



GOVERNMENT OF PUDUCHERRY

ACTION PLAN FOR UTILIZATION OF TREATED SEWAGE WATER



**Department of Science, Technology & Environment
&**

Public Works Department

November, 2019



(0413) 2201256



dste.pon@nic.in

CONTENTS

Sl. No.	Description	Page No.
1	Introduction	1
2	Ground water potential and its usage	2
3	Sewage Generation	3
4	Treated Sewage Water	3-4
5	Scope of Utilization of Treated Sewage Water	4
6	Components for Utilization of Treated Sewage	8-13
7	Policy frame work for Efficient Utilization of Treated Sewage Water	14-15
7	Summary	15-16
8	Way Forward	16
9	Annexure (I-VI)	17-27

LIST OF TABLES

Table No.	Description	Page No.
1	Availability of Treated Sewage water	4
2	Quality of Treated Sewage	7
3	Usage of Treated Sewage	7
4	Action Plan Summarized	15

LIST OF FIGURES

Figure No.	Description	Page No.
1	Sector wise Ground Water Usage	2
2	Location of Major Sewage Treatment Plants	5
3	17 MLD STP	3-4
4	Location of Common Sewage Treatment Plants	6
5	Utilization of treated sewage for fodder cultivation	8
6	Proposed Distribution of Treated Sewage Water	11

1. Introduction

Water is a precious finite resource. It cannot be created but can be destructed and be transfered one form to other. Saline water to portable water, sewage water to good quality water vice versa. Considering the availability of abundance of fresh water, we have been misusing the natural resource unwisely. When availability of fresh water is limited then development of the society will automatically come to a standstill. Now, we have realized that the water cycle is basic for life cycle.

Water budget is foremost importance for better water management and avoidance of water crisis. which shall take into consideration of availability, recharge and discharge of water. All these three key factors shall be in harmonious with each other. Like other parts of the country, Puducherry is also witnessing depletion of ground water resource and shrinking of watershed area.

State Ground Water unit of Agriculture Department, Puducherry has constructed about 100 observation tube wells, piercing different aquifer system and the water level data are periodically collected from these observation tube wells. While perusal of the water level data, it is observed that the water level is in declining trend.

On an average, there is a drop in water level by 1 mt to 1.5 mt per year, in spite of sufficient rain and adopting rainwater harvesting technologies widely. This is because of the reason that the ground water is the only sources of water for all purpose.

As Puducherry is located in the coast, depletion of ground water leads to intrusion of salt water in the aquifer. Utilization of treated sewage would minimize pressure on ground water resource.

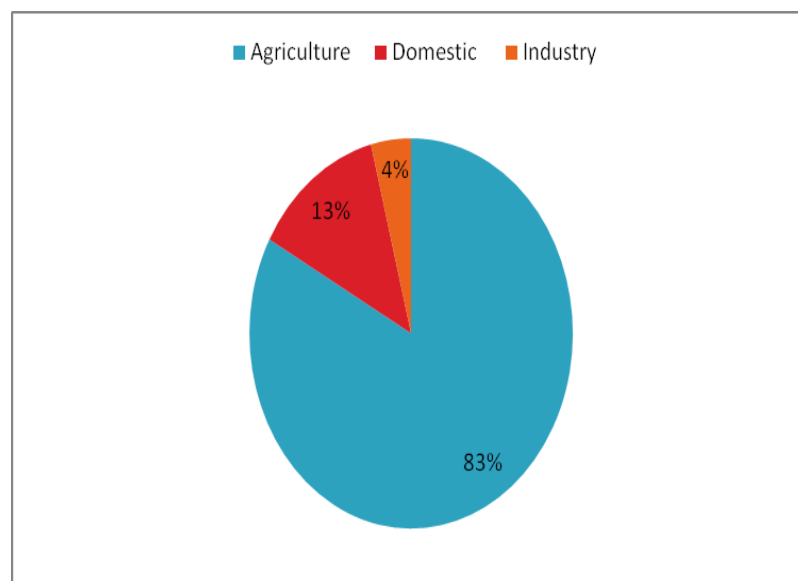
In compliance with the direction of the Hon'ble National Green Tribunal in O.A. No. 148 of 2016, this action plan has been prepared in consultation with various stakeholders.

2. Ground Water Potential and its Usage

Ground water potential of Puducherry Region has been estimated as 140 million cubic meter. (Central Ground Water Board, 2016). Agriculture is the major ground water consumption sector (116 mm³) followed by Domestic (18.5 mm³) and Industrial Sector (5.4 mm³) (Fig.1).

The source of the water for the various activities including Domestic, Industrial and Commercial usage are met from the ground water as a result of which there is depletion in the underground water resources. 30% of over drawal of ground water is reported and thus Puducherry has been categorized as Over Exploited Zone.

Fig.1: Sector wise Ground Water Usage



Source: <http://agri.puducherry.gov.in/gwpot.html>

3. Sewage Generation

a. Domestic Sector

Puducherry has Urban Population of 5.45 Lakhs. The Public Work Department (PWD) is providing the Drinking water supply and implementing Under Ground Sewerage System (UGSS) i.e. collection of sewage, and its treatment. The sewerage network of Puducherry is 447 Km. Sewage generated in the urban area is estimated as 58 MLD. However, the realized sewage generation is about 40 MLD, since 100% households connectivity to the sewer system is yet to be achieved.

b. Industrial Sector

There are 20 major sewage generation units in Puducherry (Fig.2). Around 3062 KLD of sewage is being generated of which 1943 KLD is utilized insitu. Thus the remaining 1119 KLD is available for other usage (Annexure – I).

4. Treated Sewage Water

Utilization of Treated Sewage Water is one of the promising field to conserve ground water resource. There are three numbers of 17 MLD capacity Sequence Batch Reactor (SBR) based Sewage Treatment Plants (STP) and 2 numbers of Upflow Anaerobic Sludge Blanket Reactor (UASB) based 2.5 MLD STP in operation. (Fig.3 & 4). Details of available Treated Sewage Water is given in Table – 1.

Fig.3: 17 MLD STP



LAWSPET STP



DUBRAYPET STP



KANAGANERI STP



INFLUENT AND TREATED EFFLUENT

Table 1: Availability of Treated Sewage water

Sl. No.	STP Location	Capacity of Plant (MLD)	Quantity of Treated Sewage available (MLD)
1	Lawspet	17 (SBR) 2.5 (UASB)	16 2.5
2	Dubrayapet	17 (SBR) 2.5 (UASB)	5 2.5
3	Kanaganeri	17	5
Total		56	31

5. Scope of Utilization of Treated Sewage Water

Sewage is treated in Sequence Batch Reactor (SBR) and UASB. These are State of the art technologies and yield good quality water. It meet Central Pollution Control Board, (CPCB) prescribed standards for irrigation. Treated Sewage quality is given in Table- 2.

