothan	G/WD-008	**68**	**GW**	Tigaon	G/WD-027	**56**	**GW**
Kharangana	G/WD-010	**74**	**GW**	Pipri	G/WD-038	**123**	**PW**	Vadad	G/WD-032	**107**	**PW**
Pipri	G/WD-038	**118**	**PW**	Pulgaon	G/WD-011	**93**	**GW**	**2011 (With Fe)**			
Pulgaon	G/WD-011	**88**	**GW**	Tigaon	G/WD-027	**52**	**GW**	Saongi Meghe	WDWQN001	**132**	**PW**
Tigaon	G/WD-027	**68**	**GW**	Vadad	G/WD-032	**92**	**GW**	Bhugaon	WDWQN002	**200**	**PW**
Vadad	G/WD-032	**75**	**GW**	**2010 Contd.. (With Fe)**				Barbadi	WDWQN003	**330**	**UNSUT**
2010 (With Fe)				Waigaon(nipani)	WDOBW012	**79**	**GW**	Chichala	WDWQN004	**95**	**GW**
Saongi Meghe	WDWQN001	**117**	**PW**	Wardha	WDOBW013	**87**	**GW**	**2010 Contd.. (With Fe)**			
Bhugaon	WDWQN002	**198**	**PW**	Anji	WDOBW035	**90**	**GW**	*Bhugaon	WDWQN002	**160**	**PW**
Barbadi	WDWQN003	**343**	**UNSUT**	Kurzadi	WDPZ001	**100**	**GW**	*Barbadi	WDWQN003	**311**	**UNSUT**
Chichala	WDWQN004	**80**	**GW**	*Saongi Meghe	WDWQN001	**78**	**GW**	*Chichala	WDWQN004	**86**	**GW**
Pipri(meghe)	WDOBW007	**122**	**PW**					*Waigaon(nipani)	WDOBW012	**99**	**GW**
Selsura	WDOBW010	**149**	**PW**								
Talegaon	WDOBW011	**93**	**GW**								

* Pre-MonsoonSeason, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.33 : Water Quality Index of Groundwater of Washim District

Taluka : Karanja				Taluka : Karanja				Taluka : Karanja			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Dhanaj Khurd	T/WM-009	**129**	**PW**	Dhanaj Khurd	T/WM-009	**112**	**PW**	Kamargaon	G/WM-015	**103**	**PW**
Karanja	G/WM-007	**140**	**PW**	Shaha	T/WM-020	**75**	**GW**	Karanja	G/WM-007	**81**	**GW**
Shaha	T/WM-020	**69**	**GW**	Loni	G/WM-028	**91**	**GW**	Loni	G/WM-028	**87**	**GW**
Loni	G/WM-028	**108**	**PW**								
2007 (With Fe)				**2008 (With Fe)**				**2009 (With Fe)**			
*Dhotra	WSOBW003	**58**	**GW**	Dhanaj Bk	WSOBW002	**68**	**GW**	Karanja	WSOBW006	**58**	**GW**
*Panvihir	WSOBW011	**114**	**PW**	Dhotra	WSOBW003	**51**	**GW**	Kherda	WSPZ001	**72**	**GW**
*Shaha	WSOBW015	**67**	**GW**	Kherda Bk.	WSOBW007	**50**	**GW**	Kherda Bk.	WSOBW007	**62**	**GW**
*Tuljapur	WSOBW082	**57**	**GW**	Sohol	WSOBW017	**82**	**GW**	Panvihir	WSOBW011	**59**	**GW**
				Manbha	WSOBW008	**56**	**GW**	Tuljapur	WSOBW082	**141**	**PW**
				Panvihir	WSOBW011	**39**	**EXLT**	Dhotra	WSOBW003	**72**	**GW**
				Shaha	WSOBW015	**51**	**GW**	Shaha	WSOBW015	**90**	**GW**
				Tuljapur	WSOBW082	**39**	**EXLT**				
2010 (With Fe)											
Panvihir	WSOBW011	**106**	**PW**	Panvihir	WSOBW011	**76**	**GW**	Shaha	WSOBW015	**87**	**GW**
Manba	WSOBW008	**106**	**PW**	Tuljapur	WSOBW018	**137**	**PW**	Dhotra Deshmukh	WSOBW003	**64**	**GW**
Dhanaj Bk.	WSOBW002	**79**	**GW**	Tulajapur	WSOBW018	**92**	**GW**				
2011 (With Fe)											
Janori	BS-101	**62**	**GW**	Khedara Karanja	WSPZ001	**57**	**GW**	Sohal	WSOBW017	**85**	**GW**
Dhanaj Bk.	WSOBW002	**67**	**GW**	Khedra Bk.	WSOBW007	**52**	**GW**	Panvihir	WSOBW011	**62**	**GW**
Dhotara Deshmukh	WSOBW003	**64**	**GW**	Shaha	WSOBW015	**66**	**GW**	Karanja	WSOBW006	**61**	**GW**
Manba	WSOBW008	**74**	**GW**	Tuljapur	WSOBW082	**88**	**GW**				

* MonsoonSeason, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.33 (Contd..)Washim District

Taluka : Malegaon				Taluka : Malegaon				Taluka : Malegaon			
Villages	**Well No.**	**WQI**	**Categor**	**Villages**	**Well No.**	**WQI**	**Categor**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Kinhi Raja	G/WM-018	**111**	**PW**	Kinhi Raja	G/WM-018	**65**	**GW**	Medshi	T/WM-011	**49**	**EXLT**
Medshi	T/WM-011	**71**	**GW**	Medshi	T/WM-011	**78**	**GW**				
2007 (With Fe)				**2008 (With Fe)**				**2009 (With Fe)**			
Davha	WSOBW074	**65**	**GW**	Malegaon	BS-77	**105**	**PW**	Ekamba	WSOBW076	**53**	**GW**
Dongarkinhi	WSOBW075	**107**	**PW**	Davha	WSOBW074	**53**	**GW**	Karanji	WSOBW077	**109**	**PW**
Ekamba	WSOBW076	**58**	**GW**	Dongarkinhi	WSOBW075	**105**	**PW**	Malegaon	BS-77	**121**	**PW**
Karanji	WSOBW077	**121**	**PW**	Ekamba	WSOBW076	**55**	**GW**	Dongarkinhi	WSOBW075	**111**	**PW**
Zodaga	WSWQM005	**54**	**GW**	Karanji	WSOBW077	**109**	**PW**	Davha	WSOBW074	**56**	**GW**
				Zodaga	WSWQM005	**54**	**GW**	Zodaga	WSWQM005	**53**	**GW**
								Jaulka	WSPZ009	**94**	**GW**
2010 (With Fe)											
*Dongarkinhi	WSOBW075	**93**	**GW**	*Karanji	WSPZ005	**77**	**GW**	Karanji	WSOBW077	**134**	**PW**
*Ekamba	WSOBW076	**53**	**GW**	Malegaon	WSOBW077	**198**	**PW**	Malegaon	WSOBW077	**126**	**PW**
*Zodga Bk.	WSOBW074	**59**	**GW**	Davha	WSOBEW074	**88**	**GW**	Jaulka	WSPZ009	**97**	**GW**
*Dawha	WSOBW077	**53**	**GW**								
2011 (With Fe)											
Malegaon	BS-77	**131**	**PW**	Ekamba	WSOBW076	**61**	**GW**	Dawha	WSOBW074	**64**	**GW**
Jawulka	WSPZ009	**73**	**GW**	Zodaga Bk.	WSWQM005	**64**	**GW**	Karanji	WSOBW077	**79**	**GW**
Dongarkinhi	WSOBW075	**88**	**GW**								

* MonsoonSeason, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.33 (Contd..) Washim District

Taluka : Mangulpir				Taluka : Mangulpir				Taluka : Mangulpir			
Villages	**Well No.**	**WQI**	**Categor**	**Villages**	**Well No.**	**WQI**	**Categor**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Bitoda	G/WM-013	**130**	**PW**	Bitoda	G/WM-013	**110**	**PW**	Bitoda	G/WM-013	**97**	**GW**
Shelu Bazar	G/WM-017	**112**	**PW**	Shelu Bazar	G/WM-017	**93**	**GW**				
Sendurjan	G/WM-016	**109**	**PW**	Sendurjan	G/WM-016	**106**	**PW**				
2007 (With Fe)				**2008 (With Fe)**				**2009 (With Fe)**			
Dabhadi	WSOBW036	**64**	**GW**	*Wanoja	WSOBW072	**98**	**GW**	Dabhadi	WSOBW036	**68**	**GW**
Jogaldari	WSOBW038	**92**	**GW**	Dabhadi	WSOBW036	**69**	**GW**	Wanoja	WSOBW072	**105**	**PW**
Kalamba	WSOBW039	**99**	**GW**	Mangrulpir	WSWQN003	**77**	**GW**	Kalamba	WSOBW039	**79**	**GW**
Mangrulpir	WSWQN003	**90**	**GW**	Jogaldari	WSOBW038	**71**	**GW**	Jogaldari	WSOBW038	**97**	**GW**
								Mangrulpir	WSWQN003	**61**	**GW**
2011 (With Fe)								**2010 (With Fe)**			
Wanoja	WSOBW072	**52**	**GW**	Mangarulpir	WSWQN003	**65**	**GW**	Dabhadi	WSOBW036	**91**	**GW**
Shelu Kh.	WSPZ004	**76**	**GW**	Dabhadi	WSOBW036	**73**	**GW**	Jogaldari	WSOBW038	**66**	**GW**
Jogaldari	WSOBW038	**62**	**GW**	Kalamba	WSOBW039	**64**	**GW**				

Taluka : Manora				Taluka : Manora				Taluka : Manora			
Villages	**Well No.**	**WQI**	**Categor**	**Villages**	**Well No.**	**WQI**	**Categor**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (With Fe); Not Avail. for 2009 (Without Fe)**			
Vilegaon	T/WM-008	**79**	**GW**	Dhamni	G/WM-002	**119**	**PW**	Bhuli	WSOBW021	**98**	**GW**
2007 (With Fe)				**2008 (With Fe)**				Kupta	WSOBW027	**53**	**GW**
Dhavanda	WSPZ002	**74**	**GW**	Sakhardoh	WSOBW029	**56**	**GW**	Dhavanda	WSPZ002	**88**	**GW**
Umari Bk.	WSOBW032	**57**	**GW**	Umari Bk.	WSOBW032	**44**	**EXLT**	Umari Bk.	WSOBW032	**71**	**GW**
*Bhuli	WSOBW021	**73**	**GW**	Bhuli	WSOBW021	**95**	**GW**	Sakhardoh	WSOBW029	**61**	**GW**
*Kupta	WSOBW027	**77**	**GW**	Kupta	WSOBW027	**57**	**GW**	Parwa	WSPZ003	**67**	**GW**
2010 (With Fe)											
Parwa	WSPZ003	**65**	**GW**	Sakhardoh	WSOBW029	**54**	**GW**	Umari Kh.	WSOBW032	**146**	**PW**
Dhavanda	WSPZ002	**98**	**GW**	Bhuli	WSOBW021	**139**	**PW**	Sakharadoh	WSOBW029	**75**	**GW**
Umri Kh.	WSOBW032	**64**	**GW**								
2011 (With Fe)											
Parwa	WSPZ003	**65**	**GW**	Sakharadoh	WSOBW029	**66**	**GW**	Dhawanda	WSPZ002	**99**	**GW**
Kupta	WSOBW027	**67**	**GW**	Bhuli	WSOBW021	**134**	**PW**	Umari Kh.	WSOBW032	**65**	**GW**

* MonsoonSeason, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.33 (Contd..) Washim District

Taluka : Risod				Taluka : Risod				Taluka : Risod			
Villages	**Well No.**	**WQI**	**Categor**	**Villages**	**Well No.**	**WQI**	**Categor**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Risod	G/WM-005	**120**	**PW**	Risod	G/WM-005	**106**	**PW**	Risod	G/WM-005	**108**	**PW**
Kenwad	G/WM-004	**129**	**PW**	Kenwad	G/WM-004	**115**	**PW**	Kenwad	G/WM-004	**89**	**GW**
Rithad	G/WM-014	**76**	**GW**	Rithad	G/WM-014	**79**	**GW**	Rithad	G/WM-014	**60**	**GW**
Sakhar Doha	G/WM-012	**80**	**GW**	Sakhar Doha	G/WM-012	**69**	**GW**	Sakhar Doha	G/WM-012	**54**	**GW**
Dapuri	G/WM-019	**115**	**PW**	Dapuri	G/WM-019	**120**	**PW**				
2007 (With Fe)				**2008 (With Fe)**				**2009 (With Fe)**			
Sukali	WSOBW052	**52**	**GW**	*Gohagaon	WSOBW060	**113**	**PW**	Netansa	WSOBW068	**107**	**PW**
Degaon	WSOBW059	**91**	**GW**	*Lehani	WSOBW063	**101**	**PW**	Degaon	WSOBW059	**98**	**GW**
Gohagaon	WSOBW060	**57**	**GW**	*Shelgaon	WSOBW070	**55**	**GW**	Mohaja Bandi	WSWQN001	**57**	**GW**
Lehani	WSOBW063	**107**	**PW**	*Loni Bk.	WSOBW064	**79**	**GW**	Loni Bk.	WSOBW064	**70**	**GW**
Loni Bk.	WSOBW064	**75**	**GW**	*Masalapen	WSWQN002	**62**	**GW**	Mop	WSOBW056	**59**	**GW**
Mahagaon	WSPZ006	**124**	**PW**	*Mohaja Bandi	WSWQN001	**81**	**GW**	Lehani	WSOBW063	**118**	**PW**
Masalapen	WSWQN002	**74**	**GW**	*Risod	WSOBW069	**167**	**PW**	Gohagaon	WSOBW060	**55**	**GW**
Mohaja Bandi	WSWQN001	**49**	**EXLT**	*Mop	WSOBW056	**56**	**GW**	Mahagaon	WSPZ006	**133**	**PW**
Mop	WSOBW056	**79**	**GW**	*Netansa	WSOBW068	**118**	**PW**	Risod	WSOBW069	**118**	**PW**
Netansa	WSOBW068	**99**	**GW**	Sukali	WSOBW052	**74**	**GW**	Wanoja	WSOBW043	**73**	**GW**
Risod	WSOBW069	**107**	**PW**					Masalapen	WSWQN002	**74**	**GW**
Wanoja	WSOBW043	**101**	**PW**								

* MonsoonSeason, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.33 (Contd..) Washim District

Taluka :Risod (Contd..)					Taluka :Risod (Contd..)					Taluka :Risod (Contd..)			
Villages	**Well No.**	**WQI**	**Categor**		**Villages**	**Well No.**	**WQI**	**Categor**		**Villages**	**Well No.**	**WQI**	**Category**
2010 (With Fe)													
*Degaon	WSOBW059	**81**	**GW**		*Risoad	WSOBW069	**104**	**PW**		Wanoja	WSOBW043	**98**	**GW**
*Wanoja	WSOBW042	**86**	**GW**		*Agarwadi	WSOBW056	**67**	**GW**		Netansa	WSOBW068	**138**	**PW**
*Shegaon	WSOBW070	**50**	**EXLT**		Loni Kh.	WSOBW064	**80**	**GW**		Agaewadi	WSOBW056	**66**	**GW**
*Netnsa	WSOBW068	**107**	**PW**		Risod	WSOBW069	**115**	**PW**		Wanoja	WSOBW072	**95**	**GW**
*Mop	WSOBW060	**66**	**GW**		Masalapen	WSWQM2	**82**	**GW**		Loni Kh.	WSOBW064	**118**	**PW**
*Mohajabandi	WSOBW066	**50**	**GW**		Lehani Kh.	WSOBW063	**118**	**PW**		Gohagaon	WSOBW060	**70**	**GW**
*Mahagaon	WSPZ006	**82**	**GW**		Gohagaon	WSOBW060	**73**	**GW**		Masalapen	WSWQM3	**88**	**GW**
*Loni Bk.	WSOBW064	**68**	**GW**		Shelgaon	WSOBW070	**48**	**EXLT**		Risod	WSOBW069	**97**	**GW**
*Lehani	WSOBW063	**100**	**GW**		Agarwadi	WSOBW056	**54**	**GW**		Mahagaon	WSPZ006	**88**	**GW**
*Gohagaon	WSOBW060	**68**	**GW**		Mop	WSOBW056	**60**	**GW**					
2011 (With Fe)													
Dehgaon	WSOBW059	**81**	**GW**		Mop	WSOBW056	**74**	**GW**		Gohagaon	WSOBW060	**65**	**GW**
Wanoja	WSOBW043	**88**	**GW**		Mohajabandi	WSWQN001	**53**	**GW**		Yevata	WSPZ008	**54**	**GW**
Shelgaon	WSOBW070	**59**	**GW**		Mahagaon	WSPZ006	**82**	**GW**		Risod	WSOBW069	**100**	**PW**
Netansa	WSOBW068	**103**	**PW**		Loni Kh.	WSOBW064	**71**	**GW**		Agarwadi	WSPZ013	**68**	**GW**
Maslapen	WSWQN002	**70**	**GW**		Lehani	WSOBW063	**97**	**GW**					

* MonsoonSeason, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.33 (Contd..) Washim District

Taluka : Washim				Taluka : Washim				Taluka : Washim			
Villages	**Well No.**	**WQI**	**Categor**	**Villages**	**Well No.**	**WQI**	**Categor**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Chikli	T/WM-023	**127**	**PW**	Wada	G/WM-001	**67**	**GW**	Chikli	T/WM-023	**99**	**GW**
Wada	G/WM-001	**78**	**GW**	Washim	G/WM-003	**62**	**GW**	Washim	G/WM-003	**52**	**GW**
Washim	G/WM-003	**76**	**GW**								
2007 (With Fe)				**2008 (With Fe)**				**2009 (With Fe)**			
Bitoda Teli	WSOBW044	**49**	**EXLT**	Ekamba	WSOBW045	**65**	**GW**	Warla	WSOBW053	**73**	**GW**
Bitoda Teli	WSOBW044	**52**	**GW**	Kekatumra	WSOBW047	**65**	**GW**	Pimpalgaon	WSOBW048	**97**	**GW**
Ekamba	WSOBW045	**74**	**GW**	Warla	WSOBW053	**54**	**GW**	Rajgaon	WSOBW049	**65**	**GW**
Falegaon	WSOBW046	**107**	**PW**	Washim	WSOBW054	**73**	**GW**	Kapase	BS-68	**90**	**GW**
Kekatumra	WSOBW047	**58**	**GW**	Falegaon	WSOBW046	**99**	**GW**	Kekatumra	WSOBW047	**89**	**GW**
Pimpalgaon	WSOBW048	**85**	**GW**	Pimpalgaon	WSOBW048	**73**	**GW**	Tondgaon	WSOBW051	**66**	**GW**
Rajgaon	WSOBW049	**75**	**GW**	Rajgaon	WSOBW049	**61**	**GW**	Bitoda Teli	WSOBW044	**63**	**GW**
Tondgaon	WSOBW051	**51**	**GW**	Kapase	BS-68	**48**	**EXLT**	Ekamba	WSOBW045	**65**	**GW**
Kapase	BS-68	**49**	**EXLT**	Tondgaon	WSOBW051	**54**	**GW**	Falegaon	WSOBW046	**116**	**PW**
Warla	WSOBW053	**64**	**GW**	Sawargaon	WSWQN004	**44**	**EXLT**	Washim	WSOBW054	**53**	**GW**
Tondgaon	WSOBW051	**68**	**GW**								
Washim	WSOBW054	**78**	**GW**								
2010 (With Fe)											
Washim	WSOBW054	**93**	**GW**	Tondagaon	WSOBW051	**55**	**GW**	*Falegaon	WSOBW046	**99**	**GW**
Ekamba	WSOBW045	**90**	**GW**	Washim	WSOBW054	**100**	**GW**	*Tondgaon	WSOBW051	**50**	**GW**
Umra Kapse	WSOBW052	**82**	**GW**	Umra Kapse	WSOBW052	**49**	**EXLT**	*Rajgaon	WSOBW046	**59**	**GW**
Bithoda Teli	WSOBW044	**109**	**PW**	*Washim	WSOBW 54	**87**	**GW**	*Umrakapse	WSOBW052	**50**	**GW**
Bithoda Teli	WSOBW044	**69**	**GW**	*Kekatumra	WSOBW 47	**80**	**GW**	*Pimpalgaon	WSOBW048	**92**	**GW**
Kekatumra	WSOBW047	**92**	**GW**	*Warla	WSOBW053	**73**	**GW**	*Sawargaon	WSWQN004	**45**	**EXLT**
2011 (With Fe)											
Sukali	WSPZ005	**67**	**GW**	Kekaturna	WSOBW047	**68**	**GW**	Umarakapase	BS-68	**54**	**GW**
Washim	WSOBW054	**80**	**GW**	Falegaon	WSOBW046	**70**	**GW**	Pimpalgaon	WSOBW048	**77**	**GW**
Washim		**75**	**GW**	Tondgaon	WSOBW051	**54**	**GW**	Sawargaon Barade	WSWQN004	**88**	**GW**
Bitodateli	WSOBW044	**87**	**GW**	Rajgaon	WSOBW049	**56**	**GW**	Warla	WSOBW053	**58**	**GW**
Ekamba	WSOBW045	**75**	**GW**								

