

CHAPTER - 12

MIZORAM POLLUTION CONTROL BOARD

12.1 Constitution and the office of MPCB

Government of Mizoram adopted the Central Water (Prevention & Control of Pollution) Act, 1974 and the Air (Prevention & Control of Pollution) with effect from 31.03.1989 for the control of pollution of air and water within the State of Mizoram.

In exercise of the powers conferred under sub-section (1) of section 4 of the Water (Prevention & Control of Pollution) Act, 1974 read with sub-section (1) of section 5 of the Air (Prevention & Control of Pollution) Act, 1981, Mizoram Pollution Control Board (MPCB) was constituted by the State Govt. vide Notification No. B.11012/59/88-FST dt. 22.09.1989.

Under the above said Acts, the Mizoram Water (Prevention & Control of Pollution) Rules, 2002 & the Mizoram Air (Prevention & Control of Pollution) Rules, 2002 were passed by the Government of Mizoram vide its Notification No. C.18012/12/2002-FST dt. 09.4.2003 and the whole of Mizoram has also been declared as Pollution Control Area vide order No.C.1802-/12/2000- FST dt. 02.7.2002.

MPCB is under the Department of Environment, Forests and Climate Change, Govt, of Mizoram. For its functioning, MPCB mainly depend on the annual financial assistance from the State government which s released as Grant-in-aid through its Nodal Department.

The office of MPCB has been currently functioning in a four-story rented building, located at Tuikhuahtlang, Aizawl, Mizoram. The Laboratory of 'C' grade, set up with financial support from the Ministry of Environment, Forests & Climate Change, is

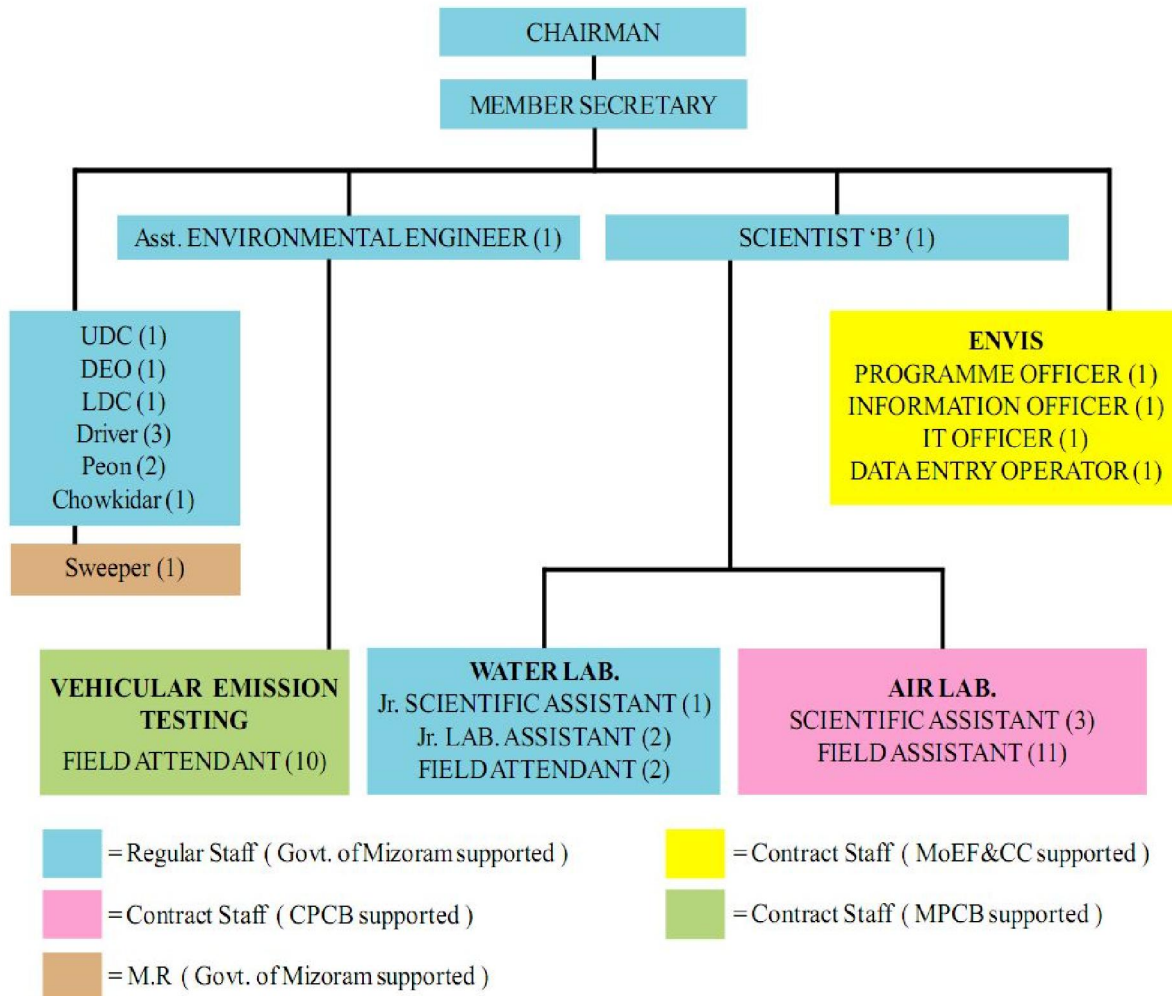
occupying the first floor which is fully functional with water, air and biological monitoring sections. As MPCB has no building of its own till now, it has