Government of Puducherry has constituted a Committee vide G.O. Ms. No. 1 dt. 19.01.2017. (Anneure – II) for sale of Secondary Treated Effluent Water. Currently one unit is purchasing 0.8 MLD treated sewage water at the rate of Rs. 13.99 / KL.

Fig.2 Location of Major Sewage Treatment Plants

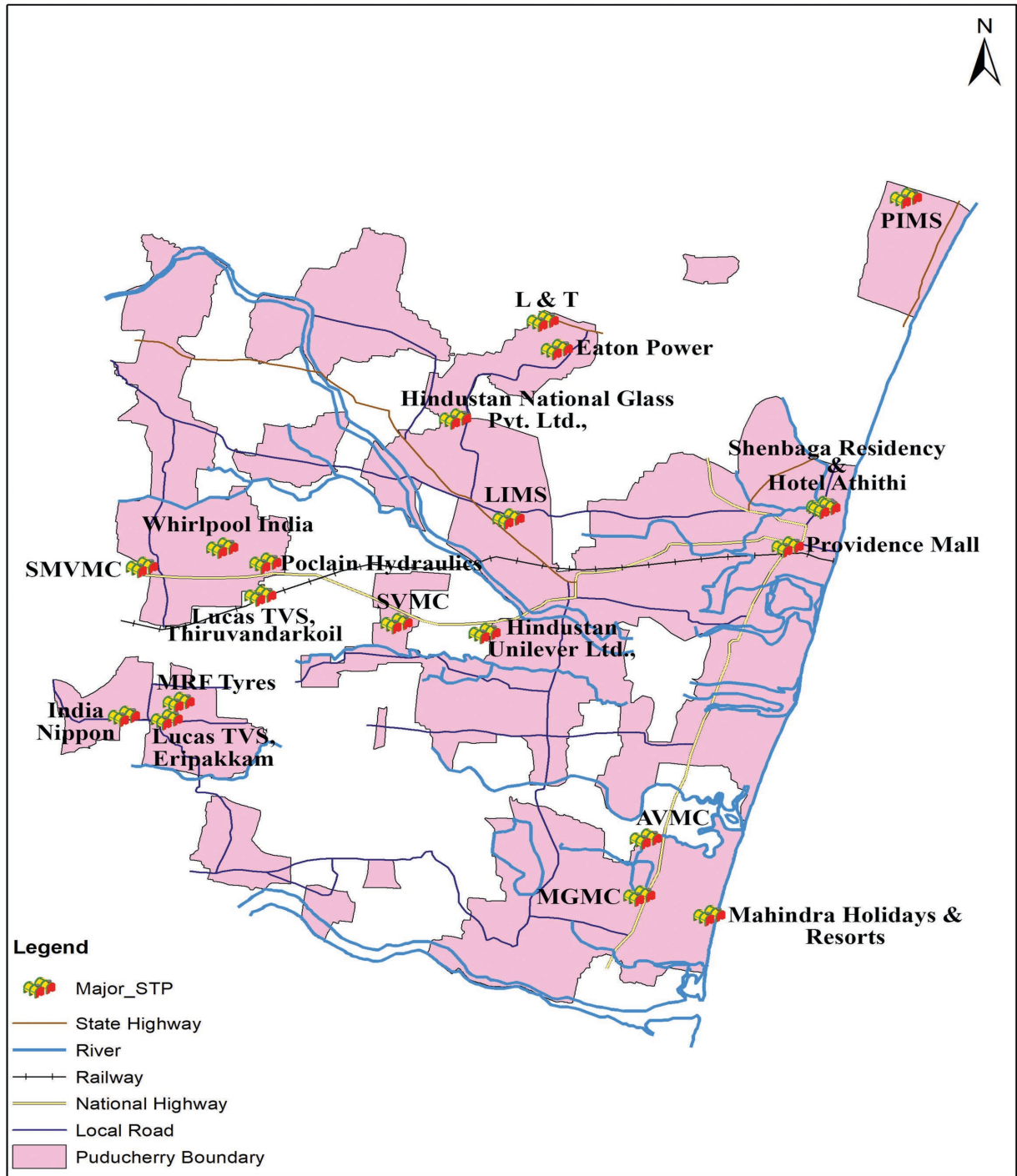


Fig.4 Location of Common Sewage Treatment Plants

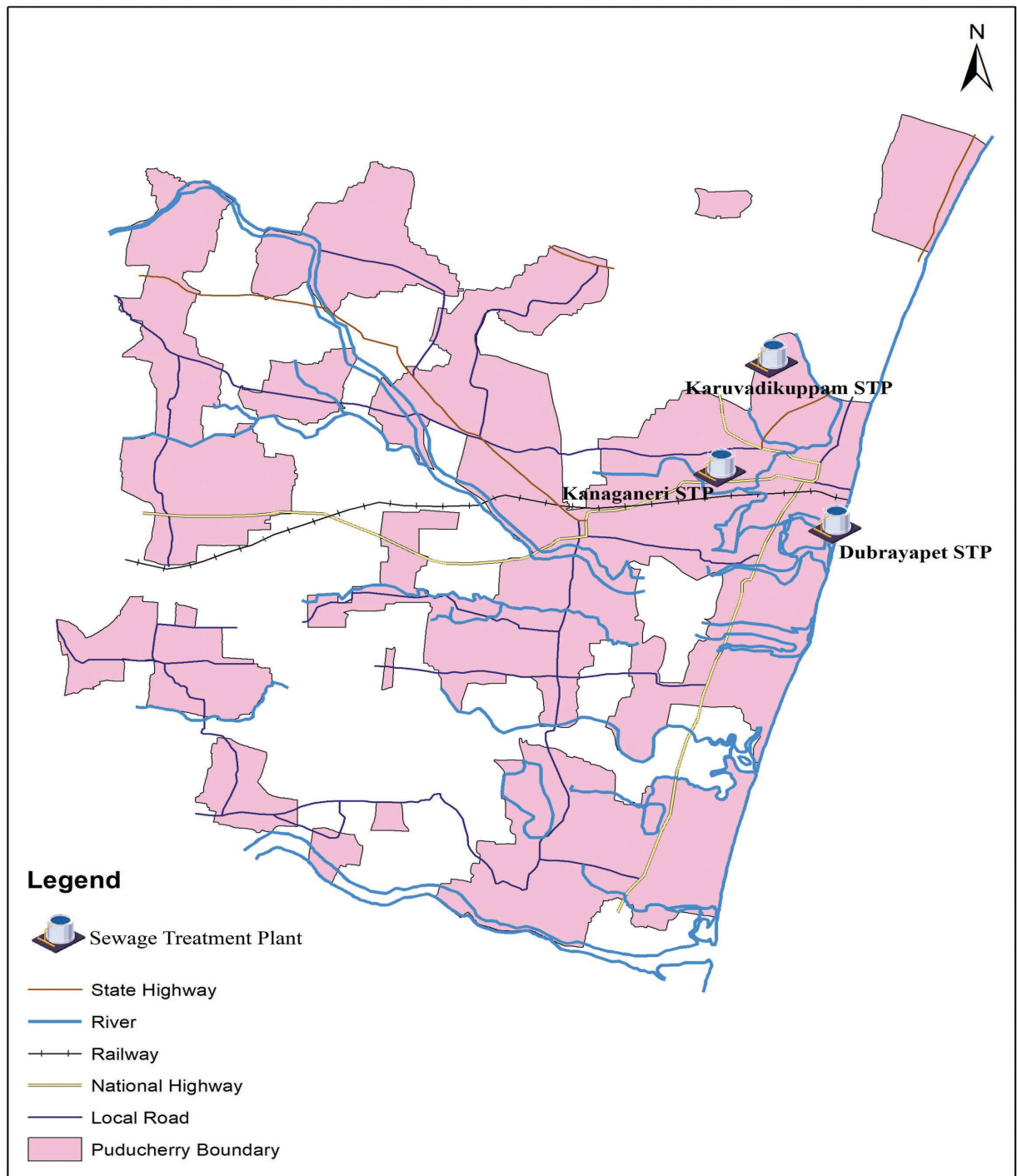


Table-2: Quality of Treated Sewage

Sl. No.	Parameters/Pollutants	Range
1	pH	7-9
2	Biochemical Oxygen Demand	7.7 mg/lit
3	Chemical Oxygen Demand	15 mg/lit
4	Total Suspended Solids	10 mg/lit
5	Total Kjeldahl Nitrogen	9.6 mg/lit
6	Nitrate Nitrogen	8.8 mg/lit
7	Ammonical Nitrogen	9.0 mg/lit
8	Total Phosphate	2 mg/lit
9	Faecal Coliform	Nil
10	Total Coliform	≤ 200 Mpn/100 ml
11	Oil & Grease	5mg/lit

Currently 15.3 MLD of treated sewage is utilized for various purpose. Details are given in Table.3

Table 3: Usage of Treated Sewage

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

Fig. 5: Utilization of treated Sewage for fodder cultivation



FODDER CROPS



SILK COTTON TREES

It is estimated that utilized treated sewage of 15.7 MLD from PWD owned STP's and 1 MLD from various industries and Institutes STP's are readily available for utilization.

6. Components for Utilization of Treated Sewage:

1. Establishment of Centralized Treated Sewage Distribution System (CTSDS)

Transportation of treated sewage to the needy place is one of the challenges. Transportation of treated sewage in tanker will cause traffic and air pollution problem. Establishment of Centralized Treated Sewage Distribution System (CTSDS) in the potentially water required location is one of the promising area of utilization of treated sewage. PIPDIC is supplying ground water in Mettupalayam Industrial Estate. There are 10 units located in the Mettupalayam Industrial Estate which require more than 10 KLD of water (Annexure - III). 800 KLD of ground water is being with drawn to meet the requirement. It is proposed to establish 3 MLD CTSDS in the Mettupalayam Industrial Estate. 17 MLD Kanaganeri PWD