* MonsoonSeason, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.34 : Water Quality Index of Groundwater of Yavatmal District

Taluka : Arni				Taluka : Arni				Taluka : Arni			
Villages	**Well No.**	**WQI**	**Categor**	**Villages**	**Well No.**	**WQI**	**Categor**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Arni	G/YT-007	**51**	**GW**	Arni	G/YT-007	**62**	**GW**	Arni	G/YT-007	**92**	**GW**
2007 (With Fe)				**2008 (With Fe)**				**2009 (With Fe)**			
Arni	YTWQN018	**81**	**GW**	Arni	YTWQNTS18	**76**	**GW**	Arni	YTWQNTS18	**91**	**GW**
Mangrul	YTWQN017	**80**	**GW**	Mangrul	YTWQN017	**84**	**GW**	Belora van	YTOBW076	**62**	**GW**
Borgaon Punji	YTWQNBS103	**104**	**PW**	**2011 (With Fe)**				Dabhadi	YTOBW075	**62**	**GW**
Dabhadi	YTOBW075	**42**	**EXLT**	*Arni	YTWQN018	**86**	**GW**	Deurwadi	YTOBW073	**66**	**GW**
2010 (With Fe)				*Borgaon (punji)	YTWQNBS103	**90**	**GW**	Mangrul	YTWQN017	**90**	**GW**
*Arni	YTWQN018	**93**	**GW**	*Dabhadi	YTOBW075	**79**	**GW**	Sawali	YTPZ009	**68**	**GW**
*Jawala	YTOBW051	**114**	**PW**	*Loanbehal	BS 89	**77**	**GW**	Mahagaon	YTWQNBS97	**61**	**GW**
*Taroda		**58**	**GW**	*Malhiwara	BS 88	**116**	**PW**	Borgaon Punji	YTOBW061	**61**	**GW**
*Talani		**80**	**GW**	*Belora(Forest)	YTOBW076	**113**	**PW**	Belura	YTWQNBS 101	**59**	**GW**
				*Mangarul	T 17	**104**	**PW**	Umari	YTOBW025	**102**	**PW**

* MonsoonSeason, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.34(Contd..) Yavatmal District

Taluka : Babhulgaon				Taluka : Babhulgaon				Taluka : Babhulgaon			
Villages	**Well No.**	**WQI**	**Categor**	**Villages**	**Well No.**	**WQI**	**Categor**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Babhulgaon	G/YT-004	**135**	**PW**	Babhulgaon	G/YT-004	**155**	**PW**	Babhulgaon	G/YT-004	**134**	**PW**
Pahur	G/YT-031	**258**	**VPW**	Pahur	G/YT-031	**213**	**VPW**	Pahur	G/YT-031	**201**	**VPW**
Umarda	G/YT-051	**129**	**PW**	Umarda	G/YT-051	**132**	**PW**	Umarda	G/YT-051	**146**	**PW**
2007 (With Fe)				**2008 (With Fe)**				**2009 (With Fe)**			
Babhulgaon	YTWQN005	**68**	**GW**	Babhulgaon	YTWQN005	**61**	**GW**	Babhulgaon	YTWQN005	**70**	**GW**
2010 (With Fe)											
*Babhulgaon	YTWQN005	**72**	**GW**	*Sindhi	YTOBW140	**82**	**GW**	*Marlapur	YTOBW180	**75**	**GW**
*Babhulgaon	YTWQN005	**77**	**GW**	*Virkhed	YTOBW174	**105**	**PW**	*Hatola	YTOBW172	**101**	**PW**
*Antargaon	YTOBW177	**72**	**GW**								
2011 (With Fe)											
*Babhulgaon	YTWQN005	**70**	**GW**	Pahur		**69**	**GW**	Marlapur	YTOBW180	**76**	**GW**
*Shindi	YTOBW140	**101**	**PW**	Karalgaon		**67**	**GW**	Kharda		**72**	**GW**
*Wai Hatola	YTOBW172	**82**	**GW**	Hatola	YTOBW172	**129**	**PW**	Gharephal		**75**	**GW**
*Virkhed	YTOBW174	**94**	**GW**	Antargaon	YTOBW177	**85**	**GW**	Mandi Borgaon		**72**	**GW**
*Antargaon	YTOBW177	**94**	**GW**	Dhaba		**86**	**GW**	Dehani		**74**	**GW**
Maralpur	YTOBW180	**74**	**GW**	Virkhed	YTOBW174	**117**	**PW**	Shindi	YTOBW140	**150**	**PW**
Bhabhulgaon	YTWQN005	**69**	**GW**	Nandura Bk		**70**	**GW**				

* MonsoonSeason, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.34(Contd..) Yavatmal District

Taluka : Darvha				Taluka : Darvha				Taluka : Darvha			
Villages	**Well No.**	**WQI**	**Categor**	**Villages**	**Well No.**	**WQI**	**Categor**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Ladkhed	G/YT-021	**95**	**GW**	Ladkhed	G/YT-021	**135**	**PW**	Selodi	G/YT-011	**106**	**PW**
Selodi	G/YT-011	**96**	**GW**	Selodi	G/YT-011	**85**	**GW**	Talegaon	G/YT-041	**57**	**GW**
Talegaon	G/YT-041	**47**	**EXLT**	Talegaon	G/YT-041	**65**	**GW**				
2007 (With Fe)				**2008 (With Fe)**				**2009 (With Fe)**			
Darwha	YTWQN015	**80**	**GW**	Bariarab	YETOBWBS97	**51**	**GW**	Kamatwada	YTOBW046	**68**	**GW**
Mozar	YTOBW045	**65**	**GW**	Bhandegaon	YTWQNBS80	**63**	**GW**	Mangkinhi	YETWQNBS 81	**103**	**PW**
Bariarab	YETOBWBS97	**68**	**GW**	Darwha	YTWQN015	**97**	**GW**	Mozar	YTOBW045	**53**	**GW**
Bhandegaon	YTOBW040	**61**	**GW**	Kamatwada	YTOBW046	**55**	**GW**	Lakhkhind	YTOBW041	**87**	**GW**
Kamatwada	YTOBW046	**71**	**GW**	Lakhkhind	YTOBW041	**105**	**PW**	Darwha	YTWQN015	**99**	**GW**
Lakhkhind	YTOBW041	**92**	**GW**	Mahatoli	YTOBW053	**140**	**PW**	**2010 (With Fe)**			
Mahatoli	YTOBW053	**149**	**PW**	Mangkinhi	YETWQN81	**73**	**GW**	Mangkinhi	YTOBWO44	**86**	**GW**
Mangkinhi	YETWQN81	**71**	**GW**	Mozar	YTOBW045	**66**	**GW**	Shelodi		**98**	**GW**
Uchegaon	YTOBW042	**70**	**GW**	Sangvi	YTOBW036	**83**	**GW**				
				Uchegaon	YTOBW042	**73**	**GW**				
2011 (With Fe)											
*Darvha	YTWQN015	**71**	**GW**	*Mangkinhi	YTOBWO44	**113**	**PW**	*Kamatwada	YTOBW046	**82**	**GW**
*Sangavi(Rly)	YTOBW036	**127**	**PW**	*Lalkhind	YTOBW041	**99**	**GW**	*Mozar	YTOBW045	**89**	**GW**
*Bori(Arab)	YTOBW037	**70**	**GW**	*Uchegaon	YTOBW042	**62**	**GW**	*Mohatali	YTOBW053	**119**	**PW**
*Bhandegaon	YTOBW040	**57**	**GW**								

* MonsoonSeason, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.34(Contd..) Yavatmal District

Taluka : Digras				Taluka : Digras				Taluka : Digras			
Villages	**Well No.**	**WQI**	**Categor**	**Villages**	**Well No.**	**WQI**	**Categor**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**							
Digras	G/YT-010	**161**	**PW**	Digras	G/YT-010	**147**	**PW**	**Data for 2009 (Without Fe) Not Available**			
Lonbhel	G/YT-028	**158**	**PW**								
2007 (With Fe)				**2008 (With Fe)**				**2009 (With Fe)**			
Digras	YTWQN016	**111**	**PW**	Digras	YTWQNTS16	**136**	**PW**	Lonbehal	YTOBW078	**71**	**GW**
Arambhi	YTOBW068	**105**	**PW**	Harsul	YTOBW063	**165**	**PW**	Arambhi	YTOBW068	**116**	**PW**
Harsul	YTOBW063	**189**	**PW**	Lakhrayachi	YTOBW069	**89**	**GW**	Digras	YTOBW065	**134**	**PW**
Lakhrayachi	YTOBW069	**81**	**GW**	Mahagaon Kh.	YTPZ005	**52**	**GW**	Harsul	YTOBW063	**118**	**PW**
Lonbehal	YTOBW078	**62**	**GW**	Mandwa	YTOBW064	**140**	**PW**	Lakhrayachi	YTOBW069	**87**	**GW**
Mandwa	YTOBW064	**148**	**PW**	Vitholi	YTOBW071	**57**	**GW**	Vitholi	YTOBW071	**71**	**GW**
Tiwari	YTOBW067	**114**	**PW**					Mandwa	YTOBW064	**54**	**GW**
Vitholi	YTOBW071	**67**	**GW**	**2011 (With Fe)**							
2010 (With Fe)				Digras (Anand Lodg)	YTOBW065	**82**	**GW**	Mahagao Kasba	YTPZ005	**82**	**GW**
Tiwari	YTOBW067	**119**	**PW**	Mandwa	YTOBW064	**103**	**PW**	Vitholio	YTOBW071	**76**	**GW**
Digras	YTOBW065	**126**	**PW**	Singad	BS 112	**69**	**GW**	Lakhrayachi	YTOBW069	**73**	**GW**
				Armbhi	YTOBW068	**97**	**GW**	Tiwari	YTOBW067	**62**	**GW**
				Harsul	YTOBW063	**71**	**GW**	Digraas (Shankartaki)	TS 16	**38**	**EXLT**

* MonsoonSeason, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.34(Contd..) Yavatmal District

Taluka : Ghatanji				Taluka : Ghatanji				Taluka : Ghatanji			
Villages	**Well No.**	**WQI**	**Categor**	**Villages**	**Well No.**	**WQI**	**Categor**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Wihout Fe)				**2008 (Wihout Fe)**				**2009 (Wihout Fe)**			
Ghatanji	G/YT-035	**100**	**PW**	Injhala	G/YT-040	**112**	**PW**	Ghatanji	G/YT-035	**112**	**PW**
Injhala	G/YT-040	**97**	**GW**	Jodmoha	G/YT-033	**112**	**PW**	Injhala	G/YT-040	**97**	**GW**
Jodmoha	G/YT-033	**62**	**GW**					Jodmoha	G/YT-033	**113**	**PW**
2007 (Wih Fe)				**2008 (Wih Fe)**				**2009 (Wih Fe)**			
Kurli	YTOBW026	**58**	**GW**	Mangi	YTOBW027	**62**	**GW**	Kurli	YTOBW026	**58**	**GW**
Belura	YTOBW133	**69**	**GW**	Manoli	YTOBW139	**115**	**PW**	Mangi	YTOBW027	**54**	**GW**
*Ghatanji	YTWQN007	**102**	**PW**	Vilayata	YTOBW057	**63**	**GW**	Manoli	YTOBW139	**47**	**EXLT**
Ghatanji	YTWQN007	**71**	**GW**					Vilayata	YTOBW057	**55**	**GW**
2011 (Wih Fe)								Yerandgaon	YTOBW136	**83**	**GW**
Ghatanji	YTWQN007	**101**	**PW**	*Yerandgaon	YTOBW136	**97**	**GW**	**2010 (Wih Fe)**			
Yerandgaon	YTOBW136	**169**	**PW**	*Kurli	YTOBW026	**81**	**GW**	*Jarur	YTOBW087	**75**	**GW**
Kurli	YTOBW026	**79**	**GW**	*Mangi	YTOBW027	**69**	**GW**	Vilayata	YTOBW057	**60**	**GW**
Mangi	YTOBW027	**79**	**GW**	*Jarud	YTOBW087	**99**	**GW**	Manjari		**86**	**GW**
Mandwa	YTOBW135	**61**	**GW**	*Mandwa	YTOBW135	**61**	**GW**	Jarur	YTOBW087	**76**	**GW**
Manoli	YTOBW139	**86**	**GW**	*Mandoli	YTOBW139	**76**	**GW**				
Villayata	YTOBW057	**73**	**GW**	*Vilayata	YTOBW057	**87**	**GW**				
Belura	YTOBW133	**64**	**GW**	*Belura	YTOBW133	**89**	**GW**				
*Ghatanji	YTWQN007	**107**	**PW**								

* MonsoonSeason, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.34(Contd..) Yavatmal District

Taluka : Kalamb				Taluka : Kalamb				Taluka : Kalamb			
Villages	**Well No.**	**WQI**	**Categor**	**Villages**	**Well No.**	**WQI**	**Categor**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Chaparda	G/YT-057	**48**	**EXLT**	Chaparda	G/YT-057	**56**	**GW**	Chaparda	G/YT-057	**51**	**GW**
Kalamb	G/YT-001	**160**	**PW**	Kalamb	G/YT-001	**180**	**PW**	Kalamb	G/YT-001	**143**	**PW**
Kotha	G/YT-052	**139**	**PW**	Kotha	G/YT-052	**144**	**PW**	**2009 (With Fe)**			
				Sirpur	G/YT-029	**83**	**GW**	Kalamb	YTWQN004	**87**	**GW**
2007 (With Fe)				**2008 (With Fe)**				**2010 (With Fe)**			
Chaparda	YTOBW084	**56**	**GW**	Kalamb	YTWQN004	**89**	**GW**	Pilkhana	YTOBW085	**78**	**GW**
Chincholi	YTOBW147	**81**	**GW**	**2011 Contd.. (With Fe)**				**2011 Contd.. (With Fe)**			
Pilkhana	YTOBW085	**104**	**PW**	Pahur		**92**	**GW**	Chaparda	YTOBW084	**58**	**GW**
Sonegaon	YTPZ008	**67**	**GW**	Kinwat	YTOBW082	**59**	**GW**	Mthikhedaa		**63**	**GW**
*Kalamb	YTWQN004	**73**	**GW**	Dongarkharda		**104**	**PW**	Kalamb	YTWQN004	**78**	**GW**
2011 (With Fe)				Sonegaon	YTPZ008	**77**	**GW**	Chincholi	YTOBW147	**86**	**GW**
Kalamb	YTWQN004	**111**	**PW**	Chincholi	YTOBW147	**85**	**GW**	Kinwat	YTOBW082	**62**	**GW**
Mangi		**77**	**GW**	Rajur		**87**	**GW**	Pilkhana	YTOBW085	**71**	**GW**
Kamthwada		**101**	**PW**	Kotha		**109**	**PW**	Sonegaon	YTPZ008	**86**	**GW**
Umari		**108**	**PW**	Jodmoha		**77**	**GW**	Chaprda	YTOBW084	**54**	**GW**
Pilkhana	YTOBW085	**80**	**GW**	Satephal		**71**	**GW**				

* MonsoonSeason, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.34(Contd..) Yavatmal District

Taluka : Kelapur (Pandharkawada)				Taluka : Kelapur (Pandharkawada)				Taluka : Kelapur (Pandharkawada)			
Villages	**Well No.**	**WQI**	**Categor**	**Villages**	**Well No.**	**WQI**	**Categor**	**Villages**	**Well No.**	**WQI**	**Categor**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Pahapal	G/YT-038	**161**	**PW**	Pahapal	G/YT-038	**99**	**GW**	Pahapal	G/YT-038	**155**	**PW**
Saykheda	G/YT-056	**61**	**GW**	Mohada	G/YT-012	**142**	**PW**	Mohada	G/YT-012	**150**	**PW**
Pandharkawada	G/YT-005	**89**	**GW**	Pandharkawada	G/YT-005	**84**	**GW**	Pandharkawada	G/YT-005	**90**	**GW**
2007 (With Fe)				**2008 (With Fe)**							
*Maregaon	YTOBW089	**102**	**PW**	Maregaon	YTOBW089	**72**	**GW**	*Kelapur	YTWQN008	**63**	**GW**
2009 (With Fe)											
Pahapal	YTOBW098	**86**	**GW**	Dharana	YTOBW091	**113**	**PW**	Pahapal	YTOBW098	**73**	**GW**
Chanakha	YTOBW028	**56**	**GW**	Khairgaon Bk.	YTOBW092	**145**	**PW**	Warha	YTOBW097	**53**	**GW**
Ghubadi	YTOBW029	**54**	**GW**	Maregaon	YTOBW089	**64**	**GW**	*Kelapur	YTWQN008	**51**	**GW**
2010 (With Fe)											
*Marathwakadi	YTOBW088	**72**	**GW**	*Pandharkawada	YTWQN008	**57**	**GW**	*Chakhna	YTOBW028	**60**	**GW**
*Borgaon Kh.	YTOBW093	**55**	**GW**	*Warha	YTOBW097	**47**	**EXLT**	*Khairgaon	YTOBW092	**96**	**GW**
*Ghubadi	YTOBW029	**53**	**GW**	*Maregaon	YTOBW089	**58**	**GW**	Warha	YTOBW097	**55**	**GW**
2011 (With Fe)											
Pandharkawada	YTWQN008	**56**	**GW**	Marathkawadi	YTOBW088	**80**	**GW**	Khargaon Bk	YTOBW092	**93**	**GW**
Maregaon	YTOBW089	**74**	**GW**	Sunna		**67**	**GW**	Ghubdi	YTOBW029	**55**	**GW**
Chankha	YTOBW028	**63**	**GW**	Mohada		**69**	**GW**	Pahaphal	YTOBW098	**96**	**GW**
Warha	YTOBW097	**58**	**GW**								

* MonsoonSeason, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.34(Contd..) Yavatmal District

Taluka : Mahagaon				Taluka : Mahagaon				Taluka : Mahagaon			
Villages	**Well No.**	**WQI**	**Categor**	**Villages**	**Well No.**	**WQI**	**Categor**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Dhanoda	G/YT-009	**89**	**GW**	Dhanoda	G/YT-009	**88**	**GW**	Dhanoda	G/YT-009	**85**	**GW**
Mahagaon	G/YT-027	**59**	**GW**	Mahagaon	G/YT-027	**65**	**GW**	Mahagaon	G/YT-027	**50**	**GW**
				Mohgaon Kasba	G/YT-026	**102**	**PW**	**2009 (With Fe)**			
2007 (With Fe)				**2008 (With Fe)**				Mahagaon	YTWQN025	**89**	**GW**
Mahagaon	YTWQN025	**78**	**GW**	*Mahagaon	YTWQN025	**83**	**GW**	Dhanoda	YTOBW079	**57**	**GW**
Pisgaon	YTOBW158	**74**	**GW**					Kaurwadi	YTPZ003	**43**	**EXLT**
*Mahagaon	YTWQN025	**95**	**GW**					*Mahagaon	YTWQN025	**84**	**GW**
2010 (With Fe)											
Tembhi	YTOBW111	**93**	**GW**	Kaurwadi	YTPZ003	**62**	**GW**	Dhanoda	YTOBW079	**60**	**GW**
2011 (With Fe)											
Dhanoda	YTOBW079	**56**	**GW**	Mahagaon	YTWQN025	**77**	**GW**	Tembhi	YTOBW111	**74**	**GW**
Kahurwadi	YTPZ003	**54**	**GW**					Wadad	BS 125	**73**	**GW**

Taluka : Maregaon				Taluka : Maregaon				Taluka : Maregaon			
Villages	**Well No.**	**WQI**	**Categor**	**Villages**	**Well No.**	**WQI**	**Categor**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2007 (With Fe)**			
Mardi	G/YT-032	**163**	**PW**	Mardi	G/YT-032	**166**	**PW**	Jalaka	YTOBW090	**58**	**GW**
Maregaon	G/YT-015	**129**	**PW**					Maregaon	YTWQN009	**64**	**GW**
2008 (With Fe)				**2009 (With Fe)**							
Maregaon	YTWQN009	**54**	**GW**	Jalaka	YTOBW090	**46**	**EXLT**	Maregaon	YTWQN009	**65**	**GW**
2010 (With Fe)								**2011 (With Fe)**			
Pisgaon		**68**	**GW**	Pathari		**87**	**GW**	Maregaon	TS9	**105**	**PW**
				Data for 2009Not Available (Without FE)							

* MonsoonSeason, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.34(Contd..) Yavatmal District

