

MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.

Water Quality during Year - 2017-18

Natural Water Resource : River Narmada
Description of Sampling Station: : River Narmada At Amarkantak origin point dist.Anuppur

S.No.	Characteristic	Unit	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb	March	Av.	Maxi.	Mini.
1	Date of Sampling		12.04.17	15.05.17	20.06.17	05.07.17	19.08.2017	05.09.17	24.10.17	24.11.17	15.12.17	01.01.18	01.02.18	6.03.18			
2	Appearance		Clear	Clear	Clear	Clear	Clear	clear	Clear	Clear	Clear	Clear	Clear	Clear			
3	Temperature	oC	25.8	35.2	27	26	28.4	28.8	27.2	23.4	24.6	20.2	19.5	22.6	25.7	35.2	19.5
4	Turbidity	NTU	2.5	2.9	3.2	3.4	3.6	2.2	2.9	2.5	2.8	1.7	1.6	1.5	2.6	3.6	1.5
5	Colour	PCS	C.L	C.L	C.L	C.L	C.L	C.L	C.L	C.L	C.L	C.L	C.L	C.L			
6	Odour	T. No	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L			
7	pH	pH Unit	7.39	7.42	7.56	7.62	7.42	7.17	7.68	7.58	7.62	6.9	7.42	7.45	7.4	7.68	6.9
8	Sp. Conductivity	µMhos/cm.	208.2	218.6	239.5	228.4	194.4	189.2	183.2	176.3	186.5	179.3	191.3	205.6	200.0	239.5	176.3
9	T. Solids	mg/l	166	146	155	168	172	183	175	161	172	165	159	171	166.1	183	146
10	D. Solids	mg/l	157	136	143	154	158	165	162	148	161	155	151	164	154.5	165	136
11	S. Solids	mg/l	9	10	12	14	14	18	13	13	11	10	8	7	11.6	18	7
12	Amm. Nitrogen	mg/l	Trace	0.02	Trace	Trace	Trace	Trace	BDL	0.06	0.04	0.12	0.02	0.01	0.0	0.12	0.01
13	Nitrite Nitrogen	mg/l	Trace	0.003	Trace	Trace	Trace	Trace	BDL	BDL	BDL	0.02	0.004	0.002	0.0	0.02	0.002
14	Nitrate Nitrogen	mg/l	0.22	0.2	0.42	0.62	0.6	0.4	0.62	0.2	0.18	0.2	0.42	0.22	0.4	0.62	0.18
15	Phosphate (PO ₄)	mg/l	ND	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL			
16	Chloride	mg/l	24.4	29.5	24.4	24.6	19.7	14.7	19.7	14.7	14.7	14.7	14.7	19.7	19.6	29.5	14.7
17	Sulphate (SO ₄)	mg/l	ND	BDL	2.2	2	Trace	Trace	2.4	3	3.8	3.6	3.2	3.8	3.0	3.8	2
18	T. Alkalinity	mg/l	20	16	20	24	28	24	32	28	24	32	28	32	25.7	32	16
19	T. Hardness	mg/l	80	88	84	88	96	92	80	80	88	92	88	84	86.7	96	80
20	CalciumHardness	mg/l	52	48	52	52	64	64	60	56	56	72	64	56	58.0	72	48
21	Magnesium H.	mg/l	28	40	32	36	32	28	20	24	32	20	24	28	28.7	40	20
22	D. Oxygen	mg/l	7	7.1	6.8	7	7.2	7	7.4	7.4	7.6	7.1	6.9	6.8	7.1	7.6	6.8
23	B.O.D.	mg/l	0.8	1.2	0.8	0.6	1.5	1.4	1.1	1.2	1.1	0.8	1.2	1.4	1.1	1.5	0.6
24	C.O.D.	mg/l	5	4.8	5	5	4.8	9.6	5	5	4.8	4.8	5	4.8	5.3	9.6	4.8
25	Sodium	mg/l	-	-	-	-	-	-	-	8	7.4	8.8	9.4	5.15	7.8	9.4	5.15
26	Potassium	mg/l	-	-	-	-	-	-	-	1.2	1.6	1.9	1.6	2.12	1.7	2.12	1.2
27	T. Coliform	MPN/100ml	<2	2	4	4	2	<2	2	<2	<2	<2	2	1.8	2.5	4	1.8
28	F. Coliform	MPN/100ml	ND	<2	<2	<2	<2	ND	<2	ND	ND	ND	<2	ND	<2		
29	T.K.N.	mg/l	-	-	-	-	-	-	-	-	-	-	-	-			

CATEGORY

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MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.

Water Quality during Year - 2017-18

Description of Sampling Station: : River Narmada At Puskar Dam Amarkantak

S.No.	Characteristic	Unit	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb	March	Av.	Maxi.	Mini.										
1	Date of Sampling		New Station										14.1.18	01.02.18	6.3.18												
2	Appearance												Clear	Clear	Clear												
3	Temperature	oC											20.6	19.5	22.6	20.9	22.6	19.5									
4	Turbidity	NTU											2	1.8	2	1.9	2	1.8									
5	Colour	PCS											C.L	C.L	C.L												
6	Odour	T. No											O.L	O.L	O.L												
7	pH	pH Unit											7.5	7.79	7.79	7.7	7.79	7.5									
8	Sp. Conductivity	µMhos/cm.											182	211.6	348.2	247.3	348.2	182									
9	T. Solids	mg/l											171	176	211	186.0	211	171									
10	D. Solids	mg/l											163	165	199	175.7	199	163									
11	S. Solids	mg/l											8	11	12	10.3	12	8									
12	Amm. Nitrogen	mg/l											0.014	0.06	0.024	0.0	0.06	0.014									
13	Nitrite Nitrogen	mg/l											0.004	0.012	0.016	0.0	0.016	0.004									
14	Nitrate Nitrogen	mg/l											0.28	0.62	0.62	0.5	0.62	0.28									
15	Phosphate (PO ₄)	mg/l											0.012	0.022	0.013	0.0	0.022	0.012									
16	Chloride	mg/l											34.4	39.4	29.5	34.4	39.4	29.5									
17	Sulphate (SO ₄)	mg/l											3.4	5.2	4.8	4.5	5.2	3.4									
18	T. Alkalinity	mg/l											26	32	32	30.0	32	26									
19	T. Hardness	mg/l											108	112	116	112.0	116	108									
20	CalciumHardness	mg/l											80	80	84	81.3	84	80									
21	Magnesium H.	mg/l											28	32	32	30.7	32	28									
22	D. Oxygen	mg/l											7.4	7.7	7.4	7.5	7.7	7.4									
23	B.O.D.	mg/l											1.8	1.5	2	1.8	2	1.5									
24	C.O.D.	mg/l											7.8	10	19.2	12.3	19.2	7.8									
25	Sodium	mg/l											12.4	13.2	9.19	11.6	13.2	9.19									
26	Potassium	mg/l											2	4.1	2.9	3.0	4.1	2									
27	T. Coliform	MPN/100ml											40	44	50	44.7	50	40									
28	F. Coliform	MPN/100ml											<2	4	4	4.0	4	4									
29	T.K.N.	mg/l											-	-	-												
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MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.

Water Quality during Year - 2017-18

Natural Water Resource : River Narmada

Description of Sampling Station: : River Narmada at Amarkantat near Kapildhara dist. Anuppur

S.No.	Characteristic	Unit	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb	March	Av.	Maxi.	Mini.
1	Date of Sampling		12.04.17	15.05.17	20.06.17	05.07.17	19.08.17	05.09.17	24.10.17	24.11.17	15.12.17	01.1.18	01.2.18	6.3.18			
2	Appearance		Clear	Clear	Clear	Slight	Slight turbid	Clear	Clear	Clear	Clear	Clear	Clear	Clear			
3	Temperature	oC	26.4	34	26.8	26.2	28.6	29	27.4	23.3	24	20.4	19.5	22.5	25.7	34	19.5
4	Turbidity	NTU	2.7	3.4	3.2	3.2	6.4	3.4	2.8	3	3.8	1.8	2	2.2	3.2	6.4	1.8
5	Colour	PCS	C.L	C.L	C.L	C.L	C.L	C.L	C.L	C.L	C.L	C.L	C.L	C.L			
6	Odour	T. No	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L			
7	pH	pH Unit	7.41	7.61	7.62	7.8	7.71	7.33	7.82	7.62	7.72	7.52	7.85	8.12	7.7	8.12	7.33
8	Sp. Conductivity	µMhos/cm.	217	211.3	242.4	342.4	201.6	204.3	181.1	186.1	215.3	182.6	256.3	221.3	221.8	342.4	181.1
9	T. Solids	mg/l	176	178	187	212	196	191	188	173	189	156	182	191	184.9	212	156
10	D. Solids	mg/l	169	170	177	200	180	173	178	159	176	145	170	181	173.2	200	145
11	S. Solids	mg/l	7	8	10	12	16	18	10	14	13	11	12	10	11.8	18	7
12	Amm. Nitrogen	mg/l	Trace	Trace	0.03	0.01	0.06	0.06	0.08	0.14	0.08	0.012	0.024	0.04	0.1	0.14	0.01
13	Nitrite Nitrogen	mg/l	Trace	Trace	0.006	0.008	0.03	Trace	0.006	0.04	0.03	0.003	0.012	0.006	0.0	0.04	0.003
14	Nitrate Nitrogen	mg/l	0.4	0.22	0.4	0.64	0.6	0.6	0.8	0.48	0.62	0.24	0.42	0.26	0.5	0.8	0.22
15	Phosphate (PO ₄)	mg/l	BDL	BDL	BDL	BDL	0.2	0.24	0.04	0.16	0.12	0.1	0.04	0.014	0.1	0.24	0.014
16	Chloride	mg/l	24.4	29.5	34.4	34.4	19.7	19.7	29.5	24.6	29.5	24.4	29.5	19.7	26.6	34.4	19.7
17	Sulphate (SO ₄)	mg/l	4.4	_	3	4.6	4.2	3	4.8	4	5.2	3.8	4.2	4	4.1	5.2	3
18	T. Alkalinity	mg/l	24	28	28	32	32	28	36	24	20	28	32	32	28.7	36	20
19	T. Hardness	mg/l	96	92	100	112	116	124	76	116	120	88	96	92	102.3	124	76
20	CalciumHardness	mg/l	64	56	60	76	72	84	52	72	72	60	68	68	67.0	84	52
21	Magnesium H.	mg/l	32	36	40	36	44	40	24	44	48	28	28	24	35.3	48	24
22	D. Oxygen	mg/l	7.7	7.7	7.5	7.5	7.5	7.4	7.8	7.6	7.5	7.5	7.8	7.5	7.6	7.8	7.4
23	B.O.D.	mg/l	1.2	1.4	1.1	1.7	1.4	1.6	1.4	1.7	1.6	1.3	1.6	1.8	1.5	1.8	1.1
24	C.O.D.	mg/l	10	9.6	5	10	9.6	9.6	5	10	9.6	9.6	10	9.6	9.0	10	5
25	Sodium	mg/l	-	-	-	-	-	-	-	10.2	11.4	13.3	14.4	6.65	11.2	14.4	6.65
26	Potassium	mg/l	-	-	-	-	-	-	-	1.8	1.6	2.8	3.2	0.89	2.1	3.2	0.89
27	T. Coliform	MPN/100ml	27	33	34	70	70	40	22	44	40	33	27	21	38.4	70	21
28	F. Coliform	MPN/100ml	<2	<2	2	8	7	<2	<2	<2	<2	<2	2	1.8	4.2	8	1.8
29	T.K.N.	mg/l	-	-	-	-	-	-	-	-	-	-	-	-			

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MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.
Water Quality during Year - 2017-18

Description of Sampling Station: : River Narmada At Chandanghat Amarkantak

S.No.	Characteristic	Unit	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb	March	Av.	Maxi.	Mini.										
1	Date of Sampling		New Station										24.1.18	01.2.18	6.3.18												
2	Appearance												Clear	Clear	Clear												
3	Temperature	oC											20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
4	Turbidity	NTU											1.7	1.7	1.8	1.7	1.8	1.7	1.8	1.7	1.8	1.7	1.8	1.7	1.8	1.7	1.7
5	Colour	PCS											C.L	C.L	C.L												
6	Odour	T. No											O.L	O.L	O.L												
7	pH	pH Unit											7.49	7.92	8.1	7.8	8.1	7.49									
8	Sp. Conductivity	µMhos/cm.											178.1	208.7	248.7	211.8	248.7	178.1									
9	T. Solids	mg/l											162	165	187	171.3	187	162									
10	D. Solids	mg/l											153	158	179	163.3	179	153									
11	S. Solids	mg/l											9	7	8	8.0	9	7									
12	Amm. Nitrogen	mg/l											0.02	0.022	0.014	0.0	0.022	0.014									
13	Nitrite Nitrogen	mg/l											0.014	0.014	0.004	0.0	0.014	0.004									
14	Nitrate Nitrogen	mg/l											0.36	0.46	0.62	0.5	0.62	0.36									
15	Phosphate (PO ₄)	mg/l											BDL	0.012	0.024	0.0	0.024	0.012									
16	Chloride	mg/l											29.5	29.5	24.6	27.9	29.5	24.6									
17	Sulphate (SO ₄)	mg/l											4.6	4.8	5.2	4.9	5.2	4.6									
18	T. Alkalinity	mg/l											32	28	32	30.7	32	28									
19	T. Hardness	mg/l											104	104	112	106.7	112	104									
20	CalciumHardness	mg/l											80	72	80	77.3	80	72									
21	Magnesium H.	mg/l											24	32	32	29.3	32	24									
22	D. Oxygen	mg/l											7.7	7.9	7.7	7.8	7.9	7.7									
23	B.O.D.	mg/l											1.4	1.2	1.4	1.3	1.4	1.2									
24	C.O.D.	mg/l											9.6	5	9.6	8.1	9.6	5									
25	Sodium	mg/l											11	12.6	10.38	11.3	12.6	10.38									
26	Potassium	mg/l											1.8	3	0.88	1.9	3	0.88									
27	T. Coliform	MPN/100ml											33	27	27	29.0	33	27									
28	F. Coliform	MPN/100ml											<2	<2	2	2.0	2	2									
29	T.K.N.	mg/l												-	-												

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MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.

Water Quality during Year - 2017-18

Natural Water Resource : River Narmada At Dindori U/S

Description of Sampling Station: water sample near Intek well point dist. Dindori

S.No.	Characteristic	Unit	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb	March	Av.	Maxi.	Mini.
1	Date of Sampling		12.04.17	15.05.17	20.06.17	05.07.17	19.08.17	05.09.17	24.10.17	24.11.17	14.12.17	01.1.18	01.02.18	6.3.18			
2	Appearance		Clear	Clear	Clear	Slight	Slight	Clear	Clear	Clear	Clear	Clear	Clear	Clear			
3	Temperature	oC	28.5	36	27.6	26.4	29	29.4	28.2	23.5	25	20.4	20.5	22.8	26.4	36	20.4
4	Turbidity	NTU	2.8	3.4	3.8	6.4	22	6.2	3.6	5.4	4.8	1.9	1.8	1.6	5.3	22	1.6
5	Colour	PCS	C.L	C.L	C.L	C.L	C.L	C.L	C.L	C.L	C.L	C.L	C.L	C.L			
6	Odour	T. No	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L			
7	pH	pH Unit	7.84	8.01	7.68	7.72	7.7	8.02	7.71	7.89	7.76	8.12	7.94	7.96	7.9	8.12	7.68
8	Sp. Conductivity	µMhos/cm.	242.6	241.3	245.1	512.3	411.4	321.2	203.2	232.5	226.4	232	241.6	246.6	279.7	512.3	203.2
9	T. Solids	mg/l	204	197	200	387	390	211	196	192	213	196	212	179	231.4	390	179
10	D. Solids	mg/l	195	189	193	369	344	187	181	181	201	195	203	172	217.5	369	172
11	S. Solids	mg/l	9	8	7	18	46	24	15	11	12	10	9	7	14.7	46	7
12	Amm. Nitrogen	mg/l	Trace	0.02	0.06	0.08	0.04	0.06	0.02	0.12	0.16	0.13	0.024	0.014	0.1	0.16	0.014
13	Nitrite Nitrogen	mg/l	Trace	0.004	0.02	0.004	0.002	0.01	0.01	0.04	0.006	0.02	0.006	0.004	0.0	0.04	0.002
14	Nitrate Nitrogen	mg/l	0.61	0.68	0.8	0.82	1.2	0.6	0.62	0.48	0.62	0.32	0.42	0.26	0.6	1.2	0.26
15	Phosphate (PO ₄)	mg/l	ND	BDL	BDL	0.2	0.4	0.2	0.14	0.16	0.1	0.01	0.02	0.012	0.1	0.4	0.01
16	Chloride	mg/l	29.5	29.5	29.5	34.4	19.7	14.7	14.7	19.5	24.6	19.7	29.5	24.4	24.1	34.4	14.7
17	Sulphate (SO ₄)	mg/l	6.4	4.8	4.4	6.2	6	4.8	6	5.2	6.2	4.6	4.8	4.6	5.3	6.4	4.4
18	T. Alkalinity	mg/l	28	32	32	36	48	44	40	36	32	36	40	36	36.7	48	28
19	T. Hardness	mg/l	120	136	132	136	124	120	128	124	128	116	120	124	125.7	136	116
20	CalciumHardness	mg/l	88	76	76	88	76	76	80	76	76	92	88	84	81.3	92	76
21	Magnesium H.	mg/l	32	60	56	48	48	44	48	48	52	24	32	40	44.3	60	24
22	D. Oxygen	mg/l	8.2	7.9	7.8	7.7	7.8	8.1	8.1	8	7.9	7.8	8.2	8.1	8.0	8.2	7.7
23	B.O.D.	mg/l	1.1	1.3	0.7	1.8	1.4	1.5	1.6	1.3	1.2	1.1	0.9	1.4	1.3	1.8	0.7
24	C.O.D.	mg/l	10	9.6	5	15	19.2	9.6	10	10	9.6	4.8	5	4.8	9.4	19.2	4.8
25	Sodium	mg/l	-	-	-	-	-	-	-	12.4	11.6	14.2	15.8	11.2	13.0	15.8	11.2
26	Potassium	mg/l	-	-	-	-	-	-	-	2.6	2.4	2.6	2.8	0.92	2.3	2.8	0.92
27	T. Coliform	MPN/100ml	27	34	30	70	110	50	21	21	34	33	27	24	40.1	110	21
28	F. Coliform	MPN/100ml	<2	<2	<2	8	12	2	<2	<2	<2	<2	<2	1.8	6.0	12	1.8
29	T.K.N.	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.

Water Quality during Year - 2017-18

Natural Water Resource : River Narmada At Dindori

Description of Sampling Station: Dindori River Narmada At D/S after mixing to city domestic Dindori Near Jogotikaria Ghat Dist. Dindori

S.No.	Characteristic	Unit	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb	March	Av.	Maxi.	Mini.
1	Date of Sampling		12.04.17	15.05.17	20.06.17	05.07.17	19.08.17	05.09.17	24.10.17	24.11.17	14.12.17	01.1.18	1.02.18	6.03.18			
2	Appearance		Clear	Clear	Clear	Slight	Slight	Clear	Clear	Clear	Clear	Clear	Clear	Clear			
3	Temperature	oC	28.6	36	27.6	26.2	29	29.4	28.2	23.6	25	20.4	20.5	22.8	26.4	36	20.4
4	Turbidity	NTU	3.1	3.8	4.6	8.2	24	6.6	3.8	6	5.2	2	2.2	2.6	6.0	24	2
5	Colour	PCS	C.L	C.L	C.L	C.L	C.L	C.L	C.L	C.L	C.L	C.L	C.L	C.L			
6	Odour	T. No	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L			
7	pH	pH Unit	7.96	8.11	7.7	7.9	7.76	8.12	7.85	8.05	7.79	8.26	8.06	7.94	8.0	8.26	7.7
8	Sp. Conductivity	µMhos/cm.	256.4	287.3	341.4	551.6	418.6	343.2	221.5	343.2	266.4	234.6	263.4	273.1	316.7	551.6	221.5
9	T. Solids	mg/l	215	203	229	397	402	221	205	206	219	211	224	218	245.8	402	203
10	D. Solids	mg/l	204	191	218	376	354	193	189	193	205	202	213	208	228.8	376	189
11	S. Solids	mg/l	11	12	11	21	48	28	16	13	14	9	11	10	17.0	48	9
12	Amm. Nitrogen	mg/l	0.06	0.08	0.08	0.08	0.06	0.08	0.05	0.18	0.22	0.16	0.06	0.02	0.1	0.22	0.02
13	Nitrite Nitrogen	mg/l	0.008	0.006	0.04	0.006	0.004	0.02	0.02	0.06	0.04	0.042	0.014	0.006	0.0	0.06	0.004
14	Nitrate Nitrogen	mg/l	0.88	0.8	0.84	1.22	1.4	0.82	0.84	0.62	0.84	0.68	0.82	0.42	0.8	1.4	0.42
15	Phosphate (PO ₄)	mg/l	0.2	0.26	0.4	0.64	0.44	0.22	0.22	0.28	0.26	0.18	0.04	0.014	0.3	0.64	0.014
16	Chloride	mg/l	34.4	34.4	44.3	44.3	24.6	24.6	19.7	19.5	29.5	24.6	34.4	29.5	30.3	44.3	19.5
17	Sulphate (SO ₄)	mg/l	6.2	5.6	6	8.4	6.4	5	6.4	6.2	6.6	5.6	6.2	6	6.2	8.4	5
18	T. Alkalinity	mg/l	32	36	40	44	52	48	44	40	36	44	44	40	41.7	52	32
19	T. Hardness	mg/l	128	148	140	148	128	124	132	128	136	120	124	120	131.3	148	120
20	CalciumHardness	mg/l	88	80	80	96	84	72	84	76	80	96	96	92	85.3	96	72
21	Magnesium H.	mg/l	40	68	60	52	44	52	48	52	56	24	28	28	46.0	68	24
22	D. Oxygen	mg/l	8	8	8.2	7.9	7.6	8	8.4	8.2	8	7.9	8.3	8.1	8.1	8.4	7.6
23	B.O.D.	mg/l	1.7	2	1.6	2	1.8	2	1.8	1.8	2	1.5	1.6	1.9	1.8	2	1.5
24	C.O.D.	mg/l	20	19.2	10	20	28.8	19.2	10	20	19.2	9.6	10	9.6	16.3	28.8	9.6
25	Sodium	mg/l	-	-	-	-	-	-	-	14.6	15.2	16.2	17.4	11.51	15.0	17.4	11.51
26	Potassium	mg/l	-	-	-	-	-	-	-	2.8	2.6	4.8	5.1	0.99	3.3	5.1	0.99
27	T. Coliform	MPN/100ml	40	50	40	110	130	70	40	50	44	50	44	50	59.8	130	40
28	F. Coliform	MPN/100ml	<2	2	8	12	33	12	4	2	4	2	4	4	7.9	33	2
29	T.K.N.	mg/l	-	-	-	-	-	-	-	-	-	-	-	-			

CATEGORY

A A A B B B A A A A A A A B

MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.

