OFFICE OF THE EXECUTIVE ENGINEER
PUBLIC HEALTH DIVISION
P.W.D., PUDUCHERRY
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No. 3059 /PW/PHD/EE/DB-DR/F.No.648 /2020-21 DT. 9/2/2021

To
The Commissioner,
Puducherry Municipality,
Puducherry

Sir,

Sub: PW – PHD –EE –SS2021- Wastewater treatment and reuse of recycled water in Puducherry-Details furnished for uploading in the SBM Portal - Reg.

Ref: No.102/PM/SBM/NO/2020-21 dt.05.02.2021

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With reference to the above, I am enclosing herewith the details of Sewage Treatment Plants and reuse of recycled water in Puducherry.

Yours faithfully,

EXECUTIVE ENGINEER
PUBLIC HEALTH DIVISION

Copy Submitted to:
(1) The Chief Engineer, Public Works Department, Puducherry for favour of information please.
(2) The Superintending Engineer, Circle-II, PWD, Puducherry for favour of information please.

Copy to:
1) The Assistant Engineer, Drainage Sub-Division-I, PHD, PWD, Puducherry
2) S.F./O.C.

GOVERNMENT OF PUDUCHERRY
PUBLIC WORKS DEPARTMENT
PUDUCHERRY

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Status of Existing STPs and Reuse of Recycled water in Puducherry

Puducherry Urban areas has been divided into 9 Zones from Zone-I to Zone-IX for implementing the underground sewerage system.

Puducherry has been implementing Sewerage Scheme to the urban area since 1980 in a phased manner under Integrated Urban Development Projects (IUDP) under State Budget for Zone-I and Zone-II. The remaining seven zones under sewage zone classification have been completed under JNNURM fundings which includes 3 decentralized treatment plants of 17 MLD capacity each of Sequential Batch Reactor (SBR) technology located at Lawspet, Dubrayapet and at Kanaganeri. The total capacity of the SBR technology plant at Puducherry is 51 MLD.

The treated effluent from all the 3 STPs matches such quality standards to be used for industrial/ agricultural and ground water recharge purposes.

The characteristics of the treated effluent i.e Secondary Treated Effluent Water (STEW) from the above STPs are as below.

Sl. No.	Parameters/Pollutants	Range
1	Biochemical Oxygen Demand	10 or less mg/lit
2	Chemical Oxygen Demand	Less than or equal to 100mg/lit
3	Total suspended solids	10 or less mg/lit
4	Total Kjeldahl Nitrogen (a N)	Less than 10 mg/lit
5	Nitrate Nitrogen	Less than or equal to 10mg/lit
6	Ammonia Nitrogen (as N)	Less than or equal to 2mg/lit
7	Total Phosphate	Less than or equal to 2mg/lit
8	Faecal Coliform	Nil
9	Total Coliform	Less than or equal to 200 Nos per 100ml
10	pH	7-9
11	Oil & Grease	Less than or equal to 5mg/lit

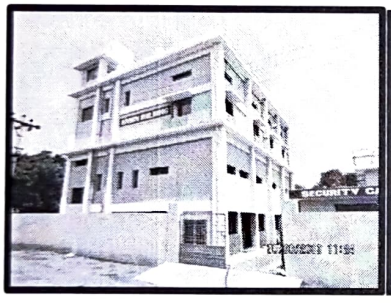
The availability of the STEW from the 3 STPs are as below

Sl. No.	Name of STP Location at Puducherry	Capacity of Plant	Quantity of STEW available at present
1	Lawspet	17 MLD	16 MLD
2	Dubrayapet	17 MLD	14.5 MLD
3	Kanaganeri	17 MLD	10 MLD

Recycling activities at present.

At present the treated effluent from the STPs are reused as detailed below;

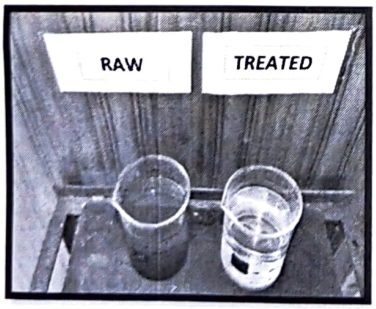
Lawspet	Supply to Industrial usage	0.95 MLD
	Fodder Grass raising	3.5 MLD
	Coconut Plantation	
	Silk cotton trees	
	Natural recharging through impounding reservoir	13 MLD
Dubrayapet	Watering the road side plantation by Municipality	15 KLD
	Construction activities	



STP at Lawspet

STP at Dubrayapet

STP at Kanaganeri



Influent and Effluent

Transport of STEW to Industries

Fodder crops

Immediate future recycling activities

In order to reuse the recycled water,

- The work of "Providing tertiary treatment plant of 0.50 MLD Capacity at Dubrayapet STP and transporting the effluent for horticulture operations at Botanical Garden and at Bharathy Park, Puducherry for an amount of Rs.240Lakhs under AMRUT Scheme", is in progress and will be completed by the end of February 2021.
- Another proposal of "Providing pumping main from STP, Lawspet to M/s. Chemfab alkalis Ltd for transportation of STEW (approximately 1 MLD) for their industrial usage at Kalapet, Puducherry. Cost of the project will be borne by M/s. Chemfab alkalis Ltd, Kalapet" will be taken up after obtaining CRZ clearance from the Puducherry Pollution Control Committee, Puducherry.

Opportunities and future proposals in Reusing Recycled Water

Usage in Parks, Nursery Development and High Way Plantation

- Considerable quantity of fresh water is used for watering in Park, Nursery and Highway Plantations STEW from available nearby sources may be used for this purpose.
- Similar Pumping system will be provided for horticulture purposes in KVK campus from nearby Kanaganeri Sewage Treatment Plant.
- Dispensing arrangements have been provided in all the 3 STPs to facilitate drawal of STEW for watering the plants, highway plantation, junction parks, landscaping in Govt office premises.
- The Forest Department has been requested to explore the possibility of usage of STEW for their Afforestation activities.
- The Agriculture Department has been requested to explore the possibility of usage of STEW for their Agriculture purpose.