No.6836/NGT/SLMC/Sci/2020/968
GOVERNMENT OF PUDUCHERRY
DEPARTMENT OF SCIENCE, TECHNOLOGY AND ENVIRONMENT
PUDUCHERRY POLLUTION CONTROL COMMITTEE
3" Floor, I-Iousing Board Complex, Anna Nagar, Puducherry — 5.
Phone: (0413) 2201256 Fax: (0413) 2203494

Puducherry, dt.
01 DEC 2020

To

Shri. D. P. Mathuria
Executive Director (Tech)
National Mission for Clean Ganga
Ministry of Jai Shakti
1st Floor, Major Dhyan Chand National Stadium,
India Gate, New Delhi — 110 002.

Sir,

Sub: DSTE/PPCC - Submission of Monthly Progress Report on Restoration of Polluted River Stretches - Reg.

Ref: Your Letter No. Legal/OA 673/2018/NMCG/2019 dt. 08.10.2020.

With reference to the above mentioned subject, Progress Report for the month of October 2020 is enclosed for kind perusal.

Yours sincerely,

(S. DINESH KANNAN, IFS.,)
MemberSecretary
Puducherry Pollution Control Committee

Enc1: as stated above

Copy to:

1. The MemberSecretary,
   Central Pollution ControlBoard,
   Parivesh Bhawan, C.B.D. Cum-Office Complex, East
   Arjun Nagar, Delhi — 110 032.

2. Guard File.

Format for submission of Monthly Progress Report in the NGT Matter OA No. 673 of 2018 (in compliance to NGT order dated 24.09.2020)

For the State of Puducherry

Overall status of the State:

I. Total Population: 1244464

Urban Population: 850123

Rural Population: 394341

II. Estimated Sewage Generation (MLD): 88MLD

III. Details of Sewage TreatmentPlant:

1	Existing no. of STPs and Treatment Capacity (in MLD):	3 Nos of SBR - 51MLD 2 Nos of UASB - 5 MLD
2	Capacity Utilization of existing STPs:	35 MLD - SBR
3	MLD of sewage being treated through Alternate technology:	5 MLD - UASB
4	Gap in Treatment Capacity in MLD:	28 MLD
5	No. of Operational STPs:	5
6	No. of Complying STPs:	3
7	No. of Non-complying STPs:	2 (closed)

Details of each existing STP in the State

No.	Location	Existing STP Capacity	Capacity Being Utilized	Operational Status of STP	Compliance Status of STP
1	Puducherry	56 MLD	35	5	3
2	Karaikal	Nil	Nil	Nil	Nil

Details of under construction STPs in the State

No.	Location	Capacity of the plant in MLD	Physical Progress in %	Status of I&D or House sewer connections	Completion Timeline
1	Puducherry	3	Tendering process	Drains	30.06.2021
2	Karaikal	3	Tendering process	-	30.06.2021

Details of proposed STPs in the State

No.	Location	Capacity ofthe STP proposed in MLD	Status of Project (at DPR Stage/ Under Tendering/ Work to be Awarded)	Likely Date of Completion
1	Puducherry	3 MLD will be installed	Financial bid opened on 19.10.2020	30.06.2021
2	Karaikal	3 MLD will be installed		

II. Details of IndustrialPollution:

1	No. of industries in the State:	3271
2	No. of water polluting industries in the State:	96
3	Quantity of effluent generated from the industries in MLD:	4.75 MLD
4	Quantity of Hazardous Sludge generated from the Industries in TPD:	3.43 TPD
5	Number of industrial units having ETPs:	93
6	Number of industrial units connected to CETP:	Nil
7	Number and total capacity of ETPs (details of existing/ under construction / proposed)	Existing - 93 Capacity - 4.75 MLD
8	Compliance status of the ETPs:	86
9	Number and total capacity of CETPs (details of existing/ under construction / proposed)	Nil
10	Status of compliance and operation of the CETPs	Nil

Town	No. of industries	Industrial discharge	Status of ETPs	Status of CETPs (existing, under construction & proposed)
Puducherry	3271	4746.2 KLD	Existing - 93	Nil

