

WHILE CAPACITY OF THE SEWAGE TREATMENT PLANT IS 180 MLD, IT ONLY OPERATES AT 130 MLD

VRISHABHAVATI STP INEFFICIENT: STUDY



DESIGNED CAPACITY
180 MLD (secondary), of which 60 MLD is taken for tertiary treatment

COST OF PROJECT
Rs. 49.95 crore; Rs. 2.62 crore annual operating cost

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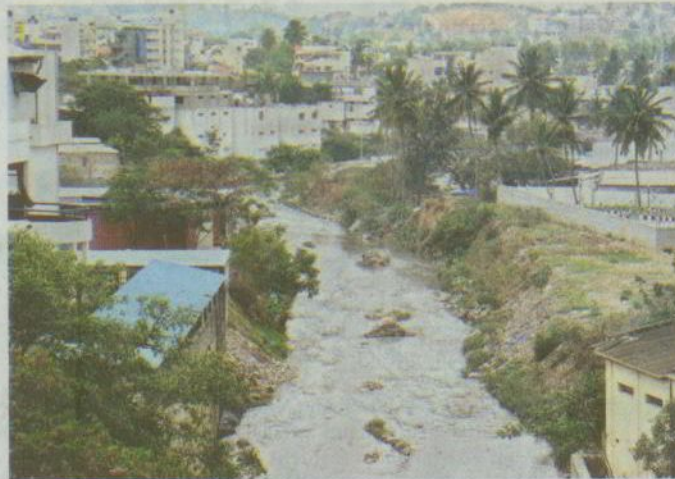
A trip to Mysuru from the city usually starts off with a strong whiff of the stench of the Vrishabhavati that is putrid, blackish and sluggish. Efforts to prevent sewage inflow into the river have gone down the drain.

An analysis of the sewage treatment plant (STP) at Vrishabhavati, which is the oldest STP in the city, by researchers at Ashoka Trust for Research in Ecology and the Environment (ATREE) points to bad planning and inherent inefficiency of the plant for the continuing discharge of sludge into the once-thriving stream.

'Contribution of sewage treatment to pollution abatement of urban streams', published recently in the journal Current Science, shows that even though the installed capacity of the plant is much lower than total sewage generated, the existing plant is underutilised and functions below "acceptable levels" of efficiency.

While the capacity of the STP is 180 million litres per day (MLD), the plant only operates at 130 MLD. And even in this, just 26 MLD is raw sewage while the rest is taken from the Vrishabhavati itself.

Raw sewage has



Efforts to prevent sewage inflow into the Vrishabhavati have gone down the drain. — PHOTOS: K. MURALI KUMAR

high biological oxygen demand (BOD) due to the high organic content, which provides food for the microbes of the plant. However, the mixing of nearly 104 MLD of river water, into which non-biodegradable industrial waste is dumped, results in the STP struggling to filter out waste from its outflow.

The result is that BOD is lowered by just 47 per cent, making the outflow reeking of organic waste and unsuitable for aquatic life. Similarly, chemical oxygen demand (COD) to BOD ratio is variably high, suggesting that industrial waste has not been filtered out. The plant does not seem to have had any impact

on the pH (that measures acidity/alkalinity of the river), dissolved oxygen, total suspended solids, nitrates, faecal coliforms, and faecal streptococcus (depicting levels of organic material) after treatment.

Moreover, with an estimated 104 tonnes of organic waste that flows in the stream daily, the STP captures just 7.5 tonnes of sludge a day, says the study.

REALITY

- Plant treats only 130 MLD
- Of this, only 26 MLD is raw sewage taken from sewerage networks
- Rest 104 MLD is lifted from the Vrishabhavati
- Only 15 MLD of secondary-treated water reached tertiary levels
- 3 MLD used by neighbouring industries, rest discharged into the stream
- Effluent has high biological oxygen demand, high chemical oxygen demand, organic matter and low dissolved oxygen, making it unsuitable for use or aquatic life

VRISHABHAVATI RIVER

Catchment area:
78 sq. km in Bengaluru

River joins the Arkavati and then the Cauvery

Category E – or worst in rankings – polluted stream

SEWAGE TREATMENT PLANT IS 14 KM FROM THE ORIGIN OF THE RIVER

BENGALURU'S SEWAGE PROBLEM

■ City will generate **1,320 MLD** of sewage by 2021

■ Treatment capacity currently: **721 MLD**

BENGALURU



ILLUSTRATION: M. ARIVARASU

The plant is designed to handle raw sewage and for treating the river itself. Eventually, it neither treats sewage nor cleans the river.
—PRIYANKA JAMWAL, lead researcher in the study

Byramangala (downstream of Vrishabhavati) is covered with froth throughout the year as untreated chemicals from detergents and cleaners accumulate at the spot.
—S. VISHWANATH, water conservationist

