

ANNUAL AVERAGE READING OF WATER QUALITY DATA UNDER NWMP, MIZORAM FOR THE YEAR 2014

Sl. No	Parameter	Method Used	Unit	River Tlawng, Upstream, Aizawl	River Tlawng, Downstream, Aizawl	River Tuirial, Upstream, Aizawl	River Tuirial, Downstream, Aizawl	Ramhlun North Tuikhur, Aizawl	Mission Vengthlang Tuikhur, Aizawl
				2050	2051	2052	2053	2054	2055
1	Depth of water body	-	m	1.58	1.67	0.46	0.5	0.73	1.13
2	Velocity of Flow	Float Method	m/s	0.7	0.65	0.64	0.8	NA	NA
3	Water Temperature	Thermometric Method	°C	24.5	24.4	23.6	23.5	19.6	19.3
4	Dissolved Oxygen	Iodometric Method	mg/l	7.1	7.24	6.8	6.8	4.8	3.03
5	pH	Electrometric Method	-	7.26	7.25	7.09	7.12	7.1	6.5
6	Conductivity	Conductometric Method	µs/cm	268.4	275	186.2	201	237.9	405.5
7	BOD	Dilution Method	mg/l	1.42	1.51	1.6	1.4	1.2	1.02
8	Nitrogen-Nitrite (N-NO ₂)	Calorimetric Method	mg/l	0.152	0.112	0.123	0.209	0.115	0.13
9	Alkalinity	Visual Titration	mg/l	57.8	61.2	58.5	62.7	52.3	195.6
10	Turbidity	Turbimetric Method	NTU	0.9	0.8	0.9	0.8	0.5	0.7
11	Chloride	Argentometric titration	mg/l	8.7	8.3	8.2	8	26.2	71.8
12	Nitrogen Ammonia (N-NH ₃)	Calorimetric Method	mg/l	1.06	0.863	0.586	0.432	0.68	1.98
13	Total hardness as CaCO ₃	Complexometric Titration	mg/l	50.8	52	60.2	56.3	74.9	148.2
14	Calcium	Complexometric Titration	mg/l	10.3	12.1	13.9	14.6	19.9	49.3
15	Magnesium	Calculation Method	mg/l	5.03	5.15	5.7	5.6	6	9.2
16	TDS	Gravimetric Method	mg/l	137.5	166.7	154.2	175	103.2	120
17	TSS	-----do-----	mg/l	67.5	80	1.7	84.2	54.2	60.9
18	Phosphate, PO ₄ ³	Calorimetric Method	mg/l	0.127	0.111	0.2	0.35	0.195	0.135
19	Sodium	Flame Photometric method	mg/l	40.25	49	40.25	40.3	54	79

