



# **Environment and Forest Department**

**Policy Note 2017-2018**

**Demand No.15**

## **Tamil Nadu Pollution Control Board**

## **TAMILNADU POLLUTION CONTROL BOARD**

### **1. INTRODUCTION**

The Tamil Nadu Prevention and Control of Water Pollution Board was constituted by the Government of Tamil Nadu on twenty seventh day of February, Nineteen eighty two (27-2-1982) under section 4 of the Water (Prevention and Control of Pollution) Act, 1974 (Central Act 6 of 1974). After the enactment of Air Pollution Act the Board was later renamed as "Tamil Nadu Pollution Control Board" (TNPCB) in the year 1983. It enforces the provisions of the Water (Prevention and Control of Pollution) Act, 1974, the Water (Prevention and Control of Pollution) Cess Act, 1977, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the rules made under these Acts.

Currently TNPCB enforces the following Acts and Rules.

- The Water (Prevention and Control of Pollution) Act, 1974
- The Tamilnadu Water (Prevention and Control of Pollution) Rules, 1983.
- The Water (Prevention and Control of Pollution) Cess Act, 1977
- The Water (Prevention and Control of Pollution) Cess Rules, 1978
- The Air (Prevention and Control of Pollution) Act, 1981
- The Tamil Nadu Air (Prevention and Control of Pollution) Rules, 1983.
- The Environment (Protection) Act, 1986
- The Environment (Protection) Rules, 1986
- The Manufacture, Storage and Import of Hazardous Chemical Rules, 1989
- Fly Ash Utilization Notification, 1999

- The Batteries (Management and Handling) Rules, 2001
- The Environment Impact Assessment Notification, 2006
- The Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016
- The Bio-Medical Waste Management Rules, 2016
- The Solid Waste Management Rules, 2016
- The Plastic Waste Management Rules, 2016
- The E-Waste Management Rules, 2016
- The Construction and Demolition Waste Management Rules, 2016

## **2. FUNCTIONS OF THE TNPCB**

As defined under section 17 of the Water (Prevention and Control of Pollution) Act, 1974 and under section 17 of the Air (Prevention and Control of Pollution) Act, 1981, the main functions of TNPCB are as follows:

- To plan a comprehensive programme for the prevention, control and abatement of water and air pollution.
- To advise the State Government on any matter concerning the prevention, control or abatement of water and air pollution.
- To collect and disseminate information relating to water and air pollution and the prevention, control or abatement thereof.
- To inspect sewage and trade effluent treatment plants for their effectiveness and review plans, specifications for corrective measures.
- To inspect industrial plants or

manufacturing process, any control equipment and to give directions to take steps for the prevention, control or abatement of air pollution.

- To inspect air pollution control areas for the purpose of assessment of quality of air therein and to take steps for the prevention, control or abatement of air pollution in such areas.
- To lay down, modify or annul effluent standards for the sewage and trade effluents and for the emission of air pollutants into the atmosphere from industrial plants and automobiles or for the discharge of any air pollutant into the atmosphere from any other source.
- To evolve economically best viable treatment technology for sewage and trade effluents.
- To collect samples of sewage, trade effluent and emission of air pollutants

and to analyze the same for specific parameters.

- To collaborate with Central Pollution Control Board in organizing the training of personnel engaged or to be engaged in programme relating to prevention, control or abatement of water and air pollution and to organise mass education programme relating thereto.
- To perform such other functions as may be prescribed by the State Government or Central Pollution Control Board.

### **3. ORGANISATION SETUP**

The organization structure of TNPCB is a three-tier system consisting of a Head-office at Chennai, Zonal offices and District offices with total staff strength of 656 (May 2017). The Board functions with 6 Zonal Offices headed by Joint Chief Environmental Engineers (Monitoring), 36 District Offices headed by District

Environmental Engineers, 2 Flying Squads headed by Environmental Engineer at Erode and Tiruppur. To assist the Board in monitoring the industries, 5 Advanced Environmental Laboratories (AELs) and 10 District Environmental Laboratories are functioning. These laboratories carry out analysis of samples of water, sewage, trade effluent, stack emission, ambient air and hazardous waste. The AELs at Chennai, Salem, Coimbatore, Cuddalore, and Madurai have been accorded certification by National Accreditation Board for Testing and Calibration of Laboratories. The AELs at Chennai, Salem and Cuddalore are OSHAS 18001 certified laboratories.

#### **4. CONSENT MANAGEMENT**

Industries have to obtain consent for discharge of sewage / trade effluent into any stream or well or into sewer or land under section 25 of the Water (Prevention and Control of Pollution) Act, 1974 and to operate them in air

pollution control area under section 21 of the Air (Prevention and Control of Pollution) Act, 1981. The Government of Tamil Nadu vide G.O. Ms. No. 4 Environment Control Department dated 28.09.1983 has declared the entire state of Tamil Nadu as air pollution control area.

For harmonization of industrial classification, the Central Pollution Control Board has categorized the industries as Red, Orange, Green and White based on their pollution potential and relative pollution index. TNPCB adopts the same categorization. Further, TNPCB has classified the industries as Large, Medium and Small scale based on their gross fixed assets. Industries with GFA less than Rs. 5 crores is small scale, Rs 5 to 10 crores is medium scale and GFA more than Rs. 10 crores is large scale.