III. Solid WasteManagement:

1	Total number of Urban Local Bodies and their Population.	**Annexure I**	
2	Current Municipal Solid Waste Generation.		
3	Number, installed capacity and utilization of existing MSW processing facilities in TPD (bifurcated by type of processing eg- Waste to Energy (Tonnage and Power Output), Compost Plants (Windrow, Vermi, decentralized pit composting), biomethanation, MRF etc.	Composting	36 TPD
		Vermi Composting	1 TPD
		Bio-gas	2 TPD
		Material recovered/Recycled	22 TPD
4	Action plan to bridge gap between Installed Capacity and Current Utilization of processing facilities (if Gap > 20%).	Proposed to have Energy recovery plant – 6 months. A proposal for waste processinghas been sent to GOI for financial Assistance for YanamMunicipality.	
5	No. and capacity of C&D waste processing plants in TPD (existing, proposed and under construction).	There is no processing plant of C&D waste. At present C&D waste is being collected & stored in earmarked area. C&D waste Generation – 29.35 TPD	
6	Total no. of wards, no. of wards having door to door collection service, no. of wards practicing segregation at source.	In all wards	
7	Details of MSW treatment facilities proposed and under construction (no., capacity and technology).	2	
8	No. and area (in acres) of uncontrolled garbage dumpsites and Sanitary Landfills.	3	
9	No. and area (in acres) of legacy waste within 1km buffer of both side of the rivers.	Nil	
10	No. of drains falling into rivers and no. of drains having floating racks/screens installed to prevent solid waste from falling into the rivers.	39 Nos Screens have been provided to all the drains.	

Status of ULB wise Management of Solid Waste

ULB	Total MSW generation in TPD	Total MSW being processed inTPD	Existing MSW facilities	Utilization Capacity of the existing MSW facilities	Proposed MSW Facilities & Completion Timeline
5	406	61 TPD	3	70%	6 months

IV. Bio-medical WasteManagement:

1	Total Bio-medical generation:	4391.1 kg/ day
2	No. of Hospitals and Health Care Facilities:	255
3	Status of Treatment Facility/ CBMWTF:	1

V. Hazardous WasteManagement:

1	Total Hazardous Waste generation:	34907 TPA
2	No. of Industries generating Hazardous waste	131 industries obtained authorisation.
3	Treatment Capacity of all TSDFs	-
4	Avg. Quantity of Hazardous waste reaching the TSDFs and Treated.	TSDF: Landfillable Waste reached- (i) M/s. Mother Earth Enviro Tech, Bangalore Incinerable waste reached- (i) M/s. Enano Incitech, Bangalore-5.5 TPM
5	Details of on-going or proposed TSDF	The TSDF located in neighboring states is being shared.

VI. Plastic WasteManagement:

1	Total Plastic Waste generation:	11753 TPA
2	Treatment/ Measures adopted for reduction or management of plastic waste:	Government of Puducherry has imposed total ban on single useplastics with effect from 02/08/2019. Surprise inspection were carried out.

IX	Details of Alternate Treatment Technology being adopted by the State/UT	Nil
X	Identification of polluting sources including drains contributing to river pollution and action as per NGT order on insitutreatment:	39 Nos Screens have been provided to all the drains.
XI	Details of Nodal Officer appointed by Chief Secretary in the State/UT:	Secretary (Envt.) DSTE
XII	Details of meetings carried under the Chairmanship of Chief Secretary in the State/UT:	3rd State Level Monitoring Committee was held on04.02.2020.
XIII	Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;	Chunnambar River and Arasalar River Water Quality data, Drain water quality data and Ground Water Quality data are given on **Annexure – II.**
XIV	Ground water regulation:	Pondicherry Ground Water Authority had closed 6 Nos. of tubewells in Puducherry region and 2 Nos. of tubewells in Karaikal Region during the past 5 years due to illegal extraction of ground water.
XV	Good irrigation practices being adopted by the State:	**Annexure- III**
XVI	Rain Water Harvesting:	**Annexure – IV**
XVII	Demarcation of Floodplain and removal of illegal encroachments:	**Annexure – V**

<table>
<tr><td>XVIII</td><td>Maintaining minimum e-flow of river:</td><td>Illegal sand mining affect e-flow in the rivers. Hence, DCR (South) has imposed Prohibitory order u/s 144 of CrPc on 1st April, 2019 prohibiting lorries, vans, two wheelers, bullock carts and any similar load carrying vehicles. Check dams were constructed toregulate the flow.</td></tr>
<tr><td>XIX</td><td>Plantation activities along the rivers:</td><td>Forest Department has planted 4000 mangroves plant on the bank of Chunnambar river bed.