Taluka : Ner				Taluka : Ner				Taluka : Ner			
Villages	**Well No.**	**WQI**	**Categor**	**Villages**	**Well No.**	**WQI**	**Categor**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Manekwada	G/YT-058	**246**	**VPW**	Manekwada	G/YT-058	**241**	**VPW**	Manekwada	G/YT-058	**196**	**PW**
Mojhar	G/YT-049	**56**	**GW**	Mojhar	G/YT-049	**68**	**GW**	Mojhar	G/YT-049	**62**	**GW**
2007 (With Fe)				**2008 (With Fe)**				**2009 (With Fe)**			
Bangaon	YTOBW038	**94**	**GW**	Watfali	YTOBW166	**67**	**GW**	Dhanaj	YTOBW183	**125**	**PW**
Bramhanwada	YTOBW163	**111**	**PW**	Ner	YTWQN014	**82**	**GW**	Gharefal	YTOBW164	**119**	**PW**
Dhanaj	YTOBW183	**138**	**PW**	**2010 (With Fe)**				Khandala	YTOBW168	**51**	**GW**
Gharefal	YTOBW164	**84**	**GW**	Mozar	YTOBW165	**89**	**GW**	Ner	YTWQN014	**72**	**GW**
Khandala	YTOBW168	**80**	**GW**	Bramhanwada	YTOBW163	**106**	**PW**	Uttarwadhona	YTOBW047	**86**	**GW**
Ner	YTWQN014	**61**	**GW**					Watfali	YTOBW166	**49**	**EXLT**
Watfali	YTOBW166	**51**	**GW**	**2011 (With Fe)**							
Uttarwadhona	YTOBW047	**67**	**GW**	*Ner	YTWQN014	**75**	**GW**	*Dhanaj	YTOBW183	**80**	**GW**
Yelgunda	YTPZ014	**41**	**EXLT**	*Bangaon	YTOBW038	**96**	**GW**	*Utttawadhona	YTOBW047	**98**	**GW**
				*Gharephal	YTOBW164	**76**	**GW**	*Watphali	YTOBW166	**86**	**GW**
				*Bramhanwada	YTOBW163	**101**	**PW**	*Pimpari	YTOBW167	**99**	**GW**
				*Mozar	YTOBW165	**90**	**GW**	*Yelgonda	YTPZ014	**59**	**GW**
				*Khandala	YTOBW168	**99**	**GW**				

Taluka : Pusad				Taluka : Pusad				Taluka : Pusad			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Categor**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Harsi	G/YT-013	**82**	**GW**	Pusad	G/YT-030	**109**	**PW**	Phul Sawangi	G/YT-059	**183**	**PW**
Phul Sawangi	G/YT-059	**64**	**GW**	**2009 (With Fe)**				Pusad	G/YT-030	**103**	**PW**
Pusad	G/YT-030	**115**	**PW**	Pusad	YTWQN019	**87**	**GW**	Marwadi Khurd	G/YT-019	**111**	**PW**
Marwadi Khurd	G/YT-019	**93**	**GW**	Chondhi	YTOBW107	**45**	**EXLT**	Parwa	G/YT-023	**96**	**GW**
2007 (With Fe)				**2008 (With Fe)**				**2010 (With Fe)**			
Pusad	YTWQN019	**82**	**GW**	*Pusad	YTWQN019	**79**	**GW**	Singad	YTOBW070	**52**	**GW**
2011 (With Fe)											
Pusad(Kakaddati)	YTWQN021	**84**	**GW**	Warud	YTOBW105	**50**	**EXLT**	Pusada (Adarsh Ng)	YTWQN019	**55**	**GW**
Jamnaik	YTOBW002	**58**	**GW**	Chondhi	YTOBW107	**69**	**GW**	Pusad (Naik Bng.)	YTWQN020	**67**	**GW**
Chikhali	YTOBW103	**93**	**GW**								

Table x.34(Contd..) Yavatmal District

Taluka : Ralegaon			
Villages	**Well No.**	**WQI**	**Categor**
2007 (Without Fe)			
Wadhona	G/YT-050	**82**	**GW**
2007 (With Fe)			
*Ralegaon	YTWQN006	**86**	**GW**
2009 (With Fe)			
Ralegaon	YTWQN006	**101**	**PW**
2010 (With Fe)			
Ramthirth	YTPZ007	**79**	**GW**
Zadgaon	YTOBW149	**130**	**PW**
Wadhona Bk.	YTOBW152	**81**	**GW**
Khadki	YTOBW153	**78**	**GW**
2011 (With Fe)			
Ralegaon	YTWQN006	**119**	**PW**
Wadhonabazar	YTOBW152	**79**	**GW**
Zadgaon	YTOBW149	**118**	**PW**

Taluka : Ralegaon			
Villages	**Well No.**	**WQI**	**Categor**
2008 (Without Fe)			
Wadhona	G/YT-050	**66**	**GW**
2008 (With Fe)			
Ashtona	YTOBW155	**120**	**PW**
Khadaki	YTOBW153	**75**	**GW**
Khairey	YTOBW156	**85**	**GW**
2011 Contd.. (With Fe)			
Wanoja	YTPZ012	**68**	**GW**
Kinhi J	YTOBW154	**104**	**PW**
Ashtona	YTOBW155	**71**	**GW**
Khadki	YTOBW153	**74**	**GW**
Ramthirth	YTPZ007	**75**	**GW**
Dapori		**78**	**GW**
Ralegaon	YTWQN006	**87**	**GW**
Zodgaon	YTOBW149	**86**	**GW**

Taluka : Ralegaon			
Villages	**Well No.**	**WQI**	**Category**
2009 (Without Fe)			
Wadhona	G/YT-050	**73**	**GW**
Kinhi Jawade	YTOBW154	**80**	**GW**
Ramtirth	YTPZ007	**81**	**GW**
Wadhona Bz.	YTOBW152	**72**	**GW**
*Ralegaon	YTWQN006	**116**	**PW**
Khadki	YTOBW153	**56**	**GW**
Wadhona Bz.	YTOBW152	**63**	**GW**
Kinhi	YTOBW154	**108**	**PW**
Ashtona	YTOBW155	**111**	**PW**
Kahiree	YTOBW156	**74**	**GW**
Ramthirth	YTPZ007	**65**	**GW**
Wanoja	YTPZ012	**60**	**GW**

Taluka : Umarkhed			
Villages	**Well No.**	**WQI**	**Categor**
2007 (Without Fe)			
Umarkhed	G/YT-048	**91**	**GW**
2009 (With Fe)			
Umarkhed	YTWQN024	**68**	**GW**
Pophali	YTWQN023	**93**	**GW**
Bitargaon	YTOBW014	**76**	**GW**
Dhanki	YTOBW011	**88**	**GW**
Marsal	YTOBW007	**48**	**EXLT**
Vidul	YTOBW009	**101**	**PW**
Data for 2008 and 2009 Not Available (Without FE)			

Taluka : Umarkhed			
Villages	**Well No.**	**WQI**	**Categor**
2007 (With Fe)			
Pophali	YTOBW004	**74**	**GW**
Umarkhed	YTWQN024	**70**	**GW**
2010 (With Fe)			
Thakani	YTOBW011	**110**	**PW**
Umerkhed	YTWQN024	**80**	**GW**
Kharbi		**95**	**GW**
2011 (With Fe)			
Ekamba	YTWQN022	**82**	**GW**
Bitragaon	YTOBW014	**55**	**GW**
Akoli	YTOBW016	**66**	**GW**
Sawaleshwar	YTOBW012	**77**	**GW**

Taluka : Umarkhed			
Villages	**Well No.**	**WQI**	**Category**
2008 (With Fe)			
*Umarkhed	YTWQN024	**59**	**GW**
Pophali	YTWQN023	**123**	**PW**
2011 Contd.. (With Fe)			
Dhanki	YTOBW011	**109**	**PW**
Bramhangaon	YTOBW010	**97**	**GW**
Vidul	YTOBW009	**97**	**GW**
Umarkhed	YTPZ011	**64**	**GW**
Marsul	YTOBW007	**70**	**GW**
Pophali	YTOBW004	**55**	**GW**

* MonsoonSeason, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.34(Contd..) Yavatmal District

Taluka : Wani			
Villages	**Well No.**	**WQI**	**Categor**
2007 (Without Fe)			
Kayar	G/YT-022	**118**	**PW**
2007 (With Fe)			
Chilai	YTOBW122	**53**	**GW**
Rasa	YTOBW120	**106**	**PW**
Shindola	YTOBW035	**116**	**PW**
Shirpur	YTOBW185	**97**	**GW**
Wani (3)	YTWQN013	**132**	**PW**
Wani (1)	YTWQN011	**93**	**GW**
Wani (2)	YTWQN012	**93**	**GW**
Pimpri k	YTOBW191	**102**	**PW**
*Ukani	YTWQN010	**117**	**PW**
Data for 2009 Not Available (Without FE)			

Taluka : Wani			
Villages	**Well No.**	**WQI**	**Categor**
2008 (Without Fe)			
Kayar	G/YT-022	**134**	**PW**
2008 (With Fe)			
Pimpri k	YTOBW191	**96**	**GW**
Ukani	YTWQN010	**106**	**PW**
Wani (3)	YTWQN013	**89**	**GW**
Wani (1)	YTWQN011	**109**	**PW**
Wani (2)	YTWQN012	**132**	**PW**
2010 (With Fe)			
Wani	YTWQN011	**91**	**GW**
Naigaon	YTOBW161	**90**	**GW**
Punwat	YTOBW187	**86**	**GW**
Ganeshpur		**83**	**GW**

Taluka : Wani			
Villages	**Well No.**	**WQI**	**Category**
2009 (With Fe)			
Rasa	YTOBW120	**137**	**PW**
Shirpur	YTOBW185	**89**	**GW**
Ukani	YTWQN010	**84**	**GW**
Wani (3)	YTWQN013	**95**	**GW**
Wani (1)	YTWQN011	**84**	**GW**
Wani (2)	YTWQN012	**92**	**GW**
Shindola	YTOBW035	**85**	**GW**
2011 (With Fe)			
Ukani	YTWQN010	**105**	**PW**
Asaha Lodge	YTWQN011	**100**	**PW**
Sonamata Mandir	YTWQN012	**111**	**PW**
Cement Godown	YTWQN013	**139**	**PW**

Taluka : Zarijamni			
Villages	**Well No.**	**WQI**	**Category**
2007 (With Fe)			
Zari	YTPZ0034	**60**	**GW**
2010 (With Fe)			
Sindhiwadhana		**115**	**PW**
Katali Borgaon	YTOBW094	**76**	**GW**
Data for 2007 to 2009 Not Available (Without Fe) and also 2011 (With Fe)			

Taluka : Zarijamni			
Villages	**Well No.**	**WQI**	**Categor**
2008 (With Fe)			
*Zari	YTPZ0034	**51**	**GW**
Ardhavan	YTOBW030	**64**	**GW**
Mukutban	YTOBW032	**61**	**GW**
Isapur	YTOBW126	**64**	**GW**

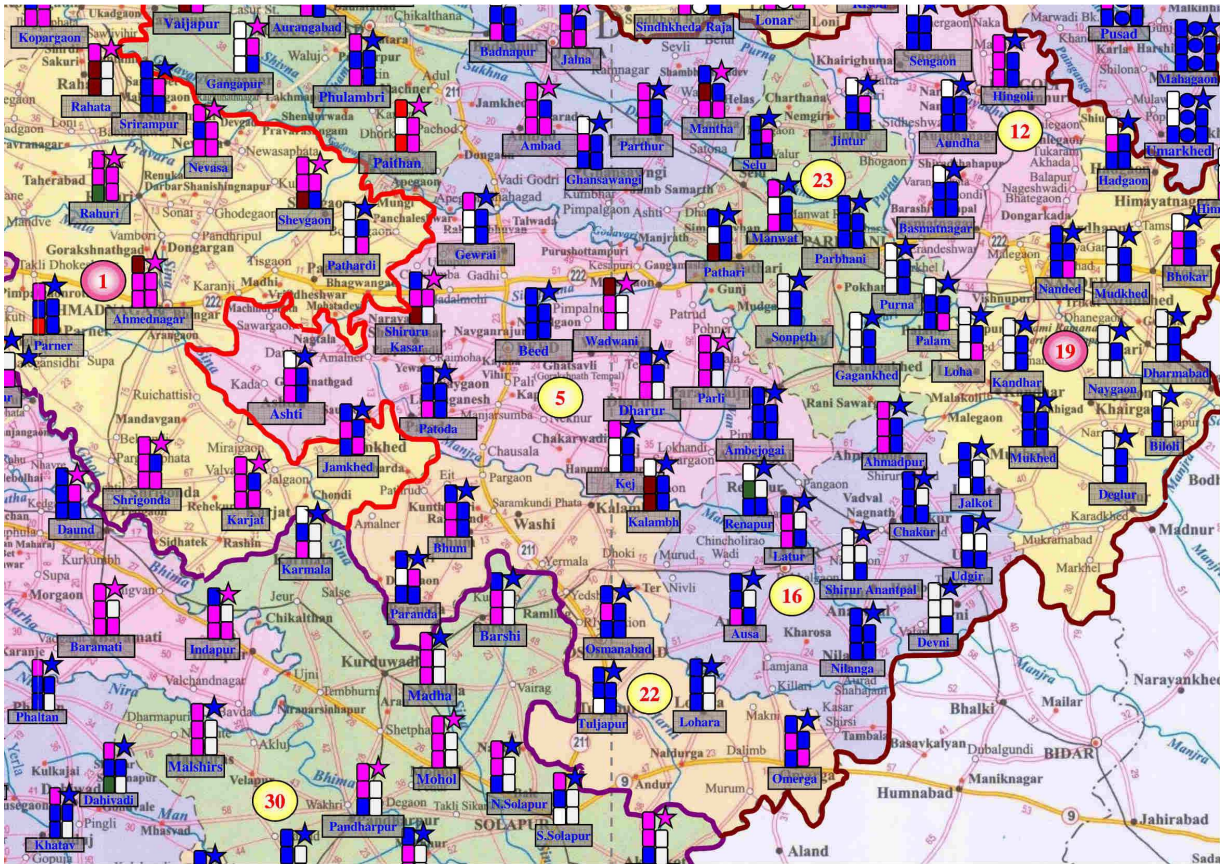
Taluka : Zarijamni			
Villages	**Well No.**	**WQI**	**Category**
2009 (With Fe)			
Dabha	YTOBW099	**59**	**GW**
Matharjun	YTOBW101	**61**	**GW**
Mudhati	YTOBW100	**62**	**GW**
Shibala	YTOBW095	**53**	**GW**
Zari	YTPZ0034	**48**	**EXLT**
Katali Borgaon	YTOBW094	**123**	**PW**
Mukutban	YTOBW032	**110**	**PW**

* MonsoonSeason, The repeated stations may indicate the samples from two different wells /dates / seasons.

Table x.34(Contd..) Yavatmal District

Taluka : Wani				Taluka : Wani				Taluka : Wani			
Villages	**Well No.**	**WQI**	**Category**	**Villages**	**Well No.**	**WQI**	**Categor**	**Villages**	**Well No.**	**WQI**	**Category**
2007 (Without Fe)				**2008 (Without Fe)**				**2009 (Without Fe)**			
Akolabazar	G/YT-043	**145**	**PW**	Akolabazar	G/YT-043	**144**	**PW**	Kolambi	G/YT-016	**55**	**GW**
Kolambi	G/YT-016	**154**	**PW**	Elbara	G/YT-034	**200**	**VPW**	Savar	G/YT-053	**138**	**PW**
Madkona	G/YT-044	**60**	**GW**	Kolambi	G/YT-016	**150**	**PW**	Wadgaon	G/YT-014	**100**	**PW**
Savar	G/YT-053	**174**	**PW**	Madkona	G/YT-044	**78**	**GW**	Jamwadi	G/YT-045	**132**	**PW**
Wadgaon	G/YT-014	**96**	**GW**	Savar	G/YT-053	**140**	**PW**	**2008 (With Fe)**			
Mandeo	G/YT-036	**54**	**GW**	Wadgaon	G/YT-014	**117**	**PW**	Akola Bazar	YTPZ001	**97**	**GW**
Jamwadi	G/YT-045	**81**	**GW**	Mandeo	G/YT-036	**74**	**GW**	Bechkheda	YTOBW049	**139**	**PW**
Karanji	G/YT-072	**54**	**GW**	Jamwadi	G/YT-045	**108**	**PW**	Borisinha	YTOBW048	**57**	**GW**
Mangrule	G/YT-042	**91**	**GW**	Karanji	G/YT-017	**113**	**PW**	Daheli	YTOBW130	**66**	**GW**
Vai (Lingi)	G/YT-046	**304**	**UNSUT**	Mangrule	G/YT-042	**96**	**GW**	Sawargad	YTOBW150	**48**	**EXLT**
2007 (WithFe)				Vai (Lingi)	G/YT-046	**285**	**VPW**	Talegaon	YTOBW131	**68**	**GW**
Akola Bazar	YTPZ001	**99**	**GW**	**2010 (With Fe)**				**2009 (With Fe)**			
*Yavatmal	YTWQN001	**80**	**GW**	Borosingh	YTOBW048	**89**	**GW**	Bechkheda	YTOBW049	**73**	**GW**
				Wadgaon	YTOBW128	**65**	**GW**	Wadgaon	YTOBW128	**61**	**GW**
				Talegaon	YTOBW131	**72**	**GW**	Borisinha	YTOBW048	**61**	**GW**
				Borisingh	YTOBW048	**95**	**GW**	Daheli	YTOBW130	**54**	**GW**
				Bechkheda	YTOBW049	**73**	**GW**	Sawargad	YTOBW150	**46**	**EXLT**
								*Yavatmal	YTWQN003	**104**	**PW**
2011 (WithFe)											
Yavatmal (Bhosa)	TS1	**86**	**GW**	*Lohara	T 3	**99**	**GW**	*Bechkheda	YTOBW049	**71**	**GW**
Chinchghat		**67**	**GW**	*Wadgaon	YTOBW128	**83**	**GW**	*Borusinga	YTOBW048	**79**	**GW**
Talegaon	YTOBW131	**70**	**GW**	*Sawargad	YTOBW150	**80**	**GW**	*Khorad	YTOBW054	**70**	**GW**
*Yawatmal	T 1	**62**	**GW**	*Talegaon	YTOBW131	**87**	**GW**	*Akola Bz.	YTWQNB08	**73**	**GW**
*Yawatmal	T 2	**79**	**GW**	*Daheli	YTOBW130	**84**	**GW**				

* MonsoonSeason, The repeated stations may indicate the samples from two different wells /dates / seasons.


Vaijapur
Aurangabad
Kopargaon
Gangapur
Rahata
Srirampur
Nevasa
Rahuri
Sheygaon
Paithan
Phulambri
Badnapur
Jalna
Sindhkheda Raja
Lonar
Sengaon
Pusad
Mahagaon
Hingoli
Aundha
Umarkhed
Hadgaon
Ambad
Parthur
Mantha
Jintur
Selu
Ghansawangi
Manwat
Parbhani
Basmatnagar
Pathari
Gewrai
Pathardi
Shiruru Kasar
Wadwani
Beed
Sonpeth
Purna
Palam
Loha
Nanded
Mudkhed
Bhokar
Dharmabad
Naygaon
Kandhar
Gagankhed
Ahmednagar
Parner
Ashti
Patoda
Dharur
Parli
Rani Sawar
Malegaon
Mukhed
Biloli
Ahmadpur
Ambejogai
Kej
Jamkhed
Shrigonda
Karjat
Daund
Kalambh
Renapur
Latur
Chakur
Jalkot
Deglur
Madnur
Bhum
Karmala
Paranda
Barshi
Osmanabad
Ausa
Shirur Anantpal
Udgir
Devni
Baramati
Indapur
Phaltan
Madha
Tuljapur
Lohara
Nilanga
Omerga
Narayankhed
Mailar
Bhalki
Basavkalyan
Dubalgundi
BIDAR
Maniknagar
Humnabad
Jahirabad
Malshiras
Dahivadi
Khatav
Mohol
N.Solapur
S.Solapur
Pandharpur
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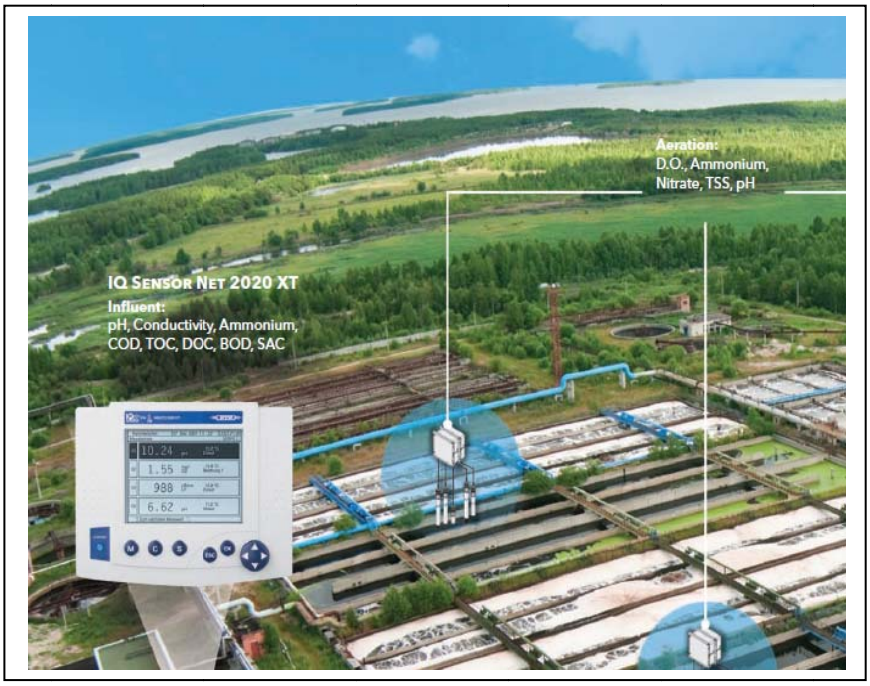
Appendix I

Measuring, Monitoring and Controlling of Wastewater Treatment Plants using Sensor Network System



Introduction to current problems with CETPs

Concept of common treatment of industrial waste water was started with an intention of controlling pollution as well keeping environment clean at large. Especially this concept is beneficial for small scale industries. For them treatment of their own effluent becomes difficult. Therefore, CETP who is treating their effluent at certain cost has to be adequate for such voluminous polluted water.