The consent is issued to the industries in two stages. In the 1<sup>st</sup> stage, 'Consent to Establish

(CTE)' is issued under the Water (Prevention and Control of Pollution) Act, 1974 & Air Prevention and Control of Pollution) Act, 1981 depending upon the suitability of the site before the industry takes up the construction activity. In the 2<sup>nd</sup> stage, 'Consent to Operate (CTO)' is issued before commissioning the industrial unit after the compliance of conditions of 'Consent to Establish' issued. The Board has delegated powers to the field officers at the Zonal and District Level to grant consent to the industries considering the category and size of the project. The Engineers in field offices inspect the industries under their jurisdiction periodically to assess the adequacy of pollution control measures adopted by the industries to treat sewage, trade effluents and emissions and to monitor their performance. They also investigate environmental pollution related complaints from the public and other organizations. From 1<sup>st</sup> April 2016 to 30<sup>th</sup> April 2017, the Board has issued 951 CTE orders and 3012 CTO orders under both the Acts.

#### 4.1 REVISION OF VALIDITY PERIOD OF CONSENT

In order to harmonize the consent validity period with validity period of environmental clearance issued by MoEF&CC/SEIAA, the Board vide Board Proceedings No. 5 dated 02.08.2016 revised the validity period of Consent to Establish and Consent to Operate issued under the Water (P&CP) Act, 1974 and the Air (P&CP) Act, 1981.

a) **CONSENT TO ESTABLISH** validity period is as follows:

Projects	Validity Period
All EIA Projects	7 Years (1 Fee)
All Non-EIA Projects	5 Years (1 Fee)

b). **Consent to Operate** validity period is as follows:

Red	Orange	Green
5 Years (5 Fees)	10 Years (5 Fees)	14 Years (7 Fees)

## **5. ONLINE CONSENT MANAGEMENT AND MONITORING SYSTEM**

In order to bring efficiency and transparency in consent management, TNPCB has implemented E-Governance in consent management. Accordingly TNPCB has developed a web based software package for Online Consent Management and Monitoring System (OCMMS). This system facilitate the industries for online submission of application for getting Consent to Establish / Consent to Operate / Renewal of Consent and also to ascertain the status of application.

This system allows to carry out the consent management processes such as application scrutiny, raising inspection, raising clarification, submitting inspection report, preparing consent order and forward consent order through online

with digital signature affixed. It helps for online monitoring for processing the application. From 20.1.2015 onwards, the applications are accepted only through OCMMS. In order to facilitate the industries to apply online through OCMMS, Help Desk has been established in all the 36 district offices. Web portal for online consent application is **tnocmms.nic.in**. From 20<sup>th</sup> January 2015 to 31<sup>st</sup> May 2017, CTE has been issued to 2855 units and CTO has been issued to 11,781 units and Renewal of consent has been issued to around 20,508 units through online.

## **6. ONLINE GRIEVANCE REDRESSAL SYSTEM**

In order to ease public to get quick redressal of their complaint, TNPCB has launched an online grievance redressal system from 1<sup>st</sup> March 2016 onwards. The public can file complaint relating to industrial pollution to TNPCB online. The offline complaints received are also uploaded in the software for online processing of complaints. The

complaint is investigated, processed online and the action taken is intimated to the petitioner. From 1<sup>st</sup> March 2016 to 31<sup>st</sup> May 2017, 3450 complaints (Offline & online) were received and processed.

### **6.1 CM CELL & AMMA CALL CENTRE PETITIONS**

A Separate Cell is functioning at Head Office to redress the petitions received through CM Cell and Amma Call centre. CM Cell petitions are disposed off within 15 days and Amma Call Centre petitions are disposed off within 7 days. From 1<sup>st</sup> April 2016 to 31<sup>st</sup> May, 2017, 428 nos. of CM Cell petitions and 1138 nos. of Amma Call centre petitions were received and disposed off.

## **7. MONITORING OF INDUSTRIES**

The Board vide B.P. Ms. No. 22 dated 25.2.2004, has fixed norms for inspection and sample collection based on size and category of the industry for effective monitoring purpose.

Type of Industry	Category	Inspection	Sample Collection
Large	Red	Once in 3 months	Once in a month
	Orange	Once in 6 months	Once in 4 months
	Green	Once in 2 years	----
Medium	Red	Once in 4 months	Once in 3 months
	Orange	Once in 6 months	Once in 6 months
	Green	Once in 2 years	----
Small	Red	Once in a year	Once in 3-6 months
	Orange	Once in 2 years	Once in 6 months
	Green	Once in 2 years	----
17 Category of Industry		Once in a month	Once in a month

From 1<sup>st</sup> April 2016 to 31<sup>st</sup> May 2017, the Board has carried out ambient air quality survey

in the vicinity of 1035 industrial units, collected and analyzed 27207 sewage and trade effluent samples.