No. of Trees planted on the Arasalar River Bank

<table><tr><th>Sl. No</th><th>Year</th><th>Nos</th></tr><tr><td>1</td><td>2017</td><td>2023</td></tr><tr><td>2</td><td>2018</td><td>7859</td></tr><tr><td>3</td><td>2019</td><td>7362</td></tr></table></td></tr>
<tr><td>XX</td><td>Development of biodiversity park:</td><td>Existing 25 acre of Mangrove plantation area in Karaikal will be developed as biodiversity park.</td></tr>
<tr><td>XXI</td><td>Reuse of Treated Water:</td><td>Annexure - VI</td></tr>
<tr><td>XXII</td><td>Model River being adopted by the State & Action Proposed for achieving the bathing quality standards:</td><td>Sankarabarani</td></tr>
<tr><td>XXIII</td><td>Status of Preparation of Action Plan by the 13 Coastal States:</td><td>Action plan for Arasalar River submitted to CPCB dt. 24.02.2020.</td></tr>
<tr><td>XXIV</td><td>Regulation of Mining Activities in the State/UT:</td><td>DCR (South) has imposed Prohibitory order u/s 144 of CrPc on 1st April, 2019 prohibiting lorries, vans, two wheelers, bullock carts and any similar load carrying vehicles.</td></tr>
<tr><td>XXV</td><td>Action against identified polluters, law violators and officers responsible for failure for vigorous monitoring.</td><td>Closure direction was issued to M/s. Ford service Centre, M/s. Wind Flower Resort, Ice Factory and Slaughter House for discharging untreated waste water into the river.</td></tr>
</table>

ANNEXURE-I

Details of Solid Waste Generation in Urban Local Bodies (Municipalities)

Sl.No	Name of the Municipality	Total Population as per census 2011	Total Quantity of waste generation in TPD
1.	Puducherry	2,44,700	170
2.	Oulgaret	3,00,104	170
3.	Karaikal	86,838	40
4.	Mahe	41,816	10
5.	Yanam	55,628	16
Total			406

ANNEXURE-II

Chunnambar River Water Quality Data			
S.No	**Parameters**	**Oct-20**	**Standard limit as per the Primary Water Quality Criteria for bathing water - Class of Water B**
1	**Date of sampling**	27.10.2020	
2	**Time**	01.45 P.M	
3	**Temp°C**	33.0	
4	**pH**	7.85	6.5-8.5
5	**DO (mg/l)**	6.1	5 or more
6	**BOD (mg/l)**	2.5	3 or less
7	**Total Coliform MPN/100 ml**	1600	500 or less
8	**Faecal Coliform MPN/100ml**	23	500 (Desirable) and 2500 (Max. Permissible)
9	**Faecal Streptococci MPN/100ml**	<2	100 (Desirable) and 500 (Max. Permissible)

Arasalar River Water Quality Data			
S.No	**Parameters**	**Oct-20**	**Standard limit as per the Primary Water Quality Criteria for bathing water - Class of Water B**
1	**Date of sampling**	26.10.2020	
2	**Time**	07.00 A.M	
3	**Temp°C**	30.0	
4	**pH**	7.24	6.5-8.5
5	**DO (mg/l)**	2.0	5 or more
6	**BOD (mg/l)**	1.0	3 or less