submitted a proposal to the Ministry of Environment, Forest and Climate Change, Govt. of India for the construction of Office Building cum Laboratory of MPCB at New Secretariat Complex, Khatla, Aizawl. In acceptance of the proposal, Ministry of Environment, Forest and Climate Change has sanctioned 2.5 crore vide letter No.G-27017/18/2012-CPW dt. 11.07.2014. The construction work is nearing completion and is expected that office of MPCB shall be shifted to the new building within the next financial year, 2017-18.

12.2 Organisation set up

The office of MPCB is headed by part time Chairman and all the administrative, financial, planning, technical and legal affairs are administered by the Member Secretary under the advice of the Chairman. The function of the office is broadly streamlined into technical and scientific aspects. The technical matters generally include industrial and vehicular pollution control, wastes management, planning etc. whereas the scientific section deals with environmental POLLUTION monitoring with respect to air, water, noise parameters, centrally supported schemes etc. The technical and scientific matters are looked after by the technical/scientific staff comprising of one A.E.E, one Scientist 'B, one Jr. Scientific Asst., two Lab. Asst, and two Field Assistant. Vehicular emission monitoring is carried out by the field staff, engaged on fixed pay basis. Besides the basic activities, MPCB is additionally looking after Centrally Sponsored Schemes, such as, National Air Monitoring Programme(NAMP), National Water Monitoring programme (NWMP), National Green Corps' (NGC/Eco-clubs). MPCB is also hosting Environmental Information System (ENVIS) Centre, sponsored by MoEF & CC. Staff engaged under NAMP and Envis Centre are financially supported by CPCB and MoEF&CC respectively. The office has no separate cells on legal, computers or financial matters yet due to staff constraints.

**ORGANISATIONAL CHART OF MIZORAM POLLUTION CONTROL BOARD
(MPCB)**



12.3 Existing members of the board

The term of the office of members of the Board is three years; the Board was last reconstituted by the State Govt, vide letter No. B.11013/9/97-FST dated 05.10.2015, presently comprising of 8 members, headed by part time Chairman, R.C.Thanga, IFS (Rtd.) with Pu C.Lalduhawma, E.E, MPCB as the Member Secretary, as listed in the following table.

<i>Sl. No.</i>	<i>Name & Designation</i>	
1.	Shri R.C.Thanga, IFS (Rtd.)	Chairman
2.	Shri C.Lalduhawma	Member Secretary
3.	Shri Lalram Thanga, P.C.C.F, Deptt. of E,F & CC	Member
4.	Shri Lalmuanzova, E-in-C, PHE Deptt.	Member
5.	Dr. F.Lianhlira, Principal Director, Health & Family Welfare Deptt.	Member
6.	Shri Zahmingthanga, Jt.Secretary, Law & Judicial Deptt.	Member
7.	Shri Zohmingthanga, E.E., AMC	Member
8.	Prof. D.Kathiresan, Dean, College of Veterinary Sciences & Animal Husbandry, Selesih	Member

12.4 Major activities undertaken during 2016-17

As the board is mandated to exercise power conferred on it and perform the functions and duties assigned to it under the aforementioned Air and Water Acts in order to abate and control pollution in the State, various activities have been undertaken by MPCB during the year 2016-17 as highlighted below:

Industrial Pollution Control:

The main role of the Pollution Control Board is Industrial Pollution control, "he Board therefore carries on the work of Consent Management in full swing since September 2003 till date. Apart from routine inspections of industrial sites, the " Board's staff also conducted inventory of industries in a phase manner in Aizawl City during the financial year. The final phase is yet to be taken up Directions were also served to non-complying units directing them to apply for / consent as per the Air & Water Act.

As per the Revised Classification of Industrial Sector adopted by the "53rd Meeting, a consent management Committee was also constituted within the Board under the Chairmanship of the Member Secretary to review and to speed up the Consent mechanism.

Status of consent granted and compliance for Red, Orange and Green categories of Industries (including 17 categories) are complied for updating in E-Track, one of the portals of the Central Pollution Control Board. A register is maintained for such industries which have been granted with consents

Table: Status of Consents granted during 2016-17

Sl. No.	CATEGORY OF INDUSTRIES	PHYSICAL ACHIEVEMENT DURING 2017-2018	VALIDITY
1	Red		
	NOC	13	1Year
	CTO	15	5 Years
	CTO Renewal	2	
	Sub Total	30	
2	Orange		
	NOC	60	1Year
	CTO	44	10 Years
	CTO Renewal	13	
	Sub Total	117	
3	Green		
	NOC	49	1Year
	CTO	46	15 Years
	CTO Renewal	1	
		Sub Total	96
	TOTAL	243	

Vehicular Emission Testing under the Central Motor Vehicle Rule;

As an authorized testing agency in the State, the Mizoram Pollution Control Board continues to perform vehicular emission testing in all the five permanent Stations in Aizawl & Lunglei on regular basis and on mobile mode in rest of the Districts capitals.

