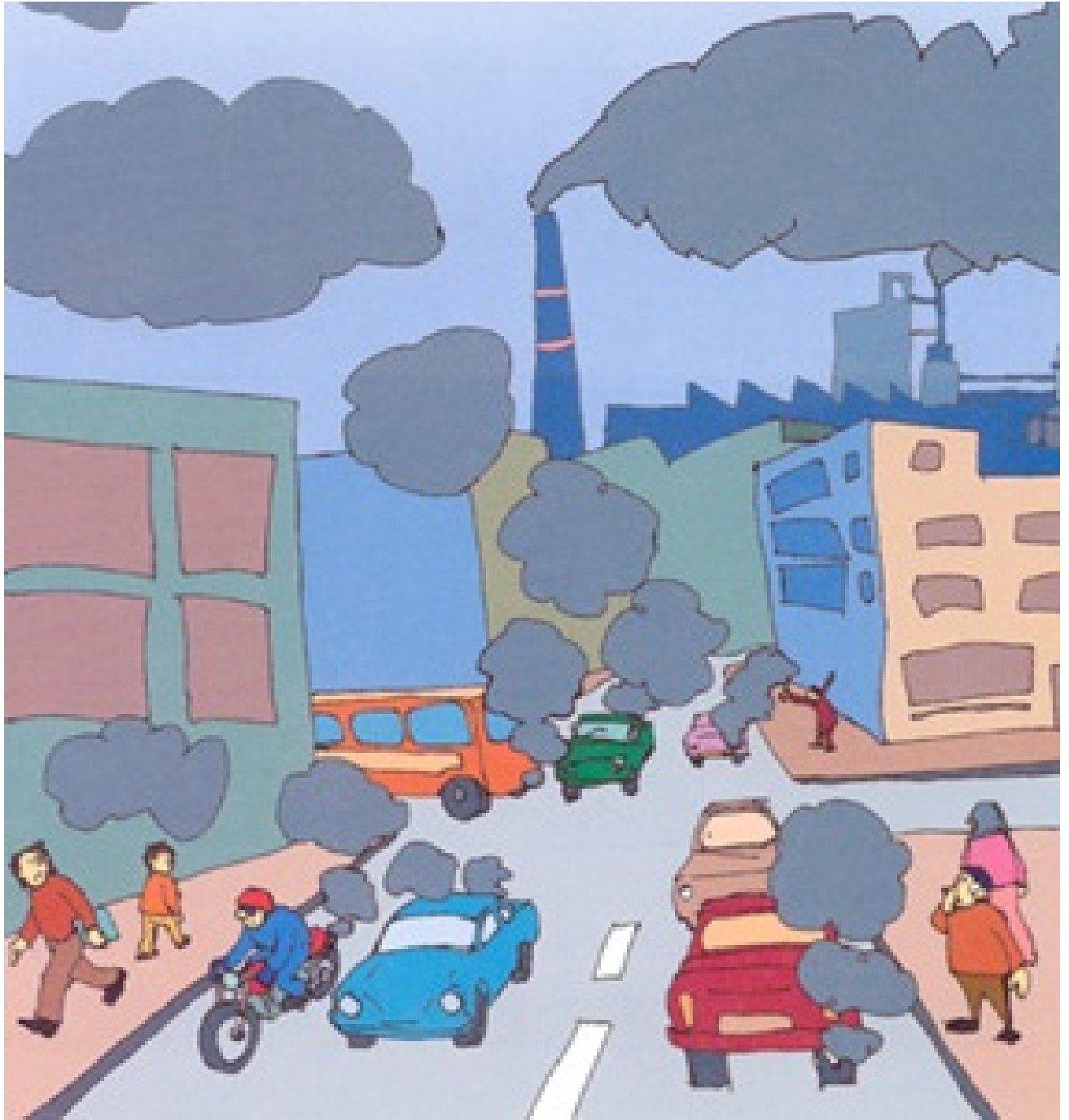


# REPORT ON ENVIRONMENTAL STATUS OF NAVI MUMBAI REGION - MAHARASHTRA



**MAHARASHTRA POLLUTION CONTROL BOARD**

Kalpataru Point, Sion Circle, Sion (East) Mumbai 400 022

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## 1. INTRODUCTION:

Maharashtra Pollution Control Board was established under the Maharashtra Prevention and Control of Water Pollution Act, 1969 in the year 1970. The primary responsibility of the Board at that time was related to the water pollution activity. With the increasing environmental awareness and associated newer environmental legislations, MPCB is being entrusted the newer areas of pollution control and environmental protection. This has made the MPCB a multidisciplinary science and technology based organisation. MPCB is now regulating all the major environmental legislations in the state including;

- Water (Prevention and Control of Pollution) Act, 1974.
- Air (Prevention and Control of Pollution) Act, 1981.
- Environmental (Protection) Act, 1986 and the rules made there under
  - Environmental Impact Assessment Notification, 1994
  - Coastal Zone Regulation, 1991
  - Hazardous Waste (Management and Handling) Rules, 1989
  - Bio-Medical Waste (M&H) Rules, 1998
  - Municipal Solid Waste (M&H) Rules, 2000
  - Plastic Rules, 2000
  - Fly ash Utilisation Notification, 1999 etc.