## **8. CARE AIR CENTRE**

TNPCB is operating a Care Air Centre at Corporate Office, Chennai for assessing real time air quality status. The 17 category of highly polluting industries, Red-Large industries, common hazardous waste incinerator facility are connected to this centre. The centre monitors the stack emission and ambient air quality of these units on 24x7 basis. The parameters monitored in this centre includes:- Stack Monitoring: Particulate matter, Sulphur-di-oxide, Nitrogen oxides. Ambient Air Quality monitoring: PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>. When the emission levels exceed the norms, the inbuilt system will inform the concerned industry, the District Environmental Engineer and Member Secretary through an automated Short Messaging System (SMS) and Electronic Mail (e.mail) enabling them to take

immediate remedial action. As on 31<sup>st</sup> May 2017, 378 units are connected to this centre for stack emission monitoring, 104 units are connected for ambient air quality monitoring.

## **9. WATER QUALITY WATCH CENTRE**

In order to monitor the quality of effluent discharge from industries and the water quality of water bodies on continuous basis (24x7), TNPCB has established a Water Quality Watch Centre at the Corporate Office, Chennai. It is functioning since July 2015. This centre monitors the quality of treated effluent at the outlet of the treatment plant on continuous (24x7) basis through online. The 17 category highly polluting industries, Red-Large industries, Common Effluent Treatment Plants are connected to this centre. As on 31<sup>st</sup> May 2017, 143 units are connected to this centre; of which 71 units are connected for zero liquid discharge monitoring and 72 units for treated effluent discharge monitoring. Three online

monitors installed in river Thamirabarani are connected to this centre. The parameters monitored through this centre includes: pH, TDS, DO, Flow.

## **10. COMMON EFFLUENT TREATMENT PLANTS**

The Ministry of Environment, Forest and Climate Change, Government of India initiated an innovative technical and financial support scheme for SSI units, considering their constraints in complying with pollution control norms individually. The scheme promotes common facilities for treatment of effluents from SSI units located in clusters through financial assistance. TNPCB plays a supportive role towards the establishment of Common Effluent Treatment Plants (CETPs) for clusters of small-scale industries in various parts of the State. The Board assists in the technical scrutiny of the proposals to ensure appropriate technology for CETPs.

In Tamil Nadu, 44 CETPs were established and commissioned, out of which 13 CETPs are for Tanneries, 30 for Textile Bleaching & Dyeing units and 1 CETP is for Hotel & Lodges. Among 13 CETPs for tanneries, 11 CETPs are in operation with Zero Liquid Discharge (ZLD) system. In the remaining two CETPs, one CETP has provided primary and secondary treatment system and opted for dilution of treated effluent with treated sewage to meet the standards prescribed by the Board. In the other one CETP, the installation of ZLD system is under progress. Among 30 CETPs established for textile dyeing processing units, 19 CETPs have implemented the ZLD system. The remaining 11 CETPs are closed in view of orders of Hon'ble High Court due to their inability to provide ZLD systems. The CETP at Kodaikanal collects and treats the wastewater arising from the hotels and lodges located around the Kodai Lake.

## **11. HAZARDOUS WASTE MANAGEMENT**

The Hazardous and Other Waste (Management and Transboundary) Rules, 2016, was notified by the Ministry of Environment, Forest and Climate Change, Government of India. The rule defines hazardous waste and lays down specific guidelines for the storage, recycling, transportation and disposal. As per the rules, the generator of hazardous waste is responsible for its treatment and disposal. TNPCB is granting authorization for handling the hazardous wastes.

As on 31<sup>st</sup> May, 2017, TNPCB has identified 3,550 units generating hazardous wastes and issued authorization under the rules. These units generates about 7.80 lakh tons of hazardous waste annually, out of which 2.90 lakh tons is landfillable, 3.70 lakh tons is recyclable and 1.20 lakh tons is incinerable. The Board is taking effective steps in handling and management of

hazardous wastes, its treatment and disposal in an environmentally safe manner. There are two common Treatment, Storage and Disposal Facilities (TSDF) in Tamilnadu under operation.

<b>Sl.No.</b>	<b>Name and address of the facility</b>	<b>Capacity</b>
1	M/s. Tamilnadu Waste Management Limited, SIPCOT Industrial Complex, Gummidipoondi, Tiruvallur District.	Authorized to handle 1,00,000 TPA for landfill, 1T/Hr for incineration. Total land area 26.9 acres.
2	M/s. Tamilnadu Waste Management Limited, Unduorumikidakulam village, Tiruchuli Taluk, Virudhunagar District.	Authorized to handle 1,50,000 TPA for landfill. Total land area 80 acres.

Pioneering efforts were taken by TNPCB to utilize the hazardous waste in the form of sludge generated from Common Effluent Treatment Plants (CETPs) of textile processing units as raw

material for co-processing in the cement factories. As on 31<sup>st</sup> May, 2017, 59,174 Tonnes of ETP sludge have been disposed to various Cement industries for co-processing. For reprocessing of hazardous wastes, TNPCB has issued authorization to 26 units for recycling of non-ferrous wastes, zinc and copper scrap, 14 units for reprocessing of used oil and 12 units for reprocessing of waste oil.

### **11.1 ONLINE HAZARDOUS WASTE MANAGEMENT AUTHORIZATION**

As a part of ease of doing business, TNPCB has launched online application and processing for issue of authorization for handling hazardous waste from 01.03.2016. Now the industries apply for authorization online and it is processed and issued online. Using this facility, the industry can track the status of the application. As on 31<sup>st</sup> May 2017, the Board has received application online

from 1733 units. These are being processed and authorization issued.