CETP so developed for an industrial cluster has to qualify for the treatment according to SPCB or CPCB whoever is stringent. Being voluminous it is difficult to measure multiple parameters in different treatment units. Measuring, monitoring and controlling such units have been always a challenge for regulatory authority. Often measurements are not reliable due interference as well as human errors.

Availability of measuring meters has helped up to certain extent. But regular maintenance and calibration is always a limitation. For measurement of a simple COD test it takes almost 2- 3 hours manually (APHA, 2005). Even others take much more time when compared to COD viz. TDS & TSS. Test like pH & DO are measured by meters which are generally not calibrated every time.

Even in CETP range of pH is generally measured using paper strip method & further chemical additions are done. With technology available it's possible to monitor online. Countries like Germany and U.K. are already using sensor based networks for measuring, monitoring and controlling wastewater treatment plants.

What are sensors?

Sensors are the devices which run on various principle (based on particle characteristics as well as ionic nature of the sample etc.) & able to deliver the real time measurement of a sample. Sensors are completely submerged in the sample all the time so chance of interference is minimal when compared against manual measurement. These devices help the operator to understand status of the treatment. Likewise many success stories have been written so far with the help of sensor revolution.

The Sensor probe shown in picture is capable of measuring 8 parameters along with COD, BOD. Electrochemical sensors are rapidly replaced by optical based sensors which are factory calibrated.

Where it can be used?

- ✓ Municipal Water and wastewater treatment plants
- ✓ Effluent treatment plants – specific to industries
- ✓ CETP – industrial clusters
- ✓ Natural bodies like – River "Ganga", "Yamuna" to monitor water quality.

Who needs it ?

Regulatory Authority like SPCB, CPCB:
To check any violation of consented values of parameters like COD, TDS etc
Industry with own effluent plant /zero discharge
To reduce the operation and maintenance cost of ETP. Sensors with accurate readings will help in reducing costs towards chemical dosing.
Common Effluent Treatment Plant Facility
With huge volume of wastewater treated per day, real time accurate measurement helps reducing operational cost.

Do they have any success stories?

Sensor based networks are widely used in Germany, U.K. and U.S.A. All SBR technology shows success stories since in their SCADA they have automatic measurement done by sensors.
In DWTP (drinking water treatment plant) – quality assurance are made generally by sensor methodology. It is hard for them to measure quality each a second.
Similarly upcoming private industries who claim better treatment does have competitive edge of sensor technology, which helps them, understand where to improve.

Should we rely on sensors?

Comparative to conventional practices of measurement of parameters like COD etc., sensor based technology gives accurate readings. Sensors are always in contact with the water, reducing any interference or human error. This is always a heart of the technology; many worldwide companies have been in market since last Almost five decades. They have earned reliability of their sensor through their genuine R&D in many years. Their products are worldwide selected and being used in all the extreme environment. This technology is quite reliable in its own way.

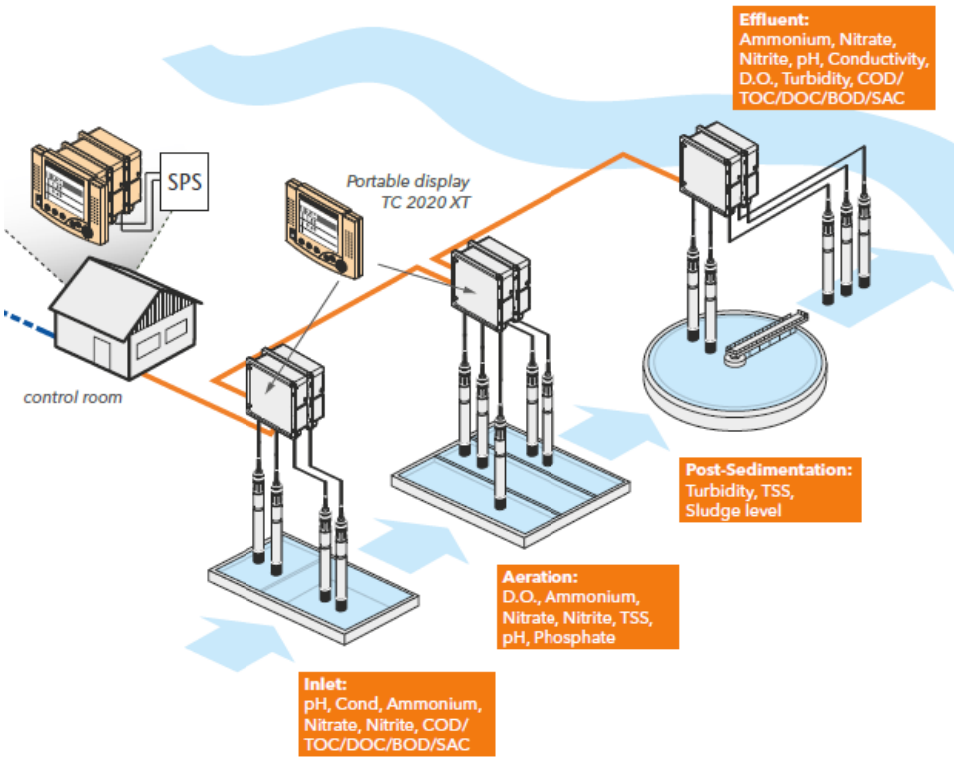
What are the advantages of Sensor technology?

- Operation would be easier for the staff
- Accurate measurement
- Real time measurement, can measure 24 X 7, data logging possible
- Free of human errors
- Performance evaluation of the unit would be done after investing crores of crores in the treatment.
- Monitoring efficiency would improve – if not in place
- Concerned authorities would be informed about the treatment in the UNITS
- Information would be even provided to the respective SPCB officials
- Environmental risk would be better understood
    - Daily average value of COD which is exceeded in any treatment plant would let us know how much organic loading we have done in the natural bodies just because of improper treatment, to our surprise this figure reaches in few thousand metric tons (current situation)
    - Daily activity would definitely push the human mind set for further improvement

- If measured properly, monitoring of chemical used would be reduced which is very uncommon in all the ETP's
- Even would let us measure & control eutrophication
- Monitoring of various segments would be in place if results deviates from the expected
- Slowly we can achieve the standards if already not

Sensor based monitoring system

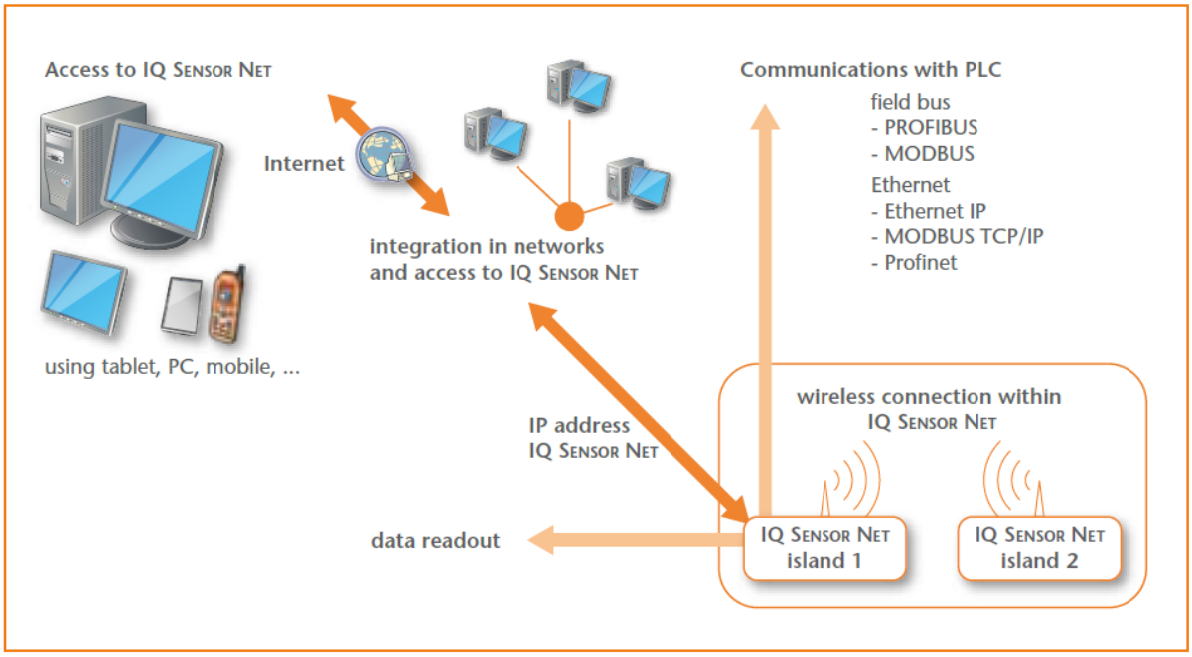
Complete assembly would look like as shown below



Complete sensor assembly would be given which includes:

1) Different Sensors
2) Different Sensors Adaptor
3) Common Controller
4) Enhanced Communication System (USP)
5) Software to interpret the raw values (USP)

Figure below shows how treatment unit will be connected to others who are not in the premises.



Flexibility & comfort

- Up to 20 digital sensors, any combination
- Easy, intuitive system expansion
- Centralized power supply along entire network
- Numerous relays and outputs maybe selected
- Communications via modem, Bluetooth, radio transmission, PROFIBUS, MODBUS, RS-232
- LED status update
- Integrates into existing systems
- Change or move parameters at any time with ease

Reliability:

- 3-year warranty
- Ultrasonic cleaning on some sensors
- System-wide lightning protection
- Modular expansion from 1 to 20 sensors
- Easily stack modules without extra wiring
- One cable for power and communications
- Factory-calibrated optical DO cap with a 2-year warranty
- USB interface (can be used for security)
- System redundancy for backup control

Range of sensors available

Parameters	Sensors												
	1 TriOxmatic®	2 FDO®	3 SensoLyt®	4 TetraCon®	5 VisoTurb®	6 ViSolid®	7 NitraVis®	8 CarboVis®	9 NiCaVis®	10 VARiON®	11 AmmoLyt®	12 NitraLyt®	13 IFL
Temperature	•	•	•	•	•	•	•	•	•	•	•	•	
DO (electrochemical)	•												
DO (optical)		•											
pH			•										
ORP			•										
Conductivity				•									
Salinity				•									
Turbidity					•								
TSS						•	•	•	•				
Ammonium										•	•		
Nitrate							•		•	•		•	
Potassium										•	•		
Chloride*										•	•		
COD (chemical oxygen demand)								•	•				
TOC (total organic carbon)								•	•				
BOD (biochemical oxygen demand)								•	•				
DOC (dissolved organic carbon share of TOC)								•	•				
SAC (spectral absorption coefficient)								•	•				
Interface (Sludge) Level Measurement**													•

*Chloride is used as compensation only and is not a visible parameter on the IQSN system. Please contact us for more information.

** For use with the 2020 XT and MC2 modules.

Sensors for waste water plant

A review

1. Accurate measurement
2. Free from cumbersome lab procedures
3. Free from calibration (as most of the sensors are factory calibrated)
4. Instant reading (saves time)
5. Immediate operational changes are possible thus saving energy and time
6. Robust technology with minimal maintenance.
7. Ultrasonic self-cleaning technology
8. Data logging possible
9. Transfer of real time data to control room and regulatory authority
10. Quick trouble shooting is possible based on accurate data at different stages of treatment
11. Up to 20 parameters can be measured.

Integrated by IIT Bombay at SINE Incubation system

Appendix II

Floating Wetland Ecosystem (FWE)

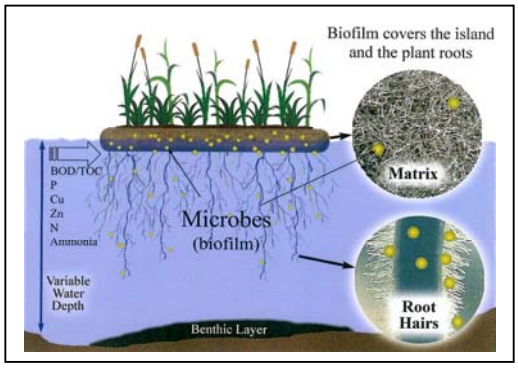
Technology Details

Floating Wetland Ecosystems (FWE) are bio-mimetic, self-sustaining floating treatment concentrated wetlands that are designed to remove excess nutrients and contaminants from lakes, streams and wastewater lagoons. The islands typically use a combination of microbial (bacteria and algae) and plant growth to effectively take up, precipitate and/or filter nutrients and other pollutants from water. They are also extremely effective at reducing nitrate, phosphate, ammonia total suspended solids and dissolved organic carbon in waterways. The technology has know how and designed developed with support from NEERI, CSIR (Govt. of India) and patent holder for Phytorid Technology (Constructed Wetland Technology for waste water treatment).

Components of Floating wetland Ecosystem

The FWE is made up from support unit with plastic frames and polymer material, which support plant material that provides surface area for microbes, which converts and take up nutrients from the water. These plants improve aesthetic of the site as well as provide habitats for many fishes and birds to nurture their life.

The floating matrix, plus the plant roots hang beneath it, provides a large surface area for biofilm growth which forms an important part of the treatment “reactor. The microbes and macrophytes uptake nutrients and move them into and through the food chain. Suspended organic particles stick to the biofilm and become periphyton, food for scuds, nymphs and ultimately fish. Suspended inorganic solids, such as heavy metals in particulate form, slough off and settle in the benthic zone beneath the FWE. The FWE is a sink for carbon dioxide and it enables nitrates and ammonia to be removed from the water and safely converted back to Nitrogen gas. This process prevents or slows down eutrophication and keeps the aquatic system in balance. FEW can be installed in nearly any waterway and launched with a minimum of disturbance.



How it Work

Constructed of durable, non-toxic plastics, polymers and vegetated with native easily available plants. FWE float on top of the water, providing an aesthetic habitat for birds, fishes and animals. But underneath the surface, a dynamic process takes place. Microbes are responsible for breaking down nutrients and other water-borne pollutants, but to be effective, they need a surface to stick to. The FWE matrix, with its dense fibers and porous texture, is the perfect surface area for growing large amounts of microbes (as a biofilm) in a short time. Nutrients circulating in the water come into contact with these biofilms and are consumed by them, while a smaller fraction is taken up by plant roots. Suspended solids slough off into the benthic zone below the island. Organic solids stick to the biofilms and become the base of the freshwater food web. These pathways represent a concentrated wetland effect to clean the water.

Technology benefits

FWEs are able to withstand fluctuations in water levels, without becoming stranded or inundated; they are very suitable for the treatment of runoff and drainage, such as urban storm water, agricultural runoff and other non point-source applications.

It can be launched over deep or shallow water, including streams and detention basins, and they represent an inexpensive option to retro-fit to existing systems, such as wastewater lagoons.

The sticky biofilm which covers the roots and matrix acts as a mechanical filter for fine particulates, while the floating wetland itself provides shade to cool the water, and blocks the light that might otherwise encourage sub-aquatic weeds.

Overhanging banks act as wave-breakers and allow passage of fish underneath. In a lake or reservoir setting, the conversion of nutrients to periphyton initiates the food chain and contributes to insect and fish growth, which are the hallmark of a healthy and productive ecosystem.

Appendix III

Application of Natural Methods for Sewage Treatment and Polishing of Treated Wastewater

CONCEPT OF PHYTORID TECHNOLOGY

Urbanization can drastically alter the natural hydrologic cycle, destroying natural areas such as wetlands that are important for water quality and controlling urban storm water runoff. The urban pollutant loads increase with the imperviousness of the watershed. Urban and sub-urban runoff including storm water runoff, non-point source pollution, contributes significantly to the pollution load as shown in **Figure 1 and Figure 2**.

Figure 1: Strom Water Pollution Load

Additionally, the storm water flows and concentrations are episodic, changing rapidly in volume, duration and intensity.

These flows can carry sediment with nutrient loads into urban settings where the pollutant loads are further augmented by increased runoff from impervious surfaces such as parking lots, roadways, rooftops, etc. The resultant runoff can include suspended particulate matter and nutrients (especially N and P) from vehicle exhaust and atmospheric deposition, trace metals from metal corrosion, materials from worn brake lining and tires, salts (deicing salts), and a wide array of complex hydrocarbons (such as motor additives, pesticides, rubber, oil and grease.

Figure 2: Status of Pollution Load in Nallas

Municipal wastewater treatment has been normally carried out by conventional systems. These systems along with advanced technologies being employed at many places are highly dependent upon power availability, skilled manpower and waste load characteristics. In developing countries, some of these could be critical towards efficient waste treatment. These factors are also responsible

for varying degree of treatment efficiency that may not produce the desirable levels of standards prescribed by the regulatory agencies/authorities.

Thus, it is important to demand of time to develop a sustainable wastewater treatment system overcoming the above-mentioned limitations of the conventional wastewater treatment technologies. One such system is Phytorid Technology based on “re-engineer” wetlands systems to solve the current runoff and wastewater quality problems. Wetlands have always been part of our ecosystem where we live.

Natural wetlands have been used to treat wastewater for hundreds of years. Formal documentation of how these natural wetlands (**Figure 3**) affected wastewater quality began in the 1960s and 1970s. Research found consistent reductions in the pollutant concentrations of wastewater, as it passed through the microbial active wetlands. And by the late 1970s and early 1980s, this research led to the planning, development, and construction of discharges to natural wetlands at many locations in North America, as well as the implementation of wetland technology for both habitat and water quality functions.

Figure 3: Natural Wetlands as a Treatment Options

Wetlands can be engineered and constructed for the following reasons:
1. To compensate and offset the rate of existing wetland loss (habitat wetlands),
2. To improve wastewater quality (treatment),
3. Provide flood control

Phytorid Technology was developed by NEERI and patented in Indian, European and Australian Countries. This publication is an overview of purely on the scientific research with respect to Indian climatic conditions only and takes part to assist us by becoming “green infrastructure” to wastewater quality problems.

These are constructed as shallow basins or channels with a subsurface barrier to avoid seepage. The Phytorid Technology is a subsurface flow type wherein water is applied to the cells/ beds filled with porous media such as gravel and stones. The hydraulics is maintained in such a manner that water does not rise to the surface retaining a free board at the top of the filled media. These systems may include a wide variety of foliage in the form of aquatic, marsh, ornamental, herbs, grasses and also terrestrial plants known to grow in water logged conditions.