There is now a paradigm shift in the functioning and approach of MPCB towards pollution control and environmental protection. One of the important tools for effective regulatory control is adequate and informative public awareness. Board has taken several steps for informative public awareness including up to-date website, advertisements in print and TV media, booklets, special programs etc. Board has also decided that the environmental status report for each region is made available in public domain. The status of Environment Report of Navi Mumbai region is prepared with this background and published.

## 2. BACKGROUND:

The Navi Mumbai region comprises of Navi Mumbai Municipal Corporation area belonging to Thane district and Uran taluka and Taloja MIDC of Raigad district. The jurisdiction of Navi Mumbai Region is further sub divided as follows:

- Sub Regional office Navi Mumbai-1:  
This Sub Region comprises of the residential & industrial areas of Belapur, Shirawane, Nerul, Turbhe, Pawane, Vashi.
- Sub Regional office Navi Mumbai-2:  
This Sub Region comprises of the residential & industrial areas of Airoli, Rabale, Ghansoli, Mahape, Khairane.
- Sub Regional office Navi Mumbai-3:  
This Sub Region comprises of the residential & industrial areas of MIDC Taloja area and Uran Taluka.

The Thane Belapur area was earlier well known for the largest industrial belt in Asia. Thereafter, this area was developed as a satellite township to solve the various problems arised due to the congestion in Mumbai city based on the recommendations made in the year 1962by Barve committee. Accordingly "CIDCO" was constituted as a wholly owned subsidiary of the State Government to exclusively develop the township. The area was gradually urbanized and also industrialized. The proximity to Mumbai, good transport network, and surplus manpower has helped the industrial sector of this area to bloom. The proximity to sea / creek has assisted to solve many problems related to disposal of treated effluents generated due to domestic and industrial activities. Due to proximity to the sea the port activities at JNPT were established which has helped immensely in the import of raw materials and export of finished goods and thus facilitating good economical growth of the region.

The water supply for this region is mainly done through network of closed pipeline from the following water sources.

- A. Morabe dam (MJP) – 55MLD.
- B. Hetawane dam (CIDCO) --- 40 MLD.
- C. Baravi dam (MIDC) --- 142 MLD.
- D. Ransai dam (MJP) --- 3 MLD.

The total water supply to the area covered under NAVI MUMBAI REGION amounts to 240 MLD.

Due to heavy urbanization and heavy industrialization this area has to face unique environmental issues. Considering the newer environmental regulations in the sector of municipal solid waste, bio medical waste, hazardous waste, the role of MPCB as a regulatory body in this area achieves high significance. The first step to understand the problem is to identify the source of pollution. Accordingly inventory of pollution sources is made.