## **12. BIO-MEDICAL WASTE MANAGEMENT**

The Bio-Medical Waste Management Rules, 2016, was notified by the Ministry of Environment, Forest and Climate Change, Government of India. These rules shall apply to all persons who generate and handle bio-medical waste in any form. It is the responsibility of the generator and the operator of the common bio-medical waste treatment and disposal facility (CBMWTF) for safe handling and disposal of the bio-medical waste. The State Government of Health shall ensure for implementation of the rule in all health care facilities. SPCB shall issue authorization to the health care facilities and CBMWTF.

In the State, the TNPCCB has so far authorized 3720 bedded private hospitals, 368 bedded

Government hospitals and 573 non bedded hospitals. All these hospitals have made agreement with the CBMWTF for the collection, transport, treatment and scientific disposal of the biomedical waste. There are 11 CBMWTF under operation at various parts of Tamil Nadu. On an average, daily 43 tonnes of bio-medical waste is handled by these facilities. In addition, three facilities are under establishment in Tiruvallur, Cuddalore and Tiruppur Districts.

### **12.1 ONLINE BIO-MEDICAL WASTE MANAGEMENT AUTHORIZATION**

TNPCB has launched online bio-medical waste application receipt and processing module on 1.3.2016. The hospitals can apply for authorization online for handling their bio-medical waste. The application will be processed and authorization will be issued online. This system allows the hospitals to track the status of their application. Upto 31<sup>st</sup> May 2017, 875 hospitals

have applied for authorization through online. These applications are processed and authorizations are being issued.

### **13. SOLID WASTE MANAGEMENT**

The Solid Waste Management Rules, 2016 was notified by the Ministry of Environment, Forest and Climate Change, Government of India. As per the rules, collection, transportation, processing, recycling, treatment and disposal of the solid waste is the responsibility of the local bodies. The role of State Pollution Control Board (SPCB) is to issue authorization to the local bodies, monitor environmental standards and ensure adherence to conditions as specified for waste processing and disposal sites. So far, the TNPCB has issued authorization to 5 Corporations, 50 Municipalities and 94 Town Panchayats for composting of municipal solid waste and setting up of waste processing facility.

## **14. PLASTIC WASTE MANAGEMENT**

The Plastic Waste Management Rules, 2016, was notified by the Ministry of Environment, Forest and Climate Change, Government of India. As per the rules, the local body shall be responsible for the development and setting up of infrastructure for segregation, collection, storage, transportation, processing and disposal of the plastic waste. Carry bag made of virgin or recycled plastic, shall not be less than fifty microns in thickness. The persons engaged in manufacture of carry bags, recycle plastic bags, multilayered packaging, recycling or processing of plastic waste shall obtain registration certificate from the State Pollution Control Board. The role of SPCB is to enforce the provisions of these rules relating to registration, manufacture and disposal of plastic wastes.

TNPCB has identified 471 plastic carry bags manufacturing units and 140 plastic recycling

units. Awareness programme is conducted through District Administration for which TNPCB provides a fund of Rs. 50,000/- (Rupees Fifty Thousand Only) every year to each District Collector since 2015. TNPCB has addressed all the local bodies to comply with the provisions of the said rules.

## **15. E- WASTE MANAGEMENT**

The E-Waste Management Rules, 2016 was notified by the Ministry of Environment, Forest and Climate Change, Government of India. As per the rules, the producer of the electrical and electronic equipment shall be responsible for collection and channelization of e-waste generated. The manufacturer of the electrical and electronic equipment, refurbisher, dismantler, recycler of e-waste shall get authorization from SPCB. SPCB shall monitor on the compliance for environmentally sound management of e-waste. TNPCB has issued authorization for 35 units (16

collection centres, 14 dismantlers, 5 recyclers) under the E-Waste Management Rules.

## **16. CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT**

The Construction and Demolition Waste Management Rules, 2016 was notified by the Ministry of Environment Forest and Climate Change, Government of India. As per the rules, the waste generator shall be responsible for collection, segregation of concrete, soil and others and storage of the same, as directed or notified by the concerned local body. The local bodies shall be responsible for transportation, processing and disposal of the waste. SPCB shall grant authorization for the waste processing facility and monitor the implementation of these rules. The Board has addressed all the local bodies to take effective steps to comply with the Rules.

## **17. AMBIENT AIR QUALITY MONITORING**

TNPCB is executing National Air Quality Monitoring Programme (NAMP) in association with Central Pollution Control Board (CPCB) in 8 cities / major towns of Tamilnadu at 28 locations. The objectives of the NAMP are to determine status and trends of ambient air quality; to ascertain whether the prescribed ambient air quality standards are met out. Under NAMP five air pollutants viz ., PM<sub>2.5</sub>, PM<sub>10</sub>, Sulphur Dioxide (SO<sub>2</sub>), Nitrogen Dioxide (NO<sub>2</sub>), and Ammonia (NH<sub>3</sub>) are monitored. The monitoring of pollutants is carried out for 24 hours (4-hourly sampling for gaseous pollutants and 8-hourly sampling for particulate matter) with a frequency of twice a week. The locations are given below.