STP is located within 4 KM from Mettupalayam Industrial Estate. Treated Sewage water can be supplied through pipeline to CTSDS, Mettupalayam and the same will be distributed to the needy industries located in the Estate.

[Estimated cost: Rs. 5 crore, Period of completion: 1 year]

(Action: PWD (PH))

2. Utilization of Treated sewage by Industries

There are 12 Numbers of water intensive industries excluding food processing units in operation at Puducherry which consumes more than 100 KLD of ground water for their processing (Annexure – IV). It is estimated that 3187.7KLD of ground water is being used by these industries. As these industries are scattered, it is not possible to provide treated sewage through pipe line. Hence, treated sewage may be transported from the nearby STP. Treated sewage can be used for boiler, cooling tower, toilet flushing, green belt development and other processing like galvanization, pulping, distillation etc. Some processing may require territory treatment. 1 MLD treated sewage from the 3 STPs can be used through tanker service.

[Estimated Cost: 0.5 Crore, Period of Completion: 3 months]

(Action: PPCC, PWD and needy units)

Major water requirement industries may jointly take treated sewage through pipe line. There is feasibility of supplying treated sewage from Lawspet STP to Kalapet area where 2 water intensive industries are located viz., M/s. Chemfab Alkalis and M/s. Solara Active Pharma. Both the industries requires 2 MLD and 1 MLD of water respectively. Besides, Pondicherry University and Pondicherry Engineering College require 1 MLD and 0.5 MLD of water for horticulture and green belt maintenance respectively. It is proposed to provide pipeline connection

for the transport of treated sewage from Lawspet to Solara Active Pharma covering 13 Km distance. Intermediate delivering line will be provided to Pondicherry Engineering College, Pondicherry University and Chemfab Alkalies. Thus totally 4.5 MLD of treated sewage will be utilized (Fig.6) (Anneure - V).

[Estimated Cost: Rs. 4.69 Crores, period of Completion: 1 Year]

(Action: PWD, PPCC, PGWA)

3. Usage in Botanical Garden and Bharathi Park

Bharathi Park is located in an area of 5 acres of land. It require around 300 KLD of ground water for irrigation.