Drainage Water Quality Data- Puducherry

S.No.	Parameters	North of Villianur Road at Vadamangalam	South of Villianur Road at Vadamangalam	Kothamedu (Nandhan Nagar End)	Near Thirukanchi Temple	Padithurai at KeezhAgraharam
1	Sample ID	1016	1017	1018	1019	1020
2	Latitude	11° 54' 16.19"	11° 54' 16.17"	11° 54' 27.51"	11° 53' 45.89"	11° 53' 29.75"
3	Longitude	79° 44' 19.29"	79° 44' 21.63"	79° 45' 11.92"	79° 45' 36.57"	79° 46' 2.31"
4	Date of Sampling	08.10.2020	08.10.2020	08.10.2020	08.10.2020	08.10.2020
5	Time of Sampling	10.00 A.M	10.20 A.M	10.50 A.M	11.15 A.M	11.30 A.M
6	Temp °C	29.0	31.0	32.0	34.0	30.0
7	pH	7.24	7.28	7.34	7.62	7.55
8	TSS (mg/l)	19.0	30.0	37.0	13.0	22.0
9	BOD (mg/l)	26.0	65.0	56.0	21.5	21.0
10	COD (mg/l)	86.0	152.0	127.0	62.0	98.0
11	O & G (mg/l)	6.5	7.7	9.1	1.9	4.6
12	Ortho Phosphate (mg/l)	6.3	2.6	9.3	4.4	4.3
13	SO_4^{2-} (mg/l)	45.8	87.0	60.6	80.2	79.3
14	NH_3-N (mg/l)	1.8	1.1	0.7	1.8	1.1
15	NO_3-N (mg/l)	BDL (DL - 0.3)				
16	NO_2-N (mg/l)	BDL (DL - 0.02)				
17	NO_3 (mg/l)	BDL (DL - 1)				
18	Total Coliform MPN/100 ml	1600	1600	1600	1600	1600
19	Faecal Coliform MPN/100 ml	<2	110	1600	<2	300
20	FaecalStreptococci MPN/100 ml	<2	90	1600	<2	110

Drainage Water Quality Data -Karaikal

S.No.	Parameters	Public Drain - PWD Office, Beach Road	Kamarajar Salai, Town Drain	NSC Boss Road, Near Veterinary Hospital	NSC Boss Road, Near Temple	Hajiyar Street Main drain	Vanjiyar - Arasalar River, Confluence Point
1	Sample ID	1037	1038	1039	1040	1041	1042
2	Date of Sampling	26.10.2020	26.10.2020	26.10.2020	26.10.2020	26.10.2020	26.10.2020
3	Time of Sampling	07.30 A.M	07.45 A.M	08.00 A.M	08.15 AM	08.30 AM	09.00 A.M
4	Latitude	10° 54' 44"	10° 54' 43"	10° 54' 43"	10° 54' 43"	10° 54' 46"	10° 54' 43"
5	Longitude	79° 50' 18"	79° 50' 09"	79° 50' 05"	79° 50' 00"	79° 49' 54"	79° 49' 54"
6	Temp °C	29.5	29.5	30.0	29.8	30.0	29.7
7	pH	7.41	7.46	7.38	7.76	7.32	7.60
8	TSS (mg/l)	20.0	43.0	39.0	46.0	33.0	94.0
9	BOD (mg/l)	40.5	30.5	77.0	42.5	8.5	1.0
10	COD (mg/l)	84.0	48.0	148.0	68.0	20.0	4.0
11	Oil & Grease (mg/l)	1.8	1.8	1.2	1.5	1.2	3.0
12	Ortho Phosphate (mg/l)	9.03	0.55	6.64	7.90	1.58	0.59
13	SO_4^{2-} (mg/l)	48.4	70.8	52.0	59.7	50.9	41.9
14	NH_3-N (mg/l)	3.3	3.3	3.2	3.3	2.7	BDL (DL-0.4)
16	NO_2-N (mg/l)	BDL (DL - 0.02)				0.03	0.13