Physical achievement

Table: Status of vehicles tested during 2016-17

<i>Sl. No.</i>	<i>Type of Vehicles</i>	<i>No. of vehicles tested</i>		
		<i>Passed</i>	<i>Rejected</i>	<i>Total</i>
<i>1</i>	<i>2- Wheelers</i>	<i>7243</i>	<i>42</i>	<i>7285</i>
<i>2</i>	<i>3- Wheelers</i>	<i>528</i>	<i>0</i>	<i>528</i>
<i>3</i>	<i>LMV(Petrol)</i>	<i>5808</i>	<i>196</i>	<i>6004</i>
<i>4</i>	<i>LMV(Diesel)</i>	<i>2126</i>	<i>278</i>	<i>2404</i>
<i>5</i>	<i>MMV</i>	<i>600</i>	<i>64</i>	<i>664</i>
<i>6</i>	<i>HMV</i>	<i>162</i>	<i>8</i>	<i>170</i>
	<i>TOTAL</i>	<i>16467</i>	<i>588</i>	<i>17055</i>
<i>7</i>	<i>Other Districts</i>	<i>2706</i>	<i>25</i>	<i>2731</i>
	<i>GRAND TOTAL</i>	<i>19173</i>	<i>613</i>	<i>19786</i>

Bio Medical Wastes Management:

With notification of the Bio- Medical Wastes Management Rules, 2016, one day Orientation programme was organized for all the staff of MPCB on 17.06.2016 as part of awareness campaigns on the implementation of the Rules.

The MPCB had published salient features of Bio- Medical Waste Management Rules, 2016 in local newspaper on 02.05.2016 in 7 leading newspaper, 2 local cable TVs, DDK & AIR and the same has also been uploaded at ENVIS website.

Annual Report on BMW, received from 48 hospitals were compiled in the prescribed format and submitted to the Central Pollution Control Board. Authorization is granted/issued only after due inspection of the institute or health care facilities or on submission of the proof documents of the waste management and treatment facilities utilized by the institute or health care facility. The Board also conducts inspection of compliance of the condition of the Authorisation of the Authorisation as and when required.

During the reporting year, based on the reports received from various hospitals, total wastes generated was 440.099 Kg/day, out of which 164.759 Kg/day was sterilized, 83.299 Kg/day was mutilated while 192.932 Kg /day were disposed into deep burial pit.

Following are the Physical achievements made during the financial year 2016-17

Table: Physical achievements on BMW management, 2016-17

Sl. No.	Item	No. of issue
1	Authorization granted	17
2	Consent Granted	4
3	Inspection	7
4	Direction	4
5.	Show-cause notice	1
6	Annual Report for 2016-17	No of Reports received from HCF's = 48 These Reports were scrutinized, compiled and submitted to CPCB, Delhi Total wastes generated – 440.099 Kg/day Qty of Wastes sterilized – 164.759 Kg/day Qty of Wastes mutilated– 83.299 Kg/day Qty of wastes disposed into deep burial pit – 192.932 Kg/day

Solid Wastes Mangement:

As soon as copy of the newly notified Rules are received, One Day Orientation programme was organized for all the staff of Mizoram on **17.06.2016** as part of awareness campaigns on the implementation of the Rules. The board published highlights of important provisions the Rule for general public awareness in the form of pamphlet was prepared and distributed among concerned State government departments and the public.

The Board scrutinized & compiled the Reports received from the concerned authorities were submitted to the CPCB up to the year 2016-17 to the commissioner, the AMC & the then Trade & Commerce Department.

Summary of the Physical achievements made on the SWM during 2016-17 are as follows:

Table: Physical achievements on BMW management, 2016-17

Sl. No	Item	No. of issue
1	Authorization granted	NIL
2	Consent Granted	NIL
3	Inspections	2
4	Directions/Request	9
5	Annual Report for 2016-17	Submitted to the CPCB
6	Others	The Board submitted ATR on the directions of the NGT on OA 199 to the CPCB vide letter No. H. 88088/Poltn/18 /16 -MPCB/91-95 on 29.03.2017
		The directions of the Hon'ble NGT was translated and circulated among citizens

Hazardous Wastes Management:

The Board disseminate awareness programme on provisions of the Hazardous and Other Wastes (Management & Transboundary movement) Rules, 2016. These include holding of 'One Day Orientation programme for all the staff of Mizoram on 17.06.2016, Publication of pamphlet highlighting important provisions of the Rule for general public awareness.

The Board also conducted inventory of industries generating Hazardous Wastes and other wastes since April 2016 in Aizawl in a phase manner. During the 'reporting year, 54 such units have been inspected which are mostly automobiles repairing Units. Accordingly, 54 units had been granted with CTE and CTO by the board.

Summary of the physical achievements made on the SWM during 2016-17 are as follows:

Table: Physical achievements on Hazardous Wastes Management, 2016-17

Sl. No.	Item	No. of issue
1	Authorization granted	Nil
2	Consent Granted	54
3	Inspections	54

Plastic Wastes Management:

As part of the awareness programme on provisions of Plastic Wastes Management

Rules, 2016, 'one day orientation programme was held to sensitise the staff of Mizoram PCB on 17.06.2016. For implementation of the Rules Commissioner, AMC was requested to make necessary bye - laws as required by the Rules, and submit Annual Report in time and a reminder was also served to the AMC for direction under section '5' of the Environmental (Protection) Act - 1986.

