

**ACTION TAKEN REPORT OF TAMILNADU POLLUTION CONTROL BOARD
SUBMITTED BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
(SOUTHERN ZONE), CHENNAI IN THE MATTER OF ORIGINAL APPLICATION
No. 164 OF 2017 (SZ), THIRU. M. DHAMOTHARAN Vs THE SECRETARY TO
GOVERNMENT, ENVIRONMENT & FOREST DEPARTMENT, GOVERNMENT OF
TAMILANDU, AS PER ORDER DATED 23rd NOVEMBER, 2021**

1. Background

In the matter of Original application No. 164 of 2017, Thiru. D.Dhamotharan Vs The Secretary to Government, E&F Department, Government of Tamil Nadu, Chennai and 5 others has passed an order dated 13/12/2019 to constitute a committee comprising of the following members namely District Collector, Tiruppur, Senior Scientist/representative of regional office of CPCB, Tamil Nadu State Pollution Control Board, Commissioner, Tiruppur Municipal Corporation, Senior Engineer of Public Works Department (PWD) Water Treatment Organisation, one scientist from NEERI and Indian Institute of Technology (IIT) Chennai.

In compliance to Hon'ble NGT order, Tamilnadu Pollution Control Board constituted the committee. The Committee has carried out the field visit to the area in question which is a subject matter in O.A. No 164 of 2017 during February 04th& 05th, 2020 and already detailed report of the committee was filed before Hon'ble NGT with the following conclusion and Suggestion of Committee to protect the water quality of Nanjarayan Lake

"....., based on the above facts, it is concluded that

(i) *The presence of Domestic sewage is predominant in both Nallaru Odai and Nanjarayan Lake. Discharge from illegal dyeing units/ incidental or accidental over flow from man holes of pumping mains of CETPs may flow through Nallaru Odai which may not be ruled out.*

(ii) *During monsoon, joining of surface runoff (from old solar pans, sludge storage area and ETP area) from M/s Angeripalayam CETP into Nallaru Odai may not be ruled out.*

(iii) *The accumulation of decomposed silt, water weeds and garbages in the Nallaru Odai confirms the poor maintenance and least importance given to water body.*

(iv) *Encroachment along the Nallaru Odai results into change of physical appearance from natural stream to sewage drain*

(v) *The average concentration of BOD (8.0 mg/L), DO (4.0 mg/L) and EC (3164 μ s/cm) of the Lake water indicates the poor water quality and not meeting of any class of designated best use of CPCB classification.*

(vi) *Due to restoration work carried out in the Nanjarayan Lake in the past and diversion of Nallaru Odai results to less odour nuisance and survival of fishes/aquatic life*

(vii) For assessing the quantum of compensation for restoration of Lake detailed assessment study of Lake is required.

7.0 Suggestion of Committee to protect the water quality of Nanjarayan Lake :

To protect water quality of Nanjarayan Lake, it is suggested to take following measures

(a) Rejuvenation of Nallaru Odai :

- To take steps to rejuvenate the Nallaru Odai by evacuating the encroachments as per the Re-survey Records of Tamilnadu Government.
- To take regular maintenance of Nallaru Odai by desilting and renovating the side walls of Odai.
- To direct the Municipal authority to install Under Ground Drainage system to collect domestic sewage of Tiruppur Municipality and to install STP to treat the same and not to allow any domestic sewage into Nallaru Odai.
- To direct the municipal authority to take steps to divert the drains carrying domestic sewage to nearby STP and not to let out into Nallaru Odai or any other water bodies.
- To ensure the proper collection of solid waste from residential and commercial area and not to allow any public to litter any solid wastes / garbage into Nallaru Odai or any nearby water bodies

(b) Operation of STP constructed by PWD to improve the water quality of Lake :

- To direct the PWD to take immediate steps for revamping of STP without any further delay.
- To operate STP continuously and efficiently to reduce the organic pollutants in the Nallaru Odai and to divert the treated water into Lake.
- To install adequate number of online monitoring system to monitor pH, EC, TDS, BOD and COD in different stretches of Nallaru Odai to identify the polluted stretches and to facilitate the identification of violating industries of particular stretch for penalizing.