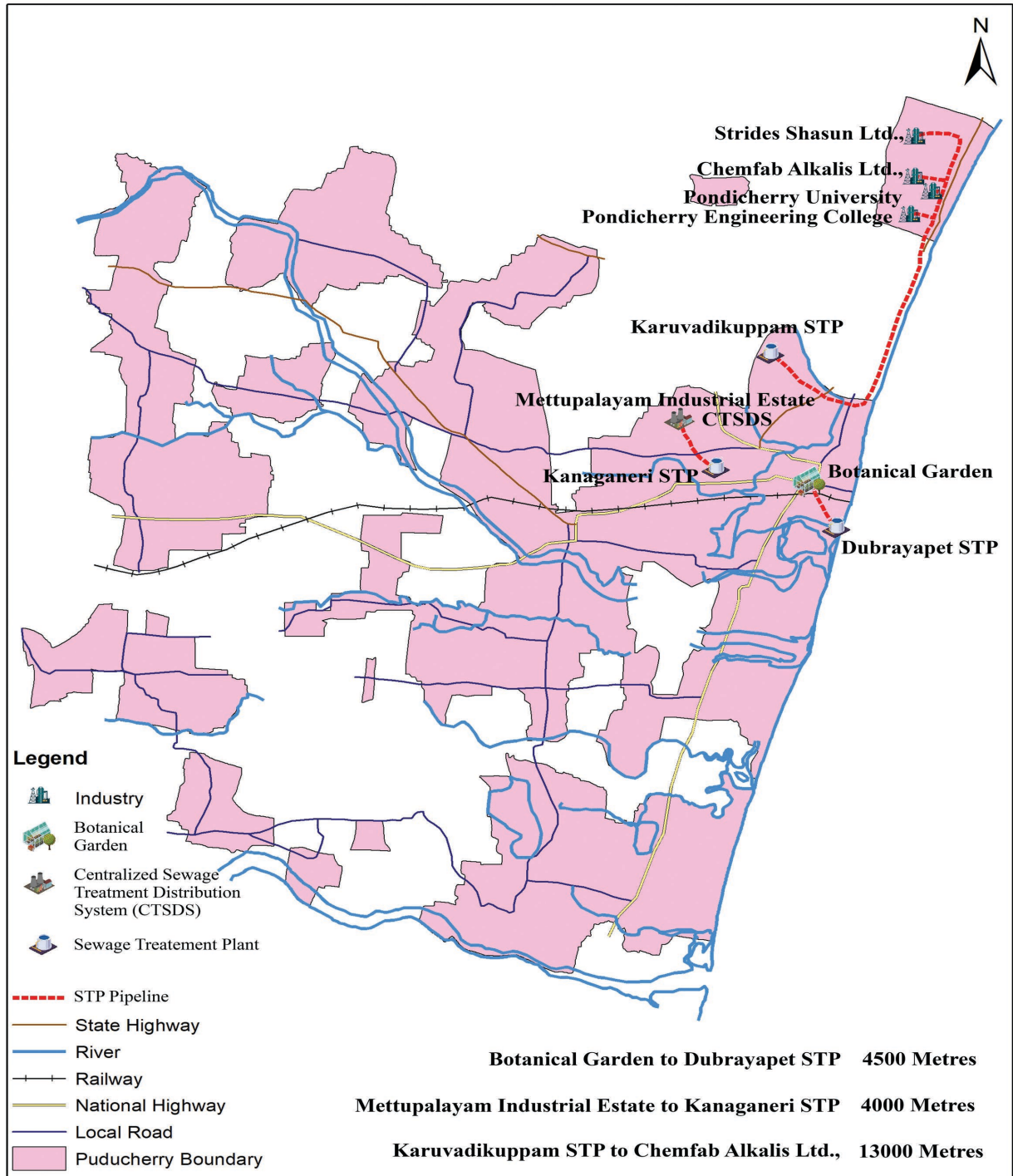
Century old Botanical Garden is one of the attractive tourist spot. It spread across 22 acres of land and housing 1500 species of flora besides lavish lawn. It is irrigated by ground water of 500 KLD.

Park and Botanical garden is located within 100 and 500 mts from sea. Salt water intrusion in these area has been reported. In order to utilize the Treated Sewage for irrigation in Botanical garden and Bharathi Park, a scheme has been envisaged for an amount of Rs. 2.06 Crore under AMRUT scheme with tertiary treatment of ultra filtration plant of capacity 0.5 MLD at Dubrayapet STP and pumping to a distance of 4500 m to the Botanical garden and Bharathi park for reuse of treated waste water for horticulture purpose (Annexure - VI).

[Estimated cost: Rs. 2.06 Crores, Period of Completion: 6 months]

(Action: PWD, Agriculture)

Fig.6 Proposed Distribution of Treated Sewage water



4. Usage in Peruthalaivar Kamaraj Krishi Vigyan Kendra, (KVK) and Rajiv Gandhi Veterinary Research Centre.

KVK is located in 145 acres of land and is involved in various cultivation and research activities. It requires 1.5 MLD of ground water. Rajiv Gandhi Veterinary Research Institute require 0.5 MLD of water for lawn and fodder grass development. From the Mettupalayam CTSDS, (STEW) 2 MLD will be supplied to these two places.

[Estimated Cost: 1.5 Crores, Period of Completion: 1 year]

(Action: PWD, KVK, River)

5. Usage in coastal area plantation

Huge demand in Irrigation sector has been envisaged in coastal area for coconut and casuarina cultivation wherein fresh water is currently used. Many hectares of land has been kept as fallow because of non availability of water. Three Medical colleges cum Hospitals viz., PIMS, AVMC and MGMCR&RI are located in the coastal area which generates around 1 MLD of treated sewage water. Appropriate system has been developed for effective usage in coastal plantation.

[Estimated Cost: 0.5 crore, Period of Completion: 3 months]

(Action: PPCC, Agriculture)

6. Usage of Nursery Development

Forest Department and Agriculture Department own two nurseries each, which are located at Mettupalayam and Lawspet respectively. It requires 50 KLD of water for irrigation. Treated Sewage Water from Mettupalayam CTSDS and Lawspet STP will be transported through tanker to these nurseries.

[Estimated Cost: Rs. 0.5 Crore, Period of Completion: 6 months]

(Action: Forestry, Agriculture)

7. Usage in High way plantation

Around 100 KLD of fresh water is used for watering in high way plantation by PWD High way division. Treated sewage from nearly available sources will be used for these purpose.

[Estimated Cost: Zero, Period of Completion: 1 month]

(Action: PWD (HD))

8. Usage as Fire hydrant by Fire Service Department

In Puducherry around 30 industries had set up Fire Hydrant system of 100 KL capacity. Fire Service Department requires 200 KL of water / month. Nearby available treated sewage water will be used for these purpose.

[Estimated cost: Zero, Period of Completion: 2 months]

(Action: Fire service and PWD)

9. Utilization in road laying and construction activity

Considerable quantity of potable water is used for road laying and construction activity. 100 KLD treated sewage water will be utilized from nearby CTSDS or STP.

[Estimated cost: 0.25 Crore, Period of Completion: 3 months]

(Action: PWD)

10. Provision of 5 MLD Teritary Treatment Plant

Teritary Treatment Plant will be installed in Dubrayapet STP and the ultra treated sewage water will be used in Velrampet Eri and Olandai Eri for boating operation.