As per the Rule, every producer of plastic carry bags requires to obtain Consent and Registration from the Pollution Control Board.

The AMC is mandated to submit annual Report to the State Pollution Control Board which shall then scrutinize and submit to the CPCB in a prescribed format.

Summary of the physical achievements made on the SWM during 2016-17 are follows:

Table: Physical achievements on Hazardous Wastes Management, 2016-17

Sl. No.	Item	No. of issue
1	Registration granted	1
2	Consent Granted	1
3	Inspections	1
4	Directions	3
5	Annual Reports	Submitted 31.07.2017 (specified time of submission- September every year)
6	Action plan	Submitted to the CPCB as received from the AMC
7	Other Reports	Action Taken Report (ATR) on implementation of new PWM Rules, 2016 was submitted to the Ministry of Environment & Forests & Climate Change, G.O.I on 18.7.16
		Report on details of companies involved in manufacturing/stocking plastic carry bags less than 50 microns was submitted to the MoEF & CC on Dt 18.07.16

Electronic Wastes Management:

Electronic Wastes management is rather a newly introduced subject. As soon as copy of the newly notified Rules is received, staff of the MPCB are sensitized on provisions of the Rules through 'one day orientation programme on 17.06.2016. Pamphlet was published on important provisions of the Rule For general public awareness and distributed among the concerned State government departments and the public. The Board with its limited fund could not extend the inventory to other Places either. Meanwhile, based on the outcome of the Meeting on National Green Tribunal (NGT)

directives to State on E-Waste (M& H) Rules,2011 held in :ne Chief Minister's Office on 27.11.2015, Proposal for inventorization was submitted to the Environment, Forest & Climate Change Department, Govt. for Mizoram. Annual Report for the year 2016-2017 has been submitted to the Central Pollution Control Board.

Public Hearing:

The Environmental Impact Assessment Notification, 2006 as amended to date has mandated the State Pollution Control Board to conduct Public hearing :for all projects requiring Environmental Clearance from the MoEF & CC or the SEIAA upon submission of the draft EIA Report prepared by the project proponent in accordance with the Terms of Reference prescribed by the MoEF & CC or the SEIAA.

During 2016-2017, the Mizoram Pollution Control Board had conducted such public hearing for exploratory drilling to be done by M/S ONGC Ltd in Mamit District on 21.10.2016. As mandated by the Notification, the Board recorded and prepared all proceedings in detail and submit the same to the MoEF & CC along with Video of the proceedings

Court cases:

The Board also attends various Court cases under the National Green Tribunal and High Courts. Altogether, about 27 cases on various pollution matters are being attended.

Water quality monitoring:

In order to assess the water quality of various water sources in Mizoram water quality monitoring network has been established by MPCB under CPCB's sponsored scheme, National Water Monitoring Programme (NWMP). As of now. 56 nos. of water quality monitoring stations has been set up covering various sources of water including surface water, underground, lakes, reservoirs , located in all the districts of the State. During the year, 2016-17, regular water quality monitoring has been undertaken by collecting water samples from all the 56 stations on monthly basis and analyzed in the laboratory. Annual average data generated for the year 2016 is shown in the following table.

Table: List of water quality monitoring stations under NWMP

Sl. No.	Name of station	District	Type of water body	Station Code
1.	Tlawng Upper Stream	Aizawl	Surface water	2050
2.	Tlawng Lower Stream	-do-	-do-	2051
3.	Tuirial Upper Stream	-do-	-do-	2052