Sl. No.	City/Town	Sample Location	Land Use
1	Chennai	Kathivakkam	Industrial zone
		Manali	Industrial zone
		Thiruvottiyur	Industrial zone

Sl. No.	City/Town	Sample Location	Land Use
		Kilpauk	Commercial (traffic intersection)
		Thiyagaraya Nagar	Commercial (traffic intersection)
		Nungam-bakkam	Commercial (traffic intersection)
		Anna Nagar	Residential zone
		Adyar	Residential zone
2	Coimbatore	District Collector Office	Mixed zone
		Ponnaiyaraja-puram	Residential zone
		SIDCO building	Industrial zone
3	Madurai	Highways Project building	Residential zone

Sl. No.	City/Town	Sample Location	Land Use
		Susee Cars and Trucks Co Ltd	Industrial zone
		Madurai Corporation office (south)	Mixed zone
4	Salem	Sowdeswari College	Mixed zone
5	Tiruchirappalli	Gandhi Market	Commercial zone
		Main Guard Gate	Traffic intersection
		Bishop Heber College	Mixed zone
		Golden rock	Residential zone
		Central Bas stand	Traffic intersection
6	Thoothukudi	Raja Agencies	Industrial zone
		SIPCOT	Industrial

Sl. No.	City/Town	Sample Location	Land Use
			zone
		AVM Building	Mixed zone
7	Mettur	Raman Nagar	Residential zone
		SIDCO	Industrial zone
8	Cuddalore	Echankadu village	Residential zone
		Imperial College	Commercial zone
		SIPCOT	Industrial zone

During the period 2016-17, the average values of Sulphur-di-oxide (SO<sub>2</sub>) and Nitrogen-di-oxide (NO<sub>2</sub>) were found to be well within the prescribed standards for ambient air in all the stations. PM<sub>10</sub> value exceeded in few places, mainly due to vehicular movement.

## **17.1 CONTINUOUS AMBIENT AIR QUALITY MONITORING STATIONS**

In addition to NAMP monitoring, the Board has installed six automatic Continuous Ambient Air Quality Monitoring (CAAQM) stations. Four stations are installed at Chennai (viz) Koyambedu, Royapuram, Perungudi (Sai Nagar), Kodungaiyur and one station each at SIPCOT Gummidipoondi and SIPCOT Thoothukudi. All the monitoring stations are in operation. These stations monitor PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>2</sub>, NH<sub>3</sub>, O<sub>3</sub>, CO and Benzene on a continuous basis. Similarly, the Board proposes to provide one CAAQM station each at SIPCOT Perundurai, SIDCO Coimbatore and Manali for which instrument has been procured and it will be installed and commissioned shortly. Further to extend this programme to other urban and major industrial areas, the Board

is in the process of establishing 25 Nos. of CAAQM stations at a total cost of Rs. 45 crores.

## **17.2 MOBILE CONTINUOUS AMBIENT AIR QUALITY MONITORING STATION**

TNPCB has commissioned one mobile continuous ambient air quality monitoring station at a cost of Rs. 1.25 crores to monitor the ambient air quality on real time basis in Chennai city. The Mobile station has the facility to monitor Sulphur-di-oxide (SO<sub>2</sub>), Nitrogen-di-oxide (NO<sub>2</sub>), Ammonia (NH<sub>3</sub>), Ozone (O<sub>3</sub>), Carbon monoxide (CO), Benzene, Toluene, Ethylbenzene, Xylene (BTEX), Particulate matter size less than 10 micron (PM<sub>10</sub>) and Particulate matter size less than 2.5 micron (PM<sub>2.5</sub>). The station also have weather monitoring equipments to measure Wind Direction, Wind Speed, Ambient Temperature, Relative Humidity, Solar Radiation, Rainfall, Barometric Pressure etc. This mobile station is used to monitor the air quality in hotspots of

Chennai city and other places and also during emergency situations.

### **17.3 NATIONAL AMBIENT NOISE MONITORING NETWORK PROGRAMME**

Noise is generated from a variety of indoor and outdoor sources such as industries, transport vehicles, construction activities, generator sets, fire crackers. The Noise Pollution (Regulation and Control) Rules, 2000 were notified by MoEF & CC under the Environment (Protection) Act, 1986 and amended in January 2010. Database on noise level is required for policy formulation, setting standards and ensuring compliance of the existing rules.

TNPCB in association with CPCB has established 10 Real Time Ambient Noise Monitoring Stations in Chennai City under National Ambient Noise Monitoring Network Programme. The locations are 1.Egmore, 2.T.Nagar,

3.Perambur, 4.Guindy, 5.Triplicane, 6.Pallikaranai, 7.Velachery, 8.Washermanpet, 9.Anna Nagar, 10.Sowcarpet. The monitoring data reveals that the ambient noise level in Chennai city is exceeding the prescribed standard which is due to vehicular movement and construction activities.