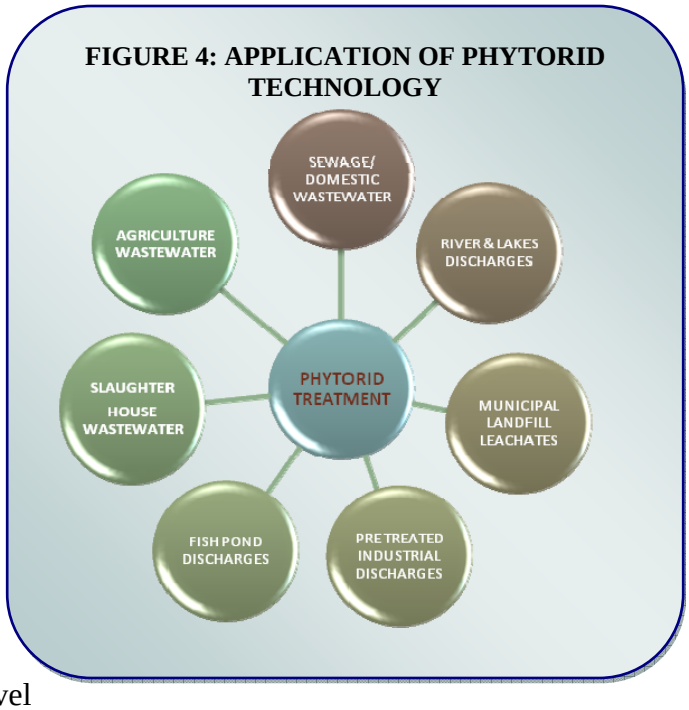
1.1 Definition

Phytorid Technology is a designed system and constructed to make use of selected vegetation to assist in treating wastewater in a controlled environment than occurs in natural wetlands. The use of Phytorid wetlands for wastewater treatment takes advantage of the same principles in a natural system, within a more controlled environment. It utilizes many of the mechanisms of phytoremediation, though the maturity of wetland suggests that it is a discipline unto itself. They can be designed for a variety of treatment objectives, as influent ranges from raw wastewater to secondary effluent.

They possess a rich microbial community in the sediment to effect the biochemical transformation of pollutants, they are biologically productive, and most importantly, they are self-sustaining. These factors make constructed treatment wetlands a very attractive option for water treatment compared to conventional systems, especially when lifetime operating costs are compared.

The technology is adaptable to a variety of treatment needs (**Figure 4**) through the selective design and combination with other technologies, such as trickling filters, septic tanks, etc. Phytorid Treatment System has significantly lower total lifetime costs and lower capital costs than conventional treatment systems.

FIGURE 4: APPLICATION OF PHYTORID TECHNOLOGY



Additionally, Phytorid Treatment Systems can:

- Tolerate fluctuations in flow and pollutant concentrations,
- Provide flood protection,
- Facilitate water reuse and recycling,
- Can be built to fit harmoniously into the landscape,
- Enhance aesthetics of open spaces,
- Provide recreational and educational opportunities, and
- Environmentally sensitive approach viewed favorably by the general public.

In treatment systems, flows are fed to a gravel bed with pore spaces. Within these pores spaces, bacteria and algae do most of the treatment work in aerobic and anaerobic conditions year round. It has been shown that planted gravel beds achieved greater than 90% removal of chemicals. Several designs can be found in the literature for wetlands treatment. Some of these procedures are rules of thumb (as was the case with natural restored wetlands), based on intuition and analogs, and others are based on data analysis and

application of physico-chemical principles. It is necessary for Phytorid treatment, to determine/ define the quantity and quality of water to be treated and the goals of the treatment.

The Phytorid System can be differentiated according to the following criteria:

- Filter media : Origin, composition, grain size distribution, hydraulic properties, etc.
- Flow : Horizontal /vertical /or both
- Operation : Continuously
- Plantation : Stabilized/ acclimatized, selected species for treatment, aesthetic views, based on the reuse of treated water.

1.2 Treatment Mechanism Involved in Phytorid Technology

- Phytorid Treatment Systems have been found to be effective in treating BOD, TSS, N and P as well as for reducing metals, organic pollutants and pathogens. The principal pollutant removal mechanisms in treatment systems include biological processes such as microbial metabolic activity and plant uptake as well as physico-chemical processes such as sedimentation, adsorption and precipitation at the water-sediment, root-sediment and plant-water interfaces as shown in **Figure 5**.
- Microbial degradation plays a dominant role in the removal of soluble/colloidal biodegradable organic matter in wastewater.
- Biodegradation occurs when dissolved organic matter is carried into the biofilms that attached on plant root systems and surrounding media by diffusion process.

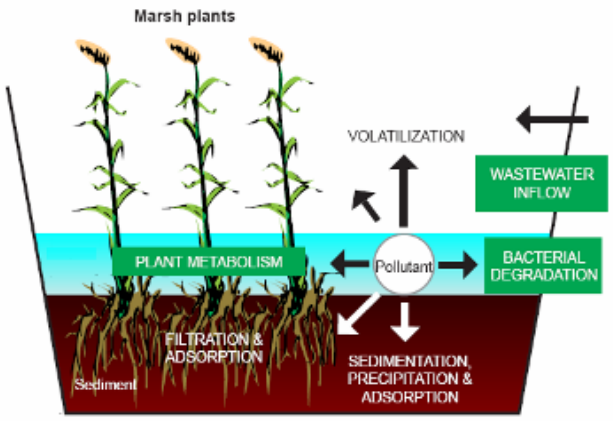


Figure 5: Processes Involved in Phytorid Treatment System

- In further development after filing of the patent 2003, further improvement was undertaken to reduce the residence time of the overall system as also to improve the technology. This development involved use of isolated bacterial consortia in the system to mainly reduce the Suspended Solids load. It also leads to reduction in BOD as well. [The requirement of bio-culture is given at the end of the document.]
- Suspended solids are removed by filtration and gravitational settlement. A pollutant may be removed as a result of more than one process at work.
- Conversion of nitrogen compounds (Nitrification / Denitrification) occurs due to planned flow of wastewater through anaerobic and aerobic zones.

- Phosphorus is present in wastewaters as Orthophosphate, Dehydrated Orthophosphate (Polyphosphate) and Organic Phosphorus. The conversion of most Phosphorus to the Orthophosphate forms is caused by biological oxidation.
- Although plant uptake may be substantial, the sorption of Phosphorus (Orthophosphate P) by anaerobic reducing sediments appears to be the most important process. Pathogens are removed mainly by sedimentation, filtration and absorption by biomass and by natural die-off and predation.
- Evapotranspiration slows water flow and increases contact times, whereas rainfall, which has the opposite effect, will cause dilution and increased flow.

1.3 Role of Plant Species for Treatment Mechanisms

- The most significant functions of plant species in relation to water purification are the physical effects (as shown in **Figure 6**) brought by the presence of the plants.

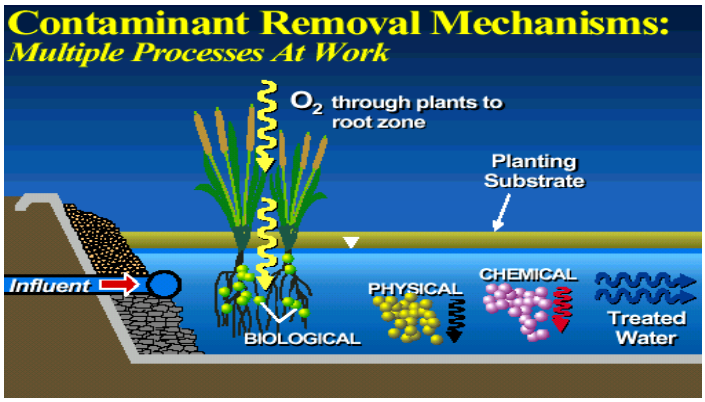


Figure 6: Contamination Removal Processes

- The plants provide a huge surface area for attachment and growth of microbes. The physical components of the plants stabilize the surface of the beds, slow down the water flow thus assist in sediment settling and trapping process and finally increasing water transparency.
- Plants play a vital role in the removal and retention of nutrients and help in preventing the eutrophication of wetlands. A range of plants has shown their ability to assist in the breakdown of wastewater. Cattails (Typha spp.) are good examples of marsh species that can effectively uptake nutrients. These plants have a large biomass both above (leaves) and below (underground stem and roots as shown in the **Figure 7**) the surface of the substrate.

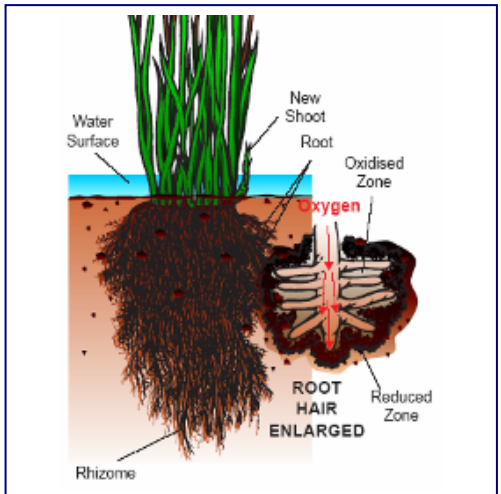


Figure 7: Root Structure for Treatment

- The sub-surface plant tissues grow horizontally and vertically, and create an extensive matrix, which binds the particles and creates a large surface area for the uptake of nutrients and ions. Hollow vessels in the plant tissues enable oxygen to be transported from the leaves to the root zone and to the surrounding soil.

- This enables the active microbial aerobic decomposition process and the uptake of pollutants from the water system to take place.
- Macrophytes stabilize the surface of plant beds, provide good conditions for physical filtration, and provide a huge surface area for attached microbial growth. Growth of macrophytes reduces current velocity, allowing for sedimentation and increase in contact time between effluent and plant surface area, thus, to an increase in the removal of Nitrogen.
- Hydraulic conductivity is improved in an emergent plant bed system. Turnover of root mass creates macropores in a system allowing for greater percolation of water, thus increasing effluent/plant interactions.
- Decomposing plant biomass also provides a durable, readily available carbon source for the microbial populations.
- Plant species provide a large surface area for growth of microbial biofilms (as shown in **Figure 8**) and responsible for a majority of the microbial processes in a treatment system, including Nitrogen reduction.
- Plant species mediate transfer of oxygen through the hollow plant tissue and leakage from root systems to the rhizosphere where aerobic degradation of organic matter and nitrification will take place. The plant species have additional site-specific values by providing habitat to make wastewater treatment systems aesthetically pleasing.

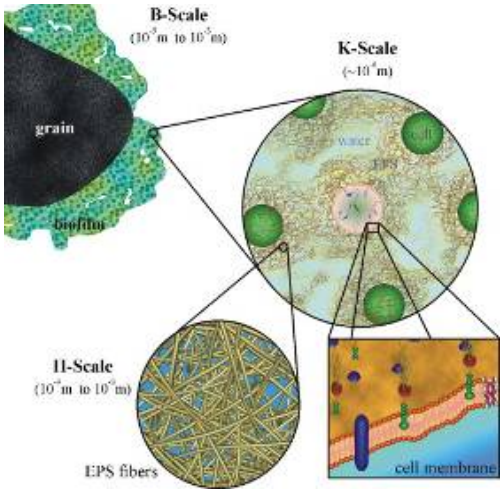


Figure 8: Biofilms Structures

1.4 Identification of Potential Sites for Construction of Phytorid Treatment System

Sites identified for treatment systems need to be assessed for:

- Existing infrastructure to determine the ease of access,
- Ownership and availability of the site,
- Engineering feasibility,
- Hydrology,
- Nature of soils on the site,
- Topography,
- Drainage area, and
- Upstream pollutant loading characteristics (including locations/ proximity of combined sewer overflows, if applicable).

1.5 Preliminary Sizing

- Each regulated water quality parameter requires its own particular treatment area for reduction to the desired level.
- Depending on regulations and retention time, the maximum size of the individual treatment areas is selected.

1.6 Preliminary Economics

This includes the

- Basic capital costs,
- Operating and maintenance costs and
- Comparison of costs for potential sites with those of conventional treatment options.

1.7 Engineering Considerations and Designs

The goal is to maximize treatment volume and efficacy.

- Typically, a distribution box needs to distribute water based on the amount of flow and changes its distribution over time.
- The primary tank in which the solids are dropped, and then the flow proceeds to the various buried gravel beds.
- Within these beds is a very coarse stone with pore spaces for bacteria and algae to do their work.
- The treated flow then moves towards the final collection tank and is pumped to the reuse.
- Aquatic species can be planted on top of the gravel beds depending on whether the water levels in the beds and the frequency of flooding can support these species.

1.8 Stream (Hydrological) Flow and Stage Calculations

- To determine the quantity of wastewater that will flow through treatment, it is essential to calculate both baseline and storm discharges.
- The amount and timing of the water to be treated is the first and foremost item to consider in design.
- This information should include the possible seasonality of flows and anticipated progression of flows over the life of the design.
- This is more important for treatment design when compared with conventional water treatment plants because of the implied life cycle of the process and the nature of urban and industrial growth.
- Conventional water treatment plants are traditionally planned for a 20-year life expectancy, but wetlands can function for a far longer period.

1.9 Treatment Potential

- The treatment achieved in SSW systems depends on the volume and frequency of the inflow and also the characteristics of the inflow.
- The treatment potential depends upon the following factors:
  - Hydraulic loading,
  - Retention, and
  - Vegetation.
- To obtain better knowledge of the water quality aspects for the storm water discharge, it is advisable to conduct fairly good data collection with regard to flows and quality.
- Major pollutant sources for the discharge is determined by assaying biological oxygen demand (BOD_3), chemical oxygen demand (COD), total suspended solids (TSS), Total Kjeldahl Nitrogen (TKN), Ammonia (NH_3), total phosphorous, pH, salinity, alkalinity, and fecal coliforms.
- Baseline sampling is done at the storm sewer outflow (inflow) and upstream, however for an event sampling (when there is sever overflow), three samples should be taken at an upstream water sample and a downstream sample.
- HRT can be obtained using the water quality data for the baseline and total maximum daily loads and water quality-based effluent limits defined by state policy for effluent concentration data.
- The presence of macrophytes is important for pollutant removal functions.

TREATMENT EFFICIENCY

Phytorid Technology reduces typical pollutant loads from sewage as given:

Pollutant	Performance (%)
Total suspended solids	90 – 95
Biochemical oxygen demand	90 – 95
Chemical oxygen demand	85 – 95
Total nitrogen	60 – 85
Phosphate	50 – 80
Fecal coliform	85 – 95

1.10 Design and Construction of Phytorid Treatment System

Phytorid to be design for Influent Characteristics as mentioned in the following table.

Sr. No.	Parameters	Influents	Units
1.	pH	5.5-8.5	-
2.	TSS	300	mg/L
3.	BOD	400	mg/L
4.	COD	800	mg/L
5.	O&G	50	mg/L
6.	N (TKN)	20-50	mg/L
7.	P	8-10	mg/L

Phytorid can meet the following characteristics at the effluent as mentioned below.

Sr. No.	Parameters	Effluents	Disinfection	Units
1.	pH	6.8-7.5	6.5-7.3	-
2.	TSS	15-25	10-15	mg/L
3.	BOD	10-30	<5	mg/L
4.	COD	30-80	<20	mg/L
5.	O&G	<5	<2	mg/L
6.	N (TKN)	5-8	<3	mg/L
7.	P	2-5	<2	mg/L
8.	TC	10×10^6	$<10^3$	per 100m

1.10.1 Site Selection

- The suitability of a site for constructing a treatment wetland may depend on the condition of one or more factors such as substrate, soil chemistry, hydrology/geomorphology, vegetation, cultural/socioeconomic impacts including environmental justice issues, the surrounding landscape, land use/zoning considerations and potential impacts to safety and health.
- Project proponents should carefully examine these factors and consult with applicable agencies in determining the most appropriate site(s) for their projects.
- A distance of 5 to 10 m from the residential building in case of domestic sewage is recommended, depending on the type of pretreatment.
- In case of industrial effluents, site-specific plan from residential areas is required. If properly designed and built, treatment systems do not create any odour or nuisance in the vicinity.
- The location is to be selected in such a manner that drinking water sources are not impaired.

- As far as possible, the site must be safe from flooding. Normal water logging does not create a problem as after the water level recedes, plant can start operating.
- The selected site should be protected from unauthorized access.
- It must be possible to dispose of the treated effluent at the selected site as per standards set by the concerned regulatory agency.
- The following precautions shall be taken such as
  - Treatment System has to be marked clearly/ labled as wastewater treatment systems.
  - The site should have sufficient space for maintenance.
  - Natural slope should be used, to avoid the need for pumps.
- The application of Phytorid Treatment System and the design depends on the availability of suitable filling material for the filter beds.
- It is basically recommended to use locally available filter material to reduce the construction cost.

1.10.2 Pretreatment System

- Sand settling devices, grease traps, gratings and sieves have to be used according to the characteristics of the raw wastewater.
- In nallas, alternative system should be kept and designed.
- Industrial effluents have to be characterized fully before deciding upon adequacy and type of pretreatment.
- All effective pretreatment systems can be combined with Phytorid Treatment System to work effectively.

1.10.3 Filter Media

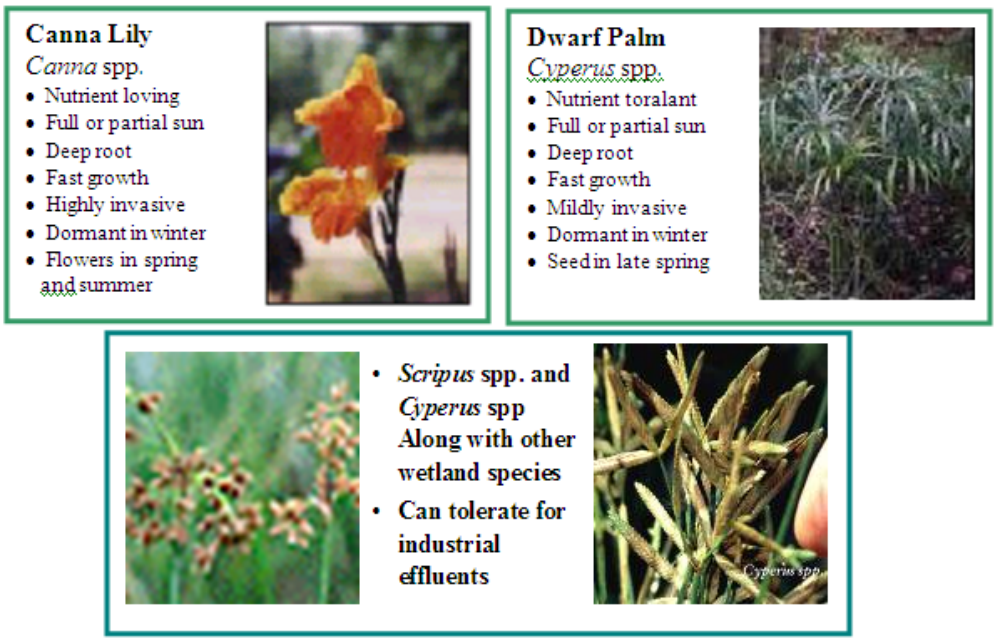
- The filter media effective for the biological treatment must consist of multiple grade of gravel, and a comparable media.
- Specific design of the correct filter media according to the available material is the most important step in the design process.
- Irregular shapes of the gravel / pebbles should be chosen, if available, for the infiltration area in horizontal system and for the drainage area.

1.10.4 Construction Details

- All the construction for the phytorid system should be waterproof. Inside baffles can be constructed of brickworks.
- Freeboard of at least 20 cm distance from bed surface to the upper edge of the lateral sealing is to be provided.
- Should have free access to all operational points like manholes, pumping stations, maintenance locations and sampling points. The access has to be constructed in a way, that crossing of the filter bed is avoided.
- Treatment System shall be designed in such a way that they are integrated into landscape as much as possible.
- Protective measures against the undesired water inflow are indispensable such as bunding all around.
- Inlet structures should be constructed that they distribute the incoming wastewater uniformly to the filter beds
- Verification is to be carried out to prove the correct function of the inflow structures. Hydraulic calculations of the infiltration section / area have to be done with a safety of one order of magnitude.
- Inlet and outlets can be planned with PVC pipes.
- Perforated PVC pipes should be inserted in the filter beds for filter cleaning or sampling.

1.10.5 Plantation and Stabilization

- Plant selection and placement are determined by the system design. Selection of plant species should be based on the final water quality discharge /reuse.
- Primary benefit of these plants is that they beautify the garden and provide color. Using plants that flower in different seasons will keep the treatment system beautiful all year long.
- Stabilization of plant species should be done for the period of 30-45 days along with root enhancer.
- The following plant species should be stabilized and planted in the Phytorid beds/ system
    - *Canna indica* (Indian Shot),
    - *Colocasia esculenta* (Green Taro),
    - *Cyperus alternifolius* (Umbrella Palm),
    - *Iris pseudacorus* (Yellow Iris),
    - *Juncus bufonius* (Toad Rush),
    - *Pennisetum purpureum* (Purple Fountain Grass),
    - *Scirpus validus* (Softstem Bulrush),
    - *Strelitzia reginae* (Bird of Paradise)
    - *Zantedeschia aethiopica* (Calla Lily)
    - *Lythrum salicaria* (Purple Loosestrife)



TYPICAL DESIGN FEATURES

The general concept design for the Phytorid system is presented in **Figure 9**. However, the design can vary based on land availability as also the level of treatment desired. The schematic also depicts modular concept of combining beds into series or parallel configurations, particularly for higher capacity treatment plants.