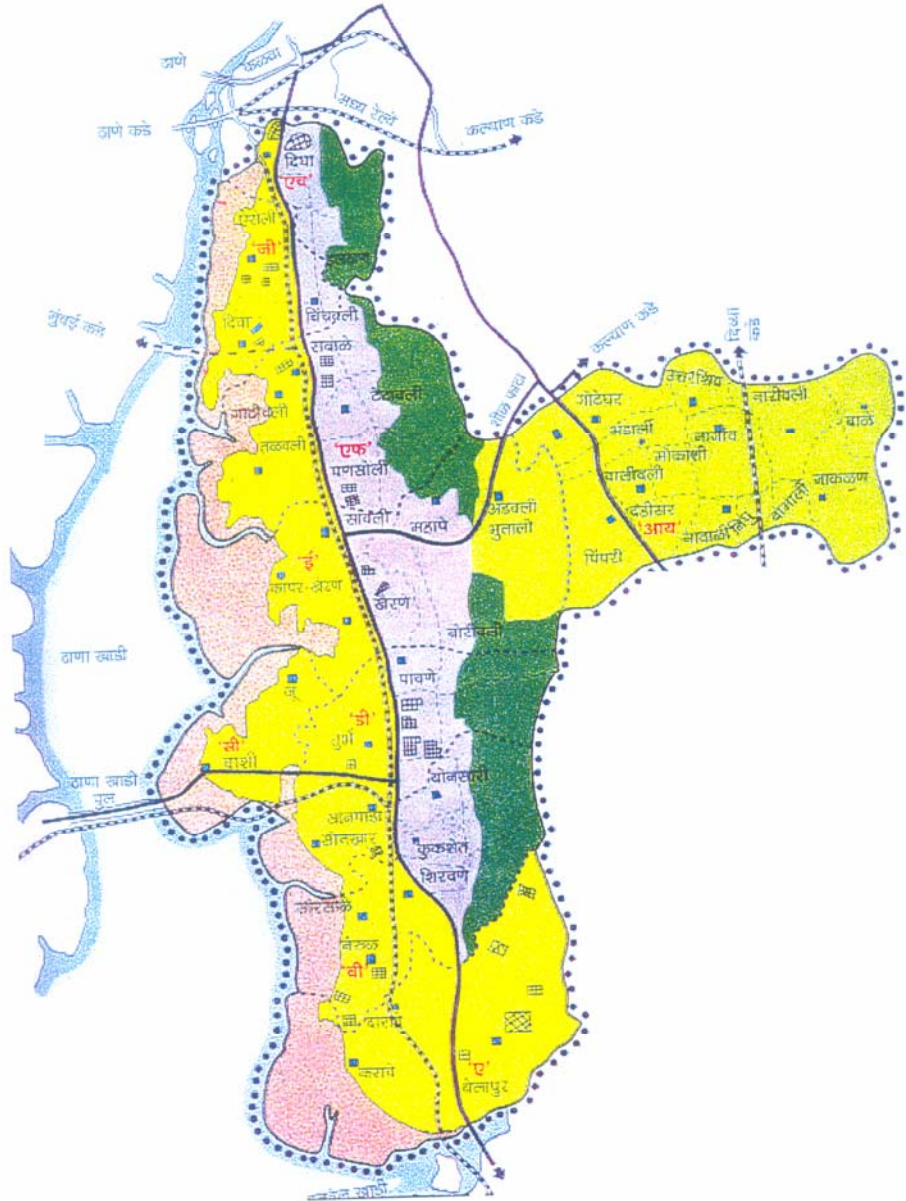
### 3. INVENTORY OF POLLUTION SOURCES:

The region has two major MIDC industrial estates namely, TTC and Taloja and few industries scattered in Uran taluka. These industrial estates mainly comprises of Chemical, bulk drugs & intermediates, dye and dye intermediates, pharmaceutical, pesticide, petrochemical, engineering goods and textile manufacturing industries. There are also three breweries in this area. The distribution of industries in the area is as follows:

**Distribution of industries by Sub Region**

District	Sub Region	Category	LSI	MSI	SSI	TOTAL
Thane (part)	NM-I	RED	31	19	246	296
		ORANGE	2	3	173	178
		GREEN	2	1	203	206
	Sub Total		35	23	622	680
Thane (part)	NM-II	RED	13	6	325	344
		ORANGE	0	3	142	145
		GREEN	0	2	540	542
	Sub Total		13	11	1007	1031
Raigad (part)	NM-III	RED	43	22	221	286
		ORANGE	5	8	41	54
		GREEN	3	1	263	267
	Sub Total		51	31	525	607
	Total		99	65	2154	2318

## MAP Showing Jurisdiction of Navi Mumbai Sub Region 1 & 2



#### 4. STATUS OF Municipal Solid Wastes as per MSW (M & H) RULES:

Navi Mumbai Region jurisdiction for MSW M&H Rules 2000 covers Municipal Corporation of Navi Mumbai and Municipal Council of Uran ('C' Class).

Considering the extensive urbanization of Navi Mumbai, and multiple residential nodes the challenges in management of municipal solid waste are numerous. The State Government has allotted 65 acres of land for proper treatment and disposal of municipal solid waste at Turbhe. The first phase on 10 acres of land is developed and scientifically developed landfill site has been made operational since June 2005. The proposal of bio-methanisation with power generation is under active consideration.

Uran Municipal area covers an area of 2.2 sq.km. About 8 MT/D municipal solid wastes is generated. A vermiculture plant is installed in the premises of Uran municipal council building, where the part solid waste is treated. The remaining solid waste is presently dumped at Boripakhadi.

Details of local bodies are as follows:

Sr.No.	Name of local body	Navi Mumbai Municipal Corporation	Uran Municipal Council
1	Class	Corporation	C
2	Population	703947	23254
3	Area in Sq.Km.	162.5	2.2
4	Qty. of MSW in MT/D	400	8
5	Details of Authorisation granted by MPCB	BO/MSW A/B-109 dated 25.1.2005	RONM/TB/03 dated 31.8.2004
6	Details of Proposed project	Bio-methanisation	Vermiculture
7	Capital cost of Project in Rs.	9.00 Crores	18.0 Lacs
8	Expected annual O&M expenses in Rs.	7.00 Crores	18.0 Lacs



## 5. Status of Bio-medical Waste Management

There are about 134 identified hospitals having bed strength of 2669 in Navi Mumbai. The total bio-medical waste generated in this region is to the tune of 860 kg per day. All of these hospitals are members of M/s. Mumbai Waste Management Ltd., Taloja common bio medical waste treatment and disposal facility.