[Estimated Cost: 10 Crores, Period of Completion: 1 Year]

(Action: PWD)

7. Policy frame work for Efficient Utilization of Treated Sewage Water

a. Providing Subsidy

Various subsidies have been provided by the Directorate of Industries and Commerce to promote industries in the U.T. of Puducherry. Industries which propose to use treated sewage for their process will be encouraged by way of incentive etc. This component will be incorporated in the future Industrial Policy.

b. Incorporation in the Statutory Clearances

- (i). Ground Water Authority is the custodian of ground water. It will restrict ground water withdrawal and encourage usage of treated sewage water available insitu or other sources. While issuing permission or renewal of permission a condition in this regard will be incorporated.

[Estimated Cost: Zero, Period of Completion: 3 months]

(Action: PGWA)

- (ii). Puducherry Pollution Control Committee, (PPCC) is a statutory body which governs industrial clearance. A policy decision will be taken for the mandatory usage of treated sewage in water intensive industries.

[Estimated cost: Zero, Period of Completion: 3 months]

(Action: PPCC)

c. Reduction of Tariff for Treated Sewage Water

Currently Ground water Authority charges Rs. 3 for one KLD of ground water. Whereas, PWD sell treated sewage water at the rate of Rs.13.99/KL. Huge disparity leads to poor demand for treated sewage water. Inorder to encourage

maximum utilization of treated sewage it is proposed to reduce the cost of treated sewage by PWD on par with PGWA.

[Estimated cost: Zero, Period of Completion: 2 months]

(Action: PWD)

8. Summary

The Action Plan has been summarized and given in Table-4

Table – 4:

Sl. No	Component	Proposed Utilization (MLD)	Estimated Cost (in Rs)	Time Frame
1	Establishment of Centralized Treated Sewage Distribution System (CTSDDS)	3	5 Crore	1 Year
2	Utilization of Treated sewage by Industries	5.5	5.19 Crore	1 Year
3	Usage in Botanical Garden and Bharathi Park	0.5	2.06 Crores	6 months
4	Usage in, KVK and Rajive Gandhi Veterinary Research Centre	1	1.5 Crores	1 Year
5	Usage in coastal area plantation	1	0.5 Crores	3 months
6	Usage for Nursery Development	0.05	0.5 Crores	6 months
7	Usage in High way plantation	0.1	0	1 month
8	Usage in fire hydrant and Fire Service Department	0.3	0	2 months
9	Utilization in road laying and construction activity	0.1	0.25 Crores	3 months
10	Provision of Teritary Treatment Plant and usage for recreation purpose	5	10 Crore	1 Year
TOTAL		16.5	25 Crores	

Total available Treated Sewage

PWD STPs	-	31 MLD
Industrial STPs	-	1.119 MLD
Total	-	32.119 MLD

Currently Utilized	:	15.3 MLD
Currently available	:	16.819 MLD
Action plan proposed for	:	11.55 MLD
Balance	:	5.3 MLD

9. Way Forward

Possibility of utilization of Secondary Treated Sewage has been thoroughly explored in industrial and other sectors. Utilization in domestic sector require Tertiary treatment plant which involve higher cost. Utilization in Agriculture Sector for irrigation has huge potential. As all the source of availability of treated sewage are confined in Urban area and Agriculture activity is in practice in rural area, distance is a major constraint for execution. Effective methodology to utilize the additional quantity of treated sewage in agriculture sector and in recreation area will be evolved.



Annexure – I

Sewage generated by Units/Institutes

Sl.No.	Name of the Unit	Quantity Generated (KLD)	Utilized Institu (KLD)	Availability (KLD)
1	M/s. Sri Manakula Vinayagar Medical College and Hospital	600	400	200
2	M/s. Pondicherry Institute of Medical Sciences	500	300	200
3	M/s. Sri Venkateshwaraa Medical College Hospital and Research Centre	400	200	200
4	M/s. Mahatma Gandhi Medical College and Research Institute	380	100	280
5	M/s. Aarupadai Veedu Medical College	240	200	40
6	M/s MRF Ltd., Eripakkam Puducherry	180	150	30
7	Providence Mall, Puducherry	80	50	30
8	M/s Lucas TVS Ltd., Eripakkam Village, NCP, Puducherry	96	90	6
9	Mahindra Holidays & Resorts India Pvt. Ltd., Valluvar Medu, Manapet Village, Bahour Commune, Puducherry.	60	60	0
10	Whirlpool of India Ltd, Thirubhuvanai, Puducherry	55	55	0
11	M/s. Sri Lakshmi Narayana Institute of Medical Science Medical College & Hospital	200	100	100

12	Eaton Power Quality Pvt. Limited, No. 2, EVR Street, Sedarapet, Villianur Commune, Puducherry.	50	50	0
13	Larsen & Toubro Limited – TLT Unit, Mylam Road, Sedarapet, Villianur Commune, Puducherry	35	35	0
14	Lucas TVS Ltd, Kothapurinatham, Thiruvandarkoil, Puducherry	32	30	2
15	SPI Technologies India Pvt. Ltd., Gothi Industrial Estate, Kurumbapet, Villianur Commune Panchayat, Puducherry	32	20	12
16	Larsen & Toubro Limited – Form Work & Timber Shop Unit, Mylam Road, Sedarapet, Villianur Commune, Puducherry	30	25	5
17	Shenbaga Residency, No. 434, M.G. Road, Puducherry Municipality, Puducherry.	30	25	5
18	M/s India Nippon Electricals Limited, Madukarai, NCP, Puducherry	26	20	6
19	Hotel Athithi, S.V. Patel Salai, Puducherry Municipality, Puducherry.	23	20	3
20	Poclain Hydraulics Pvt. Ltd	13	13	0
Total		3062 KLD	1943 KLD	1119 KLD

Annexure – II

GOVERNMENT OF PUDUCHERRY ABSTRACT

Public Works - Puducherry - Fixing and Collecting of charges for sale of secondary treated effluent water using SBR Technology in the Sewage Farm at Lawspet to the needy industries - Approval - Conveyed.

Receipt No..10.7.2.
Date...22.11.17.
Executive Engineer

CHIEF SECRETARIAT (PUBLIC WORKS)

G.O.Ms.No. 1

Puducherry, the 19 / 01 / 2017.

Read: I.D.Note No.823/PW/CE/EE(P)/AE(P)2/PHD-CSP/2016-17, dt.21/06/2016
from the Chief Engineer, Public Works Department, Puducherry.

<<OO>>

ORDER:

The Pondicherry Pollution Control Committee directed the Public Works Department to enter into an agreement for utilization of treated effluent water to the needy industries, since the treated effluent water is fully fit for such industrial process. This will prevent exploitation of ground water apart from generating income for the maintenance of the sewerage system. It is therefore proposed by the Public Works department to fix tariff for the sale of Secondary Treated Effluent Water (STEW).