Ground Water Quality Data		
Sl.No.	**Parameters**	**Borewell Near Chunnambar River Check Dam**
1	**Sample ID**	**1047**
2	**Station Code**	**1396**
3	**Dt.of Sampling**	27.10.2020
4	**Time**	12.45 P.M
5	**Temperature °C**	32
6	**pH**	6.31
7	**Conductivity µmho/cm**	558
8	**COD (mg/l)**	BDL (DL - 5)
9	**BOD (mg/l)**	BDL (DL - 1)
10	**Turbidity NTU**	0.6
11	**Nitrite-N (mg/l)**	BDL (DL - 0.02)
12	**Bi-Carbonate as CaCO3 (mg/l)**	165.6
13	**Carbonate (mg/l)**	Nil
14	**Chloride (mg/l)**	73.4
15	**Ammonia -N (mg/l)**	BDL (DL - 0.4)
16	**Total Hardness (mg/l)**	144.5
17	**Calcium Hardness (mg/l)**	89.1
18	**Magnesium Hardness (mg/l)**	55.4
19	**Calcium as Ca++ (mg/l)**	35.6
20	**Magnesium as Mg++ (mg/l)**	13.5
21	**TDS (mg/l)**	342
22	**TSS (mg/l)**	BDL (DL - 10)
23	**FDS / TFS (mg/l)**	267.0
24	**Sulphate (mg/l)**	25.9
25	**Ortho phosphate(mg/l)**	0.7

BDL - Below Detectable Limit; DL - Detection Limit

ANNEXURE – III

ADOPTION OF GOOD IRRIGATION PRACTICE

1. In the present budget a subsidy of Rs. 5000/- has been proposed for cultivation of Millets / Minor Millets which would help in reducing waterusage.
2. It is proposed to cover more area underprecisionfarming.
3. System of Rice Intensification (SRI) is popularized among the farming community as a watersavingmeasure.
4. Sustainable Sugarcane Initiative (SSI) for reducing water consumption in sugarcane crops is alsobeingpopularized.
5. Attractive subsidy assistance is being extended to farmers for installation of Drip / Sprinklerirrigationdevices.
6. Attractive subsidy assistance is being extended to farmers for laying underground pipelines for conveyance of irrigationwater.

ANNEXURE – IV

Ground Water Recharge / Rain Water Harvesting

Government of Puducherry is taking continuous efforts to protect and restore the ground water resources and fulfill the water requirement of present without compromising the needs of future generation. The details of the various actions taken by the Government of Puducherry on Ground Water Recharge and Rain Water Harvesting are stated below:

1. U.T of Puducherry prepared a separate Water Policy in 2016 to develop, conserve and manage the water resources in the region in a sustainable manner guided by the national perspective. The policy encourages to take all efforts to store the surplus rain water in the canals, ravines and rivers by way of constructing small bed dams or regulators. Traditional water conservation practices of rain water harvesting including roof top rain water harvesting is also promoted through appropriate legislative measures.

2. The Puducherry Building By-laws and Zoning Regulations mandates the building owners to take effective measures for rain water harvesting and necessary conditions are incorporated in the Building Permits. The planning authorities while issuing occupancy certificate ascertain that the conditions stipulated in the building permits regarding rain water harvesting measures have been compliedwith.

3. The Puducherry Ground Water Authority has been constituted under the Pondicherry Ground Water (Control & Regulation) Act, 2002 to effectively and efficiently control and regulate the extraction of Ground water in the Union Territory. The Puducherry Ground Water Authority does not issues fresh permits / renews permits to any industries / institutions unless it is installing the Rain Water Harvesting System in their respective buildings. This is put as a precondition and insisted upon while granting clearance to theindustries.

4. Rain water harvesting structures have been provided in all Government buildings at Government cost wherever feasible. The Department of Agriculture constructed 30 roof top rain water harvesting structures in Government buildings. Public Works Department, Puducherry constructed 165 roof top rain water harvesting structuresin

Government schools and Colleges. Further, Rain Water Harvesting Structures have been constructed in 121 industries in Puducherry.

5. To augment ground water recharge in the river basins the Public Works Department has constructed 26bed dams in Puducherry and Karaikal region another 8 bed dams are proposed to be newly constructed. The construction of bed dam has considerably helped in the raising of groundwaterlevel.