### Details of bio-medical waste generation in Navi Mumbai:

Sr. no.	Particulars of hospitals with beds	No. of hospitals	No. of beds	No. of authorisation issued	No. of hospitals complying
1	300 and above	02	1050	02	02
2	Between 200– 300	02	500	02	02
3	Between 50-200	01	70	01	01
4	Between 5-50	83	994	83	83
5	Below 5	46	55	46	46
6	No. of clinics	540	00	Undertaking submitted	540

### Common BMW facility at Taloja:

MWML at Taloja has established a bio medical waste facility for disposal of BMW wastes in the year 2003. Following units are operational in this facility:

- ⊕ Segregation of waste and colour coded bagging of waste at source.
- ⊕ Door to door BMW collection and transportation facility
- ⊕ Incinerator of capacity 200 Kg/ Hour
- ⊕ Autoclave two nos of capacity 600 & 400 liters respectively.
- ⊕ Shredder
- ⊕ Secured landfill

### BMW facility at Uran:

Uran municipal council has provided deep burial facility in accordance with BMW Rules. The deep burial facility for councils with population less than 5 lacs is permissible.

The compliance in respect of Bio-medical waste (M & H) Rules 2000 in the region is fairly good. Additional capacity of CBMWTF is presently used by GMMC.

## 6. WATER ENVIRONMENT:

### 6.1. Domestic waste water generation, treatment and disposal details

The total sewage effluent generated in Navi Mumbai Municipal Corporation area is to the tune of 190 MLD and is collected through closed underground sewerage system provided in most of the areas. There are 8 operational STPs in this area and details are as follows:

Details of STP in Navi Mumbai

Sr.	Node	capacity in MLD	Treatment type	Final disposal
1	Belapur, Sector 12	21.00	Aerated lagoon	Creek
2	Belapur, Sector 26	0.15	Primary treatment	Gardening
3	Nerul, Sector 2	17.00	Aerated lagoon	Creek
4	Nerul, Sector 50	23.00	Aerated lagoon	Creek
5	Vashi, Sector 18	34.00	Pri. & Sec treatment.	Creek
6	Sanpada, Sector 20	31.00	Aerated lagoon	Creek
7	Airoli, Sector 18	18.00	Aerated lagoon	Creek
8	Koparkhairne, Sector 14	36.00	Aerated lagoon	Creek

Slum area of Turbhe node, Ghansoli are yet to be covered under planned sewage collection and treatment system.

The total sewage effluent generated in Uran Municipal Council is to the tune of 2.1 MLD. This effluent reaches the sea through open drains. There is no

treatment facility provided by the local body and untreated sewage effluent is discharged into creek through nallah.

MPCB regularly monitors treated sewage effluent quality. Treated effluent quality of Vashi STP is as follows:

#### STP NERUL—Sec-2

Sr.No.	Date	pH	BOD	COD	SS	O & G
1	28.01.05	6.9	55	108	48	BDL
2	11.02.05	6.8	90	136	48	BDL
3	18.03.05	7.0	82	112	142	BDL
4	20.04.05	7.0	95	128	106	BDL
5	20.05.05	7.2	120.0	264.0	68.0	BDL
6	19.07.05	6.8	120.0	216.0	122.0	1.6

#### STP Belapur—Sec-26

Sr.No.	Date	pH	BOD	COD	SS	O & G
1	28.01.05	7.7	17	56	16	BDL
2	28.02.05	8.5	10	32	20	BDL
3	18.03.05	7.3	27	40	28	BDL
4	20.04.05	6.9	11	40	66	BDL
5.	19.07.05	7.3	74.0	160.0	58.0	BDL

#### STP near NRI—Sec-50

Sr.No.	Date	pH	BOD	COD	SS	O & G
1	28.01.05	7.2	50	120	76	BDL
2.	28.02.05	7.3	50	140	106	2.0
3.	18.03.05	7.2	90	192	202	BDL
4.	20.04.05	7.3	16	96	134	BDL
5.	20.05.05	7.4	56.0	88.0	78.0	BDL
6.	19.07.05	6.9	115.0	264.0	86.0	BDL

#### STP Belapur—Sec-12

Sr.No.	Date	pH	BOD	COD	SS	O & G
1.	31.01.05	7.3	80	148	42	BDL
2.	28.02.05	7.3	24	128	72	BDL
3.	18.03.05	6.9	80	176	164	BDL
4.	20.04.05	6.9	27	132	116	BDL
5.	03.05.05	7.0	75	176	114	BDL
7.	19.07.05	7.1	18.0	112.0	70.0	0.8