## **18. WATER QUALITY MONITORING**

TNPCB in association with CPCB is implementing Global Environmental Monitoring System (GEMS) and Monitoring of Indian National Aquatic Resources (MINARS) projects in the state. Under this programme, the water quality of major rivers and lakes are monitored at 55 locations on monthly basis. The monitoring data is furnished to the CPCB. The report of analysis reveals that

<b>Sl.No.</b>	<b>Water Bodies</b>	<b>No. of stations</b>	<b>Suitability of Water quality</b>
1	Cauvery and its tributaries	33	Outdoor bathing, drinking water source with conventional treatment followed

<b>Sl.No.</b>	<b>Water Bodies</b>	<b>No. of stations</b>	<b>Suitability of Water quality</b>
			by disinfection and also for fish culture and wild life propagation.
2	Tamirabarani	12	Outdoor bathing, drinking water source with conventional treatment followed by disinfection
3	Palar	1	Drinking water source with conventional treatment followed by disinfection.
4	Vaigai	1	Drinking water with conventional treatment followed by disinfection and fish culture and wild life propagation
5	Lakes	8	Drinking water with conventional treatment followed by disinfection and fish culture and wild

Sl.No.	Water Bodies	No. of stations	Suitability of Water quality
			life propagation

The source of pollution of the water bodies is mainly due to mixing of sewage from the towns and villages located near the banks. The Board has directed all the local bodies to provide sewage treatment plants.

### **18.1 CHENNAI CITY WATERWAYS MONITORING PROGRAMME**

TNPCB is monitoring the water quality of four water ways in Chennai city i.e., Adyar River, Buckingham Canal, Cooum River and Otteri Nallah in 30 monitoring locations to assess the pollution level by collecting water samples on monthly basis since April 2003 both in water bodies and sewage / industrial outlets into the said water bodies. The report of analysis reveals that the Biochemical Oxygen Demand(BOD), Total

Dissolved Solids (TDS) and Chlorides exceed the standards when compared with the IS 2296-1982 Class A Standard prescribed for inland surface waters. This is due to mixing of sewage into the water bodies. Necessary steps are being taken to improve the pollution level in these water ways.

## **18.2 CONTINUOUS WATER QUALITY MONITORING STATIONS**

TNPCB has installed online continuous water quality monitors at three locations each in Noyyal river and Kalingarayan canal in the textile industrial belt of Tiruppur and Erode districts, to monitor the water quality on continuous basis. Similarly three online monitors are installed in river Thamirabarani. These stations monitor pH, total dissolved solids and dissolved oxygen on continuous basis. TNPCB is in the process of installing three monitors in river Cauvery in Namakkal and Karur Districts.

## **19 LEGAL MATTERS**

### **19.1 APPELLATE AUTHORITY**

The Appellate Authority of Tamil Nadu Pollution Control was constituted by the Government of Tamil Nadu under the Chairmanship of Hon'ble Justice (Retd), High Court of Madras with two technical members. The Authority is functioning at No.51, Gangadeeswarar Koil Street, Purasaivakkam, Chennai-86. As per section 28 of the Water (Prevention and Control of Pollution) Act, 1974, and as per section 31 of the Air (Prevention and Control of Pollution) Act, 1981, any person aggrieved by an order made by the Tamil Nadu Pollution Control Board, shall prefer an appeal to this authority, within 30 days from the date of the order is communicated. As on 31<sup>st</sup> May 2017, 97 appeals have been filed. Out of these 46 appeals were disposed off, and the remaining 51 are under trial.

## **19.2 NATIONAL GREEN TRIBUNAL**

The National Green Tribunal, Principal Bench, New Delhi was established on 18.10.2010 under the National Green Tribunal Act 2010, for effective and expeditious disposal of cases relating to environmental protection and conservation of forests and other natural resources. As per the National Green Tribunal Act, 2010, any person aggrieved by an order or decision of the Board and/Appellate Authority issued under Section 28, 29 and 33A of the Water (Prevention and Control of Pollution) Act, 1974, under Section 13 of Water (Prevention and Control of Pollution) Cess Act, 1977, under Section 31 of the Air (Prevention and Control of Pollution) Act, 1981 and under Section 5 of the Environmental (Protection) Act, 1986 may file an application to NGT within 30 days of the order issued by the Board / Appellate Authority.

The NGT, Southern Bench was established in 2012 and has been functioning at TNPCB Building, Arumbakkam, Chennai-106. As on 31<sup>st</sup> May, 2017, 709 cases were filed. Among these, 390 cases were disposed off and 319 are under trial.

### **19.3 ACTION AGAINST POLLUTING UNITS**

In order to check any unauthorized industrial discharge into the water bodies in Erode, Namakkal, Karur, Tiruppur and Coimbatore districts, flying squads have been conducting surprise inspection on a regular basis. Based on inspection, action is being taken against the illegal units in coordination with District Co-ordination committees. During the period 1<sup>st</sup> April 2016 – 31<sup>st</sup> May 2017, 203 unauthorized units were evicted. Apart from that the Board has issued show cause notice to 5896 units and closure

direction to 222 units in the State who have violated the provisions of Water (P&CP) Act, 1974, Air (P&CP) Act, 1981 during the period 1<sup>st</sup> April 2016 to May 31<sup>st</sup>, 2017.

## **20. OTHER ACTIVITIES OF THE BOARD**

### **20.1 PUBLIC HEARING**

As per the Environmental Impact Assessment Notification, 2006, certain categories of industrial projects require prior environmental clearance from the Ministry of Environment, Forests and Climate Change, Government of India or State Environmental Impact Assessment Authority (SEIAA) depending on the size of the project. As per the notification, TNPCB conducts public hearing under the chairmanship of the District Collector. After conducting public hearing the proceedings of the meeting is sent to the Ministry of Environment, Forest & Climate Change / State Level Environment Impact Assessment Authority. During the period April 2016 to May 2017, the Board has conducted public hearings for 30 projects.