(c) Rejuvenation of Nanjarayan Lake :

- ❖ To delineate the water tank area and to construct the proper bund with fence to protect the water body from human inception and to serve the purpose of improving ground water in the surrounding area as well as to meet the irrigation water demand of the nearby villages.
- ❖ To direct the PWD to take up detailed study to assess the quantity and quality of silt accumulated in the Nanjarayan Lake by engaging expert institute. Based on the outcome of the study desilting and rejuvenation of Lake may be taken up.

❖ *To take steps to restore the water quality of water tanks by removing the unwanted substances from water tanks and to avoid the mosquito breeding and odour nuisance.*

❖ *After Rejuvenation of Lake, to take periodical maintenance of water tank by removing silt and water weeds to increase water storage capacity of Lake since it is either rain fed or filled through feeder canal (Nallaru Odai) during rainy days.*

(d) Monitoring of CETPs and their member units :

▪ *To direct the TNPCB to monitor closely all member units of CETPs with respect to water consumption, effluent generated and quantity of effluent sent to CETP for cross verification of any bypass arrangements if any. On account of any single observation of illegal discharge/by pass arrangement, action against the industry shall be taken and environmental compensation may recovered as per CPCB guidelines.*

▪ *To direct CETPs to check their pumping mains and manholes daily to avoid any accidental/incidental leakages/overflow of effluents from their manhole/pipelines which may ultimately joins the Nallaru Odai.*

▪ *To direct the TNPCB to monitor closely the CETPs with respect to Effluent received, water recovered through RO/MEE, reject management for cross verification of any bypass arrangements if any. On account of any single observation of illegal discharge/bypass arrangement, action against the industry shall be taken and environmental compensation may be recovered as per CPCB guidelines.*

▪ *To direct all CETPs to install online monitoring system (pH, EC, TDS) to their storm water drains meant for carrying surface runoff during monsoon which ultimately joins the Nallaru Odai. The online monitoring system shall be connected to TNPCB, on account of any incidence of high TDS, action against the CETP shall be taken and environmental compensation may be recovered as per CPCB guidelines."*

Action has been already taken to comply with the committee recommendation and time to time direction of the Hon'ble NGT by respective departments. The report on action taken has been submitted separately by the concern departments

The Hon'ble NGT in its latest order dated 23rd November 2021 has stated the following

"....., 7. The Sewage Treatment Plants (STPs) are intended for the purpose of treating the sewage, not to treat the effluents that are being mixed with effluents from the industrial area and it is for the Pollution Control Board to look into the issue and take appropriate action against those industries who are discharging their effluents without treating the same.

8. Further, industries are also expected to convert the effluent treatment system to one of ZLD and they are not expected to discharge the same outside the units. Unless, the Pollution Control Board takes stringent action against those industries, problems could not be solved.

9. So under such circumstances, we feel that it is necessary to direct the Tamil Nadu Pollution Control Board to ascertain as to whether there is any possibility of untreated industrial effluent being mixed either in the storm water drain or sewage drain, which ultimately reaches the water body and if any of the industries are violating the conditions imposed, what is the nature of action to be taken by them and they are directed to submit the report in this regard before the next hearing date.”

and directed to file reports to the Hon'ble Tribunal on or before 20.12.2021 by e-filing in the form of Searchable PDF/OCR Supportable PDF and not in the form of Image PDF along with necessary hardcopies to be produced as per Rules.

Based on the above Hon'ble NGT order a team was formed comprising the TNPCB Engineers as members. The team had carried out inspection to the units which are located along the Nallaru Odai stretch from Thirumuruganpoondi to Nanjarayan Lake on 11.12.2021, 13.12.2021 and 15.12.2021 in order to identify the illegal operation and discharge of untreated trade effluent by the industries in to the Nallaru Odai.