#### STP Vashi—Sec-18

Sr.No.	Date	pH	BOD	COD	SS	O & G
1	28.01.05	6.7	190	392	166	4.4

2	24.02.05	6.8	120	268	108	1.2
3	15.03.05	6.9	33	144	92	BDL
4	28.04.05	6.8	38.0	112.0	110.0	BDL
5	18.05.05	6.9	220.0	400.0	116.0	BDL
6.	19.07.05	6.9	105.0	228.0	176.0	0.8

## 6.2. Industrial / trade effluent generation, treatment and disposal:

There are 1136 industries generating industrial effluents. The large and medium scale effluent generating industries have comprehensive treatment facilities of their own while the small scale industries have provided primary treatment facilities. The treated effluents of all these industries in the MIDC estates are further treated in 2 Common Effluent Treatment Plants (CETP) at Taloja and TTC Pawane. MPC Board regularly monitors treated effluent quality from individual industries and CETPs. Details of CETPs are as follows:

### 6.2.1 CETP at TTC MIDC, Pawane

CETP at TTC was established on November 1997 and is designed to handle 12 MLD of effluent. This CETP is upgraded to enhance the total capacity upto 27 MLD. There are 425 small scale user members, 55 medium / large scale user members and 1905 non user associate members to the CETP. Treated and partially treated effluent is collected through closed underground pipeline network and brought to CETP. After secondary treatment effluent is discharged through a closed pipeline of length 3.5 Kms. by means of gravity into the Trans Thane Creek through submerged outfall. The sludge generation from the CETP is about 5 MT/Day and is disposed at CHWTSDF at TTCWMA.



**CETP at TTC Pawane**

Analysis results of treated effluent of CETP at Pawane

Year 2005	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
pH	7.3	7.0	7.2	7.6	7.5	7.4	7.0	7.29	7.1
BOD	60	42	70	72	30.0	120.0	20.0	90.0	22.0
COD	172	120	256	144	136.0	200.0	108.0	164.0	88.0
SS	70	28	124	80	154.0	70.0	68.0	42.0	34.0
O&G	2.8	BDL	2	BDL	BDL	BDL	BDL	0.8	0.8
TAN	1.03	10.58	34.1	4.6	--	249.5	11.56	0.15	13.54
TK Nitrogen	--	--	--	--	BDL	--	--	--	--
R. Chlorine	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Fluoride	0.69	0.29	0.13	0.54	0.62	0.94	2.32	0.42	BDL
Cr+6	BDL	BDL	BDL	BDL			--	--	--
T Chromium	0.09	0.01	BDL	BDL	0.06	0.01	BDL	0.05	0.114
Detergent	BDL	--	--	--		--	--	--	--
Organic Phosphorous	0.065	0.0008	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Chlorinated Hydrocarbon	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Nickel	0.14	BDL	BDL	0.109	0.09	0.20	0.05	0.2	0.151
Cadmium	BDL	BDL	BDL	BDL	BDL	0.01	BDL	BDL	BDL
Arsenic	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Copper	BDL	0.02	BDL	0.005	0.03	0.02	BDL	0.16	0.009
Lead	BDL	BDL	BDL	BDL	0.29	0.05	BDL	BDL	BDL
Zinc	BDL	BDL	0.184	0.100	0.20	0.08	0.08	0.04	0.022
Cyanide	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Mercury	0.01	0.0078	BDL	BDL	0.002	0.002	0.025	0.002	0.014
Phenol	0.37	0.43	0.132	BDL	BDL	0.193	BDL	0.284	BDL
Sulphide	BDL	BDL	0.77	BDL	BDL	BDL	BDL	BDL	BDL

### 6.2.2 CETP at Talaja MIDC

CETP at Talaja is designed to handle 10 MLD of effluent. Trade effluent from the industries is collected by means of network of closed pipelines. The effluent quantity reaching the CETP is within the installed capacity in the dry

season. In the rainy season the effluent quantity is higher resulting in some quantity of untreated effluent being discharged, but due to the dilution factor of rain water the impact is not significant. CETP is in the process of increasing its handling capacity. Upgradation in the existing aeration tank by installing Diffused Aeration System carried out at a cost of Rs.1.25 crores in May 2005 has resulted in treated effluent quality being well within prescribed standards. Hazardous waste generated from this unit in the form of sludge is regularly sent to CHWTSDF at MWML, Taloja for scientific disposal.

The treated effluent from CETP is disposed into the creek through a closed 7 kilometers long pipeline by means of gravity into creek. The blockage / breaking of effluent carrying pipelines to CETP and treated effluent carrying pipeline from CETP to the final disposal point is a cause of effluent entering adjacent rivers. Vigilance is maintained by MPC Board as well as CETP staff, and any such incidence is brought to the notice of CETP officials and CETP f is directed by MPC Board to carry out repairs at the earliest.