ANNUAL AVERAGE READING OF WATER QUALITY DATA UNDER NWMP, MIZORAM FOR THE YEAR 2014

Sl. No	Parameter	Method Used	Unit	Tlawng River, Sairang	Serlui Stream, Reiek Kai, near P.H.E Water Treatment Plant	Vaipuanpho Stream, Reiek Kai	Tuikual Stream, Reiek Kai	Sakhisih Stream, Mission Vengthlang	Tuirial River, Upstream Near Sumsuih Village
				3709	3710	3711	3712	3713	3714
1	Depth of water body	-	m	0.3	1.2	0.4	0.5	0.4	0.2
2	Velocity of Flow	Float Method	m/s	0.2	0.8	N/A	0.6	0.5	0.3
3	Water Temperature	Thermometric Method	°C	25	21	22	22	13	20
4	Dissolved Oxygen	Iodometric Method	mg/l	6.6	7.6	5.8	5.4	5.8	7
5	pH	Electrometric Method	-	6.8	8.2	8	8.5	7.18	7
6	Conductivity	Conductometric Method	µs/cm	137	636	44	265	88	12
7	BOD	Dilution Method	mg/l	1.2	1.6	1	1	1.3	1.3
8	Nitrogen-Nitrite (N-NO ₂)	Calorimetric Method	mg/l	0.091	0.131	0.109	0.116	0.042	0.071
9	Alkalinity	Visual Titration	mg/l	76	76	55.7	70.9	20.2	84.5
10	Turbidity	Turbimetric Method	NTU	-	-	-	-	-	-
11	Chloride	Argentometric titration	mg/l	9.1	26.5	6	7.5	18.9	11.3
12	Nitrogen Ammonia (N-NH ₃)	Calorimetric Method	mg/l	0.517	0.711	0.646	0.547	0.437	0.619
13	Total hardness as CaCO ₃	Complexometric Titration	mg/l	64	74	30	60	60	84
14	Calcium	Complexometric Titration	mg/l	16	20	4.8	14.4	16	24
15	Magnesium	Calculation Method	mg/l	5.7	5.7	4.3	5.7	4.8	5.7
16	TDS	Gravimetric Method	mg/l	170	120	170	120	120	150
17	TSS	-----do-----	mg/l	80	40	90	50	50	80
18	Phosphate, PO ₄ ³⁻	Calorimetric Method	mg/l	0.148	0.2	0.124	0.12	0.117	0.192
19	Sodium	Flame Photometric method	mg/l	0.148	0.2	0.124	0.12	0.117	0.192

ANNUAL AVERAGE READING OF WATER QUALITY DATA UNDER NWMP, MIZORAM FOR THE YEAR 2014

Sl. No	Parameter	Method Used	Unit	Tuirial River, Airfield, before Dumping Ground	Damdiai Stream, Airfield, near Dumping Ground	Tuirial River, Airfield, after Dumping Ground	Chite Stream, Armed Veng, near Mini Sports Complex	Tuirini River, Seling	Tuivawl River, Near Tuivawl Bridge, Keifang
				3715	3716	3717	3718	3719	3720
1	Depth of water body	-	m	0.4	0.5	0.4	0.3	1	0.3
2	Velocity of Flow	Float Method	m/s	0.3	0.7	0.5	0.5	0.1	0.3
3	Water Temperature	Thermometric Method	°C	19	18	18	19	23	22
4	Dissolved Oxygen	Iodometric Method	mg/l	7.5	5.8	7.9	5.5	8.4	7.3
5	pH	Electrometric Method	-	7.2	7.1	7.41	7.22	7.5	7.4
6	Conductivity	Conductometric Method	µs/cm	73	117	124	237	231	257
7	BOD	Dilution Method	mg/l	1.6	1.2	1.2	1.2	1.7	1.3
8	Nitrogen-Nitrite (N-NO ₂)	Calorimetric Method	mg/l	0.072	0.07	0.087	0.109	0.117	0.091
9	Alkalinity	Visual Titration	mg/l	79.4	59.1	84.5	190.9	77.7	87.8
10	Turbidity	Turbimetric Method	NTU	-	-	-	-	-	-
11	Chloride	Argentometric titration	mg/l	7.5	9.8	9.1	79.6	7.5	11.3
12	Nitrogen Ammonia (N-NH ₃)	Calorimetric Method	mg/l	0.441	0.262	0.581	0.338	0.49	0.718
13	Total hardness as CaCO ₃	Complexometric Titration	mg/l	70	80	44	164	70	86
14	Calcium	Complexometric Titration	mg/l	18.4	21.6	20	51.2	18.4	24
15	Magnesium	Calculation Method	mg/l	5.7	6.2	5.7	8.6	5.7	6.2
16	TDS	Gravimetric Method	mg/l	70	130	190	170	190	150
17	TSS	-----do-----	mg/l	80	70	90	90	80	70
18	Phosphate, PO ₄ ³	Calorimetric Method	mg/l	0.116	0.124	0.144	0.117	0.164	0.131
19	Sodium	Flame Photometric method	mg/l	44	56.5	49.5	62	49	61.5