Totally 71 Nos. of units located along Nallar Odai stretch were inspected and the break up details of the same are as follows:

- i. Printing units - 26 Nos.
- ii. Washing units - 25 Nos.
- iii. Angeripalayam CETP Member units-10 Nos.
- iv. Park CETP members Units - 3 Nos.
- v. Dyeing Unit with Individual ETP – 1 No.
- vi. Bleaching Unit with Individual ETP – 1 No.
- vii. Garment Units – 3 Nos.
- viii. Knitting Units – 2 Nos.

During inspection the following were observed.

1. No Bleaching and Dyeing units are discharging effluent into Nallaru Odai directly or indirectly. The dyeing and bleaching units located near the Nallaru Odai are either member units of CETP or units provided with Individual Effluent treatment plant & ZLD treatment system.
2. During inspection of the CETP and its member units no discharge of trade effluent noticed.
3. Out of the above mentioned 71 units, 11 units were violating and illegally discharging the untreated trade effluent directly or indirectly either to Nallar Odai or onland for open percolation / nearby drain which in turn reaches Nallaru Odai out of this 6 units were issued with Power supply disconnection order through District Co-ordination Committee on 16.12.2021 and the same has been forwarded to SE, TNEB, Tiruppur for compliance and 5 units were issued with Show cause notices.

The list of 11 number of units are as follows.

Sl. No.	Name & Address of the Unit	Action Taken by TNPCB
1	M/s. Sri Akshaya Washing, 3/253 A, Athupalayam, Pattathu Amman Kovil Back Side, Thirumuruganpoondi, Tiruppur.	Recommended for Power supply disconnection through District Co-ordination Committee
2	M/s. Sri S.S. Washing, S.F. No. 314/1D, Chettipalayam Village, Tiruppur North Taluk, Tiruppur District.	Recommended for Power supply disconnection through District Co-ordination Committee
3	M/s. Sri Thanvarshini Knit Finishers, S.F. No. 417, 418, Anupparpalayam Village, Tiruppur Taluk, Tiruppur District.	Recommended for Power supply disconnection through District Co-ordination Committee
4	M/s. Jaiwin Washing No.93/548-A, Thiruvalluvar Nagar, Athupalayam, Tiruppur - 641 652	Recommended for Power supply disconnection through District Co-ordination Committee
5 & 6	M/s. Winbow Dryer & Drying Yard Premises used unauthorized, S.F. No. 287/2, Goundachy Thottam, Thirumuruganpoondi, Tiruppur.	Recommended for Power supply disconnection through District Co-ordination Committee
7	M/s. Sree Vignesh Washing, S.F. No. 417 & 418, Velamapalyam Village, Tiruppur North Taluk, Tiruppur District.	Show Cause Notice Issued
8	M/s. The Thirumoorthi Washing, S.F. No. 397, Velampalayam Village, Tiruppur North Taluk, Tiruppur District.	Show Cause Notice Issued
9	M/s. Dharanish Washing, S.F. No. 71, 72, Mannarai Village, Tiruppur North Taluk, Tiruppur District.	Show Cause Notice Issued
10	M/s. Devi Printing, S.F. No. 373/4, Velamapalayam Village, Tiruppur North Taluk, Tiruppur District.	Show Cause Notice Issued
11	M/s. Barani Printing, S.F. No. 285 Part, Chettipalayam Village, Tiruppur North Taluk, Tiruppur District.	Show Cause Notice Issued

The above 11 units are small scale washing and Printing units located near the Nallaru Odai.

Also during routine inspection by Tamilnadu Pollution Control Board officials on various dates during the month of October and November action has been taken against 7 numbers of washing units for illegal operation and discharge of untreated trade effluent in to Nallaru Odai.