Water Quality during Year - 2017-18

Natural Water Resource : Rever Narmada

Description of Sampling Station: Rever Narmada At Mandla Near Shamshanghat.

S.No.	Characteristic	Unit	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb	March	Av.	Maxi.	Mini.
1	Date of Sampling		15.4.17	5.5.17	20.6.17	6.7.17	4.8.17	5.9.17	7.10.17	8.11.12	0.12.17	1.1.18	6.2..18	6.3.18			
2	Appearance		--	--	--	--	--	--	--	--	--	--	--	--			
3	Temperature	oC	--	--	--	--	--	--	--	--	--	--	--	--			
4	Turbidity	NTU	1	2	6	8	6	15	1.5	2	3.2	3		1	4.4	15	1
5	Colour	PCS	C.L	C.L	C.L	C.L	C.L	C.L	C.L		--	--	--	--			
6	Odour	T. No	O.L	O.L	O.L	O.L	O.L	O.L	O.L		--	--	--	--			
7	pH	pH Unit	7.22	7.25	8.52	8.6	8.36	7.92	7.24	7.7	7.25	7.82	6.93	8.5	7.8	8.6	6.93
8	Sp. Conductivity	µMhos/cm.	186	304	203	182	370	169	245	280	339	264	310	231	256.9	370	169
9	T. Solids	mg/l	318	268	176	150	388	176	210	290	352	162	320	234	253.7	388	150
10	D. Solids	mg/l	276	236	164	124	364	132	173	244	304	148	258	209	219.3	364	124
11	S. Solids	mg/l	42	32	12	26	24	44	37	46	48	14	62	25	34.3	62	12
12	Amm. Nitrogen	mg/l	0.32	0.64	0.4	0.42	0.5	0.4	0.45	0.4	0.18	BDL	0.44	0.08	0.4	0.64	0.08
13	Nitrite Nitrogen	mg/l	1.34	0.09	0.3	0.22	0.35	0.2	0.3	0.35	0.36	0.21	0.34	0.05	0.3	1.34	0.05
14	Nitrate Nitrogen	mg/l	0.1	0.5	0.3	0.3	0.5	0.6	0.4	0.2	1.42	0.42	0.2	0.55	0.5	1.42	0.1
15	Phosphate (PO ₄)	mg/l	0.04	0.033	0.1	0.132	0.112	0.132	0.4	0.25	0.6	BDL	0.1	0.16	0.2	0.6	0.033
16	Chloride	mg/l	12.4	17.49	6	12.5	15	2.5	12	10	15	7	10	9	10.7	17.49	2.5
17	Sulphate (SO ₄)	mg/l	6.4	7.6	4.25	3.5	10	9.5	5	5	16	5	6	7.75	7.2	16	3.5
18	T. Alkalinity	mg/l	16	16	10	12	12	8	14	12	60	26	25	28	19.9	60	8
19	T. Hardness	mg/l	56	68	92	84	132	64	60	115	176	58	110	50	88.8	176	50
20	CalciumHardness	mg/l	48	40	80	76	104	56	45	80	132	42	80	28	67.6	132	28
21	Magnesium H.	mg/l	18	28	12	8	28	8	15	35	44	16	30	22	22.0	44	8
22	D. Oxygen	mg/l	7.9	7.8	7.7	7.8	7.2	7.8	7.4	7.5	7.4	10.4	8	8.2	7.9	10.4	7.2
23	B.O.D.	mg/l	1.3	1.2	0.9	0.8	1.8	1.3	1.5	1.5	1.9	0.4	1.7	1.1	1.3	1.9	0.4
24	C.O.D.	mg/l	12	12	8	8	16	8	12	12	20	7	17	12	12.0	20	7
25	Sodium	mg/l	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
26	Potassium	mg/l	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
27	T. Coliform	MPN/100ml	36	36	34	40	49	46	31	39	41	41	39	40	39.3	49	31
28	F. Coliform	MPN/100ml	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cat.			A	A	A	A	A	A	A	A	A	A	A	A	A	A	A

MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.

Water Quality during Year - 2017-18

Natural Water Resource : River Narmada

Description of Sampling Station: River Narmada At Near road bridge, Mandla.

S.No	Characteristic	Unit	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb	March	Av.	Maxi.	Mini.
1	Date of Sampling		15.4.17	5.5.17	20.6.17	6.7.17	4.8.17	4.9.17	7.10.17	8.11.17	0.12.17	1.1.18	6.2.18	6.3.18	--	--	--
2	Appearance		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3	Temperature	oC	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4	Turbidity	NTU	1		10	12	10	22	2	4.8	3.5	4		1	7.0	22	1
5	Colour	PCS	C.L	C.L	C.L	C.L	C.L	C.L	C.L	--	--	--	--	--	--	--	--
6	Odour	T. No	O.L	O.L	O.L	O.L	O.L	O.L	O.L	--	--	--	--	--	--	--	--
7	pH	pH Unit	7.24	7.34	8.46	8.5	8.34	7.82	7.3	7.8	7.52	7.76	6.8	8.14	7.8	8.5	6.8
8	Sp. Conductivity	µMhos/cm.	368	294	226	214	370	208	252	329	382	244	308	220	284.6	382	208
9	T. Solids	mg/l	318	286	192	198	384	220	225	288	392	246	318	232	274.9	392	192
10	D. Solids	mg/l	282	251	176	154	362	164	195	253	325	218	260	199	236.6	362	154
11	S. Solids	mg/l	42	35	16	34	22	56	30	35	57	28	58	33	37.2	58	16
12	Amm. Nitrogen	mg/l	0.8	0.32	0.46	0.42	0.44	0.4	0.4	0.35	0.14	BDL	0.44	0.13	0.4	0.8	0.13
13	Nitrite Nitrogen	mg/l	1.34	0.1	0.6	0.24	0.25	0.2	0.25	0.28	0.31	0.22	0.15	0.23	0.3	1.34	0.1
14	Nitrate Nitrogen	mg/l	0.12	0.8	0.3	0.35	0.5	0.6	0.35	0.3	1.7	0.45	0.15	0.8	0.5	1.7	0.12
15	Phosphate (PO ₄)	mg/l	0.04	0.04	0.132	0.165	0.112	0.165	0.5	0.2	0.5	0.132	0.11	0.23	0.2	0.5	0.04
16	Chloride	mg/l	14.99	14.99	12	22.5	15	2.5	10	12	12	7	12.47	10	12.1	22.5	2.5
17	Sulphate (SO ₄)	mg/l	7.6	6.4	5.25	3.5	10	10	4	4	13	6	5	7.75	6.9	13	3.5
18	T. Alkalinity	mg/l	18	18	16	20	10	12	12	16	56	38	30	28	22.8	56	10
19	T. Hardness	mg/l	72	66	120	124	128	80	75	120	168	54	105	60	97.7	168	54
20	Calcium Hardness	mg/l	44	42	96	96	96	64	50	80	124	42	85	38	71.4	124	38
21	Magnesium H.	mg/l	28	24	24	28	32	16	25	40	44	12	20	22	26.3	44	12
22	D. Oxygen	mg/l	7.9	7.9	7.6	7.6	7.3	7.8	7.4	7.6	7.6	7.6	8.2	8	7.7	8.2	7.3
23	B.O.D.	mg/l	1.4	1.2	1.1	1.2	1.6	1.2	1.4	1.8	1.8	0.6	1.3	1.3	1.3	1.8	0.6
24	C.O.D.	mg/l	12	12	8	8	24	8	10	14	13	7	8	7	10.9	24	7
25	Sodium	mg/l	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
26	Potassium	mg/l	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
27	T. Coliform	MPN/100ml	35	39	39	46	47	46	38	40	43	40	39	40	41.0	47	35
28	F. Coliform	MPN/100ml	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cat.			A	A	A	A	A	A	A	A	A	A	A	A	A		

**MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.
Water Quality during Year - 2017-18**

Natural Water Resource : River Narmada

Description of Sampling Station: River Narmada near Bhairav Temple at Shhastradhar Mandla

S.No	Characteristic	Unit	Jan.	Feb	March	Av.	Maxi.	Mini.
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New Station

1	Date of Sampling										7.1.18		7.3.18			
2	Appearance										--	--				
3	Temperature	oC									--	--				
4	Turbidity	NTU									2	1	8	3.7	8	1
5	Colour	PCS									--	--				
6	Odour	T. No									--	--				
7	pH	pH Unit									7.61	7.2	8.26	7.7	8.26	7.2
8	Sp. Conductivity	µMhos/cm.									216	240	310	255.3	310	216
9	T. Solids	mg/l									218	304	324	282.0	324	218
10	D. Solids	mg/l									189	236	298	241.0	298	189
11	S. Solids	mg/l									29	68	26	41.0	68	26
12	Amm. Nitrogen	mg/l									BDL	0.4	0.44	0.4	0.44	0.4
13	Nitrite Nitrogen	mg/l									0.3	0.35	0.2	0.3	0.35	0.2
14	Nitrate Nitrogen	mg/l									0.4	0.2	0.34	0.3	0.4	0.2
15	Phosphate (PO ₄)	mg/l									BDL	0.4	0.112			
16	Chloride	mg/l									7	7.47	15	9.8	15	7
17	Sulphate (SO ₄)	mg/l									5.25	5	10	6.8	10	5
18	T. Alkalinity	mg/l									30	25	12	22.3	30	12
19	T. Hardness	mg/l									62	95	156	104.3	156	62
20	CalciumHardness	mg/l									46	75	128	83.0	128	46
21	Magnesium H.	mg/l									16	20	28	21.3	28	16
22	D. Oxygen	mg/l									7.8	7.8	7.4	7.7	7.8	7.4
23	B.O.D.	mg/l									1.2	0.9	1.5	1.2	1.5	0.9
24	C.O.D.	mg/l									7	17	24	16.0	24	7
25	Sodium	mg/l									--	--				
26	Potassium	mg/l									--	--	-			
27	T. Coliform	MPN/100ml									46	39	27	37.3	46	27
28	F. Coliform	MPN/100ml									--	--				
29	T.K.N.	mg/l									--	--				
	CATEGORY										A	A	A	A		

Classification of River water based on IS - 2296 - 1992

**MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.
Water Quality during Year - 2017-18**

Natural Water Resource : River Narmada

Description of Sampling Station: River Narmada near road bridge (D/S Bargi dam) Jabalpur

S.No	Characteristic	Unit	Jan.	Feb	March	Av.	Maxi.	Mini.
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1	Date of Sampling	
2	Appearance	
3	Temperature	oC
4	Turbidity	NTU
5	Colour	PCS
6	Odour	T. No
7	pH	pH Unit
8	Sp. Conductivity	µMhos/cm.
9	T. Solids	mg/l
10	D. Solids	mg/l
11	S. Solids	mg/l
12	Amm. Nitrogen	mg/l
13	Nitrite Nitrogen	mg/l
14	Nitrate Nitrogen	mg/l
15	Phosphate (PO ₄)	mg/l
16	Chloride	mg/l
17	Sulphate (SO ₄)	mg/l
18	T. Alkalinity	mg/l
19	T. Hardness	mg/l
20	CalciumHardness	mg/l
21	Magnesium H.	mg/l
22	D. Oxygen	mg/l
23	B.O.D.	mg/l
24	C.O.D.	mg/l
25	Sodium	mg/l
26	Potassium	mg/l
27	T. Coliform	MPN/100ml
28	F. Coliform	MPN/100ml
29	T.K.N.	mg/l

New Station

9.1.18	15.2.18	6.3.18			
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--	--				
1.5	3	1	1.8	3	1
--	--				
--	--				
7.84	7.29	7.83	7.7	7.84	7.29
204	376	231	270.3	376	204
210	278	234	240.7	278	210
180	216	209	201.7	216	180
30	62	25	39.0	62	25
BDL	0.2	0.08	0.1	0.2	0.08
BDL	0.09	0.05	0.1	0.09	0.05
0.5	0.34	0.55	0.5	0.55	0.34
BDL	0.04	0.16	0.1	0.16	0.04
10	14.49	9	11.2	14.49	9
5	6.4	7.75	6.4	7.75	5
30	36	28	31.3	36	28
80	96	50	75.3	96	50
60	74	28	54.0	74	28
20	22	22	21.3	22	20
7.8	7.9	7.2	7.6	7.9	7.2
1	1.1	1.1	1.1	1.1	1
6	8	3	5.7	8	3
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31	14	40	28.3	40	14
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CATEGORY

A A A A

Classification of River water based on IS - 2296 - 1992

MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.

Water Quality during Year - 2017-18

Natural Water Resource : River Narmada

Description of Sampling Station: River Narmada At JAMTARA JABLPUR.

S.No	Characteristic	Unit	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb	March	Av.	Maxi.	Mini.
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1	Date of Sampling		25.4.17	15.5.17	15.6.17	4.7.17	4.8.17	5.9.17	7.10.17	10.11.17	0.12.17	1.1.18	8.2018	6.3.18	--	--	--
2	Appearance		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3	Temperature	oC	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4	Turbidity	NTU	5	1.8	1	6	4.3	6	1.3	5	1	2	4.8	1	3.3	6	1
5	Colour	PCS	C.L	C.L	C.L	C.L	C.L	C.L	C.L	--	--	--	--	--	--	--	--
6	Odour	T. No	O.L	O.L	O.L	O.L	O.L	O.L	O.L	--	--	--	--	--	--	--	--
7	pH	pH Unit	8.34	8.17	7.31	7.1	7.36	7.48	7.08	8.36	8.07	7.32	8.29	8.1	7.7	8.36	7.08
8	Sp. Conductivity	µMhos/cm.	311	189	354	356	814	450	218	388	216	163	300	153	326.0	814	153
9	T. Solids	mg/l	326	171	313	344	293	468	198	378	201	172	312	156	277.7	468	156
10	D. Solids	mg/l	284	145	281	292	256	436	175	352	172	146	294	134	247.3	436	134
11	S. Solids	mg/l	42	26	32	52	37	32	23	26	29	26	18	22	30.4	52	18
12	Amm. Nitrogen	mg/l	0.42	0.9	0.32	0.2	1.6	0.4	0.42	0.42	0.11	BDL	0.4	0.125	0.5	1.6	0.11
13	Nitrite Nitrogen	mg/l	0.32	0.6	0.09	0.09	0.8	0.32	0.39	0.34	0.3	0.24	0.2	0.155	0.3	0.8	0.09
14	Nitrate Nitrogen	mg/l	0.5	0.7	0.09	0.1	1	0.38	0.56	0.38	0.39	0.4	0.3	0.35	0.4	1	0.09
15	Phosphate (PO ₄)	mg/l	0.112	1	0.033	5.23	2	0.112	0.5	0.132	BDL	BDL	0.11	0.12	0.9	5.23	0.033
16	Chloride	mg/l	12	4.95	19.99	12.49	16.83	32.48	5.94	32	6	5	12.49	6	13.8	32.48	4.95
17	Sulphate (SO ₄)	mg/l	10	3.8	6.4	4.4	7	10	3.4	10	3.16	4	10	7	6.6	10	3.16
18	T. Alkalinity	mg/l	10	8	12	12	38	8	6	8	16	16	12	20	13.8	38	6
19	T. Hardness	mg/l	128	78	68	70	144	136	60	144	90	34	120	50	93.5	144	34
20	CalciumHardness	mg/l	96	44	46	50	108	104	36	104	62	28	96	28	66.8	108	28
21	Magnesium H.	mg/l	32	34	22	20	36	32	24	40	28	6	24	22	26.7	40	6
22	D. Oxygen	mg/l	7.4	7.3	7.7	7.9	7.8	7.2	7.6	7.4	10	9.1	7.4	8.1	7.9	10	7.2
23	B.O.D.	mg/l	1.8	1.6	1.2	1.2	1.4	1.8	1.6	1.8	1.7	1	1.6	0.8	1.5	1.8	0.8
24	C.O.D.	mg/l	16	13	12	12	18	16	12	12	5	4	24	4	12.3	24	4
25	Sodium	mg/l	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
26	Potassium	mg/l	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
27	T. Coliform	MPN/100ml	25	40	39	23	40	58	31	31	33	38	27	33	34.8	58	23
28	F. Coliform	MPN/100ml	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
29	T.K.N.	mg/l	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Cat.

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MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.

Water Quality during Year - 2017-18

Natural Water Resource : River Narmada

Description of Sampling Station: River Narmada At Lalpur, Near water supply intake point.

S.No	Characteristic	Unit	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb	March	Av.	Maxi.	Mini.
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1	Date of Sampling		18.4.17	15.5.17	15.6.17	5.7.17	4.8.17	4.9.17	01.10.17	8.11.17	0.12.17	1.1.18	8.2.18	6.3.18	--	--	--
2	Appearance		--	--	--	--	--	--		--	--	--	--	--	--	--	--
3	Temperature	oC	--	--	--	--	--	--		--	--	--	--	--	--	--	--
4	Turbidity	NTU	1	1.8	5	6	6.3	1.5	1.8	1.6	0.9	0.2	3	1	2.5	6.3	0.2
5	Colour	PCS	C.L	C.L	C.L	C.L	C.L	C.L	C.L	--	--	--	--	--	--	--	--
6	Odour	T. No	O.L	O.L	O.L	O.L	O.L	O.L	O.L	--	--	--	--	--	--	--	--
7	pH	pH Unit	7.35	8.13	8.33	7.12	8.63	7.36	7.61	7.4	8.04	7.93	8.3	8.32	7.9	8.63	7.12
8	Sp. Conductivity	µMhos/cm.	364	193	285	352	345	337	219	278	195	169	310	156	266.9	364	156
9	T. Solids	mg/l	343	171	298	346	316	295	203	249	175	159	314	162	252.6	346	159
10	D. Solids	mg/l	307	149	272	308	275	271	175	225	156	135	302	136	225.9	308	135
11	S. Solids	mg/l	36	22	26	38	41	24	28	24	19	24	14	26	26.8	41	14
12	Amm. Nitrogen	mg/l	0.2	0.9	0.32	0.06	1.3	0.73	0.43	0.38	0.17	BDL	0.4	0.11	0.5	1.3	0.06
13	Nitrite Nitrogen	mg/l	0.8	0.4	0.34	0.04	0.6	0.64	0.27	0.17	0.28	BDL	0.28	0.18	0.4	0.8	0.04
14	Nitrate Nitrogen	mg/l	0.09	0.5	0.32	0.26	0.8	1.73	0.63	0.62	1.21	BDL	0.3	1.3	0.7	1.73	0.09
15	Phosphate (PO ₄)	mg/l	0.04	0.8	0.112	0.023	0.7	0.68	0.4	0.7	BDL	0.4	0.11	0.132	0.4	0.8	0.023
16	Chloride	mg/l	17.49	6.93	12.49	14.99	12	7.92	6.93	6.9	5	5	12.49	6	9.5	17.49	5
17	Sulphate (SO ₄)	mg/l	5.4	3.9	2	5.4	8	4.13	3.6	3.2	4.3	5	10	7.7	5.2	10	2
18	T. Alkalinity	mg/l	16	10	10	14	30	28	8	10	6	164	8	22	27.2	164	6
19	T. Hardness	mg/l	72	76	112	76	96	120	62	126	80	92	132	50	91.2	132	50
20	CalciumHardness	mg/l	46	54	84	52	54	70	40	82	56	58	104	28	60.7	104	28
21	Magnesium H.	mg/l	26	22	128	24	42	50	22	44	24	34	28	22	38.8	128	22
22	D. Oxygen	mg/l	7.9	7.4	7.5	7.9	7.8	7.8	7.3	7.8	8	7.2	7.4	7.8	7.7	8	7.2
23	B.O.D.	mg/l	1.1	1.4	1.4	1.2	1.7	1.4	1.2	1.2	1.6	1.1	1.4	1.1	1.3	1.7	1.1
24	C.O.D.	mg/l	8	11	4	12	13	11	10	9	7	3	24	5	9.8	24	3
25	Sodium	mg/l	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
26	Potassium	mg/l	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
27	T. Coliform	MPN/100ml	26	38	31	28	10	33	33	41	38	33	32	32	31.3	41	10
28	F. Coliform	MPN/100ml	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
29	T.K.N.	mg/l	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Cat.		A	A	A	A	A	A	A	A	A	A	A	A	A		

MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.