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Sl. No	Parameter	Method Used	Unit	Lawibual Stream, Lawibual village	Lawibuai Fishpond	Tamdil Lake, Saitual	Challui, Lengpui	Lungli Tuikhur, Republic Veng	Ramhlun 'S' Tuikhur, Near Community Hall
				3721	3722	3723	3724	3725	3726
1	Depth of water body	-	m	0.3	7	2.5	0.3	0.7	0.4
2	Velocity of Flow	Float Method	m/s	1.2	N/A	N/A	0.3	N/A	N/A
3	Water Temperature	Thermometric Method	°C	15	16	20.5	25	15	16
4	Dissolved Oxygen	Iodometric Method	mg/l	4.9	5.4	7.3	6.3	6	5.2
5	pH	Electrometric Method	-	7.61	6.85	7.9	7.4	6.92	7.38
6	Conductivity	Conductometric Method	µs/cm	192	92	143	113	80	86
7	BOD	Dilution Method	mg/l	1.1	1.2	1.4	1.1	1.2	1
8	Nitrogen-Nitrite (N-NO ₂)	Calorimetric Method	mg/l	0.103	0.063	0.097	0.088	0.059	0.09
9	Alkalinity	Visual Titration	mg/l	177.4	59.1	42.2	38.8	25.3	50.7
10	Turbidity	Turbimetric Method	NTU	-	-	-	-	-	-
11	Chloride	Argentometric titration	mg/l	64.4	24.2	9.8	7.5	17.4	39.4
12	Nitrogen Ammonia (N-NH ₃)	Calorimetric Method	mg/l	0.661	0.475	0.319	0.445	0.35	0.429
13	Total hardness as CaCO ₃	Complexometric Titration	mg/l	126	86	46	34	80	70
14	Calcium	Complexometric Titration	mg/l	38.4	24	12	9.6	21.6	18.4
15	Magnesium	Calculation Method	mg/l	7.2	6.2	3.8	2.4	6.2	5.7
16	TDS	Gravimetric Method	mg/l	130	150	160	130	110	90
17	TSS	-----do-----	mg/l	70	60	90	60	60	50
18	Phosphate, PO ₄ ³	Calorimetric Method	mg/l	0.179	0.123	0.219	0.179	0.125	0.148
19	Sodium	Flame Photometric method	mg/l	47.5	52	36	44	48	58

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Sl. No	Parameter	Method Used	Unit	Tuithiang Veng Tuikhur	Khurpui Tuikhur, S.Hlimen	Bawngkawn Hand Pump, Near HB Petrol Pump	Selesih Hand Pump	Tuikual Hand Pump	Chaltlang hand pump near Remi tyre works
				3727	3728	3729	3730	3731	3732
1	Depth of water body	-	m	0.4	0.3	N/A	N/A	N/A	N/A
2	Velocity of Flow	Float Method	m/s	N/A	N/A	N/A	N/A	N/A	N/A
3	Water Temperature	Thermometric Method	°C	15	12	16	16	17	16
4	Dissolved Oxygen	Iodometric Method	mg/l	4.3	4.5	0.8	3.3	3.7	1.2
5	pH	Electrometric Method	-	7.28	7.4	7	6.3	7.1	7.4
6	Conductivity	Conductometric Method	µs/cm	94	105	89	107	85	95
7	BOD	Dilution Method	mg/l	0.9	0.9	0.5	1	0.9	0.5
8	Nitrogen-Nitrite (N-NO ₂)	Calorimetric Method	mg/l	0.069	0.064	0.091	0.072	0.072	0.067
9	Alkalinity	Visual Titration	mg/l	25.3	59.1	101.4	89.5	92.9	92.9
10	Turbidity	Turbimetric Method	NTU	-	-	-	-	-	-
11	Chloride	Argentometric titration	mg/l	30.3	15.1	56.8	20.4	55.3	31
12	Nitrogen Ammonia (N-NH ₃)	Calorimetric Method	mg/l	0.3	0.334	0.665	0.532	0.319	0.361
13	Total hardness as CaCO ₃	Complexometric Titration	mg/l	86	50	126	70	124	104
14	Calcium	Complexometric Titration	mg/l	25.6	10.4	37.6	18.4	37.6	29.6
15	Magnesium	Calculation Method	mg/l	5.2	5.7	7.6	5.7	7.2	7.2
16	TDS	Gravimetric Method	mg/l	120	120	150	130	110	150
17	TSS	-----do-----	mg/l	70	50	60	50	80	70
18	Phosphate, PO ₄ ³	Calorimetric Method	mg/l	0.092	0.107	0.228	0.165	0.14	0.152
19	Sodium	Flame Photometric method	mg/l	59	59	22.5	48.5	22.5	55