Action taken in the month of October 2021 & November 2021

Sl. No.	Name & Address of the Unit	Action Taken by TNPCB
1.	M/s. Majestic Heat Setting S.F No 408/2A & 409 Velampalayam Village, Tiruppur North Taluk, Tiruppur District - 641 652.	Power Supply Disconnected through TNPCB Corporate Office
2.	M/s. Renuga Washing, S.F.No.406/7 Part, Velampalayam Village, Tiruppur North Taluk, Tiruppur District - 641 652.	Power Supply Disconnected through TNPCB Corporate Office
3.	M/s. CR Tex S.F.No.406/5 Part, Velampalayam Village, Tiruppur North Taluk, Tiruppur District - 641 652.	Power Supply Disconnected through TNPCB Corporate Office
4.	M/s. Sre Garuda Tex, X S.F.No.407, Athuvazhi Thottam, Anupparpalayam Village Tiruppur North Taluk, Tiruppur District - 641 652.	Power Supply Disconnected through TNPCB Corporate Office
5.	M/s. Senthur Washing, S.F. No. 260/2B2 Part, Thottipalayam Village, Tiruppur North Taluk, Tiruppur District.	Power Supply Disconnected through District Co-ordination Committee
6.	M/s. Varshiga Washing, No. 1/489, Ganapathy Nagar, Abirami Theatre Backside, Boyampalayam, Pooluvapatti Post, Tiruppur – 641 602.	Power Supply Disconnected already and Sealed
7.	M/s. Sri Saraswathi Knit Finishers, S,F. No. 223 Part, Thottipalayam Village, Tiruppur North Taluk, Tiruppur District.	Power Supply Disconnected through District Co-ordination Committee

The Tamilnadu Pollution Control Board has collected Water samples in Nanjarayan Lake on 24.06.2021, 20.07.2021 & 05.08.2021. The Report of analysis and the inference of the sample collected are as follows.

1.1 Report of analysis of Water samples collected on 24.06.2021 in Nanjarayan Lake

Point of collection	Inside the Lake (in the South East Corner)
pH (Num)	8.324
Total suspended solids mg/l	4
Total Dissolved Solids mg/l	1196
Chloride (as CL) mg/l	644
Sulfate (as SO ₄) mg/l	52
COD mg/l	88
BOD 3 days at 27°C mg/l	3
Total Residual Chlorine mg/l	<1.0
Phosphate (as P) mg/l	*
TKN mg/l	8
Nitrate (as No. ₃ N) mg/l	2.9
Sulfide mg/l	<1.0
Phenolic Compounds mg/l	<0.0005
Total Hardness mg/l	300
% Sodium	78

1.2. Report of analysis of Water samples collected on 20.07.2021 in Nanjarayan Lake

Point of collection	Northeast Corner in Nanjarayan Lake	Southeast Corner in Nanjarayan Lake
pH (Num)	6.92	6.79
Total suspended solids mg/l	12	8
Total Dissolved Solids mg/l	2032	2120
Chloride (asCL) mg/l	519	617
Sulfate (as SO ₄) mg/l	435	455
COD mg/l	320	400
BOD 3 days at 27° C mg/l	34	38
Phosphate mg/l	*	*
Ammonical Nitrogen mg/l	18	18
TKN mg/l	20	25
Nitrite (as No. ₃ N) mg/l	0.459	0.455
Nitrate (as No. ₃ N) mg/l	0.553	1.08
Sulfide mg/l	4.8	8

Phenolic Compounds mg/l	<0.0005	<0.0005
% Sodium	52	62
Electrical Conductivitymg/l	2874	3019
Total Iron mg/l	0.0181	0.0214
Total Chromiummg/l	<0.05	<0.05
Copper mg/l	0.0613	0.0572
Zinc mg/l	0.2366	0.2157
Lead mg/l	0.2704	0.2744
Cadmium mg/l	0.1608	0.142
Cyanide mg/l	0.018	0.021
DO mg/l	8	15 *
SAR mg/l	5.83965	6.5288
Manganese mg/l	2.9795	3.137