Water Quality during Year - 2017-18

Natural Water Resource : River Narmada

Description of Sampling Station: River Narmada At At Tilwaraghat

S.No	Characteristic	Unit	<i>Apr.</i>	May	June	<i>July</i>	Aug.	Sept.	<i>Oct.</i>	Nov.	Dec.	<i>Jan.</i>	Feb	March	Av.	Maxi.	Mini.
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3	Temperature	oC	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4	Turbidity	NTU	1	2	6	6	6	2.3	1.8	4	5	0.2	3.6	5	3.6	6	0.2
5	Colour	PCS	C.L	C.L	C.L	C.L	C.L	C.L	C.L	--	--	--	--	--	--	--	--
6	Odour	T. No	O.L	O.L	O.L	O.L	O.L	O.L	O.L	--	--	--	--	--	--	--	--
7	pH	pH Unit	7.16	8.61	8.29	7.25	8.11	7.92	7.39	7.6	8.31	7.83	7.32	8.33	7.8	8.61	7.16
8	Sp. Conductivity	µMhos/cm.	375	191	310	368	383	384	233	356	330	202	306	310	312.3	384	191
9	T. Solids	mg/l	333	169	326	354	354	350	220	312	348	180	348	332	302.2	354	169
10	D. Solids	mg/l	285	149		308	306	308	180	276	322	196	292	308	266.4	322	149
11	S. Solids	mg/l	48	20		46	48	42	40	38	26	18	56	24	36.9	56	18
12	Amm. Nitrogen	mg/l	0.9	0.5		0.32	1.7	0.83	0.5	0.4	0.42	BDL	0.64	0.44	0.7	1.7	0.32
13	Nitrite Nitrogen	mg/l	1.34	0.3		0.09	0.8	0.9	0.45	0.2	0.3	BDL	0.12	0.3	0.5	1.34	0.09
14	Nitrate Nitrogen	mg/l	0.15	0.4		0.8	1	4.19	0.48	0.5	0.36	0.88	0.34	0.34	0.9	4.19	0.15
15	Phosphate (PO ₄)	mg/l	0.054	0.6		0.057	0.8	0.55	0.4	0.5	0.112	0.5	0.14	0.112	0.3	0.8	0.054
16	Chloride	mg/l	12.44	6.93	12.49	22.49	8	7.92	7.78	10	15	10.89	29.98	15	13.2	29.98	6.93
17	Sulphate (SO ₄)	mg/l	4.4	3.6		6.7	6.3	6.34	4	5.01	10	6	20	10	7.5	20	3.6
18	T. Alkalinity	mg/l	14	12	10	16	24	36	10	14	12	168	50	16	31.8	168	10
19	T. Hardness	mg/l	68	86	124	78	136	142	75	120	156	102	82	152	110.1	156	68
20	CalciumHardness	mg/l	42	60	86	46	94	100	55	100	104	76	56	116	77.9	116	42
21	Magnesium H.	mg/l	26	20	28	32	42	42	20	20	52	26	16	36	30.0	52	16
22	D. Oxygen	mg/l	7.8	7.2	7.5	7.7	8.1	6.8	7.5	7.3	7.4	6.7	7.6	7.4	7.4	8.1	6.7
23	B.O.D.	mg/l	1.3	1.6	1.5	1.3	1.4	2	1.7	1.2	1.4	0.7	1.8	1.5	1.5	2	0.7
24	C.O.D.	mg/l	8	12	4	12	18	12	10	12	24	5	10	24	12.6	24	4
25	Sodium	mg/l	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
26	Potassium	mg/l	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
27	T. Coliform	MPN/100ml	36	34	39	46	41	48	31		27	24	48	36	37.3	48	24
28	F. Coliform	MPN/100ml	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cat.			A	A	A	A	A	A	A	A	A	A	A	A	A	A	A

Classification of River water based on IS - 2296 - 1992

MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.
Water Quality during Year - 2017-18

Natural Water Resource : River Narmada
Description of Sampling Station: River Narmada near road bridge Jansighat Jabalpur

S.No	Characteristic	Unit	Jan.	Feb	March	Av.	Maxi.	Mini.
1	Date of Sampling		9.1.18	7.2.18	7.3.18			
2	Appearance		--	--				
3	Temperature	oC	--	--				

New Station

4	Turbidity	NTU
5	Colour	PCS
6	Odour	T. No
7	pH	pH Unit
8	Sp. Conductivity	µMhos/cm.
9	T. Solids	mg/l
10	D. Solids	mg/l
11	S. Solids	mg/l
12	Amm. Nitrogen	mg/l
13	Nitrite Nitrogen	mg/l
14	Nitrate Nitrogen	mg/l
15	Phosphate (PO ₄)	mg/l
16	Chloride	mg/l
17	Sulphate (SO ₄)	mg/l
18	T. Alkalinity	mg/l
19	T. Hardness	mg/l
20	CalciumHardness	mg/l
21	Magnesium H.	mg/l
22	D. Oxygen	mg/l
23	B.O.D.	mg/l
24	C.O.D.	mg/l
25	Sodium	mg/l
26	Potassium	mg/l
27	T. Coliform	MPN/100ml
28	F. Coliform	MPN/100ml
29	T.K.N.	mg/l
	CATEGORY	

0.9	3.1	6	3.3	6	0.9
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--	--				
8.16	7.61	8.32	8.0	8.32	7.61
168	286	310	254.7	310	168
154	328	328	270.0	328	154
135	272	306	237.7	306	135
19	56	22	32.3	56	19
BDL	0.2	0.44	0.3	0.44	0.2
BDL	0.5	0.32	0.4	0.5	0.32
0.35	0.2	0.34	0.3	0.35	0.2
BDL	0.023	0.112	0.1	0.112	0.023
10	22	15	15.7	22	10
3.6	7.6	10	7.1	10	3.6
72	46	12	43.3	72	12
100	78	140	106.0	140	78
56	50	108	71.3	108	50
44	28	32	34.7	44	28
9.3	7.8	7.4	8.2	9.3	7.4
0.8	1.7	1.6	1.4	1.7	0.8
3.52	11	24	12.8	24	3.52
--	--				
--	--	-			
27	49	34	36.7	49	27
--	--				
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Classification of River water based on IS - 2296 - 1992

MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.

Water Quality during Year - 2017-18

Natural Water Resource : River Narmada

Description of Sampling Station: River Narmada near N.H..44 road bridge Barman Narsingpur

S.No.	Characteristic	Unit
1	Date of Sampling	
2	Appearance	
3	Temperature	oC
4	Turbidity	NTU

Jan.	Feb	March	Av.	Maxi.	Mini.
9.1.18	7.2.18	7.3.18			
--	--				
--	--				
4	3.1	3	3.4	4	3

6	Odour	T. No	O.L	O.L	O.L	O.L	O.L	O.L	O.L	--	--	--	--	--	--	--	--
7	pH	pH Unit	7.78	7.21	7.63	7.26	8.38	7.14	8.31	8.33	8.31	7.93	8.33	7.61	7.9	8.38	7.14
8	Sp. Conductivity	µMhos/cm.	260	366	200	348	330	362	360	370	268	250	236	372	310.2	372	200
9	T. Solids	mg/l	228	318	186	348	368	354	382	358	258	268	213	365	303.8	382	186
10	D. Solids	mg/l	212	279	162	296	312	306	358	358	220	244	189	301	269.8	358	162
11	S. Solids	mg/l	16	39	24	52	56	48	24	28	38	24	24	64	36.4	64	16
12	Amm. Nitrogen	mg/l	0.4	0.2	0.42	0.8	0.44	0.8	0.42	0.44	0.32	0.04	0.4	0.44	0.4	0.8	0.04
13	Nitrite Nitrogen	mg/l	0.5	0.5	0.71	0.1	0.15	0.1	0.34	0.34	0.06	0.3	0.35	0.1	0.3	0.71	0.06
14	Nitrate Nitrogen	mg/l	BDL	0.8	0.13	1.34	0.24	1.34	0.5	0.38	0.05	0.36	0.49	1.1	0.6	1.34	0.05
15	Phosphate (PO ₄)	mg/l	BDL	0.03	0.6	7.7	7.2	0.057	0.112	0.112	0.1	0.11	BDL	0.05	1.6	7.7	0.03
16	Chloride	mg/l	12	12.49	6.93	296	17.49	19.99	14.99	15	12.49	12.49	6	27.48	37.8	296	6
17	Sulphate (SO ₄)	mg/l	6.25	6.4	2.7	5.4	7.2	5.4	10	10	11	11	2.7	5.4	7.0	11	2.7
18	T. Alkalinity	mg/l	12	14	8	18	10	22	8	8	15	156	34	52	29.8	156	8
19	T. Hardness	mg/l	132	56	76	76	156	82	132	136	60	124	124	90	103.7	156	56
20	CalciumHardness	mg/l	84	42	48	52	124	54	104	108	45	32	100	56	70.8	124	32
21	Magnesium H.	mg/l	48	14	28	26	32	28	28	28	15	32	24	34	28.1	48	14
22	D. Oxygen	mg/l	7.5	7.9	7.8	7.7	7.2	7.5	7.2	7.4	7.7	7.4	7.8	7.5	7.5	7.9	7.2
23	B.O.D.	mg/l	1.2	1.2	1.2	1.5	1.8	1.6	2	1.6	1.4	1.4	1.2	1.8	1.5	2	1.2
24	C.O.D.	mg/l	8	12	10	16	16	16	16	16	12	24	11	14	14.3	24	8
25	Sodium	mg/l	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
26	Potassium	mg/l	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
27	T. Coliform	MPN/100ml	40	39	41	39	47	46	46	29	39	27	43	43	39.9	47	27
28	F. Coliform	MPN/100ml	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
29	T.K.N.	mg/l	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cat.			A	A	A	A	A	A	A	A	A	A	A	A	A	A	A

MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.

Water Quality during Year - 2017-18

Natural Water Resource : River Narmada

Description of Sampling Station: Narmada S.H 44 near road bridge Near Jhikoli Vill. Narsingpur

S.No.	Characteristic	Unit	Jan.	Feb	March	Av.	Maxi.	Mini.
1	Date of Sampling		23.1.18	7.2.18	7.3.18			
2	Appearance							
3	Temperature	oC						
4	Turbidity	NTU	1.5		3	2.3	3	1.5
5	Colour	PCS						
6	Odour	T. No						

7	pH	pH Unit
8	Sp. Conductivity	µMhos/cm.
9	T. Solids	mg/l
10	D. Solids	mg/l
11	S. Solids	mg/l
12	Amm. Nitrogen	mg/l
13	Nitrite Nitrogen	mg/l
14	Nitrate Nitrogen	mg/l
15	Phosphate (PO ₄)	mg/l
16	Chloride	mg/l
17	Sulphate (SO ₄)	mg/l
18	T. Alkalinity	mg/l
19	T. Hardness	mg/l
20	CalciumHardness	mg/l
21	Magnesium H.	mg/l
22	D. Oxygen	mg/l
23	B.O.D.	mg/l
24	C.O.D.	mg/l
25	Sodium	mg/l
26	Potassium	mg/l
27	T. Coliform	MPN/100ml
28	F. Coliform	MPN/100ml
29	T.K.N.	mg/l

New Station

7.88	3.5	7.3	6.2	7.88	3.5
222	342	354	306.0	354	222
199	366	341	302.0	366	199
178	320	293	263.7	320	178
21	46	48	38.3	48	21
BDL	0.2	0.02			
BDL	0.06	0.06			
0.43	0.5	0.5	0.5	0.5	0.43
0.4	0.15	0.093	0.2	0.4	0.093
12.87	19.99	14.98	15.9	19.99	12.87
3.41	5.4	6.4	5.1	6.4	3.41
88	48	42	59.3	88	42
62	88	84	78.0	88	62
34	54	56	48.0	56	34
28	34	28	30.0	34	28
7.8	7.7	7.8	7.8	7.8	7.7
0.5	1.6	1.6	1.2	1.6	0.5
3.52	10	12	8.5	12	3.52
-	-	-	-	-	-
-	-	-	-	-	-
34	38	38	36.7	38	34
-	-	-	-	-	-
-	-	-	-	-	-

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CATEGORY

**Classification of River water based on IS - 2296 - 1992
MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.
Water Quality during Year - 2017-2018**

Natural Water Resource : River Narmada.

Description of Sampling Station : River Narmada at near Road Bridge, Sandia

S.No	Characteristic	Unit	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb	March	Av.	Maxi.	Mini.
1	Date of Sampling		19.04.17	3.5.17	24.6.17	12.7.17	28.08.17	04.09.17	4.10.17	30.11.17	11.12.17	05.01.18	19.2.18	16.03.18	-	-	-
2	Appearance		Clear	Clear	Clear	Sl. Turbid	Sl. Turbid	Clear	Clear	Clear	Clear	Clear	-	Clear	-	-	-
3	Temperature	oC	-	28	29	23	24	23	26	18	20°C	19°C	21°C	-	-	-	-
4	Turbidity	NTU	8	10	10	34	32	10	-	-	-	-	-	10.5	16.36	34.0	8.0
5	Colour	PCS	Colorless	Colorless	Colorless	Sl.muddy	Sl. Muddy	Colorless	Colorless	Colorless	Colorless	Colorless	Colorless	Colorless	-	-	-
6	Odour	T. No	Odourless	Odourless	Odourless	Odourless	Odourless	Odourless	Odourless	Odourless	Odourless	Odourless	Odourless	Odourless	-	-	-

7	pH	pH Unit	7.96	7.78	7.82	7.74	7.68	7.58	7.69	8.23	8.47	8.38	8.34	8.08	7.98	8.5	7.6
8	Sp. Conductivity	µMhos/cm.	254	252	256	250	254	252	309	319	305	286	298	416	287.58	416.0	250.0
9	T. Solids	mg/l	222	228	230	448	458	218	304	312	140	151	160	220	257.58	458.0	140.0
10	D. Solids	mg/l	214	218	220	214	222	210	294	300	110	102	141	194	203.25	300.0	102.0
11	S. Solids	mg/l	8	10	10	234	236	8	10	12	30	49	19	26	54.33	236.0	8.0
12	Amm. Nitrogen	mg/l	0.018	0.020	0.025	0.015	0.02	0.01	BDL	BDL	0.005	0.11	BDL	BDL	0.03	0.1	0.0
13	Nitrite Nitrogen	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.25	0.051	0.035	BDL	0.11	0.3	0.0
14	Nitrate Nitrogen	mg/l	0.16	0.15	0.20	0.30	0.12	0.15	1.1	1.1	0.5	1.5	1.15	1.25	0.64	1.5	0.1
15	Phosphate (PO ₄)	mg/l	0.2	0.4	0.5	0.3	0.4	0.02	0.5	0.726	-	-	0.561	0.5	0.41	0.7	0.0
16	Chloride	mg/l	26.99	27.99	26.99	25.07	26.63	23.65	17.73	16.75	27.86	14	17.73	16	22.28	28.0	14.0
17	Sulphate (SO ₄)	mg/l	2.6	2.5	2.6	2.4	2.5	2.3	6.25	6.25	7	5.25	5	4.12	4.06	7.0	2.3
18	T. Alkalinity	mg/l	130	132	134	130	132	128	128	138	136	160	154	158	138.33	160.0	128.0
19	T. Hardness	mg/l	116	120	122	116	118	114	116	110	138	160	150	166	128.83	166.0	110.0
20	CalciumHardness	mg/l	94	96	98	94	96	92	160	62	110	108	104	102	101.33	160.0	62.0
21	Magnesium H.	mg/l	22	24	24	22	24	22	44	48	28	52	46	64	35.00	64.0	22.0
22	D. Oxygen	mg/l	7.9	7.7	7.6	7.8	7.8	7.8	8.4	8.7	8.2	8.6	8.5	6.3	7.94	8.7	6.3
23	B.O.D.	mg/l	1.3	1.4	1.5	1.4	1.3	1.4	1.3	1.4	1	1.8	1.5	1.1	1.37	1.8	1.0
24	C.O.D.	mg/l	9.88	9.68	19.36	19.36	9	10	10	9.6	19.2	9.6	9.6	20	12.94	20.0	9.0
25	Sodium	mg/l	13.23	14.21	14.34	13.42	13.21	13.46	9.46	9.45	8	7	19.62	9.21	12.05	19.6	7.0
26	Potassium	mg/l	1.03	1.04	1.04	1.02	1.01	1.02	1.36	1.48	1	1	3.21	1.28	1.29	3.2	1.0
27	T. Coliform	MPN/100ml	34	40	47	280	150	34	34	31	(results	22	27	(results	69.90	280.0	22.0
28	F. Coliform	MPN/100ml	<2	<2	<2	6	<2	<2	<2	<2	-	<2	-	-	6.00	6.0	6.0
29	Boron	mg/l	-	-	-	-	-	-	-	-	0.2	0.2	-	BDL	0.20	0.2	0.2
Category			A	A	A	B	B	A	A	A	B	A	A	A	B		

MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.

Water Quality during Year - 2017-2018

Natural Water Resource : River Narmada.

Description of Sampling Station : River Narmada Up stream of Jait Village, Sehore, Distt.- Sehore

S.No.	Characteristic	Unit	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb	March	Av.	Maxi.	Mini.
1	Date of Sampling											10.1.18	12.2.18	12.3.18	-	-	-
2	Appearance											-	Clear	-	-	-	-
3	Temperature	oC										-	20 °C	-	-	-	-
4	Turbidity	NTU										-	-	10.6			
5	Colour	PCS										Colorless	Colorless	Colorless	-	-	-
6	Odour	T. No										Odourless	Odourless	Odourless	-	-	-
7	pH	pH Unit										7.94	8.14	8.72	8.27	8.7	7.9
8	Sp. Conductivity	µMhos/cm.										258	294	402	318.00	402.0	258.0

New Station

9	T. Solids	mg/l
10	D. Solids	mg/l
11	S. Solids	mg/l
12	Amm. Nitrogen	mg/l
13	Nitrite Nitrogen	mg/l
14	Nitrate Nitrogen	mg/l
15	Phosphate (PO ₄)	mg/l
16	Chloride	mg/l
17	Sulphate (SO ₄)	mg/l
18	T. Alkalinity	mg/l
19	T. Hardness	mg/l
20	CalciumHardness	mg/l
21	Magnesium H.	mg/l
22	D. Oxygen	mg/l
23	B.O.D.	mg/l
24	C.O.D.	mg/l
25	Sodium	mg/l
26	Potassium	mg/l
27	T. Coliform	MPN/100ml
28	F. Coliform	MPN/100ml
29	Boron	mg/l
30	S.A.R.	meq/l
Cat.		

174	174	272	206.67	272.0	174.0
156	156	254	188.67	254.0	156.0
18	18	18	18.00	18.0	18.0
BDL	BDL	BDL	BDL	BDL	BDL
BDL	0.06	0.02	0.04	0.1	0.0
0.15	1.15	3.51	1.60	3.5	0.2
0.099	0.56	0.03	0.23	0.6	0.0
13.99	18.72	18	16.90	18.7	14.0
4	6.75	5.18	5.31	6.8	4.0
114	148	166	142.67	166.0	114.0
102	154	160	138.67	160.0	102.0
90	108	96	98.00	108.0	90.0
12	46	64	40.67	64.0	12.0
8.4	8.6	6	7.67	8.6	6.0
1.0	1.3	1.8	1.37	1.8	1.0
19.04	9.6	20	16.21	20.0	9.6
-	14.62	23.4	19.01	23.4	14.6
-	2.1	4.35	3.23	4.4	2.1
21	-	-	21.00	21.0	21.0
-	-	-			
-	0.1	0.25	0.18	0.3	0.1
-	-	-			
A	A	A	A		

MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.

Water Quality during Year - 2017-2018

Natural Water Resource : River Narmada.

Description of Sampling Station : River Narmada Down stream of Jait Village, Sehore, Distt.- Sehore

S.No	Characteristic	Unit	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb	March	Av.	Maxi.	Mini.
1	Date of Sampling											10.1.18	12.2.18	12.3.18	-	-	-
2	Appearance											-	Clear		-	-	-
3	Temperature	oC										-	20°C	-	-	-	-
4	Turbidity	NTU										-	-	-			
5	Colour	PCS										Colorless	Colorless	Colorless	-	-	-
6	Odour	T. No										Odourless	Odourless	Odourless	-	-	-
7	pH	pH Unit										8.09	8.24	8.5	8.28	8.5	8.1
8	Sp. Conductivity	µMhos/cm.										274	306	406	328.67	406.0	274.0
9	T. Solids	mg/l										192	184	246	207.33	246.0	184.0

New Station

10	D. Solids	mg/l
11	S. Solids	mg/l
12	Amm. Nitrogen	mg/l
13	Nitrite Nitrogen	mg/l
14	Nitrate Nitrogen	mg/l
15	Phosphate (PO ₄)	mg/l
16	Chloride	mg/l
17	Sulphate (SO ₄)	mg/l
18	T. Alkalinity	mg/l
19	T. Hardness	mg/l
20	CalciumHardness	mg/l
21	Magnesium H.	mg/l
22	D. Oxygen	mg/l
23	B.O.D.	mg/l
24	C.O.D.	mg/l
25	Sodium	mg/l
26	Potassium	mg/l
27	T. Coliform	MPN/100ml
28	F. Coliform	MPN/100ml
29	Boron	mg/l
30	S.A.R.	meq/l
Cat.		

168	162	206	178.67	206.0	162.0
24	22	40	28.67	40.0	22.0
0.04	BDL	0.63	0.34	0.6	0.0
0.07	BDL	0.02	0.05	0.1	0.0
0.5	1.25	5.03	2.26	5.0	0.5
0.462	0.396	0.05	0.30	0.5	0.1
17.99	20.69	19	19.23	20.7	18.0
8.5	5	6.31	6.60	8.5	5.0
124	152	168	148.00	168.0	124.0
116	156	174	148.67	174.0	116.0
98	108	90	98.67	108.0	90.0
18	48	84	50.00	84.0	18.0
6.8	8.4	5	6.73	8.4	5.0
1.3	1.5	2	1.60	2.0	1.3
28.56	9.6	20	19.39	28.6	9.6
-	14.87	23.07	18.97	23.1	14.9
-	2.3	4.02	3.16	4.0	2.3
40	-	-	40.00	40.0	40.0
-	-	-	-	-	-
-	BDL	-	-	-	-
-	-	-	-	-	-
A	A	B	A		

MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.
Water Quality during Year - 2017-2018

Natural Water Resource : River Narmada
Description of Sampling Station: At Shahaganj Rest House.

