**PROJECT BRIEF**

Panchavati – The Pavilion, is a contemporary space on Kanakapura Road, Bangalore. Spread across 20,000 m², nature and modern architecture have come together to produce a multifaceted venue that can host nearly 2,000 guests. Semi-open pavilions, open-air courtyards and an amphitheatre, surrounded by trees, beautiful landscaped lawns and paved boulevards leading to tranquil waters, make Panchavati a private and understated, yet exquisite location for the Big Fat Indian Wedding, cultural performances, corporate functions and unique product launches.

**PROJECT OUTCOMES**

- Efficient management of wastewater, which is collected from the functions, leading to a prevention of contamination of the environment.
- Research/Demonstration unit for Karnataka Pollution Control Board (KPCB) and CDD Society showcasing DEWATS.

**SYSTEM IN BRIEF**

The wastewater streams are conveyed from the wedding hall, kitchen, dining hall and toilet blocks; and are collected in a common register near the treatment system and conveyed for treatment. Wastewater from the kitchen is made to pass through a grease trap before connecting to a common register. This system also has Balancing Tank to regulate the wastewater inflow to the system

1. **Settler**: is a sedimentation tank for retaining articles by settling over a specific time frame.
2. **Integrated Aerobic Baffle Reactor with filters**: ensures anaerobic degradation of suspended and dissolved solids by mixing fresh wastewater with an active sludge blanket
3. **Planted Gravel Filter**: is used as tertiary treatment unit to reduce the nutrients
4. **Pressure Sand Carbon Filter**: is used as an advance treatment unit.

**SALIENT FEATURES**

- **Source**: Kitchen, Toilets and Wash Area
- **Design Capacity**: 60 m³/day
- **No of users**: 2,364
- **Peak flow**: 5
- **Influent quality**: BOD 300mg/l, COD 900mg/l
- **Effluent Quality**: BOD : 10mg/l, COD : 49 mg/l

**PROJECT SPECIFICATIONS**:

- **Funding Agency**: Avani Leisure
- **Implementing Agency**: CDD Society
- **Construction Period**: 2 months
- **Construction Cost**: Rs. 50 lakhs
- **Year of Commissioning**: 2017

**MODULES ADOPTED**

- **Settler**
  - Volume: 59.40 m³
  - Area of construction: 26.03 m²
- **Balancing Tank**
  - Volume: 41.64 m³
  - Area of construction: 26.03 m²
- **Anaerobic Baffle reactor**
  - Volume: 55.44 m³
  - Area of construction: 39.47 m²
  - No. of chambers: 6
- **Anaerobic Filter**
  - Volume: 16.63 m³
  - Area of construction: 30.76 m²
  - No. of chambers: 4
- **Planted Gravel Filter**
  - Area of implementation: 231.53 m²
  - Plants used: Canna Indica, Cyperus Papyrus
- **Built up area**: 353.82 m²
OPERATION AND MAINTENANCE

The wastewater treatment plant is operated and maintained by an operator.

Regular maintenance:
- Wastewater flow checking in all units and clearing the blockages in all chambers (registers).
- Regular operation of pumping of wastewater from Balancing tank and also for reuse purpose is needed.

Periodical maintenance:
- Removal of sludge in settler and baffle reactor chambers once in two to three years.
- Replacement of filter media should be done in once in five years in the filter chambers.
- Trimming of plants in the Planted Gravel Filter should be done when the plants are overgrown.

REUSE OPTIONS
- The treated wastewater is being used for gardening and irrigation.

LEARNINGS:
Optimization and improvising the system’s design to suit the irregular patterns of water usage in the community hall.

PERFORMANCE OF DEWATS

<table>
<thead>
<tr>
<th>Sample points</th>
<th>COD mg/l</th>
<th>BOD mg/l</th>
<th>TSS mg/l</th>
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<td>Date of sampling 23/01/18</td>
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<tr>
<td>Settler out</td>
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<td>161</td>
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<tr>
<td>Integrated ABR &amp; AF out</td>
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<tr>
<td>Planted gravel filter out</td>
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<tr>
<td>Sand and carbon filter out</td>
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<td>&lt;5</td>
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