

## **REPORT ON CONSTRUCTION OF 10 MLD CAPACITY MODULAR SEWAGE TREATMENT PLANT AT LANGS GARDEN CHENNAI CITY**

### **INTRODUCTION:**

- Chennai River Restoration Trust (CRRT) has taken up the Integrated Cooum River Restoration project under Government of Tamil Nadu funds.
- Sixty sub-projects for the short term ie., from 2014-15 to 2016-17, will be implemented by the concerned implementing agencies/line departments like PWD, Corporation of Chennai, Commissionerate of Municipal Administration, Directorate of rural Development, CMWSS Board, Chennai Rivers Restoration Trust and TNSCB.
- The Government by its order GO.Ms.No.9 dated 13.01.2015 of the MA&WS Department (MC1) has accorded administrative sanction to a value of Rs.604.77 Crore under integrated Coovum River Eco restoration project.
- Out of 604.77 Crore, an amount of Rs. 186.19 Crore has been allotted to Chennai Metropolitan Water Supply and Sewerage Board for implementing 15 sub projects.
- In these 15 sub projects, 10MLD capacity Modular Sewage Treatment Plant based on Moving Bed BioFilm Reactor Technology followed by Ultra Filtration at Langs Garden is constructed with a project cost of 27.78 Crore.

### **PROJECT DESCRIPTION:**

- The work of “Design, construction and commissioning of 10MLD capacity Modular sewage treatment plant based on MBBR technology along Coovum river inat Langs Garden, Chennai City on DBO Basis including O&M for 10 years” under Coovum River Restoration Trust.
- The aim of the project is to collect the untreated sewage being let out into the Cooum River by eleven outfalls near Egmore and treat the sewage in the proposed Modular Sewage Treatment plant as per Standard discharge norms specified by TNPCB/CPCB.
- The raw sewage and outlet parameters considered for design of the above plant after secondary clarifier are as follows:

| Sl.No | Description                         | Inlet Parameters | Before UF Outlet parameters |
|-------|-------------------------------------|------------------|-----------------------------|
| 1     | BOD in mg/l                         | 350              | <=10                        |
| 2     | COD in mg/l                         | 700              | =50                         |
| 3     | TSS in mg/l                         | 450              | <=10                        |
| 4     | Total Kjeldahl Nitrogen (as N) mg/l | 45               | =10                         |
| 5     | Total Phosphorus (as P) mg/l        | 5                | <=2                         |
| 6     | Fecal Coliform MPN/100 ml           | 10,00,000        | <=200                       |
| 7     | pH                                  | 6.8 to 8.5       | 6.5 -8.5                    |
| 8     | Oil & Grease mg/l                   | 15               | <=1                         |

- After Ultrafiltration and Chlorination the outlet parameters of the designed plant are as follows:

| Sl.No | Final outlet parameters   | Outlet parameters norms |
|-------|---------------------------|-------------------------|
| 1     | Turbidity                 | <=0.2                   |
| 2     | TSS                       | nil                     |
| 3     | Fecal Coliform MPN/100 ml | nil                     |

- The proposed Modular sewage treatment in based on Moving Bed Bio Reactor (MBBR) technology followed by Ultra Filtration.
- At present 42.81% of works has been completed at site. Civil works and Mechanical supplies under progress. The plant will be completed and commissioned for usage on 31.08.2022.
- The final treated water after tertiary treatment using Ultrafiltration will be supplied to GSN Railway Yard and Greater Chennai Corporation for reuse.