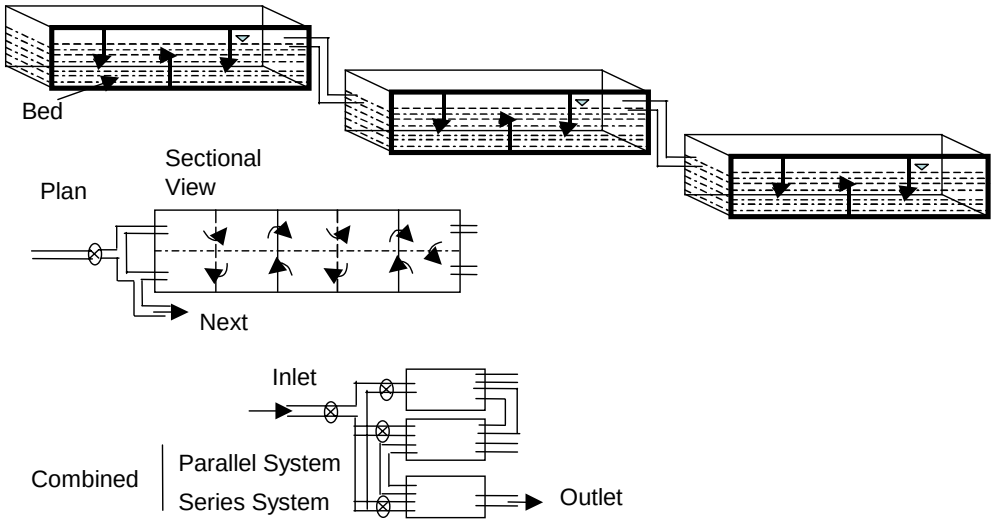


Figure.9: Cross Sectional View of Phytorid System

The sub-surface flow type, Phytorid system is proposed for the treatment of sewage or domestic wastewater which will consists of a basin or a channel with a barrier to prevent seepage, but the systems/ cells/ beds contain a suitable depth of porous media. A primary treatment facility would also be constructed along with basic for effective removal of solids and thus reduces the marginal BOD. The porous media also supports the root structure of emergent vegetation. The design of the Phytorid system assumes that the water level in the cells will remain below the top of the filter media.

The vegetation to be utilized for the said Phytorid system is very important. Various species of aquatic plants have been utilized to attain maximum efficiency in the treatment of domestic wastes. These include species like *Phragmites australis, Phalaris arundinacea, Glyceria maxima, Typha spp., Scirpus spp.*, other common grasses etc.

In a demonstration plant for treatment of nalla water it is proposed to take the sewage to Phytorid system and then treated water is either used for gardening or can be discharge into nalla at the downstream. Alternately it can also be given to nearby users who need water. A novel designing concept of using modular Phytorid systems on both sides of the nalla by drawing a controlled amount of sewage to each bed using an overflow system has been developed. In order to avoid flooding of Phytorid beds an arrangement of automatically openable gates within nalla will be provided. A typical design concept for a Phytorid system for nalla water treatment is depicted in **Figure 10**. The design specific to this project will be modified to include only phytorid bed downstream to the existing collection tank at the site.

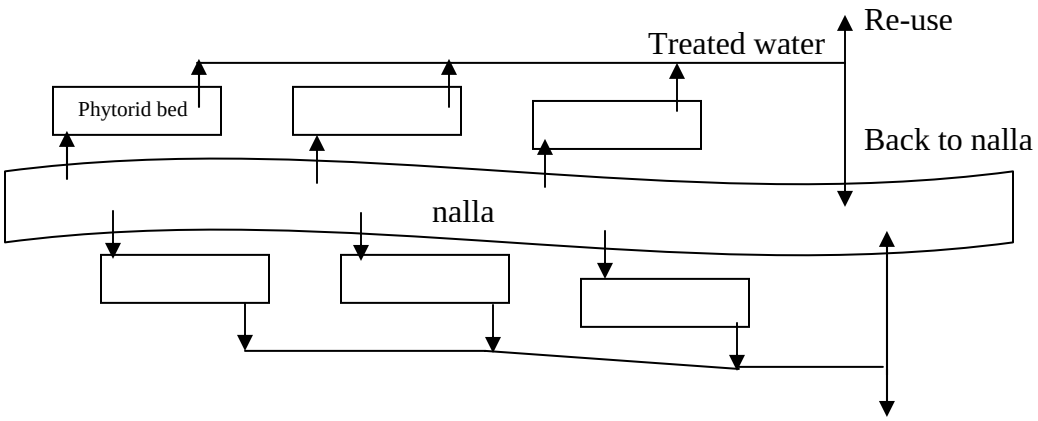


Figure 10: Modular arrangement of Phytorid beds on nalla side

Such arrangement will help in augmenting the plant capacity in future as the need arises and more water demand gets created.

Appendix IV

PSRT Based Improved Sanitation Treatment Unit

Introduction

Objective of this technology is to reduce the total suspended solid load and organics of raw sewage. Basic construction of the system consists of a baffled settler chamber as well as three anaerobic baffled chambers.

The working principle of the PSRT system is that the waste water enters the tank where large particles will be settled in the first part (as per their terminal velocity and hydrostatic pressure) of the system and further degradation of organics will be completed in the second part of the system.

Removal efficiency of the system is 30-35% higher in comparison to the conventional septic tank in term of organics. Optimum Hydraulic Retention Time of the PSRT system is in the range of 24 hour for achieving removal efficiency of 75-85% TSS removal and 70-75 % BOD removal.

Principle of Technology

PSRT system consists of following units:

- **Settler unit**
- **Anaerobic baffle tank**

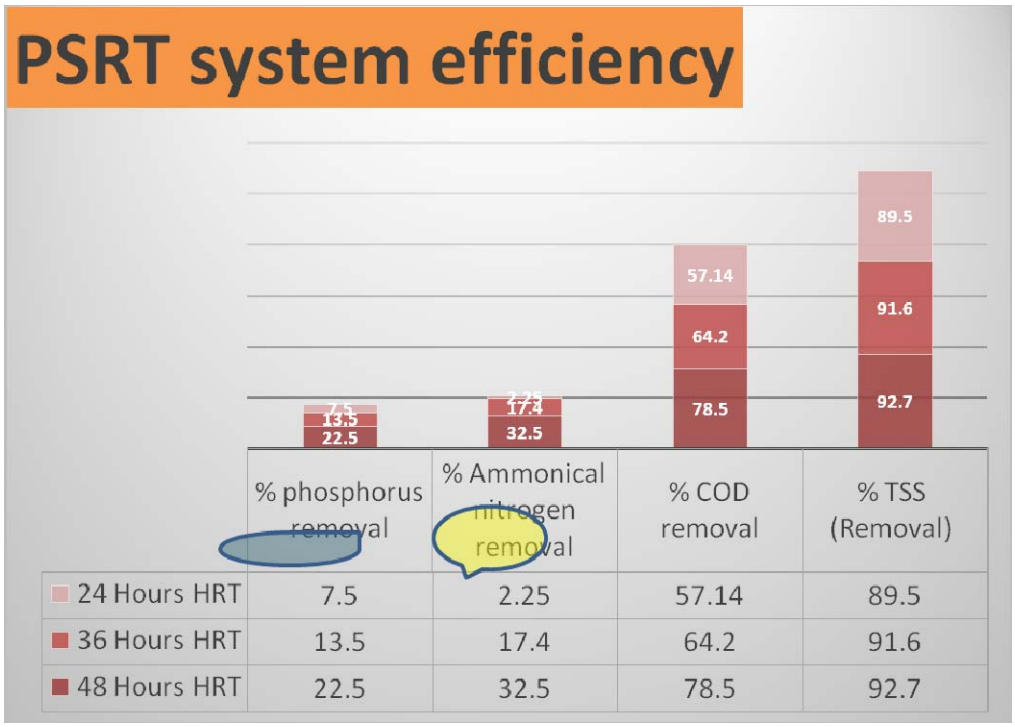
Anaerobic baffle unit consist of three compartments (A, B and C), outlet of A becomes inlet for B and outlet of B becomes inlet for C. outlet of C is final outlet of PSRT system.

PSRT based system is working on the principle of discrete settling, flocculation hindered settling, that will lead to partial treatment or removal of suspended solid in settler unit. Complete anaerobic treatment of wastewater has been taken place in the anaerobic treatment unit for further removal of organics and suspended solid.

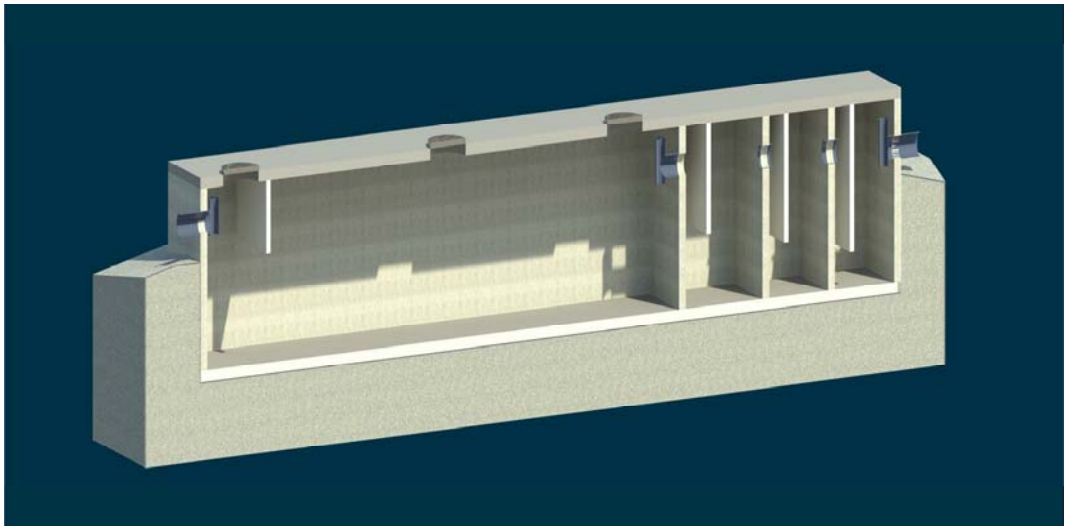
- Settling
  - Discrete, flocculation, Hindered settling & compression settling
- Anaerobic treatment
- Partial treatment in settling zone
- Complete anaerobic treatment

Performance Evaluation

Efficiency of the system is about 90% for total suspended solid, 75% for chemical oxygen demand, around 30% for nitrogen removal and about 20% for phosphorus removal. Efficiency of this system is higher than septic tank or conventional primary removal system.



Cross section view of PSRT based treatment unit



Advantage of the service is as follows

- Low cost treatment
- No energy involved in the treatment
- Can bear shock Load
- Seldom use of bio culture (though it is not mandatory)
- Stops dilution of the problem
- Nearly **90 – 95%** TSS removal
- Continuous System
- Low cost treatment
- No energy involved in the treatment
- Can bear shock Load
- decentralized treatment
    - Numerous advantages
        - No need to carry stored water frequently
        - Reduces load at STP/ River/ Nalla
        - Reduces silting in drainage system
- Recycle of water
    - Depends on end usage
- Low maintenance
- Water quality of the system falls in compliance with STP standards
- Treated water Can be used
    - In construction site (Labour Camps)
    - In Slum Areas
    - In rural areas
    - In hilly area etc…

Appendix VI

Nitrate Removal from Groundwater

Nitrates are very soluble and do not bind to soils, therefore, they have a high potential to migrate to groundwater sources. When these ground waters are purposed for potable drinking water sources, the presence of nitrates can pose serious health risks, especially for infants and pregnant women. Likewise, proper treatment of nitrate-containing wastewaters from industrial processes requires treatment prior to discharge to groundwater sources and/or for reuse.

Ion exchange provides effective nitrate removal

Nitrates have no detectable colour, taste or smell at the concentrations involved in drinking water supplies, and can occur both naturally and from man-made sources. Because they do not evaporate, nitrates/nitrites are likely to remain in water until consumed by plants or other organisms. Nitrate contamination originates mainly from agricultural operations including farm runoff and fertilizer usage, septic system failure and improper discharge of industrial and food processing waste and wastewater. Since they are very soluble and do not bind to soils, nitrates have a high potential to migrate to ground water. The primary inorganic nitrates which may contaminate drinking water are potassium nitrate and ammonium nitrate both of which are widely used as fertilizers.

Nitrates can occur in water sources at a level that does not generally cause health problems. The concentration level and length of exposure, however, can cause illness and death. In infants, serious illness is due to the conversion of nitrates by bacteria in the stomach to toxic nitrites. This can interfere with the oxygen-carrying capacity of the child's blood and can cause an acute condition in which health deteriorates rapidly over a period of days. Symptoms include shortness of breath and methemoglobinemia, a condition known as "blue baby" syndrome.

The US Environmental Protection Agency (EPA) has set a Maximum Contaminant Level Goal (MGL) for nitrates at 10 parts per million (ppm). In India Bureau of Indians Standards has set a limit of 45mg/l for nitrates. The EPA- approved treatment methods for removing nitrates/nitrites in waters destined for drinking purposes includes ion exchange and reverse osmosis.

Ion exchange: It is the most frequently used treatment technology for nitrate removal. This technology removes nitrate ions from the aqueous phase by replacing them with the anion present in the ion exchange resin. As contaminated water is passed through the resin, contaminant ions are exchanged for other ions, most often chlorides in the resin. Alternatively, nitrate-selective resins may also be used. The advantages of ion exchange are simple operation; the process is independent of temperature, can be automated, and is essentially unaffected by varying nitrate concentrations.

The system vessels are selected based upon available manpower, space limitations, access limitation and the specific water quality required. Based on the particulars of the contaminant to be removed and inlet quality requirements, generally there is acccess to a variety of ion exchange resins and other removal medias, such as activated carbon.

Once exhausted, the exchange vessels are removed and replaced with fresh, DOT-compliant vessels and returned to service. For non-potable applications, hazardous/non-hazardous contaminants are removed from the media/resin from the exhausted vessels for reuse.

For waters destined for potable use and drinking water applications, potable ion exchange resin canisters are used for the removal of organic and inorganic contaminants in surface and groundwater sources to meet drinking water standards. Each application is examined to determine the system configuration that best meets current and future needs. Once the treatment media is spent, or reaches the end of its useful life, the potable canisters are removed from the site and delivered to a local regeneration facility for destruction and/or landfill.

Reverse osmosis: Nitrate removal by reverse osmosis uses a semi-permeable membrane to selectively remove various inorganics within the water. Pressure is applied to the water to force it through the membrane. As the water passes through the membrane and effectively leaves the impurities behind. Membranes do not exhibit high selectivity for any given contaminant, and therefore, the RO process results in the removal of many contaminants, including nitrates. Estimates predict that from 85 to 95% of the nitrate can be removed with reverse osmosis. Actual removal rates may vary, depending on the initial quality of the water, the system pressure, and water temperature.

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This Document used as Reference

Appendix VI

Fluoride in groundwater:
Overview and evaluation of removal methods

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Utrecht
September 2007

Report nr. SP 2007-1

Table of contents

Figures

Tables

Summary

In this report information is given about methods for the removal of fluoride from groundwater. The methods can be used by domestic well owners and communal water suppliers. Based on available information, a matrix is composed to give an idea about the applicability of the methods for some given situations.

Fluoride removal methods

Methods	domestic + low costs	community + low costs	domestic + high F removal	community + high F removal	domestic + brackish water	community + brackish water
Activated Alumina						
Ion exchange						
Reverse osmosis						
Electrodialysis						
Nalgonda process						
Contact precipitation						
Bone Charcoal						
Calcined Clay						
Water Pyramid/Solar Dew						

The colours in the matrix correspond with the appropriateness of the method for the given situation:

- Green colour means that the method is very suitable
- Orange colour means average suitability
- Red colour means that the method is unattractive or not applicable for the given situation.

The Nalgonda process, Bone charcoal and Calcined clay are low costs methods for domestic use. On a community scale, the Nalgonda process is also a low cost option. If a high fluoride removal is necessary then activated alumina, reverse osmosis and electrodialysis are preferred methods.
For brackish water only reverse osmosis, electrodialysis and the Water Pyramid/Solar Dew method can be used.

1 Introduction

1.1 Special projects of IGRAC

The International Groundwater Resources Assessment Centre (IGRAC) aims to facilitate and promote world-wide exchange of groundwater knowledge. IGRAC focuses on activities that are prompted by the international groundwater community.

IGRAC's special projects intend to collect, analyse and display information on specific groundwater issues relevant to development of groundwater resources on various scales. Occurrence of hazardous compounds in groundwater is one of these issues. In 2004, IGRAC reviewed available information about groundwater contaminated with fluoride and displayed the probability occurrence of fluoride on continental maps (Brunt et al, 2004).
In this report, an overview is given of fluoride removal methods.

1.2 Occurrence of fluoride

Fluoride is an ion of the chemical element fluorine which belongs to the halogen group. Fluoride has a significant mitigating effect against dental caries if the concentration is approximately 1 mg/l. However, continuing consumption of higher concentrations can cause dental fluorosis and in extreme cases even skeletal fluorosis. The WHO guideline value for fluoride in drinking water is 1,5 mg/l (WMO, 2004). High fluoride concentrations are especially critical in developing countries, largely because of lack of suitable infrastructure for treatment.

In groundwater, the natural concentration of fluoride depends on the geological, chemical and physical characteristics of the aquifer, the porosity and acidity of the soil and rocks, the temperature, the action of other chemical elements, and the depth of the aquifer.
Because of the large number of variables, the fluoride concentrations in groundwater (e.g. in Kenya, South Africa and India) can range from well under 1 mg/l to more than 35 mg/l.

1.3 Outline of the report

In chapter 2 an overview is given of removal methods. The methods are briefly described using fact sheets. Also some new interesting technologies are mentioned. The methods are intercompared in a table according to relevant criteria such as removal efficiency, capacity, costs, required skill and advantages and disadvantages.

Chapter 3 deals with the set-up of a fluoride removal system, the scale of use and the location for application (developing country or industrialized regions).

An evaluation of the methods is given in chapter 4.

Chapter 5 deals with the selection process. To help water users by choosing the most appropriate methods for their situation, process selection decision trees were made for both industrialized regions and developing countries.

The electronic version of this report is available on the IGRAC web-site: www.igrac.nl

2 Overview of removal methods

2.1 Common methods

The common methods used for the removal of fluoride from drinking water are divided in the following four categories:

- precipitation;
- adsorption and ion-exchange;
- membrane filtration processes;
- distillation.

Precipitation
Precipitation processes involve addition of chemicals and formation of fluoride precipitates. Among these are precipitations with calcium and aluminium salts. Precipitation chemicals must be added daily in batches and precipitation techniques produce a certain amount of sludge every day.

Adsorption and ion-exchange
Adsorption processes involve the passage of water through a contact bed where fluoride is removed by ion exchange or surface chemical reaction with the solid bed matrix. After a period of operation, a saturated column must be refilled or regenerated. The different adsorbents used for fluoride removal include activated alumina, carbon, bone charcoal and synthetic ion exchange resins.

Membrane filtration process
Reverse osmosis and electrodialysis are two membrane filtration processes which can be used for removal of fluoride.

Distillation
Distillation units can also be used for treating the drinking water. Large scale electrodialysis plants are already used for making drinking water out of brackish water with high fluoride concentrations (Zakia et al., 2001; Werner and von Gottberg, 1998). In many parts of North Africa, water is brackish and contains over 1.5 mg/l fluoride.

In appendix 1, eight fact sheets are presented for the most common fluoride removal technologies. Information is given about the following aspects:

- process and technology used
- equipment required
- removal performance
- scale/flow rate
- experience/state of the art
- costs
- advantages and disadvantages
- contact details and additional information.

Reverse osmosis, electro dialysis and distillation are advanced, large scale treatment technologies which are difficult to use in less advanced regions. However reverse osmosis units are nowadays also deliverable for household scale. Small scale point-of-use techniques like Nalgonda technique, Bone Charcoal, Contact Precipitation and Clay are more suitable for developing countries. Activated alumina and reverse osmosis are the most common technologies. Activated alumina can concurrently remove other anions, such as arsenate. Reverse osmosis achieves significant removal of virtually all dissolved contaminants. An overview of the fluoride removal methods is given in table 1.