S.No	Characteristic	Unit	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb	March	Av.	Maxi.	Mini.
1	Date of Sampling		19.04.17	03.05.17	26.06.17	12.7.17	28.08.17	04.09.17	04.10.17	24.11.17	11.12.17	05.01.18	12.2.18	12.03.18	-	-	-
2	Appearance		Clear	Clear	Clear	Sl. Turbid	Sl. Turbid	Clear	clear	Clear	Clear	Clear	Clear	Clear	-	-	-
3	Temperature	oC	-	-	28	24	23	23	26	19	19 °C	20 °C	20 °C	-	-	-	-
4	Turbidity	NTU	6	8	8	34	32	10	10	-	-	-	-	7.7	14.46	34	6
5	Colour	PCS	Colorless	Colorless	Colorless	Sl muddy	Sl.muddy	Colorless	Colorless	Colorless	Colorless	Colorless	Colorless	Colorless	-	-	-
6	Odour	T. No	Odourless	Odourless	Odourless	Odourless	Odourless	Odourless	Odourless	Odourless	Odourless	Odourless	Odourless	Odourless	-	-	-
7	pH	pH Unit	8.1	7.84	7.92	7.78	7.82	7.62	7.68	8.36	8.4	8.25	8.17	8.88	8.07	8.88	7.62
8	Sp. Conductivity	µMhos/cm.	246	248	252	244	254	246	242	312	332	317	328	409	285.83	409	242
9	T. Solids	mg/l	204	206	212	446	446	226	170	312	173	151	186	376	259.00	446	151

10	D. Solids	mg/l	196	198	202	208	212	216	162	302	153	109	158	348	205.33	348	109
11	S. Solids	mg/l	8	8	10	238	234	10	8	10	20	42	28	28	53.67	238	8
12	Amm. Nitrogen	mg/l	0.02	0.03	0.04	0.02	0.01	0.04	BDL	BDL	0.008	BDL	BDL	0.17	0.04	0.17	0.008
13	Nitrite Nitrogen	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.25	0.05	0.1	0.02	0.11	0.25	0.02
14	Nitrate Nitrogen	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	3	0.7	1.5	2.5	1.85	2.71	2.04	3	0.7
15	Phosphate (PO ₄)	mg/l	0.11	0.12	0.15	0.1	0.2	0.25	BDL	0.495	-	-	0.396	-	0.23	0.495	0.1
16	Chloride	mg/l	25.62	26.99	27.96	24.99	22.66	23.65	24.99	15.99	29	20.4	23.65	22	23.99	29	15.99
17	Sulphate (SO ₄)	mg/l	2.9	3	3.5	2.5	3	3.6	8.5	6.5	20	6.5	6.5	7.03	6.13	20	2.5
18	T. Alkalinity	mg/l	132	134	138	128	130	132	134	130	158	160	158	156	140.83	160	128
19	T. Hardness	mg/l	124	124	130	122	128	134	130	134	164	180	172	166	142.33	180	122
20	CalciumHardness	mg/l	104	106	110	104	108	112	106	80	138	130	134	92	110.33	138	80
21	Magnesium H.	mg/l	20	18	20	18	20	22	24	54	26	50	38	74	32.00	74	18
22	D. Oxygen	mg/l	7.7	7.8	7.7	7.9	7.8	7.8	7.8	8.8	8	8.6	8.1	7.6	7.97	8.8	7.6
23	B.O.D.	mg/l	1.4	1.3	1.4	1.4	1.5	1.3	1.4	1.4	2.6	1.6	1.7	1.6	1.55	2.6	1.3
24	C.O.D.	mg/l	9.88	10	9.68	9.68	9.2	10	10	9.6	19.2	9.6	19.2	20	12.17	20	9.2
25	Sodium	mg/l	14.32	14.42	15.12	14.21	14.26	15.26	16.14	9.26	8	8	21.19	27.29	14.79	27.29	8
26	Potassium	mg/l	1.02	1.03	1.04	1.01	1.02	1.01	1.2	1.42	1	1	3.34	4.9	1.58	4.9	1
27	T. Coliform	MPN/100ml	34	40	34	280	230	36	34	33	Results discarded)	15	-	-	81.78	280	15
28	F. Coliform	MPN/100ml	<2	<2	<2	4	<2	<2	<2	<2	-	<2	-	-	4.00	4	4
29	Boron	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.2	0.2	0.2	0.2	BDL	0.20	0.2	0.2
30	Fixed Dissolve Solid	mg/l	-	-	-	-	-	-	-	182	-	-	-	-	182.00	182	182
31	S.A.R.	meq/l	0.18	-	-	-	-	-	-	-	-	-	-	-	0.18	0.18	0.18
Cat.			A	A	A	B	B	A	A	A	B	A	A	A	B		

MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.

Water Quality during Year - 2017-18

Natural Water Resource : Rever Narmada

Description of Sampling Station: Narmada At U/S befor Confluence Of River Tawa near Bandrabhan

S.No	Characteristic	Unit	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb	March	Av.	Maxi.	Mini.
1	Date of Sampling											10.1.18	12.2.18	12.03.18			
2	Appearance												-	Clear			
3	Temperature	oC											23	-	23.0	23	23
4	Turbidity	NTU											-	12.5	12.5	12.5	12.5
5	Colour	PCS										C.L	C.L	Colorless			
6	Odour	T. No										O.L	O.L	Odourless			
7	pH	pH Unit										8.06	8.04	8.06	8.1	8.06	8.04
8	Sp. Conductivity	µMhos/cm.										294	324	417	345.0	417	294
9	T. Solids	mg/l										216	184	272	224.0	272	184
10	D. Solids	mg/l										184	160	252	198.7	252	160

New Station

11	S. Solids	mg/l										32	24	20	25.3	32	20
12	Amm. Nitrogen	mg/l										0.07	BDL	0.33	0.2	0.33	0.07
13	Nitrite Nitrogen	mg/l										0.12	0.075	0.03	0.1	0.12	0.03
14	Nitrate Nitrogen	mg/l										0.9	1.15	4.52	2.2	4.52	0.9
15	Phosphate (PO ₄)	mg/l										0.792	0.49	0.07	0.5	0.792	0.07
16	Chloride	mg/l										23.99	19.71	20	21.2	23.99	19.71
17	Sulphate (SO ₄)	mg/l										13	5	5.33	7.8	13	5
18	T. Alkalinity	mg/l										136	156	166	152.7	166	136
19	T. Hardness	mg/l										130	158	184	157.3	184	130
20	CalciumHardness	mg/l										106	122	100	109.3	122	100
21	Magnesium H.	mg/l										24	36	84	48.0	84	24
22	D. Oxygen	mg/l										7.1	8.2	6.2	7.2	8.2	6.2
23	B.O.D.	mg/l										1.6	1.5	1.4	1.5	1.6	1.4
24	C.O.D.	mg/l										38.08	9.6	20	22.6	38.08	9.6
25	Sodium	mg/l											20.34	25.73	23.0	25.73	20.34
26	Potassium	mg/l											2.76	4.01	3.4	4.01	2.76
27	T. Coliform	MPN/100ml										41	-	-	41.0	41	41
28	F. Coliform	MPN/100ml											-	-			
29	T.K.N.	mg/l											-	0.03	0.0	0.03	0.03
	CATEGORY											A	A	A	A		

Classification of River water based on IS - 2296 - 1992

MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.
Water Quality during Year - 2017-18

Natural Water Resource : Rever Narmada
Description of Sampling Station: Narmada At D/S After Confluence Of River Tawa at Ramnagar near Bandrabhan

S.No	Characteristic	Unit	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb	March	Av.	Maxi.	Mini.
1	Date of Sampling											10.1.18	12.2.18	12.03.18			
2	Appearance												-	-			
3	Temperature	oC											24°C	-			
4	Turbidity	NTU											-	12			
5	Colour	PCS										C.L	C.L	Colorless			
6	Odour	T. No										O.L	O.L	Odourless			
7	pH	pH Unit										8.19	8.23	8.11	8.2	8.23	8.11
8	Sp. Conductivity	µMhos/cm.										282	312	417	337.0	417	282
9	T. Solids	mg/l										204	172	262	212.7	262	172

New Station

10	D. Solids	mg/l																176	156	246	192.7	246	156
11	S. Solids	mg/l																28	16	16	20.0	28	16
12	Amm. Nitrogen	mg/l																0.05	BDL	0.31	0.2	0.31	0.05
13	Nitrite Nitrogen	mg/l																0.09	1	0.02	0.4	1	0.02
14	Nitrate Nitrogen	mg/l																0.8	1.5	2.66	1.7	2.66	0.8
15	Phosphate (PO ₄)	mg/l																0.594	0.56	0.05	0.4	0.594	0.05
16	Chloride	mg/l																20.99	16.75	21	19.6	21	16.75
17	Sulphate (SO ₄)	mg/l																10.5	6.75	4.15	7.1	10.5	4.15
18	T. Alkalinity	mg/l																130	154	162	148.7	162	130
19	T. Hardness	mg/l																122	160	178	153.3	178	122
20	CalciumHardness	mg/l																102	128	92	107.3	128	92
21	Magnesium H.	mg/l																20	32	86	46.0	86	20
22	D. Oxygen	mg/l																7.4	8.6	7.6	7.9	8.6	7.4
23	B.O.D.	mg/l																1.1	1.4	1.4	1.3	1.4	1.1
24	C.O.D.	mg/l																28.56	9.6	20	19.4	28.56	9.6
25	Sodium	mg/l																	21.12	25.71			
26	Potassium	mg/l																	3.14	3.46			
27	T. Coliform	MPN/100ml																26	27	-	26.5	27	26
28	F. Coliform	MPN/100ml																	-	-			
29	T.K.N.	mg/l																	-	0.03			
	CATEGORY																	A	A	A	A		

Classification of River water based on IS - 2296 - 1992

MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.

Water Quality during Year - 2017-2018

Natural Water Resource : River Narmada.

Description of Sampling Station : River Narmada at near Budhnighat, Budhni

S.No	Characteristic	Unit	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb	March	Av.	Maxi.	Mini.
1	Date of Sampling		19.04.17	3.5.17	24.6.17	12.7.17	28.08.2017	04.09.201	4.10.17	24.11.17	11.12.17	5.1.18	12.2.18	12.03.18	-	-	-
2	Appearance		Clear	Clear	Clear	Sl. Turbid	Sl. Turbid	Clear	Clear	Clear	Clear	Clear	-	Clear	-	-	-
3	Temperature	oC	27	28	29	23	24	23	-	23	20	19	24°C	-	24.0	29.0	19.0
4	Turbidity	NTU	10	10	10	36	32	8	-	-	16	-	-	8.8	16.4	36.0	8.0
5	Colour	PCS	C.L	C.L	C.L	C.L	C.L	C.L	C.L	C.L	C.L	C.L	C.L	Colorless			
6	Odour	T. No	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L	Odourless			
7	pH	pH Unit	8.01	7.94	7.82	7.78	7.68	7.58	7.86	8.37	8.09	8.3	8.17	8.46	8.0	8.5	7.6
8	Sp. Conductivity	µMhos/cm.	246	252	254	248	254	246	242	317	302	330	326	400	284.8	400.0	242.0
9	T. Solids	mg/l	228	232	240	444	552	226	248	320	190	131	192	326	277.4	552.0	131.0
10	D. Solids	mg/l	218	222	228	212	218	216	234	312	145	80	164	290	211.6	312.0	80.0
11	S. Solids	mg/l	10	10	12	232	234	10	14	8	45	51	28	36	57.5	234.0	8.0

12	Amm. Nitrogen	mg/l	0.042	0.055	0.045	0.035	0.03	0.02	0.04	BDL	0.008	0.01	0.075	0.2	0.1	0.2	0.0
13	Nitrite Nitrogen	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.32	0.05	0.065	0.03	0.1	0.3	0.0
14	Nitrate Nitrogen	mg/l	0.16	0.20	0.25	0.30	0.02	0.2	0.4	1.1	1.55	3	1.4	2.67	0.9	3.0	0.0
15	Phosphate (PO ₄)	mg/l	0.0	0.03	0.04	0.2	0.4	0.02	0.06	0.561	-		0.75	0.15	0.2	0.8	0.0
16	Chloride	mg/l	28.57	26.03	26.99	25.07	24.63	26.6	28.57	15.99	29	14	20.69	19	23.8	29.0	14.0
17	Sulphate (SO ₄)	mg/l	2.9	2.8	2.9	2.6	2.6	2.5	4	8.25	10	6.5	7.5	4.71	4.8	10.0	2.5
18	T. Alkalinity	mg/l	132	136	138	128	134	132	144	132	156	168	162	160	143.5	168.0	128.0
19	T. Hardness	mg/l	126	130	132	120	124	124	138	106	160	152	160	158	135.8	160.0	106.0
20	CalciumHardness	mg/l	106	108	110	102	104	106	114	54	144	114	124	94	106.7	144.0	54.0
21	Magnesium H.	mg/l	20	22	22	18	20	18	24	52	16	38	36	64	29.2	64.0	16.0
22	D. Oxygen	mg/l	7.8	7.7	7.6	7.8	7.7	7.8	8.1	8.9	7.8	8.4	8.2	6.6	7.9	8.9	6.6
23	B.O.D.	mg/l	1.2	1.4	1.5	1.3	1.4	1.5	1.6	1.4	2.7	1.4	1.5	1.4	1.5	2.7	1.2
24	C.O.D.	mg/l	9.88	19.36	19.36	9.68	9.6	10	10	9.6	19.2	9.6	9.6	20	13.0	20.0	9.6
25	Sodium	mg/l	13.47	14.21	14.54	13.21	14.26	13.84	14.2	10.12	8	7	19.82	27.53	14.2	27.5	7.0
26	Potassium	mg/l	1.04	1.05	1.04	1.03	1.02	1.04	1.8	1.45	1	1	3.14	3.8	1.5	3.8	1.0
27	T. Coliform	MPN/100ml	40	47	46	210	150	40	34	33	Results.dis carded *	22	-	-	69.11	210.0	22.0
28	F. Coliform	MPN/100ml	<2	<2	<2	2.00	<2	<2	<2	<2	-	<2	-	-	2.00	2.0	2.0
29	Boron	mg/l	-	-	-	-	-	-	-	0.2	0.2	0.2	-	0.25	0.2	0.3	0.2
30	S.A.R.	meq/l	0.18							-	-	-	-	-	0.2	0.2	0.2
Cat.			A	A	A	B	B	A	A	A	B	A	A	A	B		

MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.

Water Quality during Year - 2017-2018

Natural Water Resource : River Narmada.

Description of Sampling Station : Near Korighat Hoshangabad. Cat.- A

S.No	Characteristic	Unit	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb	March	Av.	Maxi.	Mini.
1	Date of Sampling		19.04.17	03.05.17	26.06.17	12.7.17	26.08.17	04.09.17	04.10.17	24.11.17	12.12.17	05.01.18	12.2.18	12.03.18	-	-	-
2	Appearance		Clear	Clear	Clear	Sl. Turbid	Sl. Turbid	Clear	clear	Clear	Clear	Clear	Clear	Clear	-	-	-
3	Temperature	oC	-	28	29	23	24	24	26	24	20 °C	19 °C	19 °C	-	-	-	-
4	Turbidity	NTU	8	8	10	30	34	8	12	-	-	-	-	5.4	14.43	34.0	5.4
5	Colour	PCS	Colorless	Colorless	Colorless	Sl muddy	sl. Muddy	Colorless	Colorless	Colorless	Sl. Turbid	Colorless	Colorless	Colorless	-	-	-
6	Odour	T. No	Odourless	Odourless	Odourless	Odourless	Odourless	Odourless	Odourless	Odourless	Odourless	Odourless	Odourless	Odourless	-	-	-
7	pH	pH Unit	8.04	7.92	7.84	7.73	7.76	7.69	7.98	8.43	8.3	8.3	8.2	8.24	8.03	8.4	7.7
8	Sp. Conductivity	µMhos/cm.	252	256	262	230	246	238	286	319	347.0	312.0	318.0	415	290.08	415.0	230.0
9	T. Solids	mg/l	208	202	208	430	413	202	186	316	263.0	194.0	188.0	268	256.50	430.0	186.0
10	D. Solids	mg/l	198	194	198	198	188	192	178	306	213.0	157.0	162.0	202	198.83	306.0	157.0
11	S. Solids	mg/l	10	8	10	232	228	10	8	10	50.0	37.0	26.0	66	57.92	232.0	8.0
12	Amm. Nitrogen	mg/l	0.03	0.02	0.04	0.01	0.02	0.01	0.07	BDL	0.1	0.0	0.1	0.64	0.09	0.6	0.0

13	Nitrite Nitrogen	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	0.17	BDL	0.9	0.1	0.1	0.03	0.24	0.9	0.0
14	Nitrate Nitrogen	mg/l	3.0	2.0	1.5	1.02	1.04	1.02	3.45	1.5	5.2	3.0	2.4	2.54	2.30	5.2	1.0
15	Phosphate (PO ₄)	mg/l	0.014	0.013	0.015	0.02	0.25	0.01	BDL	0.429	-	-	0.3	0.33	0.15	0.4	0.0
16	Chloride	mg/l	26.60	27.99	28.92	23.99	23.65	24.63	23.99	31.53	38.0	23.2	24.6	19	26.35	38.0	19.0
17	Sulphate (SO ₄)	mg/l	3.0	2.0	2.0	1.8	1.6	1.5	6.25	10	25.0	8.3	7.5	5.67	6.21	25.0	1.5
18	T. Alkalinity	mg/l	136	134	138	132	128	130	124	134	192.0	180.0	166.0	158	146.00	192.0	124.0
19	T. Hardness	mg/l	126	132	138	126	130	134	112	148	178.0	160.0	164.0	172	143.33	178.0	112.0
20	CalciumHardness	mg/l	108	112	116	108	110	112	106	48	152.0	108.0	126.0	92	108.17	152.0	48.0
21	Magnesium H.	mg/l	18	20	22	18	20	22	18	100	26.0	52.0	38.0	80	36.17	100.0	18.0
22	D. Oxygen	mg/l	7.9	7.7	7.8	8.0	7.8	7.7	7.8	8.9	7.0	8.6	8.4	5.7	7.78	8.9	5.7
23	B.O.D.	mg/l	1.6	1.4	1.5	1.3	1.4	1.3	1.3	1.1	3.0	2.3	1.8	1.1	1.59	3.0	1.1
24	C.O.D.	mg/l	19.76	10.0	9.68	9.68	9.28	10	20	9.6	20.0	19.6	19.2	20	14.73	20.0	9.3
25	Sodium	mg/l	15.21	14.64	15.38	14.31	13.64	12.78	14.6	9.95	16.0	12.0	21.7	26.52	15.56	26.5	10.0
26	Potassium	mg/l	1.04	1.02	1.04	1.01	1.03	1.02	1.01	1.5	4.0	2.0	3.1	3.63	1.79	4.0	1.0
27	T. Coliform	MPN/100ml	40	50	34	240	130	34	33	38	>1600	36.0	-	-	70.56	240.0	33.0
28	F. Coliform	MPN/100ml	<2	<2	<2	2	<2	<2	<2	<2	-	<2	-	-	2.00	2.0	2.0
29	Boron	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.6	0.6	0.5	BDL	0.55	0.6	0.5
30	Fixed Dissolve Solid	mg/l	-	-	-	-	-	-	-	168	-	-	-	-	168.00	168.0	168.0
31	S.A.R.	meq/l	0.21			-			-	-	-	-	-	-	0.21	0.21	0.21
Cat.			A	A	A	B	B	A	A	A	B	B	A	A	B		

MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.
Water Quality during Year - 2017-18

Natural Water Resource : River Narmada

Description of Sampling Station : 50 mtrs. D/S Near Sethanighat. Hoshangabad

S.No	Characteristic	Unit	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb	Mar.	Av.	Maxi.	Mini.
1	Date of Sampling		19.04.17	03.05.17	26.06.17	12.7.17	28.08.17	04.09.17	04.10.17	24.11.17	12.12.17	05.01.18	12.2.18	12.03.18	-	-	-
2	Appearance		Clear	Clear	Clear	Sl. Turbid	Sl. Turbid	Clear	clear	Clear	Clear	Clear	-	Clear	-	-	-
3	Temperature	oC	-	-	28	23	24	23	25	24	19 °C	19 °C	21 °C	-	-	-	-
4	Turbidity	NTU	8	10	10	34	32	8	8	-	-	-	-	5.6	14.5	34.0	5.6
5	Colour	PCS	Colorless	Colorless	Colorless	Sl muddy	sl. Muddy	Colorless	Colorless	Colorless	Colorless	Colorless	Colorless	Colorless	-	-	-
6	Odour	T. No	Odourless	Odourless	Odourless	Odourless	Odourless	Odourless	Odourless	Odourless	Odourless	Odourless	Odourless	Odourless	-	-	-
7	pH	pH Unit	8.12	7.94	7.84	7.74	7.68	7.68	7.83	8.43	8.33	8.36	8.04	8.26	8.0	8.4	7.7
8	Sp. Conductivity	µMhos/cm.	248	252	256	248	244	252	282	317	320	324.6	328	413	290.4	413.0	244.0
9	T. Solids	mg/l	218	224	228	444	444	216	196	316	248	191	196	254	264.6	444.0	191.0
10	D. Solids	mg/l	210	214	218	212	218	208	188	304	190	131	148	220	205.1	304.0	131.0
11	S. Solids	mg/l	8	10	10	232	228	8	8	12	58	60	48	34	59.7	232.0	8.0
12	Amm. Nitrogen	mg/l	0.035	0.040	0.035	0.025	0.025	0.02	BDL	-	0.06	0.004	0.05	0.16	0.0	0.2	0.0
13	Nitrite Nitrogen	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	-	0.85	0.055	0.06	0.04	0.3	0.9	0.0

14	Nitrate Nitrogen	mg/l	0.16	0.15	0.20	0.10	0.15	0.25	0.25	-	5	3	2.95	2.77	1.4	5.0	0.1
15	Phosphate (PO ₄)	mg/l	0.24	0.26	0.30	0.20	0.25	0.35	1.01	-	-	-	0.495	0.48	0.4	1.0	0.2
16	Chloride	mg/l	27.59	26.99	27.96	23.99	22.66	24.63	19.99	54.20	34	20.14	26.6	20	27.4	54.2	20.0
17	Sulphate (SO ₄)	mg/l	1.9	1.8	2.1	1.6	1.8	2.2	5	-	22	8.25	7.5	5.2	5.4	22.0	1.6
18	T. Alkalinity	mg/l	132	136	238	128	134	138	126	138	200	172	172	166	156.7	238.0	126.0
19	T. Hardness	mg/l	118	122	230	124	124	130	128	140	184	160	172	174	150.5	230.0	118.0
20	CalciumHardness	mg/l	100	102	108	106	104	112	110	48	150	104	126	90	105.0	150.0	48.0
21	Magnesium H.	mg/l	18	20	22	18	20	18	18	92	34	56	46	84	37.2	92.0	18.0
22	D. Oxygen	mg/l	7.6	7.8	7.7	7.8	7.8	7.7	7.9	8.8	6.7	7.8	7.9	6.4	7.7	8.8	6.4
23	B.O.D.	mg/l	1.4	1.5	1.6	1.5	1.4	1.3	1.3	1.3	3	2.3	1.9	1.8	1.7	3.0	1.3
24	C.O.D.	mg/l	9.88	20.0	19.36	9.68	9.6	10	10	19.2	20	19.6	19.2	20	15.5	20.0	9.6
25	Sodium	mg/l	14.31	15.21	15.46	14.32	15.26	14.84	13.4	9.76	16	12	21.86	25.6	15.7	25.6	9.8
26	Potassium	mg/l	1.02	1.03	1.04	1.02	1.02	1.02	1.01	1.41	2	2	3.36	3.54	1.6	3.5	1.0
27	T. Coliform	MPN/100ml	40	50	50	220	230	31	40	40	Results	40	-	-	82.3	230.0	31.0
28	F. Coliform	MPN/100ml	<2	<2	<2	4	<2	<2	<2	<2	-	<2	-	-	4.0	4.0	4.0
29	Boron	mg/l	0.02	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.6	0.6	0.5	BDL	0.4	0.6	0.0
30	Fixed Dissolve Solid	mg/l	-	-	-	-	-	-	-	168	-	-	-	-	-	-	-
31	S.A.R.	meq/l	0.20	-	-	-	-	-	-	-	-	-	-	-	0.2	0.20	0.2
Category			A	A	A	B	B	A	A	A	B	B	A	A	B		

MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.