1.3. Report of analysis of Water samples Collected on 05.08.2021 in Nanjarayan Lake

Point of collection	Northeast Corner in Nanjarayan Lake	Southeast Corner in Nanjarayan Lake
pH (Num)	8.302	8.443
Total suspended solids mg/l	48	68
Total Dissolved Solids mg/l	1644	1508
Chloride (asCL) mg/l	663	529
Sulfate (as SO4) mg/l	320	344
COD mg/l	360	440
BOD 3 days at 27°C mg/l	13	13
Phosphatmg/l		
Ammonical Nitrogen mg/l	1.1	BDL(DL:1.0)
TKN mg/l	24	24
Nitrite (as No._3N) mg/l	1.7	1.2
Nitrate (as No._3N) mg/l	0.42	0.36
Sulfide mg/l	<1.0	<1.0
Phenolic Compounds mg/l	<0.0005	<0.0005
% Sodium	64	60
Electrical Conductivity mg/l	2819	2762

Total Iron mg/l	0.21	1.09
Total Chromium mg/l	0.032	0.037
Copper mg/l	BLQ(LOQ:0.005)	BLQ(LOQ:0.005)
Zinc mg/l	0.01	0.017
Lead mg/l	0.074	BLQ(LOQ:0.005)
Cadmium mg/l	BLQ(LOQ:0.005)	BLQ(LOQ:0.005)
Cyanide mg/l	BDL(DL:1.0)	BDL(DL:1.0)
DO mg/l	Nil	Nil
SAR mg/l	6.8	5.9
Manganese mg/l	0.102	0.099
Boron mg/l	0.112	0.125

1.4. Report of analysis of Faecal Coliform and Total Coliform in the Water samples Collected on 20.07.2021 & 05.08.2021 in Nanjarayan Lake

Date of collection	Parameters	Northeast Corner in Nanjarayan Lake	Southeast Corner in Nanjarayan Lake
20.07.2021	Faecal Coliform MPN/100ml	21	17
	Total Coliform MPN/100ml	70	63
05.08.2021	Faecal Coliform MPN/100ml	<2	<2
	Total Coliform MPN/100ml	140	90

It was observed from the analysis result of samples taken in different months that, there is variation in the parameters in the same locations where samples were collected. This may be due to seasonal change, Time of sample collected and other factors. From the above results of water samples collected from Nanjarayan Lake following inference are made

- a) The presence of Total Coliform (63 – 140 MPN/100ml) and Faecal Coliform (17 – 21 MPN/100ml) indicates the inception of Domestic sewage into Nanjarayan Lake.
- b) However the concentration of Boron (0.112 – 0.125 mg/L), Sodium Adsorption Ratio (SAR) (5.19-6.8) found well within the limit of irrigation water quality.
- c) The concentration of TDS (1196 – 2120 mg/L), Chloride (519 – 663 mg/L), Sulphate (52 – 455 mg/L).

The O/o Environmental Engineer, Flying squad, TNPCB Tiruppur is regularly monitoring the major water bodies in Tiruppur, The Nanjarayan Lake is one of the water body monitored. The TDS details of the Nannjarayan Lake is as follows

Report of analysis of Water samples Collected in Nanjarayan Lake

Sl. No	Month	Date of Sample collection	TDS at the Outlet of Nanjarayan Tank (mg/L)
1	Jan-21	07.01.2021	1460
2		25.01.2021	1544
3	Feb-21	05.02.2021	1456
4		26.02.2021	1720
5	Mar-21	17.03.2021	1392
6	Apr-21	28.04.2021	1816
7	Jun-21	16.06.2021	776
8	Jul-21	06.07.2021	1396
9	Aug-21	03.08.2021	1664
Average			1469

The monthly TDS observed in the Nanjarayan Lake during the year 2021 ranges from 776 mg/L to 1816 mg/L.