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Sl. No	Parameter	Method Used	Unit	S.Hlimen Hand Pump	Tlawng River, Upstream, Zobawk, Lunglei	Mat River	Tlawng River, Pialthleng, Zotlang, Lunglei	Vaitui Tuikhur, Theiriat, Lunglei	Sap Tuikhur, Serkawn
				3733	3734	3735	3736	3737	3738
1	Depth of water body	-	m	N/A	0.2	1	3.5	0.1	N/A
2	Velocity of Flow	Float Method	m/s	N/A	0.5	0.1	0.1	N/A	N/A
3	Water Temperature	Thermometric Method	°C	16	23	20	20	15	15
4	Dissolved Oxygen	Iodometric Method	mg/l	2.4	8.5	8.4	9.2	9.2	7.5
5	pH	Electrometric Method	-	7.3	7.2	8.6	7.8	6.9	7.6
6	Conductivity	Conductometric Method	µs/cm	92	33	22	33	14	24
7	BOD	Dilution Method	mg/l	0.7	1.4	1.4	1.8	1.2	1.2
8	Nitrogen-Nitrite (N-NO ₂)	Calorimetric Method	mg/l	0.066	0.081	0.084	0.057	0.106	0.057
9	Alkalinity	Visual Titration	mg/l	42.2	54	42.2	50.7	59.1	50.7
10	Turbidity	Turbimetric Method	NTU	-	-	-	-	-	-
11	Chloride	Argentometric titration	mg/l	17.4	8.3	7.5	7.5	8.3	12.8
12	Nitrogen Ammonia (N-NH ₃)	Calorimetric Method	mg/l	0.441	0.49	0.623	0.467	0.627	0.361
13	Total hardness as CaCO ₃	Complexometric Titration	mg/l	64	60	74	50	84	64
14	Calcium	Complexometric Titration	mg/l	12	14.4	17.6	13.6	22.4	16
15	Magnesium	Calculation Method	mg/l	8.1	5.7	7.2	3.1	6.7	5.7
16	TDS	Gravimetric Method	mg/l	110	180	170	160	100	120
17	TSS	-----do-----	mg/l	70	90	80	90	40	60
18	Phosphate, PO ₄ ³⁻	Calorimetric Method	mg/l	0.125	0.141	0.173	0.161	0.186	0.066
19	Sodium	Flame Photometric method	mg/l	48.5	23	19.5	70.5	71	17