Water Quality during Year - 2017-18

Natural Water Resource : River Narmada

Description of Sampling Station : 100 mtrs. D/S after confluence of SPM nalla. Cat- B

S.No	Characteristic	Unit	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb	March	Av.	Maxi.	Mini.
1	Date of Sampling		19.04.17	02.05.17	26.06.20	12.7.17	28.08.2017	04.09.17	04.10.17	24.11.17	11.12.17	05.01.18	12.2.18	12.03.18	-	-	-
2	Appearance		Clear	Clear	Clear	Sl. Turbid	Sl. Turbid	Clear	clear	Clear	Clear	Clear	-	Clear	-	-	-
3	Temperature	oC	-	-	28	23	22	23	25	24	21 °C	19 °C	23 °C	-	-	-	-
4	Turbidity	NTU	8	10	10	36	32	12	8	-	-	-	-	8.4	15.55	36.0	8.0
5	Colour	PCS	Colorless	Colorless	Colorless	Sl muddy	sl. Muddy	Colorless	Colorless	Colorless	Sl. Turbid	Colorles	Colorless	Colorless	-	-	-
6	Odour	T. No	Odourless	Odourless	Odourless	Odourless	Odourless	Odourless	Odourless	Odourless	Odourless	Odourless	Odourless	Odourless	-	-	-
7	pH	pH Unit	8.26	7.89	7.78	7.69	7.86	7.62	7.84	8.38	8.41	8.33	8.28	8.5	8.07	8.5	7.6
8	Sp. Conductivity	µMhos/cm.	262	264	268	254	256	258	284	306	340	333	342	404	297.58	404.0	254.0
9	T. Solids	mg/l	226	228	232	446	448	232	178	308	208	297	202	266	272.58	448.0	178.0
10	D. Solids	mg/l	216	218	222	212	216	220	168	298	148	247	168	202	211.25	298.0	148.0
11	S. Solids	mg/l	10	10	10	234	232	12	10	10	60	50	34	64	61.33	234.0	10.0
12	Amm. Nitrogen	mg/l	0.042	0.046	0.050	0.030	0.025	0.04	BDL	0.145	0.008	0.012	0.125	0.14	0.06	0.1	0.0
13	Nitrite Nitrogen	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.06	0.3	0.054	0.06	0.05	0.10	0.3	0.1
14	Nitrate Nitrogen	mg/l	0.21	0.23	1.5	1.01	1.02	1.06	3.9	1.8	1.58	3	2.2	8.78	2.19	8.8	0.2

15	Phosphate (PO ₄)	mg/l	2.2	2.1	2.40	1.90	1.8	22	BDL	0.66	-	-	0.561	-	4.20	22.0	0.6
16	Chloride	mg/l	28.57	27.99	28.92	25.99	24.64	24.64	18.99	14.99	32.5	23.2	27.59	18	24.67	32.5	15.0
17	Sulphate (SO ₄)	mg/l	2.2	2.1	2.4	2.0	2	2.8	11.25	7.5	12	5.25	6.75	7.49	5.31	12.0	2.0
18	T. Alkalinity	mg/l	138	140	144	138	134	136	118	136	176	176	180	164	148.33	180.0	118.0
19	T. Hardness	mg/l	124	124	130	120	126	116	124	106	180	160	166	164	136.67	180.0	106.0
20	CalciumHardness	mg/l	102	104	108	102	1.6	114	102	60	140	94	108	88	93.63	140.0	1.6
21	Magnesium H.	mg/l	22	20	22	18	20	22	22	45	40	66	58	76	35.92	76.0	18.0
22	D. Oxygen	mg/l	7.8	7.7	7.7	7.8	7.7	7.8	7.6	8.9	7.9	8.5	8	6.3	7.81	8.9	6.3
23	B.O.D.	mg/l	1.6	1.7	1.6	1.4	1.5	1.4	1.5	1.3	2.6	2.4	2.6	2.2	1.82	2.6	1.3
24	C.O.D.	mg/l	19.76	20	19.36	9.68	9.6	20	20	9.6	19.6	19.2	19.2	20	17.17	20.0	9.6
25	Sodium	mg/l	15.38	15.49	15.52	14.27	14.36	14.18	15.7	9.91	12	18	21.92	27.89	16.22	27.9	9.9
26	Potassium	mg/l	1.06	1.05	1.06	1.02	1.03	1.08	1.6	1.46	1	1	3.56	3.51	1.54	3.6	1.0
27	T. Coliform	MPN/100ml	50	34	50	430	230	36	40	41	Results	40	-	-	105.67	430.0	34.0
28	F. Coliform	MPN/100ml	<2	<2	<2	10	<2	<2	<2	<2	-	<2	-	-	10.00	10.0	10.0
29	Boron	mg/l	0.01	BDL	BDL	BDL	BDL	BDL	BDL	0.6	0.6	0.02	0.4	BDL	-	-	-
30	Fixed Dissolve Solid	mg/l	-	-	-	-	-	-	-	170	-	-	-	-	-	-	-
31	S.A.R.	meq/l	0.20	-	-	-	-	-	-	-	-	-	-	-	0.20	0.20	0.20
Category			A	A	A	B	B	A	A	A	B	B	B	B	B		

MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.

Water Quality during Year - 2017-18

Natural Water Resource : Rever Narmada

Description of Sampling Station: Narmada At D/S of Textile unit Vill. Holipura Budni Distt. Sehore

S.No.	Characteristic	Unit	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb	March	Av.	Maxi.	Mini.
1	Date of Sampling											10.1.18	12.2.18	12.3.18			
2	Appearance												Clear				
3	Temperature	oC											20 °C				
4	Turbidity	NTU											-				
5	Colour	PCS										C.L	C.L	C.L			
6	Odour	T. No										O.L	O.L	O.L			
7	pH	pH Unit										8.27	8.14	8.45	8.3	8.45	8.14
8	Sp. Conductivity	µMhos/cm.										328	294	399	340.3	399	294
9	T. Solids	mg/l										248	174	254	225.3	254	174
10	D. Solids	mg/l										206	156	196	186.0	206	156
11	S. Solids	mg/l										42	18	58	39.3	58	18
12	Amm. Nitrogen	mg/l										0.08	BDL	BDL	0.1	0.08	0.08
13	Nitrite Nitrogen	mg/l										0.14	0.06	0.04	0.1	0.14	0.04
14	Nitrate Nitrogen	mg/l										1.1	1.15	2.9	1.7	2.9	1.1
15	Phosphate (PO ₄)	mg/l										0.924	0.56	0.07	0.5	0.924	0.07

New Station

16	Chloride	mg/l										28.99	18.72	16	21.2	28.99	16
17	Sulphate (SO ₄)	mg/l										14.5	6.75	8.32	9.9	14.5	6.75
18	T. Alkalinity	mg/l										148	148	164	153.3	164	148
19	T. Hardness	mg/l										142	154	160	152.0	160	142
20	CalciumHardness	mg/l										114	108	94	105.3	114	94
21	Magnesium H.	mg/l										28	46	66	46.7	66	28
22	D. Oxygen	mg/l										6.9	8.6	6.6	7.4	8.6	6.6
23	B.O.D.	mg/l										2	1.3	1.9	1.7	2	1.3
24	C.O.D.	mg/l										38.08	9.6	20	22.6	38.08	9.6
25	Sodium	mg/l											21.41	26.88	24.1	26.88	21.41
26	Potassium	mg/l											3.35	3.32	3.3	3.35	3.32
27	T. Coliform	MPN/100ml										47	-		47.0	47	47
28	F. Coliform	MPN/100ml											-				
29	Boron													1.45	1.5	1.45	1.45
30	S.A.R.																
	CATEGORY											A	A	A	A		

MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.

Water Quality during Year - 2017-18

Natural Water Resource : Rever Narmada

Description of Sampling Station: Narmada befor Confluence of River Jamner Vill. Nemawar near

S.No.	Characteristic	Unit	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb	March	Av.	Maxi.	Mini.
1	Date of Sampling											15.1.18	8.2.18	9.3.18			
2	Appearance																
3	Temperature	oC										25	21		23.0	25	21
4	Turbidity	NTU										2.6	3.2	2.6	2.8	3.2	2.6
5	Colour	PCS										C.L	C.L	5			
6	Odour	T. No															
7	pH	pH Unit										8.02	7.98	7.92	8.0	8.02	7.92
8	Sp. Conductivity	µMhos/cm.										285	302	308	298.3	308	285
9	T. Solids	mg/l										200	226	232	219.3	232	200
10	D. Solids	mg/l										190	216	222	209.3	222	190
11	S. Solids	mg/l										10	10	10	10.0	10	10
12	Amm. Nitrogen	mg/l										0.08	0.11	0.114	0.1	0.114	0.08
13	Nitrite Nitrogen	mg/l										0.0014	0.0008	0.0009	0.0	0.0014	0.0008
14	Nitrate Nitrogen	mg/l										0.758	0.462	0.47	0.6	0.758	0.462
15	Phosphate (PO ₄)	mg/l										BDL	BDL	BDL			
16	Chloride	mg/l										16	32	36	28.0	36	16

New Station

17	Sulphate (SO ₄)	mg/l																10.16	8.16	10.26	9.5	10.26	8.16
18	T. Alkalinity	mg/l																180	90	100	123.3	180	90
19	T. Hardness	mg/l																146	110	114	123.3	146	110
20	CalciumHardness	mg/l																70	74	74	72.7	74	70
21	Magnesium H.	mg/l																76	36	40	50.7	76	36
22	D. Oxygen	mg/l																7	7.1	7.1	7.1	7.1	7
23	B.O.D.	mg/l																2	1.8	2	1.9	2	1.8
24	C.O.D.	mg/l																14	12	14	13.3	14	12
25	Sodium	mg/l																11.4	12.4	16.2	13.3	16.2	11.4
26	Potassium	mg/l																0.9	1	1	1.0	1	0.9
27	T. Coliform	MPN/100ml																50	40	40	43.3	50	40
28	F. Coliform	MPN/100ml																2	2	4	2.7	4	2
29	T.K.N.	mg/l																					
	CATEGORY																	A		A	A		

Classification of River water based on IS - 2296 - 1992

MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.

Water Quality during Year - 2017-18

Natural Water Resource : River Narmada

Description of Sampling Station: At Nemawar W/s

S.No.	Characteristic	Unit	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb	March	Av.	Maxi.	Mini.
1	Date of Sampling		23.4.17	5/12/2017	6/12/2017	7/2/2017	8/21/2017	9/28/2017	10/9/2017	6.11.17	16.12.17	15.1.18	8.2.18	9.3.18	-	-	-
2	Appearance		--	--	--	--	--	--	--	--	--	--	--	--	-	-	-
3	Temperature	oC	--	24	24	--	24	--	23	23	25	25	25	26	24.3	26.0	23.0
4	Turbidity	NTU	1.8	1.4	2.8	2.6	3.8	3.5	2.6	1.94	3	2.8	4.5	4.5	2.9	4.5	1.4
5	Colour	PCS	5	Colourless	5	Colourless	5	--	5	Clear	Clear	5	CL	C.L	5.0	5	5
6	Odour	T. No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
7	pH	pH Unit	7.60	7.30	7.64	7.76	8.08	7.72	7.82	7.82	8.23	7.36	7.76	7.76	7.7	8.23	7.3
8	Sp. Conductivity	µMhos/cm.	396	342	386	292	303	290	316	318	298	294	330	338	325.3	396	290
9	T. Solids	mg/l	278	240	268	200	208	206	228	230	202	206	236	240	228.5	278	200
10	D. Solids	mg/l	268	232	256	194	198	192	218	218		196	220	222	219.5	268	192
11	S. Solids	mg/l	10	8	12	6	10	14	10	12	10	10	16	18	11.3	18	6
12	Amm. Nitrogen	mg/l	0.094	0.076	0.14	0.07	0.086	0.082	0.082	0.41	0.072	0.076	0.421	0.438	0.2	0.438	0.07
13	Nitrite Nitrogen	mg/l	0.002	0.002	0.0018	0.02	0.009	0.008	0.0011	0.007	0.022	0.0011	0.0014	0.0018	0.0	0.022	0.0011
14	Nitrate Nitrogen	mg/l	0.754	0.744	0.726	1.523	0.486	0.456	0.724	0.894	1.624	0.612	0.891	0.912	0.9	1.62	0.456
15	Phosphate (PO ₄)	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.031	BDL	BDL	0.028	0.03	0.0	0.031	0.028
16	Chloride	mg/l	22	20	26	10	12	14	38	39	15	14	38	42	24.2	42.00	10
17	Sulphate (SO ₄)	mg/l	10.6	10.0	10.2	7.39	10.2	12.2	8.16	15.6	8.4	9.342	18.2	20.4	11.7	20.40	7.39

18	T. Alkalinity	mg/l	110	106	100	120	92	128	90	118	128	180	110	114	116.3	180	90
19	T. Hardness	mg/l	170	166	158	126	136	140	130	144	132	144	150	156	146.0	170	126
20	CalciumHardness	mg/l	108	106	90	66	90	92	70	86	68	80	90	100	87.2	108	66
21	Magnesium H.	mg/l	62	60	68	60	46	48	60	58	64	64	60	56	58.8	68	46
22	D. Oxygen	mg/l	7.1	7	7.2	7	6.9	7	6.7	6.7	7	7	7	7	7.0	7.2	6.7
23	B.O.D.	mg/l	2	2	2.0	1.6	1.8	2	1.8	1.9	1.8	1.8	2	2	1.9	2	1.6
24	C.O.D.	mg/l	16	13	10.5	9	8	12	10	14	10	12	14	16	12.0	16	8
25	Sodium	mg/l	14.4	12.4	11.3	10.2	12.6	14.6	14.2	18.8	12.2	10.4	20.8	22.6	14.5	22.6	10.2
26	Potassium	mg/l	0.9	0.8	0.6	0.5	BDL	BDL	0.8	1.1	0.6	0.8	0.8	1	0.79	1.1	0.5
27	T. Coliform	MPN/100ml	50	40	50	34	40	40	34	50	34	50	50	40	42.67	50	34
28	F. Coliform	MPN/100ml	6	4	7.0	4	4	4	4	9	4	4	7	4	5.08	9	4
29	T.K.N.	mg/l	1.68	1.68	1.12	2.24	1.4	2.52	1.4	1.68	2.52			Out fo order	1.8	2.52	1.12
30	S.A.R.	mg/l										0.37	0.73	0.78	0.63	0.8	0.4
Cat.			A	A	A	A	A	A	A	A	A	A	A	A	A		

Classification of River water based on IS - 2296 - 1992

MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.

Water Quality during Year - 2017-18

Natural Water Resource : River Narmada
Description of Sampling Station: River Narmada 500 m. D/S Jain mandir Village Nemawar

S.No.	Characteristic	Unit	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb	March	Av.	Maxi.	Mini.	
1	Date of Sampling		New										15.1.18	8.2.18	9.3.18	-	-	-
2	Appearance												-			-	-	-
3	Temperature	oC											-	21				
4	Turbidity	NTU											2.5	2.4	2.6	2.5	2.6	2.4
5	Colour	PCS											C.L.	5	5			
6	Odour	T. No											-					
7	pH	pH Unit											8.28	7.88	7.89	8.0	8.28	7.88
8	Sp. Conductivity	µMhos/cm.											285	298	300	294.3	300	285
9	T. Solids	mg/l											200	222	226	216.0	226	200
10	D. Solids	mg/l											190	212	216	206.0	216	190
11	S. Solids	mg/l											10	10	10	10.0	10	10
12	Amm. Nitrogen	mg/l											0.076	0.098	0.076	0.1	0.098	0.076
13	Nitrite Nitrogen	mg/l											0.0012	0.0006	0.0016	0.0	0.0016	0.0006
14	Nitrate Nitrogen	mg/l											0.812	0.522	0.822	0.7	0.82	0.522
15	Phosphate (PO ₄)	mg/l											BDL	BDL	BDL			
16	Chloride	mg/l											13	30	32	25.0	32.00	13
17	Sulphate (SO ₄)	mg/l											12.4	10.62	18.2	13.7	18.20	10.62
18	T. Alkalinity	mg/l											170	94	98	120.7	170	94

19	T. Hardness	mg/l
20	CalciumHardness	mg/l
21	Magnesium H.	mg/l
22	D. Oxygen	mg/l
23	B.O.D.	mg/l
24	C.O.D.	mg/l
25	Sodium	mg/l
26	Potassium	mg/l
27	T. Coliform	MPN/100ml
28	F. Coliform	MPN/100ml
29	T.K.N.	mg/l
30	S.A.R.	mg/l
Cat.		

148	130	134	137.3	148	130
80	80	82	80.7	82	80
68	50	52	56.7	68	50
7	10	7	8.0	10	7
1.8	2	2	1.9	2	1.8
13	10	15	12.7	15	10
13.6	13.6	22.4	16.5	22.4	13.6
0.9	1	0.8	0.90	1	0.8
40	50	48	46.00	50	40
4	4	6	4.67	6	4
	-	-			
A	A	A	A		

Classification of River water based on IS - 2296 - 1992

MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.

Water Quality during Year - 2017-18

Natural Water Resource : River Narmada

Description of Sampling Station: Narmada River at Hanuwantia (Indera Sager Reg.) Distt.Khandwa

S.No.	Characteristic	Unit	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb	March	Av.	Maxi.	Mini.
1	Date of Sampling											14.1.18	05.02.18	05.03.18	-	-	-
2	Appearance											Clear	Clear	Clear	-	-	-
3	Temperature	oC										21	23	23	22.3	23.0	21.0
4	Turbidity	NTU										1.1	2.3	3.8	2.4	3.8	1.1
5	Colour	PCS										1	1	1	1.0	1	1
6	Odour	T. No										O.less	O. less	O. Less			
7	pH	pH Unit										8.68	8.69	8.7	8.7	8.7	8.68
8	Sp. Conductivity	µMhos/cm.										388	340	463.74	397.2	463.74	340
9	T. Solids	mg/l										249	245	320	271.3	320	245
10	D. Solids	mg/l										243	238	310	263.7	310	238
11	S. Solids	mg/l										6	7	10	7.7	10	6
12	Amm. Nitrogen	mg/l										0.018	0.014	0.014	0.0	0.018	0.014
13	Nitrite Nitrogen	mg/l										0.006	0.004	0.003	0.0	0.006	0.003
14	Nitrate Nitrogen	mg/l										2.012	0.584	0.62	1.1	2.01	0.584
15	Phosphate (PO ₄)	mg/l										1.03	0.008	0.008	0.3	1.03	0.008
16	Chloride	mg/l										29.35	26.6	23.65	26.5	29.35	23.65
17	Sulphate (SO ₄)	mg/l										4.48	4.623	2.84	4.0	4.62	2.84
18	T. Alkalinity	mg/l										172	152	152	158.7	172	152
19	T. Hardness	mg/l										160	136	172	156.0	172	136

New Station

20	CalciumHardness	mg/l																120	104	152	125.3	152	104
21	Magnesium H.	mg/l																40	32	20	30.7	40	20
22	D. Oxygen	mg/l																7.2	7.6	8	7.6	8	7.2
23	B.O.D.	mg/l																1.2	1.1	1.1	1.1	1.2	1.1
24	C.O.D.	mg/l																8.71	10.86	8.64	9.4	10.86	8.64
25	Sodium	mg/l																16.01	16.7	16.6	16.4	16.7	16.01
26	Potassium	mg/l																1.8	1.9	1.5	1.73	1.9	1.5
27	T. Coliform	MPN/100ml																40	40	33	37.67	40	33
28	F. Coliform	MPN/100ml																<1.1	<2	<2	<2	<2	<1.1
29	T.K.N.	mg/l																4.04	0.64	0.69	1.8	4.04	0.64
30	FDS	mg/l																168	142	208	172.67	208.0	142.0
31	Fluoride	mg/l																0.8	5.6	6.16	4.19	6.16	0.8
32	Boron	mg/l																0.008	0.004	0.002	0.00	0.008	0.002
Cat.																		A	"A "	"A "	A		

MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.