**Diffused aeration system provided at CETP Taloja**

**Analysis results of treated effluent of CETP at Taloja**

Parameter.	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
PH	7.2	6.8	7.0	7.4	6.5	7.6	7.5	7.7
BOD	320.0	360.0	140.0	190.0	400.0	65.0	35.0	52.0
COD	896.0	704.0	1328.0	1200.0	1520.0	200.0	104.0	140.0
S.S	164.0	216.0	162.0	304.0	442.0	--	106.0	50.0
OG.	5.4	12.0	1.0	BDL	3.6	2.0	BDL	BDL

T.A.N.	228.0	198.45	42.5	62.4	185.0	91.6	61.8	30.20
Res. Chlorine.	BDL	--	BDL	BDL	BDL	--	BDL	BDL
Fluoride.	0.33	0.64	0.95	0.93	1.2	5.14	4.39	0.49
T.K.N.	--	--	--	--	--	--	73.0	96.32
Chromium	BDL	BDL	BDL	BDL	BDL	BDL	BDL	--
Total Chromium	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.035
Nickel	0.20	0.22	0.261	0.072	0.285	0.137	0.126	0.118
Cadmium	0.01	BDL	BDL	0.017	BDL	BDL	BDL	BDL
Arsenic	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Copper	0.01	BDL	0.028	0.009	0.011	0.011	BDL	0.261
Lead	BDL	BDL	BDL	BDL	0.055	0.049	0.083	0.058
Zinc	BDL	0.02	0.154	0.060	0.028	0.922	0.229	0.059
Cyanide	BDL	--	1.3435	0.364	0.053	0.011	0.017	BDL
Mercury.	0.01	0.016	BDL	0.025	0.045	0.020	BDL	0.02
Phenol	0.08	0.44	0.665	0.176	0.376	BDL	0.298	BDL
Sulphide.	BDL	--	4.98	3.77	4.90	0.58	--	BDL
Boron.	--	6.10	--	--	--	--	--	--

## 7. Air Quality Monitoring:

Navi Mumbai Region accommodates highly populated urban areas like Airoli, Vashi, Nerul, Turbhe and Belapur. Being heavily industrialized in addition to urbanization, the air quality in the area suffers due to vehicular and industrial emissions. The industries in this region are visited regularly to monitor and verify the adequacy of air pollution control systems that are in place. Action is initiated against defaulting units, if any.

MPCB monitors ambient air quality at several locations including industrial, commercial and residential areas. A continuous air monitoring station is in operation at Vashi with an on-line display for public awareness.



Display board of continuous air monitoring station at Vashi

The Board also monitors quality of the emissions from the stack on regular basis. Total number of 197 stack monitoring has been carried out since January 2005.

Most of the large and medium scale industries have their own air quality monitoring facility and carry out air quality monitoring within their own premises and submit the analysis to the Board. Some industries also get air quality monitored in their premises through private agencies.

The average air quality as monitored by MPC Board is illustrated in the table below:



Results of Ambient Air quality samples collected in Navi Mumbai region

Sr. No.	Location	Date	SO <sub>2</sub> μ/m <sup>3</sup>	NO <sub>x</sub> μ/m <sup>3</sup>	RSPM μ/m <sup>3</sup>	SPM μ/m <sup>3</sup>
1	Koparkhairne	28/01/05	BDL BDL	105.0 150.0	89.4	116.6
2	Koparkhairne	17/02/05	3.2 2.7	44.0 83.0	110.0	598.0
3	Koparkhairne	03/03/05	2.67 2.92	46.0 56.0	59.9	150.2
4	Koparkhairne	28/04/05	7.0 7.0	80.0 100.0	68.5	234.0
5	Koparkhairne	30/06/05	5.0 7.0	110.0 108.0	31.0	45.0
6	Mahape	09.02.05	22.0 27.0	63.0 66.0	122.0	239.0
7	Koparkhairne	03.03.05	2.67 2.92	46.0 56.0	59.9	150.2
8	Mahape.	30.03.05	14.0 15.0	32.0 32.0	103.0	184.0
9	Koparkhairne	23.04.05	7.0 7.0	80.0 100.0	68.5	234.0
10	Mahape	18.05.05	4.8 4.0	30.0 31.0	317.0	472.0
11	Koparkhairne	30.06.05	5.0 7.0	110.0 108.0	31.0	45.0
12	Rabale	01.07.05	6.0 4.0	68.0 101.0	50.0	61.0
13	Airoli	04.07.05	BDL BDL	39.0 40.0	43.0	43.0
14	Near Central Lab.	24.08.05	BDL BDL	167.0 182.0	48.0	97.0
15	Mahape	29/01/05	32.0 18.4	16.0 BDL	64.0	134.0
16	Mahape	05/02/05	22.0 22.0	5.50 17.0	157.0	641.0
17	Ghansoli.	06/02/05	22.0 23.0	34.0 61.0	216.0	715.0
18	Mahape	10/02/05	59.0 34.0	48.0 15.0	95.0	512.0
19	Koparkhairne	17/02/05	3.2 2.7	44.0 83.0	110.0	598.0
20	Koparkhairne	03/03/05	2.67 2.92	46.0 56.0	59.9	150.2
21	Mahape	22/03/05	23.0 34.0	18.0 16.0	226.0	648.0
22	Rabale	14/02/05	127.0 95.0	3.20 83.0	179.0	512.0

The above mentioned reports of the Ambient Air Quality Monitoring show that , the values of RSPM and SPM frequently exceeding the quality norms prescribed by Central Pollution Control Board. This may be because of the regular road traffic and the construction activities in this area.