2. The Government, after careful examination of the proposal, hereby constitutes a Committee for Sale of Secondary Treated Effluent Water (STEW) with the following members:

- | | |
|---|--------------------|
| (1) Secretary to Government (Public Works) | - Chairman |
| (2) Chief Engineer, Public Works Department | - Member |
| (3) Director, Department of Agriculture | - Member |
| (4) Director, Local Administrative Department | - Member |
| (5) Director, Department of Industries and Commerce | - Member |
| Director, Department of Science, Technology & Environment | - Member |
| Executive Engineer (Public Health), Public Works Department | - Member Secretary |

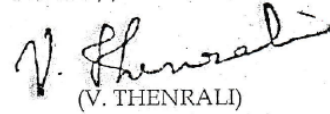
3. The Committee is authorized to take decisions on the sale of STEW with the following conditions:-

- (i) The Committee shall follow a competitive process for the sale of STEW through e-tender or auction.
- (ii) The upset price of STEW shall be fixed at Rs.13.10 per KL in the first instance.
- (iii) The duration of sale shall be fixed for a period of 2 years.
- (iv) The upset price / sale price shall be increased by 6% after one year at the time of renewal.
- (v) STEW shall be used for industrial purposes only and under no circumstances shall be used for drinking purposes. Onus in this regard rests on the Industry / Buyer.
- (vi) The sale of STEW shall be restricted only to Industries.
- (vii) After the completion of tendering / auction, an agreement shall be signed between the Public Works Department and the Industry to whom STEW is to be sold.
- (viii) The Industry / Buyer shall take full responsibility to obtain necessary statutory approval, clearance and permission wherever necessary from all concerned Departments before entering into agreement with PWD.

.... / 2

- (ix) The details, such as, approximate quantity of supply/ consumption per day by the Industry, payment, terms and conditions, non-drawal of STEW, penalties for default in the case of remittance of tariff, caution deposit etc., shall be worked out by the Committee and incorporated in the Agreement.
- (x) The sold STEW shall be transported from Sewage Treatment Plant, Lawspet to the respective destination by the buyer(s)/ Industry (ies) at their own cost.
4. Cases in which approval of Government is necessary:-
- (a) The cases in which the tariff for the sale of STEW is proposed to be fixed below the upset price/ sale price.
- (b) The approval of Government is necessary in Extraordinary cases.
5. The charges collected from the Industries/Buyers shall be credited in the relevant Head of Account.
6. The Public Works Department shall, submit a proposal to Government after 2 years for revising the rate/charges per kilo litre for sale of STEW based on the actual Operation & Maintenance charges of the STP.
7. If there is any difficulty in interpreting any of the provisions herein above mentioned, the decision of the Committee, thereon, shall be final.
8. This issues with the concurrence of the Finance Department vide their I.D.No.1753/FC/FD/F5/A1/2016 dated 25.08.2016.

// By order of the Lieutenant - Governor //


(V. THENRALI)

DEPUTY SECRETARY TO GOVT.(WORKS)

To
The Chief Engineer,
Public Works Department, Puducherry.

Copy to:-

1. The Under Secretary (Finance), Chief Secretariat, Puducherry.
2. The Superintending Engineer, Circle-II, PWD, Puducherry.
3. The Executive Engineer, Comprehensive Sewerage Project, PWD., Puducherry.
4. The Executive Engineer, Public Health Division, PWD., Puducherry.
5. The Executive Engineer (Design), CDC., PWD, Puducherry.
6. The Director of Accounts and Treasuries, Puducherry.
7. The Principal Accountant, General (Audit-I) Tamil Nadu and Puducherry, No. 474, Anna Salai, Chennai.
8. The Accountant General (Audit-I) Tamil Nadu and Puducherry, Puducherry Branch.
9. The Central Records Branch, Puducherry.
10. The G.O. File / Spare copy.

(F.No.281/58/2016-PW(B2))

Endt no. 430/RW/PWD DB-Dr/16-17 dt. 23/1/17

Copy to AE Dr, DA, SEC, C.O. Office for info



ASSISTANT SECRETARY TO GOVT. (WORKS)

Annexure-III

List of Water Intensive Industries in Mettupalayam Industrial Estate (above 10 KLD)

SL.NO	NAME OF THE INDUSTRY	CONSUMPTION (IN KLD)
1	Sri VenKateswara Sizing & Processing Mills	12
2	Swathy Organics and Specialities Pvt Ltd.,	12
3	Venkataramana Food Specialities Ltd.,	16
4	Foseco India Ltd	19
5	Sumangala Steels (P) Ltd.,	25
6	PASIC(Eau De Puducherry)	25
7	Guru Paper Mills(P) Ltd.,	30
8	Magna Chemical Manufacturer Pvt Ltd.,	30
9	M/s.Ucal Fuel Systems. Ltd.,	36
10	Mohan Breweries And Distilleries Ltd.	60
TOTAL		265

Annexure – IV

List of Water Intensive Units (Above 100 KLD)

Sl.NO	Industry Name	Total (in KLD)
1	MRF Ltd	715
2	Chemfab Alkalis Ltd	490
3	Hindustan Lever Ltd (Toilet Soap Division)	325
4	Hindustan Unilever Ltd. - detergent division	260
5	M/s.Inox Air Products Ltd.,	257
6	Strides Shasun Limited Unit II	233
7	Whirlpool of india Ltd	152
8	Hindustan National Glass And Industries Ltd.,	130
9	Nilkamal Plastic Ltd	125
10	Strides Shasun Limited Unit I	110
11	Priya Granite (P) Ltd	104.2
12	Pallava Granite Industries	101.5
13	Nithya Packaging, Othiyanpet	185
Total		3187.7