Water Quality during Year - 2017-18

Natural Water Resource : Narmada River at Punasa Dam

S.No.	Characteristic	Unit	April	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Average	Max.	Min.
1	Date of Sampling		08.04.17	10.05.17	14.6.17	22.07.17	05.08.17	05.09.17	02.10.17	23.11.17	20.12.17	01.01.18	05.02.18	05.03.18	-	-	-
2	Appearance		Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear			
3	Temperature	°C	30	30	30	25	--	23	23	22	20	20	23	23	24.45	30.00	20.00
4	Turbidity	NTU	0.8	0.6	0.9	1.4	2.2	3.2	0.8	1.2	1.3	3.5	7.2	3.4	2.21	7.20	0.60
5	Colour	PCS	1	1	1	1	1	1	1	1	1	1	1	1	1.00	1.00	1.00
6	Odour	T. No	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O. Less	O. less	O. Less			
7	pH	pH Unit	6.94	8.2	8.3	8.45	8.46	8.3	8.42	7.9	8.48	8.06	8.65	8.8	8.25	8.8	6.94
8	Sp. Conductivity	uMhos/cm.	272.13	288.1	282	360	2960	396	364	474	458	326.29	362	391.71	577.85	2960	272.13
9	T. Solids	mg/l	193	203	186	218	198	267	208	266	276	230	260	278	231.92	278	186
10	D. Solids	mg/l	187	196	178	210	190	260	200	260	269	223	252	270	224.58	270	178
11	S. Solids	mg/l	6.0	7	8	8	8	7	8	6	7	7	8	8	7.33	8	6
12	Amm. Nitrogen	mg/l	0.009	0.008	0.016	0.006	0.007	0.01	0.014	0.026	0.021	0.008	0.008	0.015	0.01	0.026	0.006
13	Nitrite Nitrogen	mg/l	0.004	0.008	BDL	0.002	0.002	0.002	0.009	0.024	0.008	0.004	0.002	0.004	0.01	0.024	0.002
14	Nitrate Nitrogen	mg/l	0.657	0.78	0.484	0.832	0.416	0.738	0.79	0.703	0.692	0.609	0.724	0.69	0.68	0.832	0.416
15	Phosphate (PO ₄)	mg/l	0.0161	0.006	0.012	0.01	0.008	0.011	0.019	0.02	0.018	0.014	0.006	0.008	0.01	0.02	0.006
16	Chloride	mg/l	21.05	26.6	18.434	24.99	20.9	64.02	24.88	33.98	31.536	21.21	28.5	21.68	28.15	64.02	18.434
17	Sulphate (SO ₄)	mg/l	3.556	1.8	2.62	2.42	2.93	2.73	2.83	8.1	4.95	8.03	4.69	2.96	3.97	8.1	1.8
18	T. Alkalinity	mg/l	164	128	132	136	120	180	152	172	180	160	152	152	152.33	180	120
19	T. Hardness	mg/l	144	108	112	108	96	164	140	164	172	168	148	160	140.33	172	96
20	CalciumHardness	mg/l	120	80	90	88	72	128	112	130	144	124	112	116	109.67	144	72

21	Magnesium Hardness	mg/l	24	28	22	22	84	36	28	34	28	44	36	44	35.83	84	22
22	D. Oxygen	mg/l	7.4	7.4	7.2	6.5	6.9	6.9	7.3	7.6	8	7.5	7.5	7.7	7.33	8	6.5
23	B.O.D.	mg/l	1	1.2	1.1	1.2	1.2	1.2	1.1	1.1	1.2	1.3	1.2	1.2	1.2	1.3	1
24	C.O.D.	mg/l	8.64	9.52	12.84	15	9	12	10.78	7.84	9.52	11.61	13.83	14.4	11.25	15	7.84
25	Sodium	mg/l	14	14	16.01	16.2	14.8	14.62	15.06	20	18	15.8	16.8	17	16.02	20	14
26	Potassium	mg/l	1.3	1.7	1.2	1.4	1.5	1.26	1.4	1.8	1.8	1.6	1.4	1.6	1.50	1.8	1.2
27	T. Coliform	MPN/100ml	33	40	40	30	40	34	30	34	40	24	40	40	35.42	40	24
28	F. Coliform	MPN/100ml	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
29	Fluoride	mg/l	0.4	0.46	0.58	0.54	0.62	0.58	0.5	0.84	0.78	0.66	0.72	0.72	0.62	0.84	0.4
30	FDS	mg/l	136	138	118	136	120	161	124	174	170	148	166	180	147.58	180	118
31	T.K.N.	mg/l	2.8	5.04	3.36	4.2	4.4	3.92	4.48	5	5.602	3.92	5.042	6.16	4.49	6.16	2.8
32	Boron	mg/l	ND	0.004	0.006	0.002	0.002	0.003	0.004	0.006	0.004	0.002	0.004	0.003	0.00	0.006	0.002
	CATEGORY		"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	

MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.

Water Quality during Year - 2017-18

Natural Water Resource : River Narmada

Description of Sampling Station: At U/S Omkarewhar Dam

S.No.	Characteristic	Unit	April	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Average	Max.	Min.		
1	Date of Sampling		New Station										14.1.18	05.02.18	05.03.18	-	-	-	
2	Appearance												Clear	Clear	Clear	Clear	Clear	Sl.Muddy	Clear
3	Temperature	°C											21	23	23	22.33	23.00	21.00	
4	Turbidity	NTU											1.4	4.3	4	3.23	4.30	1.40	
5	Colour	PCS											1	1	1	1.00	1.00	1.00	
6	Odour	T. No											O.less	O. less	O. less				
7	pH	pH Unit											8.78	8.72	8.45	8.65	8.78	8.45	
8	Sp. Conductivity	µMhos/cm.											396	357	442.05	398.35	442.05	357.00	
9	T. Solids	mg/l											256	250	308	271.33	308.00	250.00	
10	D. Solids	mg/l											249	242	300	263.67	300.00	242.00	
11	S. Solids	mg/l											7	8	8	7.67	8.00	7.00	
12	Amm. Nitrogen	mg/l											0.014	0.016	0.012	0.01	0.02	0.01	
13	Nitrite Nitrogen	mg/l											0.005	0.004	0.004	0.00	0.01	0.00	
14	Nitrate Nitrogen	mg/l											1.5	0.693	0.73	0.97	1.50	0.69	
15	Phosphate (PO ₄)	mg/l											0.018	0.009	0.009	0.01	0.02	0.01	
16	Chloride	mg/l											27.39	26.6	21.68	25.22	27.39	21.68	
17	Sulphate (SO ₄)	mg/l											4.83	7.64	5.67	6.05	7.64	4.83	
18	T. Alkalinity	mg/l											168	148	148	154.67	168.00	148.00	
19	T. Hardness	mg/l											152	140	160	150.67	160.00	140.00	
20	CalciumHardness	mg/l											124	116	80	106.67	124.00	80.00	
21	M.Hardness	mg/l											18	24	80	40.67	80.00	18.00	

22	D. Oxygen	mg/l																7.4	7.7	7.2	7.43	7.70	7.20
23	B.O.D.	mg/l																1.3	1.3	1.1	1.23	1.30	1.10
24	C.O.D.	mg/l																14.52	15.8	8.64	12.99	15.80	8.64
25	Sodium	mg/l																15.04	17.2	19	17.08	19.00	15.04
26	Potassium	mg/l																1.6	1.8	1.6	1.67	1.80	1.60
27	T. Coliform	MPN/100ml																40	34	40	38.00	40.00	34.00
28	F. Coliform	MPN/100ml																<1.1	<2	<2	<2	<2	<2
29	Fluoride	mg/l																0.84	0.72	0.73	0.76	0.84	0.72
30	FDS	mg/l																172	144	200	172.00	200.00	144.00
31	T.K.N.	mg/l																5.04	4.482	5.88	5.13	5.88	4.48
32	Boron	mg/l																0.003	0.004	0.004	0.004	0.004	0.003
	CATEGORY																	A	"A "	"A "	A		

MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.

Water Quality during Year - 2017-18

Natural Water Resource : River Narmada

Description of Sampling Station: At Omkarewhwar d/s.

S.No.	Characteristic	Unit	April	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Average	Max.	Min.
1	Date of Sampling		08.04.17	08.05.17	27.6.17	14.07.2017	04.08.17	05.09.17	20.10.17	30.11.17	07.12.17	01.01.18	05.02.18	05.03.18	-	-	-
2	Appearance		Clear	Clear	Clear	Clear	Sl. Muddy	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Sl.Muddy	Clear
3	Temperature	°C	30	29	30	28	24.5	23	23	22	22	20	23	23	24.8	30.0	20.0
4	Turbidity	NTU	0.9	0.4	1	4	14	3.3	3	1.5	2.6	2	5	3.1	3.4	14.0	0.4
5	Colour	PCS	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.0	1.0
6	Odour	T. No	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O. Less	O. less	O. Less			
7	pH	pH Unit	7.8	8.6	8.39	8.14	7.98	8.11	7.82	8.06	8.4	8.14	8.62	8.4	8.2	8.6	7.8
8	Sp. Conductivity	µMhos/cm.	294	308	315	345	357	505	375	416.65	358.65	353.64	389	451.33	372.4	505.0	294.0
9	T. Solids	mg/l	223	208	216	248	262	308	284	257	252	236	276	315	257.1	315.0	208.0
10	D. Solids	mg/l	215	202	204	234	246	294	266	250	244	230	264	305	246.2	305.0	202.0
11	S. Solids	mg/l	8.0	138	12	14	16	14	18	7	8	6	12	10	21.9	138.0	6.0
12	Amm. Nitrogen	mg/l	0.02	0.011	0.012	0.024	0.018	0.009	0.016	0.008	0.019	0.011	0.021	0.012	0.0	0.0	0.0
13	Nitrite Nitrogen	mg/l	0.002	0.008	BDL	0.008	0.006	0.003	0.003	0.006	0.003	0.002	0.004	0.005	0.0	0.0	0.0
14	Nitrate Nitrogen	mg/l	0.7	0.42	0.9	0.648	0.83	0.72	0.44	0.716	1.222	0.541	0.834	0.78	0.7	1.2	0.4
15	Phosphate (PO ₄)	mg/l	0.018	0.016	0.019	0.008	0.026	0.014	0.18	0.021	0.028	0.016	0.019	0.009	0.0	0.2	0.0
16	Chloride	mg/l	24.88	26.6	27.22	34.49	28.5	114.32	23.92	19.71	26.99	25.07	24.7	29.56	33.8	114.3	19.7
17	Sulphate (SO ₄)	mg/l	6.873	1.64	1.7	3.05	6.69	4.27	6.22	6.21	8.99	6.29	8.16	5.9	5.5	9.0	1.6
18	T. Alkalinity	mg/l	152	140	148	128	168	180	160	170	120	164	152	152	152.8	180.0	120.0
19	T. Hardness	mg/l	148	124	132	140	124	168	120	150	144	184	140	164	144.8	184.0	120.0
20	CalciumHardness	mg/l	120	104	108	100	88	132	80	120	108	144	108	84	108.0	144.0	80.0
21	M.Hardness	mg/l	28	20	24	40	36	36	40	30	36	40	32	80	36.8	80.0	20.0
22	D. Oxygen	mg/l	7.4	7.2	7.3	6.6	7.2	6.8	7.4	7.6	7.4	7.6	7.7	7	7.3	7.7	6.6
23	B.O.D.	mg/l	1.4	1.4	1.3	1.4	1.6	1.6	1.4	1.2	1.3	1.4	1.6	1.2	1.4	1.6	1.2

24	C.O.D.	mg/l	15.36	14.28	15.68	19.2	18	18	15.68	10	14.28	15.48	20.74	9.6	15.5	20.7	9.6
25	Sodium	mg/l	17	14	15.02	20.18	16.08	18.8	14	16	14	16.5	19.7	19.8	16.8	20.2	14.0
26	Potassium	mg/l	1.8	1.8	2.01	1.86	1.4	1.84	1.26	1.5	1.6	1.8	1.8	1.7	1.7	2.0	1.3
27	T. Coliform	MPN/100ml	50	40	40	50	50	50	40	40	6	40	50	50	42.2	50.0	6.0
28	F. Coliform	MPN/100ml	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
29	Fluoride	mg/l	0.724	0.382	0.4	0.89	0.72	0.73	0.66	0.76	0.68	0.72	0.74	0.75	0.7	0.9	0.4
30	FDS	mg/l	138	138	144	156	156	180	142	160	168	154	158	202	158.0	202.0	138.0
31	T.K.N.	mg/l	6.16	4.482	5.04	4.48	5.6	5.04	5.6	5.6	6.16	5.04	5.042	7.28	5.5	7.3	4.5
32	Boron	mg/l	0.003	0.016	0.016	0.008	0.004	0.004	0.002	0.004	0.006	0.002	0.006	0.004	0.0	0.0	0.0
	CATEGORY		"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	

Classification of River water based on IS - 2296 - 1992

MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.

Water Quality during Year - 2017-18

Natural Water Resource : River Narmada

Description of Sampling Station: Barwaha near Mortakka Bridge

S.No.	Characteristic	Unit	April	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Average	Max.	Min.
1	Date of Sampling		08.04.17	13.05.17	27.6.17	22.07.17	04.08.17	05.09.17	02.10.17	04.11.17	13.12.17	01.01.18	05.02.18	05.03.18	-	-	-
2	Appearance		Clear	Clear	Clear	Clear	Sl. Muddy	Clear	Clear	Clear	Clear	Clear	Clear	Clear			
3	Temperature	°C	30	31	30	25	24	23	23	24	22	20	23	23	24.8	31.0	20.0
4	Turbidity	NTU	0.8	1.2	2	4.5	1.4	2.4	1.3	1.3	1.1	2.2	3.3	1.8	1.9	4.5	0.8
5	Colour	PCS	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.0	1.0
6	Odour	T. No	O. Less	O. Less	O. Less	O. Less	O. Less	O. Less	O. Less	O. Less	O. Less	O. Less	O. less	O. Less			
7	pH	pH Unit	7.7	8.3	8.41	8.36	8.62	8.23	8.3	8.42	8.5	8.56	8.94	8.23	8.4	8.9	7.7
8	Sp. Conductivity	µMhos/cm.	286	324	402	372	404.1	466	429	398	480	365	398	450	397.8	480.0	286.0
9	T. Solids	mg/l	188	210	258	255	253	300	270	246	230	246	279	287	251.8	300.0	188.0
10	D. Solids	mg/l	182	204	248	241	242	288	262	240	220	238	270	275	242.5	288.0	182.0
11	S. Solids	mg/l	6.0	6	10	14	11	12	8	6	10	8	9	12	9.3	14.0	6.0
12	Amm. Nitrogen	mg/l	0.019	0.014	0.01	0.009	0.008	0.006	0.018	0.019	0.014	0.009	0.022	0.024	0.0	0.0	0.0
13	Nitrite Nitrogen	mg/l	0.005	0.022	0.011	0.001	0.009	0.002	0.003	0.007	0.003	0.003	0.006	0.005	0.0	0.0	0.0
14	Nitrate Nitrogen	mg/l	0.686	0.6	0.9	1.24	0.538	0.548	0.687	1.13	1.082	0.699	0.823	0.723	0.8	1.2	0.5
15	Phosphate (PO ₄)	mg/l	0.013	0.016	0.018	0.012	0.026	0.011	0.014	0.014	0.036	0.006	0.016	0.018	0.0	0.0	0.0
16	Chloride	mg/l	19.14	24.7	30.85	29.99	34.2	91.64	34.457	23.48	29.35	23.14	47.5	36.58	35.4	91.6	19.1
17	Sulphate (SO ₄)	mg/l	6.01	2.23	2.1	4.16	4.83	2.54	3.015	6.91	7.43	7.5	8.23	7.3	5.2	8.2	2.1
18	T. Alkalinity	mg/l	156	144	160	144	140	168	152	200	160	168	156	148	158.0	200.0	140.0
19	T. Hardness	mg/l	132	120	140	120	128	160	160	120	140	180	144	120	138.7	180.0	120.0
20	CalciumHardness	mg/l	112	96	108	88	96	128	128	100	90	120	96	120	106.8	128.0	88.0
21	Magnesium Hardness	mg/l	20	24	32	32	32	32	32	20	50	60	48	28	34.2	60.0	20.0
22	D. Oxygen	mg/l	7.6	7.4	7.2	6.8	7.1	6.7	7.3	7.4	7.9	7.8	7.2	7.5	7.3	7.9	6.7
23	B.O.D.	mg/l	1.2	1.1	1.3	1.4	1.4	1.4	1.5	0.5	1.2	1.1	1.7	1.2	1.3	1.7	0.5

24	C.O.D.	mg/l	0.719	9.52	14.7	20	12	12	23.52	9	12.74	13.55	21.736	12.48	13.5	23.5	0.7
25	Sodium	mg/l	15	15.6	14.07	19.6	17.13	18.08	14.6	14.01	18	17.2	19.9	20.1	16.9	20.1	14.0
26	Potassium	mg/l	1.2	1.8	1.2	1.8	2.4	1.62	1.2	1.2	2	1.8	2	2	1.7	2.4	1.2
27	T. Coliform	MPN/100ml	40	34	40	50	40	40	30	40	34	40	50	50	40.7	50.0	30.0
28	F. Coliform	MPN/100ml	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
29	Fluoride	mg/l	0.719	0.58	0.72	0.62	0.67	0.68	0.56	0.73	0.066	0.69	0.79	0.8	0.6	0.8	0.1
30	FDS	mg/l	130	158	170	165	168	172	176	168	146	158	178	180	164.1	180.0	130.0
31	T.K.N.	mg/l	5.04	3.361	5.6	6.44	5.04	2.8	3.921	5.04	2.8	4.48	5.6	6.16	4.7	6.4	2.8
32	Boron	mg/l	0.002	0.004	0.006	0.003	0.004	0.002	0.002	0.002	0.002	0.004	0.007	0.005	0.0	0.0	0.0
	CATEGORY		"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	

Classification of River water based on IS - 2296 - 1992

MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.

Natural Water Resource : River Narmada

Description of Sampling Station: At Dhareshwar Khargon

S.No.	Characteristic	Unit	April	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Average	Max.	Min.	
1	Date of Sampling		New Station										20.1.18	05.02.18	05.03.18	-	-	-
2	Appearance												Clear	Clear	Clear	Clear	Sl.Muddy	Clear
3	Temperature	°C											22	23	23	22.7	23.0	22.0
4	Turbidity	NTU											2.5	3.6	1	2.4	3.6	1.0
5	Colour	PCS											1	1	1	1.0	1.0	1.0
6	Odour	T. No											O.less	O. less	O. Less			
7	pH	pH Unit											8.52	8.78	8.65	8.7	8.8	8.5
8	Sp. Conductivity	µMhos/cm.											374	383	420	392.3	420.0	374.0
9	T. Solids	mg/l											231	267	271	256.3	271.0	231.0
10	D. Solids	mg/l											224	260	263	249.0	263.0	224.0
11	S. Solids	mg/l											7	7	8	7.3	8.0	7.0
12	Amm. Nitrogen	mg/l											0.011	0.009	0.02	0.0	0.0	0.0
13	Nitrite Nitrogen	mg/l											0.003	0.004	0.004	0.0	0.0	0.0
14	Nitrate Nitrogen	mg/l											0.95	0.469	0.674	0.7	1.0	0.5
15	Phosphate (PO ₄)	mg/l											0.008	0.007	0.014	0.0	0.0	0.0
16	Chloride	mg/l											30.85	22.8	23.77	25.8	30.9	22.8
17	Sulphate (SO ₄)	mg/l											7.59	3.764	3.78	5.0	7.6	3.8
18	T. Alkalinity	mg/l											192	144	140	158.7	192.0	140.0
19	T. Hardness	mg/l											180	136	112	142.7	180.0	112.0
20	CalciumHardness	mg/l											140	104	80	108.0	140.0	80.0
21	M.Hardness	mg/l											40	32	32	34.7	40.0	32.0
22	D. Oxygen	mg/l											8	7.7	7.6	7.8	8.0	7.6
23	B.O.D.	mg/l											1.2	1.1	1.2	1.2	1.2	1.1

24	C.O.D.	mg/l																7	10.86	8.64	8.8	10.9	7.0	
25	Sodium	mg/l																	17.2	16.6	20.1	18.0	20.1	16.6
26	Potassium	mg/l																	1.8	1.8	1.8	1.8	1.8	1.8
27	T. Coliform	MPN/100ml																	40	33	40	37.7	40.0	33.0
28	F. Coliform	MPN/100ml																	<2	<2	<2	<2	<2	<2
29	Fluoride	mg/l																	0.74	0.65	0.8	0.7	0.8	0.7
30	FDS	mg/l																	158	156	184	166.0	184.0	156.0
31	T.K.N.	mg/l																	4.48	3.92	6.16	4.9	6.2	3.9
32	Boron	mg/l																	0.004	0.004	0.003	0.0	0.0	0.0
	CATEGORY																		A	"A "	"A "	"A "		

MADHYA PRADESH POLLUTION CONTROL BOARD. BHOPAL.
Water Quality during Year - 2017-18