The other parameters like SO<sub>2</sub> and NO<sub>x</sub> are mostly found within the limits.

## 8. Monitoring of Noise Pollution:

The noise levels in some parts of the region are high due to heavy vehicular traffic, industrial operations and commercial activities. The Board monitors noise levels regularly in industrial zones. Noise monitoring is also carried out when there are complaints regarding noise pollution in commercial and residential areas.

A special drive to ascertain the levels of noise pollution due to firecrackers was undertaken by the Board during the Diwali Festival. A statement of noise levels during explosions of crackers during Diwali is shown below:

Noise Level Readings in dB(A) during Diwali

Sr. No.	Locations	Date	Time	Readings in dB(A)
1.	Nerul Sector-18	01.11.2005	19.10 PM	103.4 99.0 99.2 119.0 121.0
2.	Vashi Sector-17	01.11.2005	20.30 PM	127.0 117.6 111.3 112.7 98.6
3.	A.P.M.C Yard	02.11.2005	19.25 PM	77.3 84.2 81.3 78.6 76.7
4.	Airoli Naka	02.11.2005	19.10 PM	90.7 95.2 88.5 102.4 110.6
5.	Swatantra Sangram Chowk Ghansoli	02.11.2005	19.50 PM	120.0 104.1 127.2 96.2 94.3
6.	Koperkhairane Sect – 10	02.11.2005	20.50 PM	98.4 95.6 104.2 123.8 100.1

In spite of the regulation made by the Central Government for enforcing the norms on crackers manufacturing the noise level monitored during the Diwali festival were observed on higher side .

## **9. Hazardous Waste Management:**

Navi Mumbai Region accommodates a large number of industrial units such as chemicals, textiles, pesticides etc. and as such the hazardous waste generation in the region is significant. As per the inventory made by the Board based on 2003 amendment in the Rules, there are about 517 hazardous waste generation units. Details are as follows:

✦ No. of units generating Hazardous waste:	517 nos.
✦ Total Quantity of Hazardous waste generated:	111996 MTA.
✦ Quantity of waste recyclable:	13958 MTA.
✦ Quantity of waste incinerable:	50991 MTA.
✦ Quantity of land disposable waste:	47047.2 MTA.

The inventory prepared on the basis of available records is being verified on the field and will be revised accordingly.

### **9.1 Treatment & Disposal of Hazardous Waste:**

The area is fortunate in having with two common facilities for management of hazardous waste at TTC and Mumbai Waste Management Ltd. (MWML), Taloja. MPC Board has made it mandatory to the industries generating hazardous waste in this region to become members of this common hazardous waste treatment, storage and disposal facility (CHWTSDF) and send their hazardous waste regularly for scientific disposal.

#### **CHWTSDF of TTCWMA, Mahape:**

CHWTSDF was established in January 2004. The facilities provided are treatment like solidification and physical chemical treatment along with secured land fill. The capacity of landfill is 25,000 Mt of waste. This facility has membership of about 1000 hazardous waste generating units.



Secured landfill site of TTCWMA

CHWTSDF of MWML, Talaja:

A state of the art incinerator to incinerate hazardous waste is provided at MWML CHWTSDF, Talaja.



An aerial view of landfill site at MWML Talaja



**Units of the incinerator provided at MWML Taloja**

In addition to these CHWTSDF, Navi Mumbai Region has waste reprocessing / recycling industries as follows:

- ✦ No. of units for non ferrous recycling units 15 nos.
- ✦ No. of units recycling other hazardous wastes 31 nos.
- ✦ No. of industries having own incineration facility 6 nos.