## 20.2 CLEANER TECHNOLOGIES

TNPCB is keen on promoting a holistic approach to environment protection by enforcing adoption of cleaner technology options rather than mere end-of-pipe treatment. In recent years several industrial units in Tamil Nadu have switched over to cleaner technologies such as;

- Adoption of double conversion and double absorption technology in sulphuric acid manufacturing
- Gas carburizing instead of cyanide salt in heat treatment and cyanide free electroplating.
- Adoption of membrane cell process replacing mercury cell process in caustic soda manufacturing

- Adoption of dry process instead of wet process to reduce air pollution in cement factories
- Utilization of 25 to 30% of fly ash in Portland Pozzolana Cement manufacturing
- Activated carbon manufacturing units have gone for waste heat recovery boiler and eliminated the dedicated boiler to produce steam for the activation purpose. This system eliminates the consumption of coal / wood as fuel for the boiler and thus avoids greenhouse gaseous emission.
- Pulp and paper industries have been encouraged to go in for elemental chlorine free bleaching to reduce the formation of organo-chlorides including dioxins.

### **20.3 MASSIVE TREE PLANTING PROGRAMME**

TNPCB has supported the Forests Department in Massive Tree Planting Programme for planting of 64 lakhs seedlings, 65 lakhs seedlings, 66 lakhs seedlings and 67 lakhs seedlings during the year 2012, 2013, 2014 and 2015 respectively. The Board has released fund of Rs.28.84 crores, Rs.20 crores, Rs.17.99 crores and Rs.16.832 crores for the tree planting programme during the year 2012, 2013, 2014 and 2015 respectively.

### **20.4 ENVIRONMENTAL CAMPAIGN AND PUBLIC PARTICIPATION**

Environmental campaign has become an important tool to achieve effective compliance of various pollution control norms. Large scale public involvement can strengthen environment movements for the sake of implementation of

environment-friendly rules and regulations by the government machinery. Towards this end, the TNPCB conducts various types of environmental awareness programmes every year on the following occasions.

- **Bhogi Festival:-** Board conducts awareness programmes not to burn the waste materials such as waste tyres, tubes, plastic materials, cloths etc in open places. In Chennai city, Board conducts ambient air quality monitoring during pre-bhogi and bhogi festival days in 15 locations. The results are published in the TNPCB web site and dailies.
- **Vinayagar Chathurthi:-** Awareness programmes are conducted through the Collectors in all the district headquarters and towns not to use Plaster of Paris and paints to make the Vinayagar idols. The Board also monitors water quality of the identified water bodies before and after

immersion of idols in the specified locations.

- **Deepavali Festival:-** Awareness programmes are conducted to discourage bursting of crackers from 10 P.M to 6 A.M and also not to burst crackers of more than 125 decibel (average). The Board also monitors ambient air quality and noise level in Chennai and other cities viz., Trichy, Coimbatore, Madurai, Tirunelveli, Vellore, Salem, Hosur, Tiruppur, Dindigul and Cuddalore during Pre-Deepavali and Deepavali days. The results are published in the TNPCB web site and dailies.
- **Karthigai Mahadeepam Festival:-** The Plastic Awareness campaign is conducted every year in Thiruvannamalai Town during the Karthigai Mahadeepam Festival. In order to encourage the people to avoid plastic carry bags and to use

alternate like cloth bag, paper bags, jute bags, TNPCB conducts a programme by giving coupons to the people who bring cloth bag, jute bags and select the winners by lucky draw. Winners are given gold and silver coins. This programme has helped to create a great deal of awareness among the people.

- **Government Exhibitions:-** TNPCB actively participates in the Government Exhibitions conducted every year at Island Grounds in Chennai and in the District Head Quarters by providing stall and exhibits models on effluent treatment plant, air pollution control measures, solid waste management and other information related to environmental protection. In 2016-17, TNPCB participated in the Government Exhibitions held in Chennai-Island Grounds and in Tirunelveli, Nagercoil, Madurai, Coimbatore,

Thanjavur, Salem, Namakkal, Cuddalore and Tiruvannamalai. Large number of students and people have visited the stalls and benefited. The TNPCB stall was awarded 3<sup>rd</sup> price in the 2017 exhibition.

- **World Environment Day:-** World Environment Day is observed on 5<sup>th</sup> June of every year to raise awareness to take positive environmental action to protect nature and the planet earth. TNPCB observes the day by conducting awareness programme to the school students and the public. On this day, green awards are distributed to the best performing industries.
- **Ozone Day:-** 16<sup>th</sup> September of every year is observed as International Day for the preservation of the Ozone Layer. During the month of September 2016, Ozone day was observed in Districts in association with Industries and

Educational Institutions.