6. Recharge structures are constructed in the desilted ponds for recharge of ground water aquifer since1990onwards.

7. Attractive Subsidy assistance are being extended for renovation of unused dug-cum-bore wells for harvestingrainwater.

8. Recharge shafts are being constructed across the river courses/ channels / river beds near the water holding area for better recharging ofgroundwater.

9. Construction of Farm Ponds is promoted for harvesting Rain Water and reuse it for critical wilting of crops in Karaikal region. The ponds are also used for fish culture by which the farmers are realizing additional income by extending attractive subsidy assistance.

10. Agriculture Department and Department of Science, Technology and Environment conducts awareness programmes to the Publics, Farmers, Students and industrialist to create awareness about the conservation of water and harvestingrainwater.

11. Tanks and ponds play a vital role in recharging ground water resources. The task of rehabilitation of tanks was taken up by the Government of Puducherry under Tank Rehabilitation Project, Puducherry (TRPP) with the financial assistance of European Union in the year 1998 which lasted for 6 years till 2004. Under this project all the 84 numbers of tanks located in Puducherry have been desilted and their water holding capacity has been increased from 46 MCM to 75 MCM which has given a good impact in the ground water regime of Puducherry. Subsequently in 2016, rejuvenation of 25 tanks and 32 village ponds in Puducherry have been taken up with funding from the Ministry of Environment Forests and Climate Change, Govt. of India underthe

National Adaptation fund for Climate Change and the project is under progress. Also, the U.T. Government has taken up desilting of urban drains, rural canals and village ponds with the cooperation of the general public and donor institutions under various projects initiated by the U.T. government since 2017 viz. Water Rich Puducherry program initiated by the Hon'ble Lieutenant Governor of Puducherry, Neerum Oorum Program and Nam Neer Program initiated by the District Collectors of Puducherry and Karaikal Districts respectively. Under these programs Government Employees are motivated by the administration to contribute for the desilting of water bodies through Employee Social Responsibility (ESR) Fund as a pioneer initiative which received an overwhelming response. The Industries and Institutions are also encouraged to take up the restoration works under CSR. Public Participation and Student Participation are encouraged to strengthen the community ownership. To make the restoration initiative sustainable, a team is formed for each pond in a combination of SHG of the own Village, NSS students of the own Villages and Self Interest Groups like Lion Club, Rotary Club, etc., for futuremaintenance.

ANNEXURE - V

PROTECTION AND MANAGEMENT OF FLOOD PLAIN ZONES (FPZ)

Sl. No.	Key components of proposed action plans for restoration of identified polluted river stretches in States / UTs	Proposed Achievable Target	Proposed Time Targets for Compliance	Present status and or Pendency in terms of %	Remarks
1.	**Flood Plain Zone protection and its management**	Proposal submitted for approval of 50.00 Crore.	2020 - 2025	The Karaikal Region is receiving water from the Seven Cauvery distributaries from Tamilnadu. The flood / excess water due to rainfall run off will be released and regulated by Tamilnadu Irrigation Division from the upper reaches through these seven distributaries. The river banks and the inspection tracks are almost strengthened to receive the flood water from upper reaches in Tamilnadu and to dispose safely to the Ocean (Bay of Bengal). However flood protection scheme works has been included under Flood Management and Border Area Program for an amount of Rs.50 Crore in the proposal for the period from 2020-2025 for getting approval from Government. The details are enclosed, in which for protecting the Arasalar river bank an estimate for an amount of Rs.10.00 Crore is earmarked to protect the Left Bank of Arasalar river above tail end regulator at Melaoduthurai.	After getting approval of works under Flood Management and Border Area Programme, DPR will besubmitted

ANNEXURE-VI

Reuse of Treated Water

Lawspet STP	Industrial usage	0.8 MLD
	Fodder Grass raising	3 MLD
	Coconut Plantation	
	Silk cotton trees	
	Natural recharging through impounding reservoir	9 MLD
Dubrayapet STP	Watering the road side plantation by Municipality	0.015 MLD
	Construction activities	
Kanaganeri STP	Boating Operations in Kanaganeri	2.5 MLD
		15.3 MLD