Natural Water Resource : River Narmada

Description of Sampling Station: At Mandleshwar near w/s. Jallod intake

S.No.	Characteristic	Unit	April	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Average	Max.	Min.
1	Date of Sampling		18.4.17	14.5.17	27.6.17	19.07.2017	03.08.17	05.09.17	20.10.17	04.11.17	13.12.17	01.01.18	05.02.18	05.03.18	-	-	-
2	Appearance		Clear	Clear	Clear	Clear	Sl. Muddy	Clear	Clear	Clear	Clear	Clear	Clear	Clear			
3	Temperature	°C	31	31	30	26	24	23	23	24	22	20	23	23	25.0	31.0	20.0
4	Turbidity	NTU	0.8	1.6	2.1	6.1	6.8	2	1.41	1.1	2.8	1.4	2.7	1.02	2.5	6.8	0.8
5	Colour	PCS	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.0	1.0
6	Odour	T. No	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O. Less	O. less	O. Less			
7	pH	pH Unit	7.38	8.6	8.56	8.66	8.44	8.36	8.01	8.93	8.3	8.57	8.71	8.71	8.4	8.9	7.4
8	Sp. Conductivity	µMhos/cm.	288	362	380	308	347	432	453.65	440.36	420.25	370.22	404.52	422	385.7	453.7	288.0
9	T. Solids	mg/l	186	217	238	215	251	272	288	213	261	207	250	270	239.0	288.0	186.0
10	D. Solids	mg/l	180	209	228	204	242	261	280	203	252	202	242	260	230.3	280.0	180.0
11	S. Solids	mg/l	6	8	10	11	9	11	8	10	9	5	18	10	8.8	11.0	5.0
12	Amm. Nitrogen	mg/l	0.012	0.008	0.009	0.008	0.018	0.012	0.021	0.016	0.017	0.014	0.014	0.02	0.0	0.0	0.0
13	Nitrite Nitrogen	mg/l	0.002	ND	BDL	0.003	0.004	0.008	0.005	0.005	0.081	0.003	0.008	0.007	0.0	0.1	0.0
14	Nitrate Nitrogen	mg/l	0.72	0.768	0.9	0.323	0.794	0.634	0.811	1.055	1.3259	0.672	0.723	0.78	0.8	1.3	0.3
15	Phosphate (PO ₄)	mg/l	0.016	0.008	0.01	0.016	0.026	0.019	0.029	0.039	0.014	0.008	0.008	0.016	0.0	0.0	0.0
16	Chloride	mg/l	18.85	23.75	29.04	23.48	42.75	27.43	23.64	30.85	27.99	19.28	26.7	32.92	27.2	42.8	18.9
17	Sulphate (SO ₄)	mg/l	2.26	1.68	2.01	3.17	7.42	3.72	7.61	7.131	7.737	8.226	6.92	5.6	5.3	8.2	1.7
18	T. Alkalinity	mg/l	124	164	168	124	160	168	150	156	176	168	152	136	153.8	176.0	124.0
19	T. Hardness	mg/l	120	128	132	92	128	160	100	140	160	152	132	120	130.3	160.0	92.0
20	Calcium Hardness	mg/l	92	100	108	72	100	124	60	96	120	116	84	80	96.0	124.0	60.0
21	Magnesium Hardness	mg/l	28	28	24	20	28	36	40	44	40	36	48	40	34.3	48.0	20.0
22	D. Oxygen	mg/l	7.5	7.5	7.4	7.2	7.1	6.9	7.2	7.6	7.9	8	7.4	7.4	7.4	8.0	6.9
23	B.O.D.	mg/l	1.1	1.1	1	1.3	1.4	1.1	0.8	1.2	1.4	1.1	1.4	1.2	1.2	1.4	0.8
24	C.O.D.	mg/l	7.61	7.61	8.82	14.28	15	11	7.84	14	14	8.71	14.82	8.64	11.0	15.0	7.6
25	Sodium	mg/l	14.4	15.08	13.01	16.8	16.02	17.6	17.1	16.8	14.6	16.8	20	18.1	16.4	20.0	13.0

26	Potassium	mg/l	1.2	1.76	1.02	1.4	1.3	1.8	1.28	1.8	1.1	1.6	2	1.8	1.5	2.0	1.0
27	T. Coliform	MPN/100ml	30	34	34	40	40	33	40	40	40	33	40	40	37.0	40.0	30.0
28	F. Coliform	MPN/100ml	<2	<2	<2	<2	<2	<2	<1.1	<2	<2	<2	<2	<2	<2	<2	<2
29	Fluoride	mg/l	0.64	0.58	0.74	0.69	0.55	0.68	0.61	0.68	0.69	0.64	0.79	0.72	0.7	0.8	0.6
30	FDS	mg/l	110	146	160	132	140	168	151	152	174	128	144	182	148.9	182.0	110.0
31	T.K.N.	mg/l	2.8	5.6	2.24	2.241	3.92	3.921	3.08	6.16	8.4	3.36	6.72	5.04	4.5	8.4	2.2
32	Boron	mg/l	0.002	0.006	0.008	0.002	0.004	0.004	0.006	0.002	0.005	0.004	0.006	0.003	0.0	0.0	0.0
	CATEGORY		"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	

Classification of River water based on IS - 2296 - 1992

MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.

Water Quality during Year - 2017-18

Natural Water Resource : River Narmada

Description of Sampling Station: At Mandleshwar d/s

S.No.	Characteristic	Unit	April	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Average	Max.	Min.
1	Date of Sampling		18.4.17	14.5.17	30.6.17	19.07.2017	03.08.17	05.09.17	02.10.17	04.11.17	13.12.17	01.01.18	05.02.18	05.03.18	-	-	-
2	Appearance		Clear	Clear	Clear	Clear	Sl. Muddy	Clear	Clear	Clear	Clear	Clear	Clear	Clear			
3	Temperature	°C	31	31	29	26	25	23	23	24	22	20	23	23	25.00	31	20
4	Turbidity	NTU	1.2	1.6	1.2	6.1	2.1	2.4	1.08	1.5	2.8	1.2	3.5	1.2	2.2	6.1	1.08
5	Colour	PCS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6	Odour	T. No	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O. Less	O. less	O. Less			
7	pH	pH Unit	7.91	8.6	8.42	8.66	8.52	8.44	8.15	8.34	8.3	8.47	8.31	8.66	8.398	8.66	7.91
8	Sp. Conductivity	µMhos/cm.	294	384	328	308	400.01	489	664.7	378	420.25	374.54	415	480	411.29	664.7	294
9	T. Solids	mg/l	192	228	208	215	253	331	408	202	261	241	259	302	258.33	408	192
10	D. Solids	mg/l	184	220	199	204	240	322	398	194	252	235	249	288	248.75	398	184
11	S. Solids	mg/l	8	8	9	11	13	9	10	8	9	6	10	14	9.58	14	6
12	Amm. Nitrogen	mg/l	0.02	0.007	0.013	0.008	0.018	0.006	0.029	0.014	0.017	0.012	0.018	0.029	0.016	0.029	0.006
13	Nitrite Nitrogen	mg/l	0.002	ND	0.008	0.003	0.006	0.003	0.006	0.004	0.081	0.014	0.006	0.006	0.013	0.081	0.002
14	Nitrate Nitrogen	mg/l	0.802	0.872	0.59	0.323	0.738	0.524	0.849	1.609	1.3259	0.741	0.804	1.024	0.850	1.609	0.323
15	Phosphate (PO ₄)	mg/l	0.018	0.012	0.012	0.016	0.024	0.008	0.028	0.018	0.014	0.014	0.012	0.018	0.016	0.028	0.008
16	Chloride	mg/l	22.29	28.3	23.59	23.48	19	32.92	28.71	19.28	27.99	23.14	24.7	36.58	25.83	36.58	19
17	Sulphate (SO ₄)	mg/l	2.56	2.01	2.16	3.17	3.48	2.724	2.08	4.108	7.737	8.23	7.62	8.1	4.50	8.23	2.01
18	T. Alkalinity	mg/l	128	160	140	124	144	224	200	120	176	172	156	140	157.00	224	120
19	T. Hardness	mg/l	120	132	120	92	124	200	220	92	160	156	140	124	140.00	220	92
20	Calcium Hardness	mg/l	100	100	84	72	84	164	50	68	120	116	108	92	96.50	164	50
21	Magnesium Hardness	mg/l	20	32	36	20	40	36	170	24	40	40	32	32	43.50	170	20
22	D. Oxygen	mg/l	7.5	7.4	7.5	7.2	6.8	6.8	7.2	7.4	7.9	7.9	7.4	7.4	7.37	7.9	6.8
23	B.O.D.	mg/l	1.2	1.2	1.1	1.3	1.2	1.1	1	1.3	1.4	1.2	1.5	1.4	1.24	1.5	1
24	C.O.D.	mg/l	10.47	9.52	12.74	14.28	8	12	8.82	10	14	17.42	15.8	13.44	12.21	17.42	8
25	Sodium	mg/l	14	16.18	15.7	16.8	17.84	16.2	18.5	13.02	14.6	16.8	20.2	22.1	16.83	22.1	13.02

26	Potassium	mg/l	1.3	1.4	1.4	1.4	1.98	1.4	2.08	1.46	1.1	1.8	2	2.19	1.63	2.19	1.1
27	T. Coliform	MPN/100ml	34	40	34	40	40	34	40	40	40	40	50	50	40.17	50	34
28	F. Coliform	MPN/100ml	<2	<2	<2	<2	<2	<2	<1.1	<2	<2	<2	<2	<2	<2	<2	<2
29	Fluoride	mg/l	0.62	0.54	0.67	0.69	0.82	0.58	0.84	0.64	0.69	0.68	0.83	0.92	0.71	0.92	0.54
30	FDS	mg/l	130	160	158	132	164	190	154	159	174	152	148	202	160.25	202	130
31	T.K.N.	mg/l	2.8	7.28	3.921	2.241	6.1	3.361	3.36	5.88	8.4	3.92	7.84	7.28	5.20	8.4	2.241
32	Boron	mg/l	0.002	0.005	0.006	0.002	0.004	0.003	0.005	0.003	0.005	0.003	0.006	0.008	0.00	0.01	0.00
	CATEGORY		"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "		

Classification of River water based on IS - 2296 - 1992

MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.

Water Quality during Year - 2017-18

Natural Water Resource : River Narmada

Description of Sampling Station: At Maheshwar D/s.

S.No.	Characteristic	Unit	April	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Average	Max.	Min.
1	Date of Sampling		18.4.17	14.5.17	27.6.17	19.07.2017	03.08.17	05.09.17	02.10.17	04.11.17	13.12.17	01.01.18	05.02.18	05.03.18	-	-	-
2	Appearance		Clear	Clear	Clear	Clear	Sl. Muddy	Clear	Clear	Clear	Clear	Clear	Clear	Clear			
3	Temperature	°C	31	31	30	26	24	23	23	24	22	20	23	23	25.0	31	20
4	Turbidity	NTU	1.5	1.5	2	14.6	2.3	2.3	1.21	2	2.2	2.7	5.1	1.2	3.2	14.6	1.2
5	Colour	PCS	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1	1
6	Odour	T. No	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O. Less	O. less	O. Less			
7	pH	pH Unit	7.9	8.4	8.41	8.6	8.62	8.4	7.86	7.5	8.4	8.63	8.48	7.88	8.3	8.63	7.5
8	Sp. Conductivity	µMhos/cm.	308.47	410	402	361.4	396.32	402	608.7	462.94	400.8	384.18	388.14	460.89	415.5	608.7	308.47
9	T. Solids	mg/l	192	254	258	267	252	298	375	222	248	255	243	254	259.8	375	192
10	D. Solids	mg/l	184	244	248	249	237	286	368	207	240	247	232	245	248.9	368	184
11	S. Solids	mg/l	8	10	10	18	168	12	7	15	8	8	11	9	23.7	168	7
12	Amm. Nitrogen	mg/l	0.02	0.009	0.01	0.011	0.021	0.008	0.024	0.021	0.016	0.015	0.02	0.016	0.0	0.024	0.008
13	Nitrite Nitrogen	mg/l	0.002	0.016	0.011	0.004	0.012	0.002	0.004	0.004	0.009	0.009	0.007	0.005	0.0	0.016	0.002
14	Nitrate Nitrogen	mg/l	1.007	0.806	0.9	0.623	0.982	0.668	0.018	1.923	0.724	1.09	0.813	0.704	0.9	1.923	0.018
15	Phosphate (PO ₄)	mg/l	0.014	0.016	0.018	0.02	0.032	0.008	0.036	0.022	0.012	0.013	0.014	0.001	0.0	0.036	0.001
16	Chloride	mg/l	22.29	33.25	30.85	25.43	19	32.92	28.28	34.71	35.98	21.21	22.8	22.86	27.5	35.98	19
17	Sulphate (SO ₄)	mg/l	2.732	2.34	2.1	4.12	4.41	4.26	4.56	9.34	8.2	8.5	7.77	4.017	5.2	9.34	2.1
18	T. Alkalinity	mg/l	128	168	160	132	144	132	128	-	172	176	148	200	153.5	200	128
19	T. Hardness	mg/l	120	136	140	112	148	192	200	160	140	160	128	250	157.2	250	112
20	Calcium Hardness	mg/l	92	104	108	72	112	156	80	104	120	124	96	150	109.8	156	72
21	Magnesium Hardness	mg/l	28	32	32	40	36	36	120	56	20	36	32	100	47.3	120	20
22	D. Oxygen	mg/l	7.5	7.4	7.2	6.7	6.7	6.9	7	7.4	7.9	7.7	7.7	7.9	7.3	7.9	6.7
23	B.O.D.	mg/l	1.2	1.4	1.3	1.6	1.4	2.1	0.7	1.4	1.6	1.3	1.4	1.4	1.4	2.1	0.7
24	C.O.D.	mg/l	10.47	14.28	14.7	17.13	15	20	7.84	18	14.28	14.52	18.77	11.52	14.7	20	7.84
25	Sodium	mg/l	14	17.06	14.07	19	20.8	17.8	21.01	17.9	14.6	17.3	20.8	21.11	18.0	21.11	14
26	Potassium	mg/l	1	1.4	1.2	1.8	2.3	1.8	2.5	2	1.4	2	2	2	1.8	2.51	1

27	T. Coliform	MPN/100ml	40	40	40	50	50	40	40	50	34	50	50	50	44.5	50	34
28	F. Coliform	MPN/100ml	<2	<2	<2	<2	<2	<2	<1.1	<2	<2	<2	<2	<2	<2	<2	<2
29	Fluoride	mg/l	0.424	0.64	0.72	0.83	0.88	0.62	0.98	0.78	0.79	0.74	0.86	0.82	0.8	0.98	0.424
30	FDS	mg/l	130	140	170	158	168	184	201	146	158	164	144	132	157.92	201	130
31	T.K.N.	mg/l	2.8	6.44	5.6	3.361	6.72	4.482	2.8	6.72	4.482	5.6	7.2	6.16	5.20	7.2	2.80
32	Boron	mg/l	0.002	0.008	0.006	0.008	0.005	0.002	0.006	0.003	0.006	0.006	0.005	0.005	0.005	0.008	0.002
	CATEGORY		"A "	"A "	"A "	"A "	"B "	"A "	"B "	"A "	"A "	"A "	"A "	"A "	"A "		

Classification of River water based on IS - 2296 - 1992

MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.

Water Quality during Year - 2017-18

Natural Water Resource : River Narmada

Description of Sampling Station: At Shabastradhara (Jalkoti)

S.No.	Characteristic	Unit	April	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Average	Max.	Min.
1	Date of Sampling											20.1.18	05.02.18	05.03.18	-	-	-
2	Appearance											Clear	Clear	Clear	Clear	Sl.Muddy	Clear
3	Temperature	°C										21	23	23	22.33	23.00	21.00
4	Turbidity	NTU										2.4	2.6	0.82	1.94	2.60	0.82
5	Colour	PCS										1	1	1	1.00	1.00	1.00
6	Odour	T. No										O.less	O. less	O. Less			
7	pH	pH Unit										8.4	8.67	8.02	8.36	8.67	8.02
8	Sp. Conductivity	µMhos/cm.										359	394.11	425.84	392.98	425.84	359.00
9	T. Solids	mg/l										224	243	248	238.33	248.00	224.00
10	D. Solids	mg/l										216	236	240	230.67	240.00	216.00
11	S. Solids	mg/l										8	7	8	7.67	8.00	7.00
12	Amm. Nitrogen	mg/l										0.012	0.008	0.012	0.01	0.01	0.01
13	Nitrite Nitrogen	mg/l										0.006	0.002	0.004	0.00	0.01	0.00
14	Nitrate Nitrogen	mg/l										0.84	0.626	0.438	0.63	0.84	0.44
15	Phosphate (PO ₄)	mg/l										0.009	0.008	0.04	0.02	0.04	0.01
16	Chloride	mg/l										28.92	30.4	22.86	27.39	30.40	22.86
17	Sulphate (SO ₄)	mg/l										6.72	6.6	3.49	5.60	6.72	3.49
18	T. Alkalinity	mg/l										180	156	180	172.00	180.00	156.00
19	T. Hardness	mg/l										160	148	150	152.67	160.00	148.00
20	CalciumHardness	mg/l										132	116	110	119.33	132.00	110.00
21	M.Hardness	mg/l										18	32	40	30.00	40.00	18.00
22	D. Oxygen	mg/l										7.8	8	8.5	8.10	8.50	7.80
23	B.O.D.	mg/l										1	1.2	1.4	1.20	1.40	1.00
24	C.O.D.	mg/l										10	11.85	10.56	10.80	11.85	10.00
25	Sodium	mg/l										16.8	18.6	18.2	17.87	18.60	16.80
26	Potassium	mg/l										1.8	1.7	1.5	1.67	1.80	1.50
27	T. Coliform	MPN/100ml										40	40	40	40.00	40.00	40.00

New Station

29	Fluoride	mg/l	0.66	0.58	0.8	0.72	0.68	0.73	0.71	0.72	0.62	0.074	0.76	0.88	0.7	0.88	0.074
30	FDS	mg/l	118	144	152	134	142	166	210	164	174	160	162	230	163	230	118
31	T.K.N.	mg/l	3.36	4.482	2.8	5.6	5.6	3.92	5.88	6.72	5.04	6.16	5.6	6.16	5.110	6.72	2.8
32	Boron	mg/l	0.002	0.008	0.003	0.004	0.005	0.005	0.005	0.004	0.004	0.004	0.005	0.004	0.004	0.008	0.002
	CATEGORY		"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "		

Classification of River water based on IS - 2296 - 1992

MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.
Water Quality during Year - 2017-18

Natural Water Resource : River Narmada

Description of Sampling Station: At Dharampuri (before mixing domestic nalla)

S.No.	Characteristic	Unit	April	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Average	Max.	Min.
1	Date of Sampling		13.4.17	13.5.17	3.6.17	25.07.17	03.08.17	05.09.17	02.10.17	04.11.17	13.12.17	01.01.18	05.02.18	05.03.18	-	-	-
2	Appearance		Clear	Clear	Clear	Clear	Sl. Muddy	Clear	Clear	Clear	Clear	Clear	Clear	Clear			
3	Temperature	°C	30	31.4	32.5	25	23	23	24	24	22	20	23	23	25.08	32.50	20.00
4	Turbidity	NTU	1.1	0.8	0.8	7.1	6.42	1.6	8.2	1.3	1.2	6.3	2.8	2.6	3.35	8.20	0.80
5	Colour	PCS	1	1	1	1	1	1	1	1	1	1	1	1	1.00	1.00	1.00
6	Odour	T. No	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O. Less	O. less	O. Less			
7	pH	pH Unit	7.6	8.12	8.36	8.52	8.9	8.42	8.37	7.25	8.48	8.69	8.7	8.75	8.347	8.9	7.25
8	Sp. Conductivity	µMhos/cm.	300	370	320	302	380	332	445	501.49	522.7	276.85	428	491.89	389.16	522.7	276.85
9	T. Solids	mg/l	197	250	225	207	224	234	270	230	332	209	264	304	245.50	332	197
10	D. Solids	mg/l	190	243	220	190	209	222	259	220	320	202	258	294	235.58	320	190
11	S. Solids	mg/l	7	7	5	17	15	12	11	10	12	7	6	10	9.92	17	5
12	Amm. Nitrogen	mg/l	0.014	0.009	0.018	0.009	0.009	0.018	0.02	0.015	0.022	0.018	0.018	0.021	0.02	0.022	0.009
13	Nitrite Nitrogen	mg/l	0.002	0.022	0.01	0.002(BDL)	0.008	0.006	0.004	0.028	1.097	0.01	0.002	0.006	0.12	1.097	0.002
14	Nitrate Nitrogen	mg/l	0.724	0.472	0.884	1.23	0.85	0.72	1.73	1.63	1.066	1.348	0.71	0.824	1.02	1.73	0.472
15	Phosphate (PO ₄)	mg/l	0.008	0.017	0.016	0.008	0.01	0.016	0.026	0.054	0.012	0.02	0.016	0.026	0.02	0.054	0.008
16	Chloride	mg/l	33.94	36.1	30.62	26	30.4	23.77	38.28	43.39	33.98	28.92	32.06	27.99	32.12	43.39	23.77
17	Sulphate (SO ₄)	mg/l	3.68	2.68	3.07	3.92	4.04	3.08	5.17	9.79	8.59	9.07	6.28	4.69	5.34	9.79	2.68
18	T. Alkalinity	mg/l	124	156	160	132	172	152	152	172	200	136	164	152	156.00	200	124
19	T. Hardness	mg/l	120	140	140	112	140	128	160	160	170	156	156	120	141.83	170	112
20	Calcium Hardness	mg/l	100	112	112	88	112	100	124	132	136	92	112	96	109.667	136	88
21	Magnesium Hardness	mg/l	20	28	28	24	28	28	36	28	36	64	44	24	32.33	64	20
22	D. Oxygen	mg/l	7.3	7.6	7.4	7.2	7.3	7.4	7.1	7.2	7.9	8	7.4	7.5	7.44	8	7.1
23	B.O.D.	mg/l	1.1	1.1	1.2	1.4	1.5	1.3	1.4	1.2	1.2	1.4	1.1	1.4	1.28	1.5	1.1
24	C.O.D.	mg/l	9.6	12.37	13	15	10	16	20.58	15	14	14.52	15.8	7.68	13.63	20.58	7.68
25	Sodium	mg/l	15	14.8	16.8	16.02	17.08	18	18.3	16	15.6	20.2	17.01	19.8	17.05	20.2	14.8
26	Potassium	mg/l	1.8	1.9	2	1.3	1.4	1.8	1.8	1.7	1.6	2	1.6	1.8	1.73	2	1.3
27	T. Coliform	MPN/100ml	34	40	40	40	40	40	40	40	34	40	50	40	39.833	50	34
28	F. Coliform	MPN/100ml	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0	0
29	Fluoride	mg/l	0.68	0.58	0.64	0.002	0.8	0.67	0.79	0.68	0.78	0.84	0.64	0.83	0.66	0.84	0.002

30	FDS	mg/l	127	148	152	132	142	160	172	170	182	130	160	176	154.25	182	127
31	T.K.N.	mg/l	5.04	5.042	3.36	4.48	4.48	3.92	5.6	6.12	5.88	3.92	5.04	6.72	4.97	6.72	3.36
32	Boron	mg/l	0.003	0.07	0.002	0.002	0.003	0.006	0.006	0.004	0.004	0.006	0.004	0.004	0.0095	0.07	0.002
	CATEGORY		"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	

Classification of River water based on IS - 2296 - 1992

MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.

Water Quality during Year - 2017-18

Natural Water Resource : River Narmada

Description of Sampling Station: At Dharampuri d/s.