## **20.5 ENVIRONMENTAL TRAINING INSTITUTE**

TNPCB has established Environmental Training Institute (ETI) in the year 1994. The main objective of this institute is to impart training to staff of the Pollution Control Board, representatives of Industry and non-governmental organizations. During the year 2016-17, i.e., up to 31.05.2017, the ETI has conducted 46 training programmes, in which 843 participants have been trained. Training programme includes

- Pollution Control Laws and Rules
- Integrated Coastal Zone Management
- Environmental Economics
- Air Quality and Health
- Wastewater Treatment

- Right to Information Act
- Online Consent Management and Monitoring System
- Identification and quantification of hazardous wastes
- Solid Waste Management
- Plastic Waste Management
- Vehicle emission monitoring

## **20.6 GREEN AWARDS**

Green awards are being given every year to Industries who have adopted best practices in achieving best environmental quality in emission, discharge of waste water, solid and hazardous waste management and green belt development. Similarly Green Awards are also given to the District Collectors who have taken action for the betterment of environment in their districts.

Accordingly Green awards are given to the industries and District Collectors every year.

## **21 HIGHLIGHTS OF PERFORMANCE AIR AND WATER POLLUTION CONTROL**

- In order to monitor ambient air quality on continuous basis, the Board has installed six Continuous Ambient Air Quality Monitoring Stations (CAAQMS) at cost of Rs.6 crores. The Board is also in the process of installing further 25 Nos. of CAAQMS in the State at a cost of Rs. 45 crores.
- The Board has established one mobile continuous real time ambient air quality monitoring station to monitor the ambient air quality of Chennai city at a cost of Rs. 1.25 crores.
- In order to monitor the quality of stack emission, ambient air and effluent

discharge from red – large and highly polluting industries on continuous basis (24x7), the Board has established a Care Air Centre and Water Quality Watch Centre at head office.

- In order to monitor ambient noise level of Chennai city on real time basis, TNPCB has installed ten noise monitoring stations in Chennai.
- Action was taken to revive the 754 textile dyeing units located in Tiruppur which were closed due to directions of the Hon'ble High Court of Madras. At present 18 CETPs with 458 member units and 95 units with Individual Effluent Treatment Plant which have provided ZLD plant have been permitted to operate. In view of the above action by TNPCB, the pollution level in the form of Total Dissolved Solids (TDS) in the Noyyal

River at Orathupalayam dam has come down.

- TNPCB has installed online continuous water quality monitoring stations at three locations in each of water bodies of Noyyal river, Kalingarayan canal, Thamirabarani river at a total cost of Rs. 0.65 crores. The Board is in the process of installing similar station in river Cauvery.
- The moratorium imposed by the Ministry of Environment Forests & Climate Change, Government of India to the critically polluted areas of Manali, Cuddalore and Coimbatore, were lifted due to the continuous follow-up action of the Board in effective implementation of action plan by the industries,

- In order to avoid deaths during cleaning of tanks in Effluent Treatment Plants, Training programmes were conducted to the ETP operators and more than 3000 persons have been trained.

### **HAZARDOUS WASTE MANAGEMENT**

- The Board has taken effective initiatives for the disposal of Effluent Treatment Plant (ETP) sludge from Textile Dyeing units and so far, about 59,174 Tonnes of sludge has been disposed off to various Cement industries for co-processing.

### **STRENGTHENING OF LABORATORIES**

- In order to get recognition at the National level, TNPCB has got NABL accreditation for its 5 Advance Environmental Laboratories in Chennai, Coimbatore, Salem, Cuddalore, and Madurai.

- Three AELs in Chennai, Salem and Cuddalore have been accorded OHSAS 18001 certification.
- Now District Environmental Laboratories were established at Maraimalai Nagar Office at Kancheepuram district and in Perundurai Office at Erode district.
- In order to upgrade analytical capability of Board Laboratories, water sample and air sample analysis instruments were procured and supplied at a cost of Rs. 4.91 cores.

## **INFRASTRUCTURE DEVELOPMENT**

- Twelve District office buildings were constructed and inaugurated at a cost of Rs. 21.23 crores. Construction work is in completion stage for two more buildings, (Perundurai and Vaniyambadi)

- 216 Nos. of laptops at a cost of Rs.1.41 crore were provided to all the Senior officers and Engineers of the TNPCB for speedy disposal of work.
- For effective monitoring of industries and protecting the environment, six zonal offices headed by Joint Chief Environmental Engineers at Chennai, Vellore, Coimbatore, Trichy, Madurai and Salem and eight district offices headed by District Environmental Engineers at Coimbatore North, Tiruppur South, Ariyalur, Sivagangai, Ramanathapuram, Dharamapuri, Theni and Ooty were newly formed.

#### **COMPUTERIZATION OF TNPCB ACTIVITIES**

- In January 2015, TNPCB launched Online Consent Management and Monitoring System (OCMMS). The entire process of applying for consent under Water & Air Acts, processing of application, payment

of fees and issuing of consent are done online.

- In March 2016, the TNPCB introduced online complaint management system which enables the citizen to file the pollution related complaint online and get it redressed.
- In March 2016, TNPCB introduced module for online submission of application for getting authorization under Hazardous Waste and Bio-medical Waste Management Rules.
- On 1<sup>st</sup> May 2017, TNPCB has launched a E-Noting Module to facilitate online communication for exchange of communication between TNPCB and industries.

**K.C.KARUPPANAN**

*MINISTER FOR ENVIRONMENT*