4.	Tuirial Lower Stream	-do-	-do-	2053
5.	Ramhlun 'North' Tuikhur	-do-	Spring water	2054
6.	Mission Vengthlang 'North' Tuikhur	-do-	-do-	2055
7.	Tlawng River, Sairang	-do-	Surface water	3709
8.	Serlui Stream, Reiek kai, near P.H.E Water Treatment Plant	-do-	-do-	3710
9.	Vaipuanpho Stream, Reiek kai	-do-	-do-	3711
10.	Tuikual Stream, Reiek kai	-do-	-do-	3712
11.	Sakhisih stream, Mission vengthlang	-do-	-do-	3713
12.	Tuirial River, Upstream Near Sumsuih village	-do-	-do-	3714
13.	Tuirial River, Airfield, before dumping ground	-do-	-do-	3715
14.	Damdiai Stream, Airfield, near dumping ground	-do-	-do-	3716
15.	Tuirial River, Airfield, after dumping ground	-do-	-do-	3717
16.	Chite Stream, Armed veng, near Mini sports complex	-do-	-do-	3718
17.	Tuirini River, Seling	-do-	-do-	3719
18.	Tuivawl River, Near Tuivawl bridge, Keifang	-do-	-do-	3720
19.	Lawibual Stream, Lawibual village,	-do-	-do-	3721
20.	Lawibuai fishpond	-do-	-do-	3722
21.	Tamdil Lake, Saitual	-do-	-do-	3723
22.	Challui, Lengpui	-do-	-do-	3724
23.	Lungli Tuikhur, Republic Veng	-do-	Spring water	3725
24.	Ramhlun 'S' Tuikhur, Near Community Hall	-do-	-do-	3726
25.	Tuithiang Veng Tuikhur	-do-	-do-	3727
26.	Khurpui Tuikhur, S.Hlimen	-do-	-do-	3728
27.	Bawngkawn Hand Pump, Near HB Petrol Pump	-do-	Ground water	3729
28.	Selesih Hand Pump	-do-	-do-	3730
29.	Tuikual Hand Pump	-do-	-do-	3731
30.	Chalthang hand pump near Remi tyre works	-do-	-do-	3732
31.	S.Hlimen Hand Pump	-do-	-do-	3733
32.	Tlawng River, Upstream, Zobawk, Lunglei	Lunglei	Surface water	3734
33.	Mat River	-do-	-do-	3735
34.	Tlawng River, Pialthleng, Zotlang, Lunglei	-do-	-do-	3736
35.	Vaitui Tuikhur, Theiri, Lunglei	-do-	-do-	3737
36.	Sap Tuikhur, Serkawn	-do-	-do-	3738
37.	Zobawk Veng Handpump, Lunglei	-do-	Ground water	3739
38.	Saikah Stream, Lawngtlai	Lawngtlai	Surface water	3740
39.	Khurpui Tuikhur, Lawngtlai	-do-	Spring water	3741
40.	Chanmari Hand Pump, Lawngtlai	-do-	Ground water	3742
41.	P.H.E Reservoir, Helipad, New Saiha	Saiha		3743
42.	Chhimtuipui River, Kawlchaw	-do-	-do-	3744
43.	Chhochhopa Tuikhur, Saiha	-do-	-do-	3745
44.	Tuikum River, Serchhip	Serchhip	Surface water	3746
45.	Sesah Stream, Serchhip	-do-	-do-	3747

46.	Project veng Hand Pump, Serchhip	-do-	Ground water	3748
47.	Lahmun River, Phaizau, Mamit	Mamit	Surface water	3749
48.	Teirei River, Near Bawngva village, Mamit	-do-	-do-	3750
49.	Tut River, Near Dapchhuah village.	-do-	-do-	3751
50.	Tuichhuahen Stream, Kolasib	Kolasib	-do-	3752
51.	Hmar veng Tuikhur, Kolasib	-do-	-do-	3753
52.	Tlawng River, Downstream, Bairabi	-do-	-do-	3754
53.	Pond, Near Thermal Power Plant, Bairabi	-do-	-do-	3755
54.	Tiau River, Champhai	Champhai	Surface water	3756
55.	Tuipui River, Champhai	-do-	-do-	3757
56.	Bethel veng Hand-pump, Champhai	-do-	-do-	3758

Table: ANNUAL AVERAGE OF WATER QUALITY OF AIZAWL DISTRICT UNDER NWMP, 2016

Parameters	STATION CODE															
	2050	2051	2052	2053	2054	2055	3709	3710	3711	3712	3713	3714	3715	3716	3717	3718
D.O(mg/L)	7.02	7.25	6.88	10.4	6.4	3.9	7.3	7.3	7.3	6.8	5.7	7.2	6.9	6.6	6.66	6.08
pH	7.36	7.56	7.332	7.354	6.8	7.219	7.29	7.52	7.63	7.48	6.88	7.02	7.4	7.387	7.4	7.44
Conductivity (us/cm)	250.8	298.6	335.2	315.4	369.4	330.9	375.6	294.1	233.3	286.8	387.3	274.1	313.1	345.6	392.1	342
BOD (mg/L)	1.5	1.55	1.516	1.425	1.4	1.216	1.958	1.508	1.57	1.56	1.33	1.45	1.454	1.375	1.45	1.363
N-NO ₂ (mg/L)	0.1	0.082	0.053	0.048	0.09	0.112	0.161	0.08	0.076	0.07	0.078	0.064	0.081	0.06	0.065	0.335
Faecal Coliform (MPN)	5.8	21.22	19.8	19.17	0	7	27.22	1.8	-	9.1	3.6	-	-	9.1	9.3	0
Total Coliform (MPN)	790	578	1142.1	1580	44	210	1194	305	-	2400	23	-	-	2400	587.5	2400
Turbidity (NTU)	6.16	4.61	2.554	2.145	0.4	6.381	9.06	2.009	0.645	1.572	0.57	0.208	2.209	1.754	2.463	1.027
Alkalinity (mg/L)	42.83	45.49	66.54	65.89	32.76	102.5	35	51.99	39.43	65.08	142.9	46.72	64.97	70.41	65.22	241.7
Chloride (mg/L)	9.15	8.4	8.65	9.15	36.56	87.96	8.816	18.9	7.816	14.02	70.66	10.49	9.23	12.85	9.48	116.7
N-NH ₃ (mg/L)	0.49	0.46	0.334	0.325	0.511	0.649	1.281	0.306	0.297	0.378	0.433	0.31	0.297	0.38	0.419	0.71
Total hardness (mg/L)	53.16	50.5	67.5	66.66	62.83	118.5	54.51	52.41	28.83	55.66	132.2	54.66	65.83	81.5	69	183.9
Calcium (mg/L)	13	12.4	16.5	15.93	15.33	33.73	14.26	13.26	7	14.46	39.3	13.94	15.98	20.66	16.8	55.87
Magnesium (mg/L)	4.9	4.65	6.291	6.383	5.83	8.175	5.23	4.68	2.75	4.55	8.19	5.35	6.13	7.11	6.44	10.5