Annexure – V

OFFICE OF THE EXECUTIVE ENGINEER (PLANNING) Central Office, P.W.D., Puducherry		OFFICE OF THE EXECUTIVE ENGINEER P.H.D., P.W.D., PUDUCHERRY	
Receipt No.: 4626 Date: Public Works - Puducherry - "Providing and laying pumping main from the Sewerage Treatment Plant (STP) of PHD/PWD, Lawspet, Puducherry to M/s. Chemfab Alkalies Limited, Kalapet, Puducherry for transporting/conveying Secondary Treated Effluent Water (STEW) for industrial reuse" on Deposit Work basis for private sector - Administrative Approval - Accorded.		Receipt No.: 14388 Date: 29/8/19	
GOVERNMENT OF PUDUCHERRY ABSTRACT			
CHIEF SECRETARIAT (PUBLIC WORKS) Puducherry, dt. 29/08/2019.			
G.O. Ms. No. 70 OFFICE OF THE CHIEF ENGINEER P.W.D. PUDUCHERRY Receipt No.: 1598/CE/P Dated on: 30/8/19 Watched on: 31/8/19		1. I.D.No.977/PW/CE/EEP/AE(P)2/F.No.PHD-II-2/2019-20 dated 18.07.2019 of the Chief Engineer, Public Works Department, Puducherry. 2. G.O.Ms.No.1 dated 19.01.2017 of Chief Secretariat (Works), Puducherry.	
ORDER: PS to CE		-----	
The Chief Engineer, Public Works Department has stated in the I.D.Note 1 st read above that the Government of Puducherry has already approved for sale of Secondary Treated Effluent Water (STEW) from the Sewage Treatment Plants (STPs) to the needy industries vide G.O. 2 nd read above, as the treated effluent water is fit for industrial process, selling the STEW to needy industries will prevent exploitation of ground water apart from generation of revenue to Government. Whereas M/s.Chemfab Alkalies Limited, Kalapet, Puducherry, a chemical industry, requires STEW for their industrial use, in a meeting conducted with regard to Desalination plant by M/s.Chemfab Alkalies Limited, the Puducherry Ground Water Authority has resolved for supplying the STEW through pipeline to the firm's campus. Considering that the usage of STEW by industries will prevent the exploitation of ground water by industries and also the advantages of conveying through pipelines over transporting through trucks, the Public Works Department proposes to take up this work on Deposit Work basis to private sector i.e. M/s.Chemfab Alkalies Ltd., who agrees (i) to meet the entire cost, excluding the cost of pipes and including the payment of Departmental charges to PWD and other incidental charges that may arise and also (ii) to supply O-PVC pipes free of cost, from their own manufacturing facility at Sri City, Tada, Andhra Pradesh, directly at the work site. The Public Works Department has prepared Project report with tentative cost ₹4,69,00,000/- (Rupees four crore sixty nine lakhs only), which excludes the cost of pipes and includes the Departmental charges payable to the Department. The Department proposes to undertake the work as Deposit Work with M/s.Chemfab Alkalies Limited meeting the cost of the work by depositing in advance and by entering into an agreement /Memorandum of Understanding (MoU) with M/s.Chemfab Alkalies Limited for the same.			
DRAWING BRANCH Receipt No.: 5236 Date: 12/9/19		2. Accordingly, after careful consideration, Administrative Approval of the Government is hereby conveyed for the work of "Providing and laying pumping main from the Sewerage Treatment Plant of PHD/PWD, Lawspet, Puducherry to M/s. Chemfab Alkalies Limited, Kalapet, Puducherry for transporting/conveying Secondary Treated Effluent Water (STEW) for industrial reuse", to be taken up by Public Works Department as Deposit Work for the non-Government body viz. M/s. Chemfab Alkalies Limited, Kalapet, Puducherry, at a tentative project cost of ₹4,69,00,000/- (Rupees four crore sixty nine lakhs only), subject to the following conditions:	
(1) The Public Works Department, Puducherry shall, in consultation with the Law Department, prepare an agreement / MoU in respect of taking up/executing of the work, to be entered with the firm, viz. M/s. Chemfab Alkalies Limited, Kalapet, Puducherry.			
(10/12/19)		(....2)	
A.C.P.-II 29/8/19		F.No.28587/34/2019-PW(B2) D:\B2_Unit\B2 New 2019\G.O.s Orders 2018\B2 GO 2019_4.docx	

- (2) The firm, viz. M/s. Chemfab Alkalies Limited, Kalapet Puducherry, should meet the entire Project Cost. The firm should Deposit the entire Project Cost with PWD in advance (or) should submit a Bank Guarantee equivalent to the project cost in favour of PWD, towards Security Deposit.
 - (3) The firm should obtain/facilitate with PWD to get the Statutory Clearances from the neighbouring state of Tamilnadu for the project.
 - (4) The firm should pay/remit to PWD necessary Departmental Charges as per Appendix-14 of CPWD Works Manual 2014, to take up the work on Deposit basis.
 - (5) The firm should supply the pipes required for the work, free of cost directly at the work site.
 - (6) The firm should abide by the Mode of Payment through ESCROW account as per terms & conditions/agreement/MoU to be entered for the work.
 - (7) The firm should bear any/all additional expenditure over and above the project cost that may arise during the course of execution of the work /after the execution of the work, due to 10C/10CA/10CC and/or due to any arbitration that may arise due to this work.
 - (8) The full rights and ownership of the property/pipeline infrastructure developed by this work shall rest with Public Works Department, Puducherry.
 - (9) The firm cannot have any stake / claim any rights on the STEW supplied through pipeline which may or may not be used en route for any other Govt. purpose as per terms and rules that may be framed by the Government.
 - (10) However, the firm shall bear the cost of annual maintenance for the Pumping main and Motor and Electrical/Electricity charges in maintaining the underground pipeline, and the firm shall pay the same as and when a demand is raised by PWD.
 - (11) The firm shall pay the cost of STEW supplied to them separately at the rates fixed by the Government, as per the supply made & demand raised by the STP/Public Health Division of PWD.
 - (12) The STEW supplied to the firm shall not be sold or used for any other purpose.
 - (13) The firm shall permit PHD/PWD to inspect the supply arrangements inside the premises of the firm at regular intervals or as and when required in events of breakdown, emergency, complaint, etc.
 - (14) The Puducherry Pollution Control Committee suo-moto inspect / accord permission for the said work.
 - (15) The Public Works Department shall take up the work only after executing the agreement/MoU referred at (1) above and receiving the Deposit/Bank Guarantee referred at (2) above.
3. The Public Works Department, Puducherry shall follow the CPWD Works Manual 2014 and other existing codes/procedures in executing the above work.
4. This issues with the concurrence of the Finance Department vide I.D.No.1615/FC/FD/FC/F5/2018 dt.27/08/2019.

// By Order //


(CHAURE RATNAGHOSH KISHOR)
UNDER SECRETARY TO GOVT.(WORKS)

✓ To
The Chief Engineer,
Public Works Department, Puducherry.