**10. Review of yearly activities of MPCB, Navi Mumbai Region:**

The Navi Mumbai region covers 2318 industries, 8 STPs, 2 CETPs, 2 CHWTSDFs, 540 hospitals, 1 BMWTDF and numerous environmental monitoring stations. The technical staff strength of this region is 13. The Board regularly monitors the air and water quality and noise levels. The details of samples collected for the period January – November 2005 are summarised below:

Sr.no	Particulars	SRO-NM I	SRO-NM II	SRO-NM III	Total
1.	Water samples				
	a. Industrial	595	266	639	1500
	b. River	0	0	30	30
	c. Creek	18	11	19	48
	d. Ponds &	93	59	22	174

		lakes				
2.	Air samples					
	a.	Ambient	35	41	16	92
	b.	Stack	96	68	33	197
3.	Hazardous waste		76	56	11	143
4.	Noise samples		30	25	2	57
5.	Bio-medical waste		0	0	2	2

**Public Complaints about Pollution Problems:-**

There are several complaints regarding pollution received by the Board in this Region. Officials promptly visit and assess the situation in each case and carry out investigation. If the complaints are found to be genuine, necessary action is initiated. The details complaints attended to for the period January – November 2005 are summarized below:

Sr.no	Particulars	SRO-NM I	SRO-NM II	SRO-NM III	Total
1.	Complaint received				
	a. Air	23	13	6	42
	b. Water	06	07	10	23
	c. noise	08	01	00	09
2.	Complaints attended				
	a. Air	23	13	6	42
	b. Water	06	07	10	23
	c. noise	08	01	00	09

## **11. Area specific problems and tasks ahead of the Board:**

Given the varied topography, heavy industrialization and urbanization in the region, there are several problems that need to be addressed. Some key problems have been identified and the action taken, probable solutions and the tasks that lie ahead of the board are listed below:

### **11.1. Problems**

#### **11.1.1 Illegal Disposal of Hazardous Waste**

Several instances of illegal disposal of Hazardous waste have come to light in the MIDC and at their outskirts. Due to the presence of several similar types of waste generating units in the area, it is difficult to pinpoint the culprits. It has been observed that such instances occur on non-working days and at night time. Thus it becomes extremely difficult to exercise control over such activity in spite of vigilance by the MPC Board. Taking help of outside agency to keep a round the clock vigilance in this area could be a probable solution.

Such illegal disposal of hazardous wastes are usually carried out through an unauthorized transports. Hence has the back tracking investigations could be accomplished by the police agency. Also the regular control can be possible only if , local public, police depart, industrial association , NGO's and HW facility operator come together and work for the general cause of the public health.

#### **11.1.2. Fishkill incidents in the area:**

A few instances of fish kill have occurred in the region.

They are briefly narrated as follows.:-

- 1) Fish kill incident at Diwale Creek .

This was occurred on 26<sup>th</sup> june 2005 near village Diwale. Which is located at downs steam of the effluent disposal point of CETP of Tajola Industrial Area. The mortality was found on higher side.

The creek water and fish samples were analyzed but no chemical toxicity was detected .



## 2) Fish Kill at Ghansoli Area.:-

The Fish kill was reported at a small fish breeding pond located near Ghansoli Village. It can be categorized as a minor incident. The region was found due to discharge of sewage from local nalla. This was earlier sprayed by Municipal Corporation with Larvicide Chemicals.

The probable causes of death in most of the fish kill incidents could not be pinpointed. Causes of death could include environmental factors, illegal disposal of hazardous wastes / chemicals by tankers from outside the region etc.

### 11.1.3. Smell nuisance in residential sectors:

Since the residential areas lie in the vicinity of the industrial belt, several complaints of smell nuisance especially during nighttime have been registered. Probable causes of such smell nuisance include non-operation of air pollution control systems at night time and illegal incineration of chemical waste in brick kilns. Action is initiated against such defaulting industries and brick kilns.

Due to the heavy flooding occurred on July 26<sup>th</sup> 2005 food grains stored in warehouses in Pawane area were contaminated and emanated foul smell in surrounding areas due to decomposition. Directions were issued to the warehouses to scientifically dispose these grains at MSW site of NMMC..

## 11.2. Tasks ahead

### 11.2.1. Upgradation / capacity enhancement of CETPs:

The CETP at Talaja was designed for 10 MLD and CETP of TTC was designed for 12 MLD. Increase in the number of industries generating waste water and run-offs during rainy season results in a much larger quantity of effluent entering the CETPs. The Board has directed the CETPs to enhance their capacity. The capacity enhancement of CETP Talaja will be completed by the end of 2006 and that of CETP TTC is almost completed and will be commissioned soon.

### 11.2.2 . Mangrove Protection

The mangroves in the region are suffering as a result of improper environmental management. The Board has appointed an Expert Committee for environmental improvement of the Airoli Creek at Navi Mumbai and an action plan based on the committee's recommendations has been submitted to the State Government. In addition to implementation of the action plan for this area, similar studies need to be undertaken for protection of mangroves in other parts of the region.

#### Conclusion:

There are numerous tasks like the implementation of the Environment Protection Act – Water Act and Air Act and implementation of the Honourable Supreme Court's directives in respect of hazardous waste, MSW etc. At present the staff strength of the Board is quite small. These tasks can be undertaken and targets can be better achieved if the technical staff strength is augmented.