Sodium (mg/L)	22.41	26.95	21.208	22.58	34	50.95	30.75	32	23.95	27.25	38.04	18.95	21.13	21.2	24.66	43.36
TDS (mg/L)	116.7	131.7	118.3	125	83.3	93.33	125	101.7	100	105	109.2	120	130.9	101.7	145	115.5
TSS (mg/L)	54.16	59.16	54.166	54.16	35.83	37.5	54.16	39.16	40	43.33	49.16	51.66	60.83	43.33	67.5	51.81
Phosphate (mg/L)	0.23	0.24	0.183	0.155	0.181	0.258	0.492	0.174	0.128	0.138	0.221	0.203	0.14	0.168	0.156	0.155

Table: ANNUAL AVERAGE OF WATER QUALITY OF AIZAWL DISTRICT UNDER NWMP, 2016

Parameters	STATION CODE															
	3719	3720	3721	3722	3723	3724	3725	3726	3727	3728	3729	3730	3731	3732	3733	
D.O(mg/L)	6.94	6.88	5.641	6.1	6.56	6.11	6.76	6.29	4.16	7.11	2.62	2.63	1.7	1.56	3.01	
pH	7.57	7.53	7.314	7.11	7.76	7.31	7.2	6.94	10.42	7.31	7.02	7.03	6.83	6.58	6.98	
Conductivity (us/cm)	379.9	389.8	309.4	301.5	375.5	341.5	277.9	348.4	270.6	390.3	242.9	238.3	294.5	243.6	369.7	
BOD (mg/L)	1.49	1.99	1.325	1.283	1.5	1.3	1.49	1.38	1.14	1.58	0.93	0.88	0.51	0.66	0.96	
N-NO₂ (mg/L)	0.077	0.055	0.08	0.091	0.059	0.16	0.066	0.07	0.056	0.068	0.087	0.081	0.097	0.07	0.077	
Faecal Coliform (MPN)								1.8		3.6	0	3.6	0	0	0	
Total Coliform (MPN)								277.5		15	7.2	21	9.1	15	3.6	
Turbidity (NTU)	1.303	0.869	1.054	2.281	1.73	7.73	0.11	0.33	0.17	0.264	3.78	1.41	7.6	0.88	0.69	
Alkalinity (mg/L)	59.5	50.9	135.1	42.9	43.68	41.8	38.8	30.1	26.4	34.7	120.9	73.8	159.1	112.8	139.4	
Chloride (mg/L)	8.65	9.64	88.69	45.35	9.15	9.06	40.09	37.41	53.53	12.45	46.27	69.35	92.36	64.64	25.72	
N-NH₃ (mg/L)	0.379	0.311	0.357	0.409	0.37	1.47	0.32	0.35	0.33	0.31	0.29	0.35	0.44	0.36	0.38	
Total hardness (mg/L)	58	54.2	147.9	65.2	44.7	53.2	75.5	68.5	94.2	61.2	115.3	118	202.3	140.5	125.9	
Calcium (mg/L)	14.56	13.53	43.81	15.53	10.58	25.6	18.77	16.4	27.23	15.33	32.53	35.05	62.96	41.53	37.08	
Magnesium (mg/L)	5.6	5.316	9.2	6.283	4.31	4.9	6.83	6.57	7.7	5.96	8.19	7.95	10.85	8.75	7.94	
Sodium (mg/L)	17.33	17.37	53.08	30.83	13.08	30.66	26.5	37.88	36.59	24.08	31.55	34.25	37.87	29.95	25.54	
TDS (mg/L)	114.2	114.1	100.9	106.7	105.9	95	85	85	84.2	90	95.9	92.5	95	93.3	98.3	
TSS (mg/L)	49.2	50.9	43.33	46.66	45	42.5	34.16	35.83	33.33	37.5	40.83	40.83	39.16	38.33	39.16	

Phosphate (mg/L)	0.186	0.116	0.186	0.217	0.18	0.41	0.13	0.16	0.12	0.2	0.22	0.18	0.22	0.18	0.2
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Table: ANNUAL AVERAGE OF WATER QUALITY OF AIZAWL DISTRICT UNDER NWMP, 2016