S.No.	Characteristic	Unit	April	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Average	Max.	Min.
1	Date of Sampling		13.4.17	13.5.17	13.6.17	25.07.17	03.08.17	05.09.17	02.10.17	04.11.17	13.12.17	01.01.18	05.02.18	05.03.18	-	-	-
2	Appearance		Clear	Clear	Clear	Sl. Muddy	Sl. Muddy	Sl. Muddy	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Sl. Muddy	Clear
3	Temperature	°C	30	31.5	32.5	25	24	23	24	24	22	20	23	23	25.17	32.50	20.00
4	Turbidity	NTU	1.6	1.4	0.9	8.9	8.02	1.8	5.7	1.4	1.4	12.1	3.6	4.6	4.29	12.10	0.90
5	Colour	PCS	1	1	1	1	1	1	1	1	1	1	1	1	1.00	1.00	1.00
6	Odour	T. No	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O. Less	O. less	O. Less			
7	pH	pH Unit	7.94	8	7.89	8.59	8.72	8.48	8.4	7.78	8.58	8.61	8.86	8.93	8.40	8.93	7.78
8	Sp. Conductivity	µMhos/cm.	350	392	340	312	392	350	406.25	654.92	550.68	370.86	489	506.44	426.18	654.92	312
9	T. Solids	mg/l	210	257	237	206	232	258	248	252	334	246	282	312	256.17	334	206
10	D. Solids	mg/l	202	248	230	198	212	244	240	240	319	238	272	300	245.25	319	198
11	S. Solids	mg/l	8	9	7	18	20	14	8	12	15	8	10	12	11.75	20	7
12	Amm. Nitrogen	mg/l	0.017	0.015	0.02	0.01	0.009	0.02	0.016	0.017	0.026	0.02	0.022	0.024	0.018	0.026	0.009
13	Nitrite Nitrogen	mg/l	0.003	0.029	0.019	0.002	0.009	0.007	0.023	0.052	0.099	0.005	0.009	0.008	0.022	0.099	0.002
14	Nitrate Nitrogen	mg/l	0.931	0.82	1.08	1.86	1.09	0.69	1.644	1.803	1.07	1.19	0.834	0.913	1.160	1.86	0.69
15	Phosphate (PO ₄)	mg/l	0.009	0.02	0.018	0.009	0.012	0.018	0.022	0.062	0.099	0.022	0.009	0.028	0.03	0.099	0.009
16	Chloride	mg/l	37.71	30.4	40.2	28	51.3	29.26	28.71	48.21	39.98	38.56	35.83	29.99	36.51	51.3	28
17	Sulphate (SO ₄)	mg/l	4.02	3.07	3.15	4.01	5.1	3.62	4.62	10.41	8.9	12.66	6.83	4.98	5.95	12.66	3.07
18	T. Alkalinity	mg/l	136	164	164	136	180	164	136	180	208	192	176	160	166.33	208	136
19	T. Hardness	mg/l	128	144	152	116	160	144	144	168	180	176	160	132	150.33	180	116
20	Calcium Hardness	mg/l	96	100	112	92	120	108	112	142	144	136	120	100	115.17	144	92
21	Magnesium Hardness	mg/l	32	44	40	24	40	36	32	26	36	40	40	32	35.17	44	24
22	D. Oxygen	mg/l	7.1	7.4	7.2	7	7.2	7.3	7.2	7	7.7	7.9	7.2	7.4	7.30	7.9	7
23	B.O.D.	mg/l	1.3	1.3	1.4	1.6	1.6	1.4	1.3	1.4	1.9	1.2	1.4	1.6	1.45	1.9	1.2
24	C.O.D.	mg/l	15.36	14.28	15	16	17	18	16.66	15	16	17.42	18.77	11.52	15.92	18.77	11.52
25	Sodium	mg/l	17	17.5	19.8	17.01	18.12	19.3	16.6	17.7	16.02	20.6	18.4	20.6	18.22	20.6	16.02
26	Potassium	mg/l	1.9	2	2.1	1.4	1.6	1.9	1.4	<2	1.7	2	2	2	1.82	2.1	1.4
27	T. Coliform	MPN/100ml	40	50	50	50	50	5	30	50	40	50	60	50	43.75	60	5
28	F. Coliform	MPN/100ml	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
29	Fluoride	mg/l	0.72	0.73	0.72	0.8	0.9	0.72	0.68	0.72	0.84	0.88	0.74	0.88	0.78	0.9	0.68

30	FDS	mg/l	136	156	160	138	148	170	168	180	192	158	186	180	164.3	192	136
31	T.K.N.	mg/l	5.88	3.921	4.48	4.76	5.04	6.16	3.92	8.12	6.12	6.16	6.16	7.84	5.71	8.12	3.92
32	Boron	mg/l	0.004	0.078	0.003	0.002	0.004	0.007	0.004	0.003	0.004	0.008	0.005	0.006	0.01	0.002	0.078
	CATEGORY		"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"B "	"A "	"A "		

Classification of River water based on IS - 2296 - 1992

MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.

Water Quality during Year - 2017-18

Natural Water Resource : River Narmada

Description of Sampling Station: At Semalda U/S of Barwani

S.No.	Characteristic	Unit	April	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Average	Max.	Min.	
1	Date of Sampling		New Station										11.1.18	05.02.18	05.03.18	-	-	-
2	Appearance												Clear	Clear	Clear	Clear	Sl.Muddy	Clear
3	Temperature	°C											20	22	23	21.67	23.00	20.00
4	Turbidity	NTU											1.8	3.3	2	2.37	3.30	1.80
5	Colour	PCS											1	1	1	1.00	1.00	1.00
6	Odour	T. No											O.less	O. less	O. less			
7	pH	pH Unit											8.74	8.67	8.47	8.63	8.74	8.47
8	Sp. Conductivity	µMhos/cm.											364.57	445	579	462.86	579.00	364.57
9	T. Solids	mg/l											25	273	422	240.00	422.00	25.00
10	D. Solids	mg/l											220	267	412	299.67	412.00	220.00
11	S. Solids	mg/l											5	6	10	7.00	10.00	5.00
12	Amm. Nitrogen	mg/l											0.01	0.023	0.018	0.02	0.02	0.01
13	Nitrite Nitrogen	mg/l											0.006	0.006	0.006	0.01	0.01	0.01
14	Nitrate Nitrogen	mg/l											0.802	0.526	1.048	0.79	1.05	0.53
15	Phosphate (PO ₄)	mg/l											0.015	0.011	0.029	0.02	0.03	0.01
16	Chloride	mg/l											23.65	33.94	29.56	29.05	33.94	23.65
17	Sulphate (SO ₄)	mg/l											6.091	5.3	6.84	6.08	6.84	5.30
18	T. Alkalinity	mg/l											152	164	188	168.00	188.00	152.00
19	T. Hardness	mg/l											176	168	168	170.67	176.00	168.00
20	CalciumHardness	mg/l											112	132	124	122.67	132.00	112.00
21	M.Hardness	mg/l											64	36	44	48.00	64.00	36.00
22	D. Oxygen	mg/l											7.6	7.4	7	7.33	7.60	7.00
23	B.O.D.	mg/l											1.2	1.3	2	1.50	2.00	1.20
24	C.O.D.	mg/l											10.64	19.76	13.44	14.61	19.76	10.64
25	Sodium	mg/l											15.5	17.5	22.8	18.60	22.80	15.50
26	Potassium	mg/l											1.7	2	1.8	1.90	2.20	1.70
27	T. Coliform	MPN/100ml											40	40	50	43.33	50.00	40.00
28	F. Coliform	MPN/100ml											<2	<2	<2	<2	<2	<2
29	Fluoride	mg/l											0.73	0.89	1.06	0.89	1.06	0.73
30	FDS	mg/l											140	186	256	194.00	256.00	140.00

31	T.K.N.	mg/l
32	Boron	mg/l
	CATEGORY	

5.04	6.16	2.24	4.48	6.16	2.24
0.003	0.004	0.006	0.004	0.006	0.003
A	"A "	"A "	"A "		

Classification of River water based on IS - 2296 - 1992

MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.

Water Quality during Year - 2017-18

Natural Water Resource : River Narmada

Description of Sampling Station: At Rajghat Badwani.

S.No.	Characteristic	Unit	April	May	June	July	Aug	Sen	Oct	Nov	Dec	Jan	Feb	Mar	Average	Max.	Min.
1	Date of Sampling		18.4.17	30.5.17	27.6.17	25.07.17	03.08.17	05.09.17	02.10.17	30.11.17	13.12.17	01.01.18	05.02.18	05.03.18	-	-	-
2	Appearance		Clear	Clear	Clear	Clear	Sl. Muddy	Clear	Clear	Clear	Clear	Clear	Clear	Clear			
3	Temperature	°C	31	31	30	25	24	23	23	22	22	21	23	23	24.83	31	21
4	Turbidity	NTU	1	2.2	2.3	2.8	7.01	3.3	3.2	2.5	2.7	4.9	6.2	2.6	3.39	7.01	1
5	Colour	PCS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6	Odour	T. No	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O. Less	O. less	O. Less			
7	pH	pH Unit	7.62	8.3	8.4	7.4	8.25	8.24	8.2	7.8	8.4	8.67	8.86	8.43	8.21	8.86	7.4
8	Sp. Conductivity	µMhos/cm.	303	312	331	336	400	443	380	391.95	418.7	400	375	601	390.97	601	303
9	T. Solids	mg/l	201	224	229	258	246	299	262	242	258	266	231	432	262.33	432	201
10	D. Solids	mg/l	190	216	220	240	230	288	254	234	50	258	225	418	235.3	418	50
11	S. Solids	mg/l	11	8	9	18	16	11	8	8	8	8	6	14	10.4	18	6
12	Amm. Nitrogen	mg/l	0.015	0.008	0.006	0.009	0.016	0.016	0.021	0.02	0.018	0.018	0.024	0.02	0.02	0.024	0.006
13	Nitrite Nitrogen	mg/l	0.004	0.007	0.004	0.001	0.004(BDL)	0.003	0.004	0.004	0.01	0.005	0.003	0.008	0.00	0.01	0.001
14	Nitrate Nitrogen	mg/l	0.834	0.473	0.424	1.076	1.24	0.603	0.624	1.041	1.051	0.884	0.81	1.068	0.84	1.24	0.424
15	Phosphate (PO ₄)	mg/l	0.02	0.019	0.016	0.019	0.02	0.014	0.019	0.022	0.021	0.012	0.014	0.026	0.02	0.026	0.012
16	Chloride	mg/l	23.57	21.52	23.59	29.99	30.4	34.75	32.543	21.68	33.98	23.14	28.28	40.4	28.65	40.4	21.52
17	Sulphate (SO ₄)	mg/l	2.63	2.22	2.94	3.88	4.12	3.212	4.123	6.89	4.6	22.47	6.32	7.23	5.89	22.47	2.22
18	T. Alkalinity	mg/l	132	148	152	132	204	200	164	168	172	170	160	220	168.50	220	132
19	T. Hardness	mg/l	124	128	128	120	172	184	152	148	180	160	140	200	153.00	200	120
20	CalciumHardness	mg/l	100	84	92	80	124	156	120	120	156	80	112	160	115.33	160	80
21	Magnesium Hardness	mg/l	24	44	36	40	46	28	32	28	24	72	28	40	36.83	72	24
22	D. Oxygen	mg/l	7.3	7.3	7.4	6.4	7.1	6.7	7.2	7.9	7.8	7.8	7.4	7.1	7.28	7.9	6.4
23	B.O.D.	mg/l	1.3	1.2	1.2	1.6	1.7	1.4	1.3	1.2	1.4	1.2	1.4	2.6	1.46	2.6	1.2
24	C.O.D.	mg/l	12.37	18	19.6	20	20	16	17.64	9.8	18	16.45	17.78	15.36	16.75	20	9.8
25	Sodium	mg/l	17.06	15.4	14.9	17.94	18.02	15.9	16.7	16.7	19.6	18.2	18.02	24.8	17.77	24.8	14.9
26	Potassium	mg/l	1.4	1.6	1.5	1.76	1.6	1.8	1.1	1.6	1.8	1.9	2.1	1.8	1.66	2.1	1.1
27	T. Coliform	MPN/100ml	50	40	50	50	50	40	34	40	50	40	60	50	46.17	60	34
28	F. Coliform	MPN/100ml	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
29	Fluoride	mg/l	0.65	0.48	0.55	0.72	0.8	0.66	0.73	0.69	0.71	0.78	0.76	1.08	0.718	1.08	0.48
30	FDS	mg/l	114	146	148	168	160	170	176	148	176	160	156	270	166.00	270	114

31	T.K.N.	mg/l	3.92	3.361	2.801	3.08	3.08	4.482	3.361	5.6	7.84	5.6	7.28	2.24	4.39	7.84	2.24
32	Boron	mg/l	0.003	0.06	0.05	0.003	0.009	0.004	0.003	0.004	0.006	0.006	0.007	0.008	0.014	0.06	0.003
	CATEGORY		"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "		

Classification of River water based on IS - 2296 - 1992

MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.

Water Quality during Year - 2017-18

Natural Water Resource : River Narmada
Description of Sampling Station: At Koteshwar, Nisarpur, Dhar.

S.No.	Characteristic	Unit	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Average	Max.	Min.
1	Date of Sampling		18.4.17	13.5.17	30.6.17	13.07.17	19.08.17	05.09.17	02.10.17	04.11.17	15.12.17	01.01.18	05.02.18	05.03.18	-	-	-
2	Appearance		Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear			
3	Temperature	°C	31	31.4	29.4	28	23	23	23	24	22	21	22	23	25.07	31.4	21
4	Turbidity	NTU	1	0.7	1	8.4	1.2	1.7	2.8	1.2	2.9	8	5	2.2	3.01	8.4	0.7
5	Colour	PCS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6	Odour	T. No	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O. Less	O. less	O. Less			
7	pH	pH Unit	7.82	8.1	8.2	8.4	8.31	8.39	8.36	7.72	8.57	8.69	8.61	8.76	8.328	8.76	7.72
8	Sp. Conductivity	µMhos/cm.	290	310	320	374	308	324	394	426.52	422.2	437.64	400	573	381.6	573	290
9	T. Solids	mg/l	190	202	206	263	192	242	227	250	271	254	242	382	243.4	382	190
10	D. Solids	mg/l	182	196	198	235	180	226	220	240	263	244	236	370	232.50	370	180
11	S. Solids	mg/l	8	6	8	28	12	16	7	10	8	10	6	12	10.92	28	6
12	Amm. Nitrogen	mg/l	0.018	0.015	0.016	0.022	0.018	0.014	0.019	0.014	0.014	0.014	0.025	0.02	0.02	0.025	0.014
13	Nitrite Nitrogen	mg/l	0.002	0.018	0.024	0.007	0.007	0.006	0.004	0.004	0.009	0.005	0.005	0.007	0.01	0.024	0.002
14	Nitrate Nitrogen	mg/l	0.73	0.72	0.77	0.844	0.92	0.422	0.869	1.89	0.898	1.073	0.81	1.024	0.91	1.89	0.422
15	Phosphate (PO ₄)	mg/l	0.012	0.014	0.01	0.02	0.018	0.01	0.014	0.012	0.008	0.016	0.016	0.022	0.01	0.022	0.008
16	Chloride	mg/l	21.05	26.6	27.22	33.26	28.92	29.26	30.62	28.92	25.99	26.99	30.17	39.91	29.08	39.91	21.05
17	Sulphate (SO ₄)	mg/l	2.88	2.73	2.82	4.4	4.2	3.14	3.26	6.3	3.127	10.82	6.56	6.74	4.7	10.82	2.73
18	T. Alkalinity	mg/l	120	140	144	160	140	148	148	144	156	180	152	164	149.7	180	120
19	T. Hardness	mg/l	112	126	128	152	128	128	140	132	176	160	140	180	141.8	180	112
20	Calcium Hardness	mg/l	92	96	96	124	108	100	108	100	128	116	108	140	109.7	140	92
21	Magnesium Hardness	mg/l	20	28	32	28	20	48	32	32	48	44	32	40	33.67	48	20
22	D. Oxygen	mg/l	7.6	7.4	7.5	6.9	7	7.4	7.1	7.3	8	7.6	7.4	7.4	7.38	8	6.9
23	B.O.D.	mg/l	1.2	1.1	1.2	1.4	1.1	1.3	1.1	1.2	1.4	1.2	1.4	2	1.30	2	1.1
24	C.O.D.	mg/l	9.6	10.47	10.78	16.32	14	12	9.8	18	8	10.64	15.8	13.44	12.40	18	8
25	Sodium	mg/l	16.2	16	17	19	22	16.2	15.6	16.8	16.8	16.9	19	23.6	17.93	23.6	15.6
26	Potassium	mg/l	1.4	1.5	1.8	2	1.2	1.8	1.4	1.8	1.9	1.8	1.9	1.68	1.68	2	1.2
27	T. Coliform	MPN/100ml	40	30	34	50	50	50	30	40	34	30	60	50	41.50	60	30
28	F. Coliform	MPN/100ml	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
29	Fluoride	mg/l	0.68	0.61	0.68	1.08	0.77	0.46	0.79	0.68	0.69	0.69	0.8	1.04	0.75	1.08	0.46
30	FDS	mg/l				0				-	-	160	156	258	143.5	258	0
31	T.K.N.	mg/l	3.361	3.92	3.361	5.6	5.04	3.92	4.48	5.04	6.16	60.16	6.16	2.24	9.12	60.16	2.24

32	Boron	mg/l	0.004	0.011	0.009	0.006	0.006	0.006	0.002	0.003	0.004	0.005	0.008	0.006	0.006	0.011	0.002
	CATEGORY		"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "	"A "		

MADHYA PRADESH POLLUTION CONTROL BOARD, BHOPAL.
Water Quality during Year - 2017-18

Natural Water Resource : River Narmada
Description of Sampling Station: At Kakrana, interstate boundry, Alirajpur.

S.No.	Characteristic	Unit	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Average	Max.	Min.
1	Date of Sampling		18.4.17	13.5.17	30.6.17	13.07.17	19.08.17	05.09.17	02.10.17	04.11.17	16.12.17	01.01.18	05.02.18	05.03.18	-	-	-
2	Appearance		Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear
3	Temperature	°C	31	31	29.5	28	24	23	24	24	22	21	22	22	25.13	31	21
4	Turbidity	NTU	1	1.4	1.2	12.5	1.2	2.3	8.5	1.8	1.3	6.1	5.8	4.6	3.98	12.5	1
5	Colour	PCS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6	Odour	T. No	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O.L	O. Less	O. less	O. Less			
7	pH	pH Unit	7.8	8.3	8.6	8.5	8.2	8.42	8.06	7.72	8.56	8.7	8.66	8.14	8.31	8.7	7.72
8	Sp. Conductivity	µMhos/cm.	294	320	333	380	320	310	418.47	483	449.4	439.45	405	480	386.03	483	294
9	T. Solids	mg/l	204	220	210	270	196	222	282	270	291	269	251	349	252.83	349	196
10	D. Solids	mg/l	194	212	202	244	186	211	270	258	279	261	243	336	241.33	336	186
11	S. Solids	mg/l	10	8	8	26	10	132	12	12	12	8	8	13	21.58	132	8
12	Amm. Nitrogen	mg/l	0.014	0.013	0.018	0.024	0.016	0.019	0.018	0.016	0.016	0.016	0.022	0.023	0.018	0.024	0.013
13	Nitrite Nitrogen	mg/l	0.003	0.018	0.007	0.006	0.004	0.008	0.008	0.004	0.005	0.005	0.004	0.008	0.01	0.018	0.003
14	Nitrate Nitrogen	mg/l	0.86	0.92	0.66	0.92	0.72	0.56	1.228	1.68	1.956	0.973	0.87	1.066	1.03	1.956	0.56
15	Phosphate (PO ₄)	mg/l	0.011	0.016	0.014	0.02	0.012	0.012	0.032	0.012	0.022	0.012	0.018	0.02	0.02	0.032	0.011
16	Chloride	mg/l	22.97	34.2	27.22	35.22	34.71	25.6	26.8	43.39	25.99	30.85	32.06	39.42	31.54	43.39	22.97
17	Sulphate (SO ₄)	mg/l	3.06	3.03	2.66	4.93	2.8	3.46	5.17	4.97	8.912	14.45	6.49	7.68	5.63	14.45	2.66
18	T. Alkalinity	mg/l	136	148	148	160	132	140	148	152	168	180	148	156	151.33	180	132
19	T. Hardness	mg/l	124	128	132	156	124	124	140	140	176	172	144	172	144.33	176	124
20	Calcium Hardness	mg/l	96	104	100	120	104	100	112	100	132	120	112	148	112.33	148	96
21	Magnesium Hardness	mg/l	28	24	32	36	20	24	28	40	44	52	32	24	32.000	52	20
22	D. Oxygen	mg/l	7.5	7.2	7.4	6.8	7.1	7.2	6.9	7.1	7.7	7.8	7.5	7.3	7.29	7.8	6.8
23	B.O.D.	mg/l	1.3	1.4	1.2	1.3	1.2	1.2	1.2	1.4	1.4	1.4	1.9	2	1.408	2	1.2
24	C.O.D.	mg/l	11.5	15.23	11.76	18.24	10	10	5.88	20	9	14.52	19.76	11.52	13.12	20	5.88
25	Sodium	mg/l	17	16	16.3	21	17	17.9	1.8	17.2	18.2	19	20.19	23.9	17.12	23.9	1.8
26	Potassium	mg/l	1.8	1.6	1.7	2	1.2	2	26.8	1.6	2	2	2.2	2.1	3.92	26.8	1.2
27	T. Coliform	MPN/100ml	34	50	50	40	50	40	30	50	40	33	60	50	43.92	60	30
28	F. Coliform	MPN/100ml	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
29	Fluoride	mg/l	0.77	0.72	0.8	1.04	0.72	0.58	0.82	0.78	0.69	0.8	0.8	1	0.79	1.04	0.58
30	FDS	mg/l	128	152	154	170	132	132	180	174	188	170	168	220	164.00	220	128
31	T.K.N.	mg/l	5.042	5.42	3.921	6.163	4.28	5.04	5.04	6.12	5.6	5.04	7.28	2.8	5.15	7.28	2.8
32	Boron	mg/l	0.003	0.008	0.008	0.008	0.002	0.008	0.004	0.004	0.006	0.006	0.008	0.008	0.006	0.008	0.002