(....3)

F.No.28587/34/2019-PW(B2)

Copy to:

1. The Under Secretary to Government, Finance Department, Puducherry.
2. The Superintending Engineer, Circle-II, PWD, Puducherry.
3. The Executive Engineer, Public Health Division, PWD, Puducherry.
4. The Executive Engineer (Planning), PWD, Puducherry
5. The Executive Engineer (Design), CDC, PWD, Puducherry.
6. The Director of Accounts & Treasuries, Puducherry.
7. The Principal Accountant General (Civil Audit-I), Tamil Nadu & Puducherry, No.474, Anna Salai, Chennai-35.
8. The Deputy Accountant General (Civil Audit-I), Tamil Nadu & Puducherry, DAT Building, Kumaragurupallam, Puducherry.
9. The Central Records Branch, Puducherry.
10. The G.O. File / Spare copy.

F.No.28587/34/2019-PW(B2)

Enclt no: 5236/R/PWD/DB-Dr/19 dt. 12/9/19.

Copy Communicated to AE Dr, DA, G.O.B. for information

Vacant
ASSISTANT ENGINEER (PLANNING)
PUBLIC HEALTH DIVISION
P.W.D., PUDUCHERRY.

e/c

DRAINAGE SUB-DIVISION, P.W.D.
 Receipt No. 1019 Date 13/9/19

GOVERNMENT OF PUDUCHERRY

ABSTRACT

Local Administration Secretariat –Administrative approval and Sanction for utilising the Amount already sanctioned and deposited in the Account of AMRUT for the Implementation of AMRUT Mission (Centrally Sponsored Scheme) in Pondicherry Region during the Financial Year 2019-20 – Orders -- Issued.

LOCAL ADMINISTRATION DEPARTMENT (SECRETARIAT WING)

G.O. Rt. No.31/LAS/A1/2019-20

Puducherry, dated 14.09.2019

READ: 1. G.O. Ms. No.107/LAD(SW)2017-18 dt. 20.03.2018-Local Administration Secretariat, Puducherry.

2. I.D. No. 672/PW/SE-II/AE(P)-7PP-1116/2019-20 dated 08.07.2019 of the Public Works Department, Puducherry.

3. Letter No. K.16015/57/2016-AMRUT-II-B dt. 13.12.2018 of MoHUA, New Delhi.

ORDER:

Earlier sanction for the release of first instalment of Rs. 4,87,00,000/- (20% of Central Assistance of Rs. 24.34 crores) for SAAP-III component during the F.Y. 2017-18 vide Order read under 1 above, on the basis of estimated project cost for the implementation of projects as per the G.O. cited reference 1 above.

2. Out of which, the first instalment of Rs.7,40,000/- (on the estimated cost of Rs. 2.06 crores) released for the implementation of the above project has been deposited in to the Indian Bank, Puducherry Account No. 6502353384 under the name "SMART CITY MISSION DIRECTORATE – AMRUT".

3. The Ministry of Housing & Urban Affairs (MoHUA), New Delhi vide letter cited reference 3 read above, conveyed their no objection for the replacement of projects in SAAP by the State Government with the approval of State High Powered Steering Committee (SHPSC), with a condition that the SAAP size must be within Rs. 64.91 crore.

4. Now it is proposed to replace the project titled "recycling and re-use of waste water for horticulture usages in Pondicherry municipality "at the cost of Rs. 0.37 crore under SAAP-III (2017-18)", as the project titled "Laying of pumping main from Dubrayapet STP to Botanical Garden and Ultra Filtration Plant at Dubrayapet for re-use of waste water for horticulture purpose" costing Rs. 2.06 crore under SAAP-III (2017-18). The details are as follows.

Sl. No.	Particulars	Amount (in Rs.)
1.	Pumping Main	89,61,955
2.	Submersible Pumpset	17,25,635
3.	Rectification of Roads	22,90,169
	Sub-total	1,29,77,759
4.	Internal Electrification – L.S.-	3,25,000
5.	External Electrification – L.S.-	5,25,000
6.	Ultra Filtration Plant with allied work 0.5 MLD. – L.S.-	45,00,000
7.	GST @ 12%	15,57,331
8.	Quality Control Charges @ 1%	1,29,778
9.	Advertisement Charges –L.S.-	1,00,000
10.	Contingencies @ 3%	4,85,133
	Grand Total	2,06,00,000

5. The Secretary, Local Administration Department on the recommendation of Director, Local Administration Department and Public Works Department on production of such statement by him, shall authorize to utilise the funds.

(G.O. Rt. No. 31/LAS/A1/2019-20, dated 09.09.2019)

6. The condition stipulated in the AMRUT Mission statement and Guidelines under Water Supply Sewerage and Parks/Green Space should be strictly followed.

7. The implementing agency Public Works Department shall furnish necessary Utilisation Certificate (UC) on monthly basis on utilisation of funds for the project for further release of instalments of Central Assistance (CA). Once the remaining 2nd Instalment (40%) and 3rd Instalment (40%) is released by the Ministry, the expenditure towards the project will also be debited from the AMRUT account.

8. Hence, Administrative approval and Sanction of Lieutenant Governor is hereby accorded for partial modification in the earlier G.O. cited vide reference 1, for utilising the funds already sanctioned which is in the account of "SMART CITY MISSION DIRECTORATE - AMRUT" - INDIAN BANK, MAIN BRANCH, PONDICHERRY - Account No. 6502353384" for implementing the project "Laying of pumping main from Dubrayapet STP to Botanical Garden and Ultra Filtration Plant at Dubrayapet for re-use of waste water for horticulture purpose".

9. This issues with the concurrence of the Finance Department vide their I.D.No. 1623/FC/FD/F4/A1/2019-20 dated 09.09.2019.

// BY ORDER//

GIDDI BALARAM

UNDER SECRETARY TO GOVT. (LA)

To

The Director,
Local Administration Department,
Puducherry.

Copy to:-

1. The Chief Engineer, Public Works Department, Puducherry.
2. The Commissioner, Pondicherry Municipality, Puducherry
3. The Finance Department, Puducherry.
4. The Director, Directorate of Accounts and Treasuries, Puducherry.
5. The Deputy Director, Directorate of Accounts and Treasuries, Puducherry.
6. The Director, Department of Planning & Research, Puducherry.
7. The Assistant Examiner, Local Fund Audit, Puducherry.
8. The Resident Audit Unit, Puducherry.
9. The Deputy Director (MA), Local Administration Department, Puducherry.
10. The Drawing Officer, Local Administration Department, Puducherry.
11. The Mission Director (AMRUT), Smart City Mission Directorate, Puducherry.
12. Spare copy/G.O. file/ Stock file

End no: 5323/PW/PWD/OS- Am/19 dt, 16/9/19

Copy communicated to AR Dy, DA.G.O. Rie
for info

V. S. S. S.
ASSISTANT ENGINEER (PLANNING)
PUBLIC HEALTH DIVISION
P.W.D., PUDUCHERRY.