Parameters	STATION CODE														
	3719	3720	3721	3722	3723	3724	3725	3726	3727	3728	3729	3730	3731	3732	3733
D.O(mg/L)	6.94	6.88	5.641	6.1	6.56	6.11	6.76	6.29	4.16	7.11	2.62	2.63	1.7	1.56	3.01
pH	7.57	7.53	7.314	7.11	7.76	7.31	7.2	6.94	10.42	7.31	7.02	7.03	6.83	6.58	6.98
Conductivity (us/cm)	379.9	389.8	309.4	301.5	375.5	341.5	277.9	348.4	270.6	390.3	242.9	238.3	294.5	243.6	369.7
BOD (mg/L)	1.49	1.99	1.325	1.283	1.5	1.3	1.49	1.38	1.14	1.58	0.93	0.88	0.51	0.66	0.96
N-NO ₂ (mg/L)	0.077	0.055	0.08	0.091	0.059	0.16	0.066	0.07	0.056	0.068	0.087	0.081	0.097	0.07	0.077
Faecal Coliform (MPN)								1.8		3.6	0	3.6	0	0	0
Total Coliform (MPN)								277.5		15	7.2	21	9.1	15	3.6
Turbidity (NTU)	1.303	0.869	1.054	2.281	1.73	7.73	0.11	0.33	0.17	0.264	3.78	1.41	7.6	0.88	0.69
Alkalinity (mg/L)	59.5	50.9	135.1	42.9	43.68	41.8	38.8	30.1	26.4	34.7	120.9	73.8	159.1	112.8	139.4
Chloride (mg/L)	8.65	9.64	88.69	45.35	9.15	9.06	40.09	37.41	53.53	12.45	46.27	69.35	92.36	64.64	25.72
N-NH ₃ (mg/L)	0.379	0.311	0.357	0.409	0.37	1.47	0.32	0.35	0.33	0.31	0.29	0.35	0.44	0.36	0.38
Total hardness (mg/L)	58	54.2	147.9	65.2	44.7	53.2	75.5	68.5	94.2	61.2	115.3	118	202.3	140.5	125.9
Calcium (mg/L)	14.56	13.53	43.81	15.53	10.58	25.6	18.77	16.4	27.23	15.33	32.53	35.05	62.96	41.53	37.08
Magnesium (mg/L)	5.6	5.316	9.2	6.283	4.31	4.9	6.83	6.57	7.7	5.96	8.19	7.95	10.85	8.75	7.94
Sodium (mg/L)	17.33	17.37	53.08	30.83	13.08	30.66	26.5	37.88	36.59	24.08	31.55	34.25	37.87	29.95	25.54
TDS (mg/L)	114.2	114.1	100.9	106.7	105.9	95	85	85	84.2	90	95.9	92.5	95	93.3	98.3
TSS (mg/L)	49.2	50.9	43.33	46.66	45	42.5	34.16	35.83	33.33	37.5	40.83	40.83	39.16	38.33	39.16
Phosphate (mg/L)	0.186	0.116	0.186	0.217	0.18	0.41	0.13	0.16	0.12	0.2	0.22	0.18	0.22	0.18	0.2

Table: WATER QUALITY STATUS OF TLAWNG AND TUIRIAL RIVERS, MARCH 2017

STATION CODE	Water Quality Criteria	BOD	DO	FC	TC	WATER QUALITY STATUS
	LOCATION NAME	< 3.0 mg/L	> 4.0 mg/L	< 2500 MPN/100 ml	< 5000 MPN/100 ml	
2050	Tlawng Upper Stream	1.8	5.6	3.6	210	Satisfactory
2051	Tlawng Lower Stream	1.3	5.9	0.0	210	Satisfactory
2052	Tuirial Upper Stream	1.8	7.7	3.6	460	Satisfactory
2053	Tuirial Lower Stream	2.0	8.0	3.6	2400	Satisfactory
3709	Tlawng River Sairang Village	1.5	6.0	7.3	1100	Satisfactory

Air quality monitoring:

Under National Air Quality Monitoring Programme (N.A.M.P), sponsored by CPCB, air quality monitoring in the State has been initiated by MPCB since the year, 2005. Initially, only 3 monitoring stations were set up within Aizawl district and later in the year, 2011, 8 nos. of additional stations were established with the financial assistance from CPCB. The present air quality monitoring network in the State, therefore, comprises of 11 nos. of air monitoring stations, located in 4 districts of Mizoram, as shown in the following table. During the year, 2016-17, from the existing 11 nos. of air quality monitoring stations in the State, MPCB has undertaken regular monitoring of air quality at the recommended frequency: 24 hrs. monitoring of twice a week for 4 nos. of air parameters namely, PM10, TSP, SO2 and NO2. Annual average data generated for the year 2016 alongwith – Air Quality Index (AQI) is shown below:

Air quality monitoring station in Mizoram under NAMP

Sl.	Station Location	NAMP Station Code	Year of commencement
	AIZAWL DISTRICT		
1	<i>Khatla, Aizawl</i>	450	2005
2	<i>Laipuitlang, Aizawl</i>	451	-do-
3	<i>Bawngkawn, Aizawl</i>	452	-do-
4	<i>Bazar Bungkawn, Aizawl</i>	737	2011
5	<i>Lengpui Airport, Lengpui</i>	738	-do-
	LUNGLEI DISTRICT		
6	<i>Farm Veng, Lunglei</i>	735	-do-
7	<i>Chanmari, Lunglei</i>	736	-do-
	KOLASIB DISTRICT		
8	<i>Project Veng, Kolasib</i>	733	-do-
9	<i>Diakkawn, Kolasib</i>	734	-do-
	CHAMPHAI DISTRICT		
10	<i>Kahrawt veng, Champhai</i>	731	-do-
11	<i>Vengthlang, Champhai</i>	732	-do-