ANNUAL AVERAGE READING OF WATER QUALITY DATA UNDER NWMP, MIZORAM FOR THE YEAR 2014

Sl. No	Parameter	Method Used	Unit	Zobawk Veng Hand Pump, Lunglei	Saikah Stream, Lawngtlai	Khurpui Tuikhur, Lawngtlai	Chanmari Hand Pump, Lawngtlai	P.H.E Reservoir, Helipad, New Saiha	Chhimtuipui River, Kawlchaw
				3739	3740	3741	3742	3743	3744
1	Depth of water body	-	m	N/A	0.1	0.2	N/A	5	2.3
2	Velocity of Flow	Float Method	m/s	N/A	1	N/A	N/A	N/A	1.2
3	Water Temperature	Thermometric Method	°C	16	20	18	19	21	21
4	Dissolved Oxygen	Iodometric Method	mg/l	2.3	7.6	7.2	11.3	6.2	9.9
5	pH	Electrometric Method	-	7.8	7.2	7.6	6.6	7.6	8.7
6	Conductivity	Conductometric Method	µs/cm	102	80	67	55	21	51
7	BOD	Dilution Method	mg/l	0.7	1.4	1	2	0.9	1.9
8	Nitrogen-Nitrite (N-NO ₂)	Calorimetric Method	mg/l	0.104	0.037	0.046	0.098	0.062	0.066
9	Alkalinity	Visual Titration	mg/l	189.2	16.9	42.2	114.9	25.3	84.5
10	Turbidity	Turbimetric Method	NTU	-	-	-	-	-	-
11	Chloride	Argentometric titration	mg/l	7.5	9.1	11.3	34.1	11.3	7.5
12	Nitrogen Ammonia (N-NH ₃)	Calorimetric Method	mg/l	0.593	0.209	0.433	0.688	0.236	0.433
13	Total hardness as CaCO ₃	Complexometric Titration	mg/l	126	64	54	86	50	84
14	Calcium	Complexometric Titration	mg/l	38.4	16	14.4	24	13.6	24
15	Magnesium	Calculation Method	mg/l	7.2	5.7	4.3	6.2	3.8	5.7
16	TDS	Gravimetric Method	mg/l	60	140	90	130	90	170
17	TSS	-----do-----	mg/l	110	50	40	90	40	60
18	Phosphate, PO ₄ ³	Calorimetric Method	mg/l	0.11	0.031	0.093	0.161	0.186	0.066
19	Sodium	Flame Photometric method	mg/l	53.5	18	22.5	70.5	71	17

ANNUAL AVERAGE READING OF WATER QUALITY DATA UNDER NWMP, MIZORAM FOR THE YEAR 2014

Sl. No	Parameter	Method Used	Unit	Chhochhopa Tuikhur, Saiha	Tuikum River, Serchhip	Sesah Stream, Serchhip	Project veng Hand Pump, Serchhip	Lahmun River, Phaizau, Mamit	Teirei River, Near Bawngva Village, Mamit
				3745	3746	3747	3748	3749	3750
1	Depth of water body	-	m	0.3	1.1	0.3	0.3	1.5	0.5
2	Velocity of Flow	Float Method	m/s	N/A	0.1	N/A	N/A	0.5	3
3	Water Temperature	Thermometric Method	°C	19	13	14	18	25	23
4	Dissolved Oxygen	Iodometric Method	mg/l	7.2	7.3	7.7	9.9		9.5
5	pH	Electrometric Method	-	7.5	7.4	8.2	8.5	8	7.8
6	Conductivity	Conductometric Method	µs/cm	20	25	48	20	120	152
7	BOD	Dilution Method	mg/l	1	1.3	1.4	1.8		1.9
8	Nitrogen-Nitrite (N-NO ₂)	Calorimetric Method	mg/l	0.071	0.066	0.1	0.085	0.082	0.068
9	Alkalinity	Visual Titration	mg/l	59.1	55.7	84.5	89.8	84.5	109.8
10	Turbidity	Turbimetric Method	NTU	-	-	-	-	-	-
11	Chloride	Argentometric titration	mg/l	15.1	7.5	7.5	11.3	9.8	7.5
12	Nitrogen Ammonia (N-NH ₃)	Calorimetric Method	mg/l	0.505	0.574	0.608	0.654	0.524	0.46
13	Total hardness as CaCO ₃	Complexometric Titration	mg/l	86	60	84	110	104	100
14	Calcium	Complexometric Titration	mg/l	24.8	12.8	21.6	31.2	32	28.8
15	Magnesium	Calculation Method	mg/l	5.7	6.7	7.2	7.6	5.7	6.7
16	TDS	Gravimetric Method	mg/l	90	150	140	140	130	150
17	TSS	-----do-----	mg/l	30	70	80	70	70	60
18	Phosphate, PO ₄ ³	Calorimetric Method	mg/l	0.147	0.14	0.118	0.164	0.197	0.124
19	Sodium	Flame Photometric method	mg/l	47	22.5	20	21.5	30	21