Table 1: Fluoride removal methods (based on Heidweiller, 1990; Pickard and Bari, 2004 and BGS, 2003)

Techniques	Household	Community level	Removal efficiency (%)	WHO-level feasible	Water Loss	Capacity/dose	Working PH	Interferences	Operator skill	Relative costs	Advantages	Disadvantages
Precipitation												
Alum (aluminumsulphate)	x	x	>90%	yes	1-2%	150 mg/mg F	non-specific	-	low	medium-high	established process	sludge produced treated water is acidic residual Al present
Lime	x	x	>90%	yes	1-2%	30 mg/mg F	non-specific	-	low	medium-high	established process	sludge produced treated water is alkaline
Alum + Lime (Nalgonda)	x	x	70-90%	possible	1-2%	150 mg alum + 7 mg lime/mg F	non-specific optimum pH 6.5	-	low	medium-high	low-tech established process	sludge produced high chemical dose residual Al present
Gypsum + fluorite	x	x	?	no	1-2%	5 mg gypsum + <2 mg fluorite/mg F	non-specific	-	medium	low-medium	simple	requires trained operators low efficiency, high residual CaSO4
Calcium choride	x	x	> 90%	possible	1-2%	3 mg CaCl2/mg F	6.5-8					
Adsorption/ion exchange												
activated carbon	x	x	>90%	yes	1-2%	variable	<3	many	medium	high	-	many interferences large pH changes before and after treatment
plant carbon	x	x	>90%	?	1-2%	300 mg F/kg	7	-	medium	low-medium	locally deleverable	requires soaking in potassium hydroxide
zeolites	x	x?	>90%	yes	1-2%	100 mg F/kg	non-specific	-	medium	high	-	poor capacity
defluoron 2	x	x	>90%		1-2%	360 g F/m3	non-specific	alkalinity	medium	medium	-	disposal of chemicals used in resin regeneration
clay pots	x		60-70%	possible	1-2%	80 mg F/kg	non-specific	-	low	low	locally deleverable	low capacity, slow
activated alumina	x	x	85-95%	yes	1-2%	100 mg alumina/mg F (1200 g F/m3)	5.5	alkalinity	low	medium	proven effectiveness will treat current F and As low energy consumption sludge typically non-hazardous	source water pH adjustment to 6.5 spent regeneration solution contains high F (and As) concentrations chemical and sludge handling needed efficiency dependent on source water
bone	x	x	low?	possible	1-2%	900 g F/m3	>7	arsenic	low	low	locally available	may give taste; degenerates not universally accepted
bone char	x	x		possible	1-2%	1000 g F/m3	>7	arsenic	low	low	locally available high capacity	not universally accepted
Other												
electrodialysis		x	85-95%	yes	20-30%	high	non-specific	turbidity	medium	very high	will treat current F and As and other contaminants possitive public perception	high water loss high energy consumption high (capital) costs
reverse osmosis		x	85-95	yes	40-60%	high	non-specific	turbidity	medium	very high	will treat current F and As and other contaminants possitive public perception	high water loss high energy consumption high (capital) costs

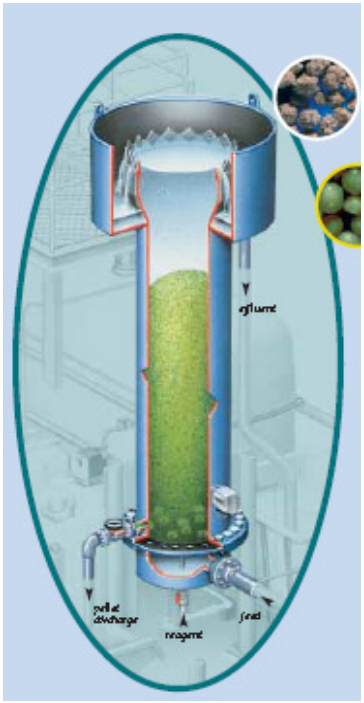
From table 1 it can be seen that majority of low -costtechnology methods rely on precipitation or flocculation or adsorption/ion-exchange processes. The Nalgonda[1] technique is probably the best known and most established method. This method uses a combination of aluminium sulphate and lime. The method can be used at a domestic scale (in buckets) or community scale. It has moderate costs and required materials are easily available. The removal efficiency is however moderate. Activated alumina and bone material are among the most appropriate removal methods (appropriate technology = most effective method). Activated alumina method also removes arsenic, but may not always be available or affordable. Bone products are not readily acceptable in some areas. Other highly efficient methods of removal include electro dialysis and reverse osmosis, but these methods tend to involve higher technology and higher costs and are therefore less suitable for many applications in developing countries.

2.2 New technologies

Besides the methods mentioned in table 1 several new methods have been introduced in recent years. These new technologies include:

- Crystalactor®
- Memstill® technology
- The WaterPyramid® solution
- The Solar Dew Collector system
- Boiling with brushite and calcite
- Use of new absorbents

Crystalactor®
In the Netherlands a new type of contact precipitator, named the Crystalactor®, is developed by DHV (Giesen, 1998). The Crystalactor® is a fluidized-bed type crystallizer also called a pellet reactor.



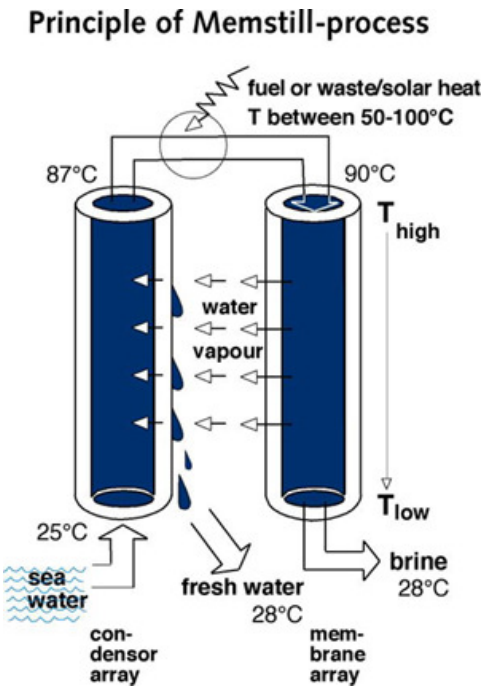
Source: DHV

In the reactor fluoride is removed from the water while calcium fluoride pellets with a diameter of 1 mm are produced. The major advantages of the Crytalactor® are that (1) the installation is compact, (2) calcium fluoride pellets with a high-purity are produced, (3) the produced pelltes have an extremely low water content 95% tot 10% moisture) and (4) the pellets can be reused. Costs comparisons show that the total treatment costs are typically approximately 25% of the costs for conventional precipitation. However the Crystalactor® is more suitable for wastewaters with high fluoride concentrations (> 10 mg/l). For treating drinking water, the Crystalactor® is only advisable in case of high fluoride concentrations (> 10 or 20 mg/l). For reaching a concentration below 1 mg/l fluoride, a second technique must be used afterwards (for example I.E).

[1] The Nalgonda technique is named after the Nalgonda District in India where it was first developed.

Memstill® technology

The Netherlands Organisation of Applied Scientific Research (TNO) has developed a membrane-based distillation concept which radically improves the economy and ecology of existing desalination technology for seawater and brackish water. This so-called "Memstill® technology" combines multi-stage flash and multi-effect distillation modes into one membrane module (Hanemaaijer et al., 2007).



Source: TNO

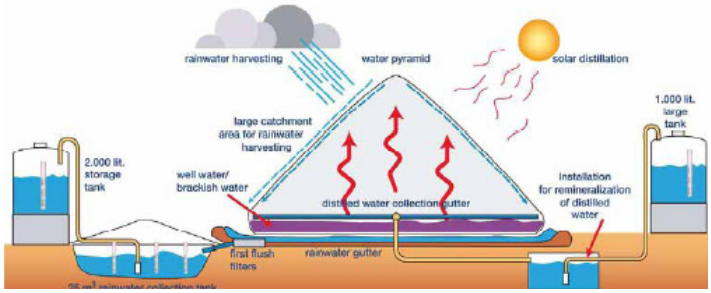
Cold feed water takes up heat in the condenser channel through condensation of water vapour, after which a small amount of (waste) heat is added, and flows counter currently back via the membrane channel. Driven by the small added heat, water evaporates through the membrane, and is discharged as cold condensate. The cooled brine is disposed, or extra concentrated in a next module.

The Memstill® technology can produce (drinking)water at a cost well below that of existing technologies like reverse osmosis and distillation.
With the Memstill® technology also anions like fluoride and arsenic are removed. It is expected that the Memstill® technology will be also developed for small scale applications using solar heat.

The WaterPyramid® solution

http://www.aaws.nl/home.htm - #http://www.aaws.nl/home.htm - #Aqua-Aero WaterSystems has developed the WaterPyramid® concept for tropical, rural areas (Aqua-Aero, 2007).
http://www.aaws.nl/home.htm - #http://www.aaws.nl/home.htm - #http://www.aaws.nl/home.htm - #The WaterPyramid® makes use of simple technology to process clean drinking water out of salt, brackish or polluted water. One of the pollutants could be fluoride. Most of the energy needed to clean the water is obtained from the sun.

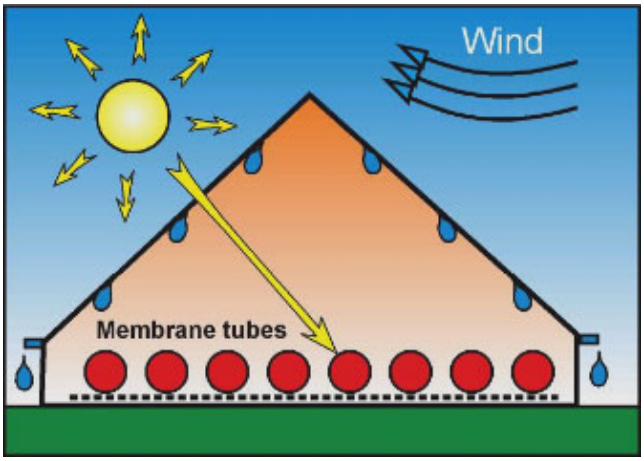
WaterPyramid® with a total area of 600 m^2 and situated under favourable tropical conditions, can produce up to 1250 litres of fresh water a day. The production rate is dependant on site specific factors such as climate and temperature, cloudiness and wind activity. Desalination is driven by the sun and the energy needed for pressuring the WaterPyramid® is obtained using solar cells in combination with a battery back-up system. Intermittent peak demands in electricity, related to e.g. (borehole) pumping and maintenance, are covered using a small generator system.



Source: Aqua-Aero WaterSystems

The Solar Dew Collector system
Solar Dew (Solar Dew, 2007) developed a new porous membrane to purify water using solar energy. The technique is similar to the WaterPyramid®.
Water sweats through the membrane, evaporates on the membrane's surface and increases the air humidity in the evaporation chamber.

Based on a temperature difference, pure water condenses on the cooler surfaces of the system.



Source: Solar Dew

The product water quality is very constant and similar to that of distilled water. The quantity depends on the intensity of the solar radiation. To avoid crystallization, the brine has to be drained periodically.

The system is able to process: sea-, brackish or contaminated waste water (e.g. with heavy metals, oil residue, boron, fluoride) with an allowable pH range of 5-11.

Boiling with Brushite and Calcite
Existing methods for defluoridating drinking water involve expensive high technology or are slow, inefficient and/or unhygienic. In Larsen and Pearce (2002), a new method is suggested, using a suspension of the minerals brushite (CaHPO4.2H2O) and calcite (calciumcarbonaat) followed by boiling. On a laboratory scale, this method gave good results. It was concluded that boiling a brushite/calcite suspension rapidly converts the two salts to apatite which incorporates fluoride if present in solution. This process may be exploited to defluoridate drinking water.

New adsorbents for adsorption of fluoride
In recent years, several new adsorbents for adsorption of fluoride have been investigated. For example, lanthanum-impregnated silica-gel, La(II) and Y(III)-impregnated alumina and aluminium-impregnated carbon have been used for adsorption of fluoride successfully by Raichur and Jyoti Basu (2001). The use of waste materials and low-cost materials as adsorbents for fluoride has been examined. Raichur and Jyoti Basu (2001) paid also attention to adsorption of fluoride onto mixed rare earth oxides. The rare earth oxides are naturally occurring in Southern India. The method is simple and has shown great potential for selective removal of fluoride. It was found that the mixture of rare earth elements adsorb fluoride rapidly and effectively. Most of the adsorption took place in the first 5-10 min. The adsorbent was found to load as high as 12.5 mg of fluoride per gram of adsorbent. The optimum pH was found to be about 6.5 for fluoride adsorption which makes it very suitable for use in drinking water treatment. Other ions such as sulphate and nitrate (up to 100 mg/l) did not greatly affect the adsorption of fluoride thereby indicating that the rare earth oxide is a selective adsorbent for fluoride.

3 Setup, scale of use and location

Defluoridation of drinking-water is technically feasible at point-of-use (at the tap), for small communities of users (e.g. wellhead application) and for large drinking-water supplies. Point-of-use systems can produce sufficient quantities of treated water for drinking and cooking requirements of several persons. Numerous plumbed-in, small distillation units are marketed that have been tested and can produce 10 litres per day or much larger volumes. Many certified low pressure reverse osmosis units are available with rated capacities in the range of 30-100 litres per day. Point-of-use defluoridation using activated alumina anion exchange is capable of removing fluoride from small volumes of water, but international performance standards have not been developed to date.

Community-sized, commercially available, package water treatment systems that use activated alumina or reverse osmosis technology also exist. They can be purchased as a complete unit that can be readily shipped and installed on-site.
These can produce hundreds of litres or more of treated, low fluoride water per day. Large defluoridation systems can also be designed and constructed on-site to engineer's specifications.

Conventional water treatment, as carried out in both rural and urban areas in industrialized countries, takes place typically:

- in a water works without direct involvement of the users,
- under the supervision of skilled operators, and
- where the affordability of treatment is taken for granted.

In such cases the method of treatment is well established and well controlled. However, it requires major input of resources and may have serious limitations or disadvantages in less-developed countries, especially in rural areas where the water users are scattered or the supply is entirely local. Here treatment may only be feasible at a decentralized level, e.g. at community village level or at household level (see table 2).

Table 2: Differences in characterization of water treatment methods in conventional systems in industrialized and developing countries (Fawell et al., 2006)

Criteria	**Industrialized Countries**	**Developing countries**
Set-up and water flow	Always continuous, often in columns	Often discontinuous in columns Fill and draw in batch
Scale and treatment site	Always at water works, usually close to water source	At water works At village community level At household level
Treatment media/process	Contact precipitation Activated alumina Synthetic resins Reverse osmosis Electrodialysis	Bone charcoal Contact precipitation Nalgonda Activated alumina Clay Other naturally occurring media

4 Evaluation

There is not a universal method which is appropriate under all social, financial, economic, environmental and technical conditions. None of the methods has been implemented successfully at a large scale in many parts of the world. All available defluoridation methods do have disadvantages, such as:
1. *High Cost-Tech;* i.e. either the price and/or the technology is high, demanding imported spare parts, continuous power supply, expensive chemicals, skilled operation or regeneration, etc. Reverse osmosis, ion exchange and activated alumina may thus be categorized as high cost-tech methods.

2. *Limited efficiency;* i.e. the method does not permit sufficient removal of the fluoride, even when appropriate dosage is used. As in the Nalgonda technique, the residual concentration would often be higher than 1 mg/l, unless the raw water concentration itself is relatively low.

3. *Unobserved breakthrough;* i.e. the fluoride concentration in the treated water may rise gradually or suddenly, typically when a medium in a treatment column is exhausted or even when the flow is out of control. As in the case of bone charcoal and other column filters, these techniques necessitate frequent monitoring of fluoride residual, or at least the rate and the volume of treated water, if unobserved breakthrough or the loss of removal capacity is to be avoided.

4. *Limited capacity;* while the removal capacity of bone charcoal or activated alumina may be about 2 mg of fluoride per gram of medium, much higher amounts of calcined clay for example have to be used in order to obtain appropriate removal.

5. *Deteriorated water quality;* this would by nature result in excessively high pH values, normally above 10. The water quality may also deteriorate due to bacterial grow, poorly prepared medium (bone charcoal) or due to medium escaping from the treatment container, e.g. ion exchange, alumina, Nalgonda sludge, etc.

6. *Taboo limitations;* in particular, the bone charcoal method is culturally not acceptable to Hindus. Bone charcoal originating from pigs may be questioned by Muslims. The charring of bones has also been reported to be unacceptable to villagers in North Thailand.

General comparison of the methods is given in table 3.

Table 3: General comparison of the most promising defluoridation methods used in developing countries (Fawell et al., 2006).

Advantages	**Defluoridation methods**				
	BC	**CP**	**Nal**	**AA**	**Cl**
No daily dosage of chemicals, i.e. no daily working load	+	-	-	+	+
Dosage designed for actual F conc. Independent of unit or plant	-	+	+	-	-
No risk of false treatment due to break point	-	+	+	-	-
Removal capacity of medium is independent of F concentration	-	+	-	-	-
No regeneration or renewal of medium is required	-	+	+	-	-
High removal efficiency can be ensured	+	+	-	+	-
Easy to construct, even by the users	+	+	++	+	+
Construction materials are cheap and widely available	+	+	++	+	+
Can be sized for one or several families or a group, e.g. a school	+	++	+	+	-
No risk of medium/chemicals unacceptability	-	-/+	+	+	-
No risk of deterioration of the original water quality	-/+	+	-/+	-/+	-

BC = bone charcoal; CP = contact precipitation; Nal = Nalgonda technique of aluminium sulfate and lime; AA = activated alumina; Cl = calcined clay; "risk" means in some cases

+ = advantage
- = disadvantage

5 Selection

For the selection of an appropriate fluoride removal method in industrial and developing countries two process selection decision trees have been made.

A decision tree for the industrialized countries is shown in figure 1.
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Figure 1: Decision tree for fluoride removal techniques applicable in industrialized countries

Activated Alumina and RO/ED are the favourite techniques for industrial countries when high capacity and proven technology is needed.

For small applications contact precipitation or ion exchange (in case the water contains only high concentrations of fluoride) is recommended.

A decision tree for the developing countries is shown in figure 2.

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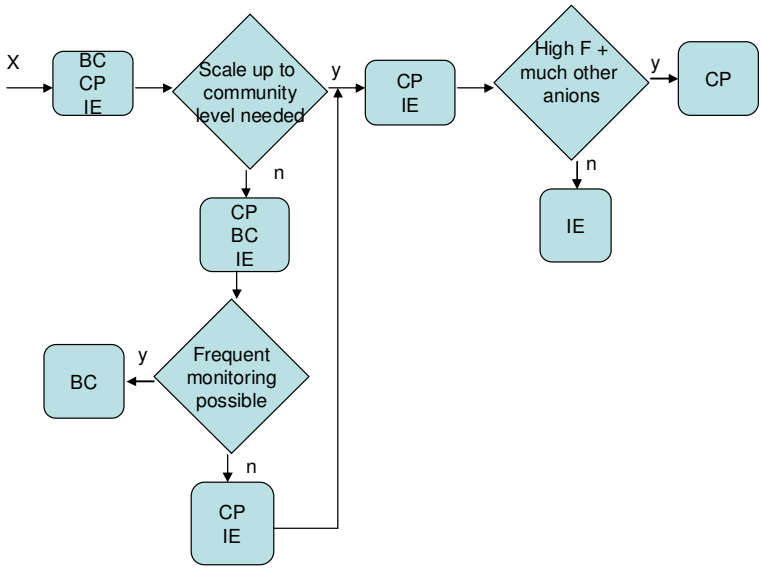


Figure 2: Decision tree for fluoride removal techniques applicable in developing countries.

Activated alumina is the favourable technique for developing countries in case high removal efficiency and high capacity is needed.

For situations where moderate removal efficiency is sufficient, the Nalgonda technique is preferable.

In other situations (high removal efficiency, small scale) contact precipitation or ion exchange (only high F-ions) is advisable. Bone charcoal can also be used if frequent monitoring is possible.

References

Aqua-Aero WaterSystems, 2007.
WaterPyramid. http://www.waterpyramid.nl

British Geological Survey (BGS), 2003.
Water Quality Fact Sheet: Fluoride. WaterAid International site.
http://www.wateraid.org/documents/plugin_documents/fluoride1.pdf.pdf

Brunt, R., Vasak, L. and Griffioen, J., 2004.
Fluoride in groundwater: Probability of occurrence of excessive concentration on global scale. Report SP 2004-2, International Groundwater Resources Assessment Centre (IGRAC).

Fawell, J., Bailey, K., Chilton, J., Dahi, E., Fewtrell, L. and Magara, Y., 2006.
Fluoride in Drinking water, World Health Organisation, IWA Publishing, Alliance House, 12 Caxton Street, London SW1H 0QS, UK.

Giesen, A., 1998.
Fluoride removal at low costs. European Semiconductor 20 (1998), 4. pp 103-105.

Heidweiller, V.M.L., 1992.
Fluoride Removal Methods. In Endemic fluorosis in developing countries: causes, effects and possible solutions (Frencken, J.E., editor). Publication number 91.082, NIPG-TNO, Leiden, The Netherlands, 1992

Larsen, M.J. and Pearce, E.I.F., 2002.
Defluoridation of Drinking Water by Boiling with Brushite and Calcite. Caries Research 2002;36:341-346 (DOI: 10.1159/000065964). Department of Dental Pathology, Endodontology and Operative Dentistry Royal Dental College, Aarhus.