Annual average of air quality, 2016

Sl. No.	LOCATION	PM₁₀	NO₂	SO₂
1	<i>Sikulpuikawn, Aizawl</i>	87	10.13	2
2	<i>Laipuitlang, Aizawl</i>	34	4.5	2
3	<i>Bawngkawn, Aizawl</i>	65	10.06	2
4	<i>Dawrpui, Aizawl</i>	79	16.78	2
5	<i>Lengpui, Aizawl</i>	38	4.5	2
6	<i>Kahrawt, Champhai</i>	28	4.5	2
7	<i>Vengthlang, Champhai</i>	38	4.5	2
8	<i>Project Veng, Kolasib</i>	22	4.5	2
9	<i>Diakkawn, Kolasib</i>	39	4.5	2
10	<i>Farm Veng, Lunglei</i>	18	4.5	2
11	<i>Venglai, Lunglei</i>	39	4.5	2
<i>National Standards for annual average</i>		60	40	50

Monthly air quality index (AQI)

MONTHS	KHATLA	LAIPUI TLANG	BAWNG KAWN	DAWRPUI	LENGPUI	KAHRAWT, CHAMPHAI	VENG THLANG, CHAMPHAI	PROJECT VENG, KOLASIB	DIAKKAW N, KOLASIB	FARM VENG, LUNGLEI	VENGLAI, LUNGLEI
JANUARY	218	52	26	93	59	21	64	25	41	49	58
FEBRUARY	119	54	94	113	72	19	64	25	43	60	59
MARCH	119	57	99	110	66	23	66	23	43	52	81
APRIL	66	26	76	83	46	19	60	25	41	46	51
MAY	66	37	71	70	32	19	46	23	41	28	41
JUNE	56	28	56	65	19	17	20	20	41	21	25
JULY	51	26	51	73	24	13	24	19	39	14	18
AUGUST	82	34	75	93	33	16	21	20	38	12	15
SEPTEMBER	39	19	62	47	20	14	18	20	36	8	13
OCTOBER	43	20	36	55	23	16	25	22	37	7	17
NOVEMBER	55	25	64	66	23	73	26	15	34	17	35
DECEMBER	60	31	71	73	40	19	33	30	33	24	46
AQI Range		Associated Health Impacts									
0-50		Minimal Impact									
51 - 100		Minor breathing discomfort to sensitive people									
101-200		Breathing discomfort to the people with lung, heart disease, children and older adults									
201-300		Breathing discomfort to people on prolonged exposure									
301-400		Respiratory illness to the people on prolonged exposure									

12.5 Environmental Information System (ENVIS) Centre

Environmental Information System (ENVIS) is a Central Scheme of the Ministry of Environment, Forests and Climate Change, launched in the year, 1982 with a purpose to integrate country-wide efforts in environmental information collection, collation, storage, retrieval and dissemination to all concerned. Mizoram Envis Centre with Mizoram Pollution Control Board as the Host Institute was set up on 3rd June, 2003. As

mandated, the Centre has been actively involved with the task of collection, storage, retrieval and dissemination of information and status of environment and related issues. Some of the major activities undertaken during the reporting year is summarized below:

1. Website Related Activities:

The Centre has been maintaining a website, available at the URL: <http://www.miz.envis.nic.in> which serves as an important source of dissemination of environmental related news and information of the State. During 2016-2017 ENVIS Website had more than 2,44,775 visitors.

2. Publication:

- i) Newsletter: Four issues of MIZO-ENVIS Newsletter was published by the Centre on a quarterly basis.
- ii) Pamphlets: Six new pamphlets regarding new rules notified by the Ministry of Environment, Forests and Climate Change, Govt, of India were published by the Centre in local language.
- iii) Booklet : A small booklet titled Activities of ENVIS Centre, Mizoram highlighting the different activities taken up by the Centre since its inception was published
- iv) Calendar: ENVIS Centre prepared 2017 calendar and distributed for free.

Awareness Activities:

Activities such as cleanliness drive at City Park, Aizawl Zoological Park different schools, taking of mass pledges to cleanliness, etc. were organized n observation of such important events like Swachh Bharat Pakhwadas, Nations Youth Day, etc

National Green Corps Programme / Eco-Clubs:

With an objective of educating school children and creating awareness on environmental protection, Ministry of Environment, Forests and Climate Change, Govt. of India has launched National Green Corps Programme (NGC) by establishing eco-clubs in schools and actively involving them in environmental related activities. In Mizoram, the programme was initiated in the year, 2012 with MPCB as the 'Nodal Agency in the State. As of now, as many as 1890 eco clubs have been set-up in various schools in all the districts of Mizoram. During the year, 2016-17, various activities have been taken up by the eco clubs including:

- 1 Cleaning up of school campus.
- 1 Planting of saplings and flowers.
- 3 Maintainign eco-garden and looking after planted trees .
4. Observation of important Environmental Related Days.

5. Swachh Bharat Abhiyan.

6. Awareness Campaigns.