3. The observation on Nallaru Odai & Nanjarayan Lake:

Nallaru Odai:

During inspections on 11.12.2021, 13.12.2021 and 15.12.2021 the following observation were made

- During inspections there was considerable flow noticed in the Nallaru Odai. No coloured flow was noticed in the Nallaru Odai. In the banks of Nallaru Odai dumping of Municipal solid waste was noticed.
- The TDS value on the day of inspection in the Nallar Odai at Thirumuruganpoondi Bridge is 957 mg/l and at the bridge near M/s. Angeripalayam CETP is 1551 mg/l as per the portable TDS meter.
- Major stretch of Nallaru Odai it is covered with Seemaikaruvelam Water Hyacinth and other bushes.

Nanjarayan Lake:

- During inspection it was observed that lean flow over the check dam constructed across the Nallaru Odai was flowing in to the Nanjarayan Lake, The colour of the water in the Lake was found natural and no odour experienced near the Lake.
- Various local Birds and Birds from the foreign country were found visiting to the Nanjarayan Lake Patches of water holding area of the Nanjarayan Lake and all boundary area of the lake is surrounded with Seemaikaruvelam and Water Hyacinth.

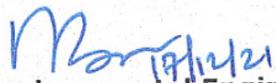
1. Action taken by Tamilnadu Pollution Control Board

- As per the instruction of TNPCB the CETP's have installed 14 Nos. of CCTV Cameras and 3 Nos. of Online TDS meters along the stretch of Nallaru Odai. The Tamilnadu Pollution Control Board has instructed the CETP's to connect the CCTV's and TDS meters through online portal so as to have a centralized monitor system and to ensure that there is no discharge of industrial effluent into the Nallaru Odai.

Sl. No.	Reference Number	Location of CCTV
1	1- CCTV	U/s of KTM dyeing (East Facing)
2	2- CCTV	D/s of KTM Dyeing (East Facing)
3	3- CCTV	D/s of Sri Valli Process (East Facing)
4	4- CCTV	D/s of Sri Valli Process (West Facing)
5	5- CCTV	D/s of Angeripalayam Bridge (East Facing)
6	6- CCTV	U/s of SVP Knit process (South Facing)
7	7- CCTV	D/s of SVP Knit process (East Facing)
8	8- CCTV	D/s of SVP Knit process (West Facing)
9	9- CCTV	D/s of SVP Knit process boiler (East Facing)
10	10- CCTV	U/s of Welcome Dyers (West facing)
11	11- CCTV	U/s of Nagsai Colours (West Facing)
12	12- CCTV	U/s of Nagsai Colours (East Facing)
13	13- CCTV	Angeripalayam CETP Aeration Tank (West Facing)

Sl. No	Reference Number	Location of Online TDS meter
1	1- TDS	TDS Meter (U/s of KTM Dyeing)
2	2- TDS	TDS Meter -D/s of Park Members (Poomparai Bridge)
3	3- TDS	TDS Meter - in D/s of Angeripalayam CETP

2. As per the instruction of the Tamilnadu Pollution Control Board the Angeripalayam CETP has formed a team to examine the pipe line and manholes on daily basis to monitor their pipeline and manholes.
3. The Angeripalayam CETP was instructed to strengthen the Manholes located in the Nallaru Odai and the CETP is in process of exploring the modern mechanism to monitor and avoid if there is any leakage/seepage from the Manholes.
4. Frequency of regular monitoring of Industries and stretches of Nallaru Odai by the O/o District Environmental Engineer, Tiruppur North & O/o Environmental Engineer flying squad is being increased in order to avoid and prevent any illegal inflow of industrial effluent in to Nallaru Odai and Nanjarayan Lake.


**District Environmental Engineer,
Tamilnadu Pollution Control Board,
Tiruppur North.**