Pickard, B. and Bari, M., 2004.
Feasibility of Water Treatment Technologies for Arsenic and Fluoride removal from groundwater. AWWA Water Quality Technology Conference, San Antonio, Texas; November 2004.
https://chppm-www.apgea.army.mil/dehe/pgm31/newpubs/WQTC2004ArsenicProc(Pickard%20and%20Bari).pdf

Raichur, A.M. and Basu Jyoti M., 2001.
Adsorption of fluoride onto mixed rare earth oxides. Separation and Purification Technology 24(1-2):pp. 121-127.

Solar Dew, 2007.
The Solar Dew Collector Sytem. http://www.solardew.com/index2.html

Hanemaaijer, J.H., van Medevoort, J., Jansen, A., van Sonsbeek, E., Hylkema, H., Biemans, R., Nelemans, B.and Stikker, A., 2007.
Memstill Membrane Distillation: A near future technology for sea water desalination,
Paper presented at the International Desalination Conference, June 2007, Aruba.

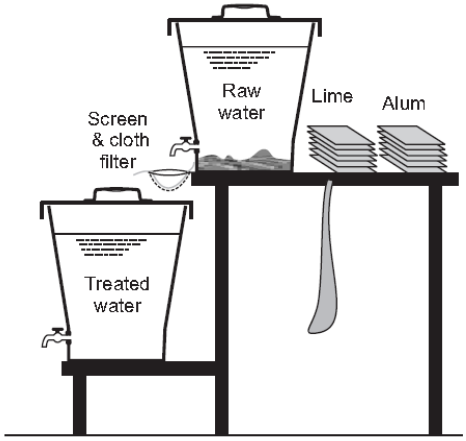
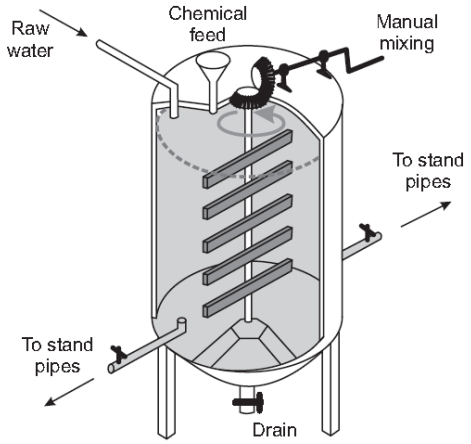
Werner, T.E. and von Gottberg, A.J.M., 1998.
Five Billion Gallons later- Operating Experience at City of Suffolk EDR plant. American Desalting Association 1998 North American Biennial Conference and Exhibition, Virginia.

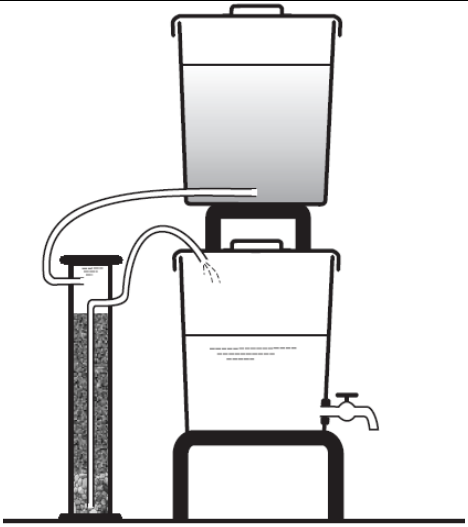
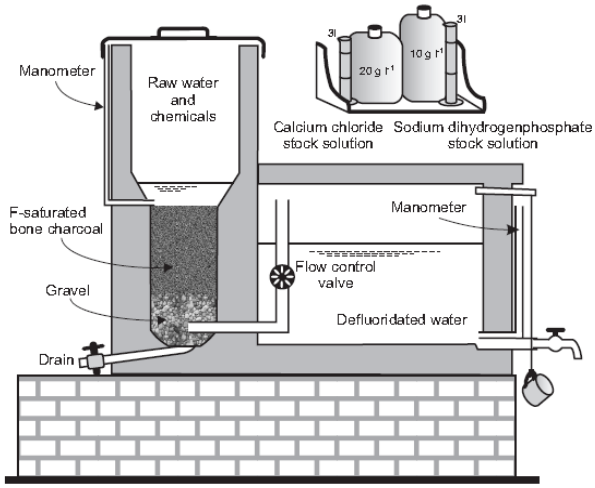
World Health Organisation (WHO), 2004.
Guidelines for Drinking-water Quality; Third Edition. WHO, Geneva.

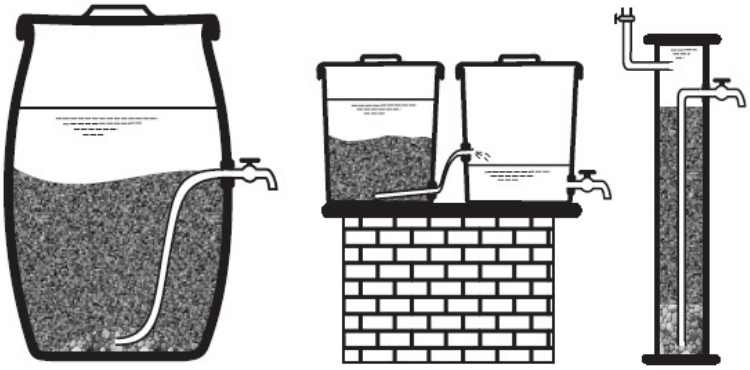
Zakia, A., Bernard, B., Nabil, M., Mohamed T., Stephan, N. and Azzedine, E.,
2001. Fluoride removal from brackish water by electrodialysis. Desalination 133 (2001), 215-233,
Elsevier Science BV.

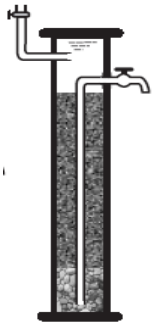
Appendix 1: Fact sheets fluoride removal technologies

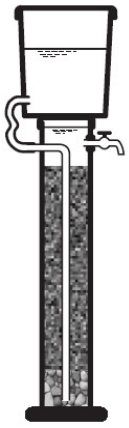
1. **Nalgonda process**
2. **Contact precipitation**
3. **Bone Charcoal**
4. **Activated Alumina**
5. **Clay**
6. **Reverse osmosis**
7. **Electrodialysis**
8. **Ion exchange**

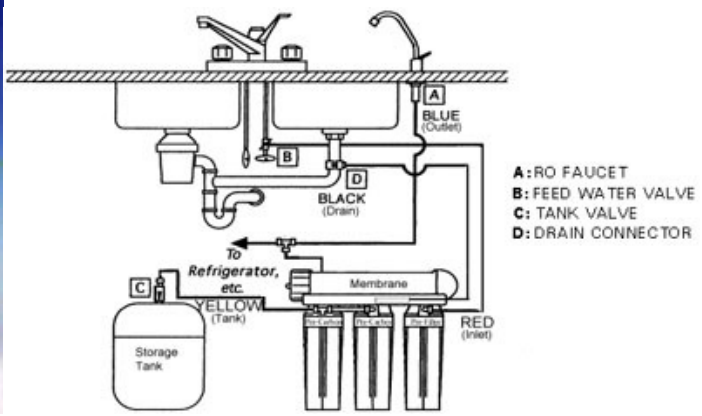
Technology	**Nalgonda**
Process	Aluminum sulphate based Coagulation-flocculation sedimentation
Technology Description	The Nalgonda process was adapted and developed in India by the National Environmental Engineering Research Institute (NEERI) and developed to be used at both the community or household levels. The process is aluminium sulphate based coagulation-flocculation sedimentation, where the dosage is designed to ensure fluoride removal from the water.
Equipment	 The Nalgonda defluoridation as adopted for community domestic use in the United Republic of Tanzania.  The Nalgonda technique for domestic and defluoridation
Removal performance	The method does not permit sufficient removal of the fluoride, even when appropriate dosage is used. The residual concentration would often be higher than 1 mg/ l, unless the raw water concentration itself is relatively low.
Scale/flow rate	20-60 litre basket (household) 10-100 litre/h (household)
Experience	Established process in India and Tanzania. The aluminium sulphate and lime process was proposed for defluoridation of water when fluoride in water became a health concern in the USA as the agent behind mottling of teeth. Four decades later the process was adopted by NEERI as the Nalgonda technique and developed for low cost use at all levels in India (household, village community and waterworks levels).
Costs	Low- costs. See http://www.who.int/water_sanitation_health/publications/fluoride_drinking_water_full.pdf
Advantages	• Widespread knowledge about the possibilities of solving the treatment problems at different levels, even at very low cost. • Understanding of the non-stoichiometric co-precipitation mechanisms for removal of fluoride in the flocculation process.
Disadvantages	• The treatment efficiency is limited to about 70 per cent. Thus the process would be less satisfactory in case of medium to high fluoride contamination in the raw water. • A large dose of aluminium sulphate, up to 700–1,200 mg l–1, may be needed. Thus it reaches the threshold where the users start complaining about residual sulphate salinity in the treated water. • The large dose also results in a large sludge disposal problem in the case of water works treatment.
Contact details/More information	National Environmental Engineering Research Institute (NEERI) http://www.neeri.res.in/ Fluoride in Drinking water WHO-report: http://www.who.int/water_sanitation_health/publications/fluoride_drinking_water_full.pdf

Technology	**Contact precipitation (general)**
Process	Precipitation
Technology Description	Contact precipitation is a technique by which fluoride is removed from the water through addition of calcium and phosphate compounds and then bringing the water in contact with an already saturated bone charcoal medium.
Equipment	 Contact precipitation for household use  Contact precipitation of fluoride as invented in Ngurdoto
Removal performance	> 90% removal of F
Scale/flow rate	Several (household, community)
Experience	Although it has so far only been implemented at village level in the United Republic of Tanzania and in Kenya, contact precipitation is probably suitable for implementation at any required level. The figures show contact precipitation plant as developed for household use and installed at various schools in the rural areas of the Arusha region, the United Republic of Tanzania.
Costs	low
Advantages	The process seems to be promising, because it implies: _ relatively low daily working load; _ high reliability without the need of surveillance of flow or effluent concentration; _ high removal efficiency, even in case of high raw water concentrations; _ low operating cost; and _ no health risk in the case of misuse or over-dosage of chemicals.
Disadvantages	
Contact details/More information	Fluoride in Drinking water WHO-report: http://www.who.int/water_sanitation_health/publications/fluoride_drinking_water_full.pdf Household water treatment: http://www.irc.nl/page/8028#fluoride

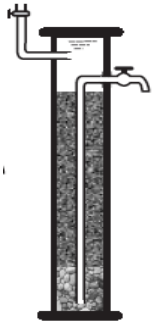
Technology	**Bone Charcoal**
Process	adsorption
Technology Description	Bone charcoal is a blackish, porous, granular material. The major components of bone charcoal are calcium phosphate 57–80 per cent, calcium carbonate 6–10 per cent, and activated carbon 7–10 per cent. In contact with water the bone charcoal is able, to a limited extent, to absorb a wide range of pollutants such as colour, taste and odour components. Moreover, bone charcoal has the specific ability to take up fluoride from water.
Equipment	 Three most common domestic units for sorption defluoridation [WHO]. The figure above illustrates the three most common types of domestic bone charcoal filters. One of the differences concerns the water flow in the filter. Another difference between the various configurations is whether the filter allows the filter medium to drain water, if treated water is withdrawn without ensuring an adequate influent, allowing the medium to become dry. "Drying" the medium results in disturbance of the sorption process and more contact time would be required to re-establish treatment. Unfortunately this point is overlooked in many household filter designs.
Removal performance	Fluoride concentration can be reduced to less than or equal to 1 mg/l
Scale/flow rate	20-60 litre basket (household)
Experience	Bone charcoal is the oldest known water defluoridation agent. It was used in USA in the 1940s through to the 1960s, when bone charcoal was commercially widely available because of its large scale use in the sugar industry (WHO). The first domestic defluoridators were developed in the early 1960s as column filters similar to the one shown in the figure above. Today bone charcoal defluoridation at waterworks has been replaced by the use of ion-exchange resins and activated alumina. At a domestic level, bone charcoal defluoridation seems to work well in Thailand and Africa, but so far there is no experience of wide scale implementation.
Costs	low
Advantages	locally available simple and easy to build
Disadvantages	may give taste; degenerates not universally accepted
Contact details/More information	Fluoride in Drinking water WHO-report: http://www.who.int/water_sanitation_health/publications/fluoride_drinking_water_full.pdf

Technology	**Activated alumina**
Process	adsorption
Technology Description	Activated alumina is aluminium oxide (Al2O3) grains prepared to have a sorptive surface. When the water passes through a packed column of activated alumina, pollutants and other components in the water are adsorbed onto the surface of the grains.
Equipment	  column filter household filter The activated alumina process is carried out in sorption filters as shown in the figure above. In order to avoid the monitoring of the water quality, the unit is supplied with a water meter allowing for direct indication of the cumulative water flow. After treatment of, for example, 2,000 litres equivalent to 250 BV of water containing about 5 mg/l, the unit is opened for renewal of the 8 kg of medium. Alternatively the unit is dismounted for regeneration by the dealer.
Removal performance	According to WHO the fluoride removal capacity of alumina is between 4 and 15 mg g^{-1}. Experience from the field, however, shows that the removal capacity is often about 1 mg g^{-1} (Fawell et al., 2006). Thus there seems to be a large difference in the degree of "activation" of alumina products. One of the explanations may be due to variation in pH. The capacity of alumina is highly dependent on pH, the optimum being about pH 5.
Scale/flow rate	Suitable for both household and community scale
Experience	Activated alumina was proposed for defluoridation of water and a drum filter was patented for domestic use as early as 1936 (WHO). Since then activated alumina has become the subject of several patents and, due to commercial interests, one of the most advocated defluoridation methods. The activated alumina process was evaluated for fluoride removal from an underground mine water in South Africa in the early 1980s and it was found that potable water could be produced from an underground mine water with a fluoride concentration of approximately 8 mg/l. Two 500×10^3 litres per day defluoridation plants were installed as a result of the investigation (WHO-report).
Costs	It was previously considered that the activated alumina process, due to high chemical cost and non-availability in markets, was not a consideration for most developing countries. This is no longer the case. Experience, mainly from India, Thailand and China, indicates that activated alumina may under certain conditions be affordable for low income communities.
Advantages	Proven effectiveness, will treat current F and S
Disadvantages	Spent regeneration solution contains high F concentrations
Contact details/More information	http://www.thewaterexchange.net/fluoride-water-filters.htm http://www.crystalquest.com/data%20sheet%20fluoride.htm Fluoride in Drinking water WHO-report: http://www.who.int/water_sanitation_health/publications/fluoride_drinking_water_full.pdf

Technology	**Clay**
Process	Adsorption
Technology Description	Clay is an earthy sedimentary material composed mainly of fine particles of hydrous aluminium silicates and other minerals and impurities. Clay is fine-textured, plastic when moist, retains its shape when dried and sinters hard when fired. These properties are utilized in manufacture of pottery, brick and tile. Both clay powder and fired clay are capable of sorption of fluoride as well as other pollutants from water.
Equipment	 Stratified column of brick chips, pebbles and coconut shells as used in Sri Lanka. Domestic clay column filters are normally packed using clay chips found as waste from the manufacture of brick, pottery or tile. The figure beneath illustrates such a column filter. It resembles the filter used in Sri Lanka (WHO-report) The filter is based on up-flow in order to allow for settling of suspended solids within the filter bed. The filter does not have a clean water reservoir and the filtration rate is controlled by slow withdrawal through the tap.
Removal performance	60-70%
Scale/flow rate	Household scale
Experience	According to Fawell et al. (2006) nearly 80 per cent of 600 clay column defluoridators installed in households in Sri Lanka were found in operating condition after being monitored for different periods from two years onwards. The described technology was found to be sustainable, but only if the users were motivated through information and motivation campaigns (Fawell et al., 2006).
Costs	low
Advantages	locally available
Disadvantages	low capacity, slow, low removal efficiency, hygienic aspects because of use of clay
Contact details/More information	Fluoride in Drinking water WHO-report: http://www.who.int/water_sanitation_health/publications/fluoride_drinking_water_full.pdf

Technology	**Reverse osmosis**
Process	Membrane technology
Technology Description	Reverse osmosis is a membrane technology that uses pressure to force water through a semi-permeable membrane, thereby removing dissolved solutes from solution based on particle size, dielectric characteristics, and hydrophilic/hydrophobic tendencies. RO can be used as a stand-alone treatment for most source waters, Beside fluoride molecules also other molecules will be retained. RO is listed as a fluoride removal BAT (Best Available technique).
Equipment	 RO water filter for household  Reverse Osmosis Water Filter Diagram
Removal performance	85-95% removal of F-
Scale/flow rate	Varies, there are RO-filters for household use and RO-units for community level
Experience	State of the art (small scale and community scale)
Costs	Very high
Advantages	RO is EPA-listed BAT for both F and As Familiarity with membrane separation system; Will treat current (F/As) and possible future contaminants of concern; Positive public perception
Disadvantages	High water loss (20-40%) due to high source water silica concentrations (for RO); High energy consumption; High treatment technology capital costs; Pre- (filtration) and post- (pH/alkalinity adjustment) treatment may be needed; Chemical handling facilities needed; Multiple systems needed to achieve water conservation goals (<5% water loss); Skilled operator required.
Contact details/More information	www.thewaterexchange.net/fluoride-water-filters.htm www.crystalquest.com

Technology	**Electrodialysis (ED)**
Process	Membrane proces
Technology Description	Electrodialysis (ED) is a membrane process similar to RO, except that ED uses an applied d.c. potential (electric current), instead of pressure, to separate ionic contaminants from water. Because water does not physically pass through the membrane in the ED process, particulate matter is not removed. Thus, ED membranes are not technically considered filters. The EDR process product water quality is comparable to RO, and may require post-treatment stabilization. The EDR process is often used in treating brackish water to make it suitable for drinking, and tends to be most economical for source water TDS levels in excess of 4,000 mg/L.
Equipment	 EDR
Removal performance	85-95% removal of F-
Scale/flow rate	Community scale
Experience	State of the art technique for brackish water
Costs	Very high
Advantages	Familiarity with membrane separation system; Will treat current (F/As) and possible future contaminants of concern; Positive public perception.
Disadvantages	Water loss, high costs, brine discharge, see also disadvantages RO
Contact details/More information	http://www.gewater.com/index.jsp

Technology	**Ion exchange**
Process	Ion exchange
Technology Description	The most common ion-exchange removal methods are activated alumina, activated carbon, bone char, granulated bone media, ion exchange resins (defluoron 2) or clay minerals. Ion exchange removal methods using activated alumina, clay and bone charcoal are described separately. The water is filtered down trough a column packed with an ion exchange resin. When the adsorbent becomes saturated with fluoride ions, the filter material has to be back washed with a mild acid or alkali solution tot clear and regenerate it. The effluent form backwashing is rich in accumulated fluoride and must be therefore disposed of carefully tot avoid recontamination nearby groundwater.
Equipment	 column filter
Removal performance	Medium-high; Depends on quality of water
Scale/flow rate	Suitable for both community and household use
Experience	Less experience with strong anion-exchange resins because of low capacity and relative high costs
Costs	Rel. high
Advantages	
Disadvantages	High costs, low capacity, sorption of other anions, Fluoride concentration must be less than 10 mg/l.
Contact details/More information	Resins: http://www.dow.com/ Filters: http://www.ionindia.com/product_range.html

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Annexure I

Water Quality Criteria (CPCB)

Annexure II & IIa

Water Quality Standards for Best Designated Usage (MPCB) and General Standards for Discharge of Environmental Pollutants

Annexure III

Receiving Sea Water Standards for Different Categories, Applicable Parameters and Pertinent Issues

Annexure IV

Drinking Water Quality Standards

Annexure V

Water Quality Indices of Rivers of Maharashtra

Annexure VI

Map of Surface and Sea Creek Water Quality Index of Maharashtra State (2007-11)

Annexure VIa

List of Municipal Corporation / Councils Wastewater Discharges into Rivers Stream /Bassin

Annexure VII

Percent Exceedance Monitoring Locations of River Water

Annexure VIII

Water Quality Indices for Sea Water

Annexure IX

Five Years Descriptive Statistics of Ground Water Quality

Annexure X

District wise Water Quality Indices of Maharashtra State (2007-2011)

Annexure XI

Map of Ground Water Quality Index of Maharashtra State (2007-2011)

Appendix I

Measuring, Monitoring and Controlling of Wastewater Treatment Plants using Sensor Network System

Appendix II

Floating Wetland Ecosystem (FWE)

Appendix III

Application of Natural Methods for Sewage Treatment and Polishing of Treated Wastewater

Appendix IV

PSRT Based Improved Sanitation Treatment Unit

Appendix V

Nitrate Removal from Groundwater

Appendix VI

Fluoride in Ground: Overview and Evaluation of Removal Methods -IGRAC