ANNUAL AVERAGE READING OF WATER QUALITY DATA UNDER NWMP, MIZORAM FOR THE YEAR 2014

Sl. No	Parameter	Method Used	Unit	Tut River, Near Dapchhuah Village	Tuichhuahe n Stream, Kolasib	Hmar veng Tuikhur, Kolasib	Tlawng River, Downstream, Bairabi	Pond, Near Thermal Power Plant, Bairabi	Tiau River, Champhai
				3751	3752	3753	3754	3755	3756
1	Depth of water body	-	m	1.1	1.5	0.5	1	1	0.2
2	Velocity of Flow	Float Method	m/s	0.4	3.7	N/A	0.5	N/A	0.4
3	Water Temperature	Thermometric Method	°C	22	21	18	22	25	23
4	Dissolved Oxygen	Iodometric Method	mg/l	8.9	3.4	7.2	7.6	5.7	6.3
5	pH	Electrometric Method	-	7.9	7.2	6.6	7.6	7.3	8.9
6	Conductivity	Conductometric Method	µs/cm	181	102	99	300	270	362
7	BOD	Dilution Method	mg/l	1.8	0.9	1.2	1.2	1.1	1.3
8	Nitrogen-Nitrite (N-NO ₂)	Calorimetric Method	mg/l	0.064	0.063	0.073	0.124	0.092	0.12
9	Alkalinity	Visual Titration	mg/l	111.5	89.5	25.3	54	76	111.5
10	Turbidity	Turbimetric Method	NTU	-	-	-	-	-	-
11	Chloride	Argentometric titration	mg/l	11.3	11.3	7.5	9.1	9.8	15.1
12	Nitrogen Ammonia (N-NH ₃)	Calorimetric Method	mg/l	0.619	0.547	0.407	0.692	0.737	0.722
13	Total hardness as CaCO ₃	Complexometric Titration	mg/l	106	90	32	66	80	140
14	Calcium	Complexometric Titration	mg/l	42.2	25.6	8.8	18.4	21.6	128
15	Magnesium	Calculation Method	mg/l	7.2	6.2	2.4	4.8	6.2	7.6
16	TDS	Gravimetric Method	mg/l	140	130	110	190	130	160
17	TSS	-----do-----	mg/l	80	70	50	110	70	60
18	Phosphate, PO ₄ ³⁻	Calorimetric Method	mg/l	0.114	0.137	0.128	0.157	0.197	0.124
19	Sodium	Flame Photometric method	mg/l	36	50	60.5	32	30	21

ANNUAL AVERAGE READING OF WATER QUALITY DATA UNDER NWMP, MIZORAM FOR THE YEAR 2014

Sl. No	Parameter	Method Used	Unit	Tuipui River, Champhai	Bethel Veng Hand-pump, Champhai
				3757	3758
1	Depth of water body	-	m	0.5	N/A
2	Velocity of Flow	Float Method	m/s	0.3	N/A
3	Water Temperature	Thermometric Method	⁰ C	22	21
4	Dissolved Oxygen	Iodometric Method	mg/l		1.5
5	pH	Electrometric Method	-	6.29	6.9
6	Conductivity	Conductometric Method	μs/cm	148	405
7	BOD	Dilution Method	mg/l		0.5
8	Nitrogen-Nitrite (N-NO ₂)	Calorimetric Method	mg/l	0.094	0.097
9	Alkalinity	Visual Titration	mg/l	96.3	135.2
10	Turbidity	Turbimetric Method	NTU		
11	Chloride	Argentometric titration	mg/l	90	15.1
12	Nitrogen Ammonia (N-NH ₃)	Calorimetric Method	mg/l	0.654	0.399
13	Total hardness as CaCO ₃	Complexometric Titration	mg/l	90	130
14	Calcium	Complexometric Titration	mg/l	25.6	40
15	Magnesium	Calculation Method	mg/l	6.2	7.2
16	TDS	Gravimetric Method	mg/l	190	110
17	TSS	-----do-----	mg/l	90	50
18	Phosphate, PO ₄ ³	Calorimetric Method	mg/l	0.21	0.197
19	Sodium	Flame Photometric method	mg/l	57.5	63.5

(Source: Mizoram Pollution Control Board)