

## Water Conservation, Harvesting and Re-cycling:

**Sewage Water** from the Institute, mess, hostels, quarters and the entire campus flows through an inlet pipe into the large machine, the RMBR (Rotating Media Bioreactor), inside the STP, where oxidation takes place. The outlet of the RMBR connects to an outside tank, where it is treated with alum and stored for what is called the **Primary Treatment**.

When the sedimentation of the wastes takes place after a certain period, the supernatant is carefully removed by pipe to **Secondary Treatment chamber**, which is a double chamber attached by pipes only. The bottom sediments of the sewage from the primary treatment chamber are removed by a motor separately and dried under the sun in a sludge trolley, for drying. The effluent from the secondary treatment chambers are passed through the sand chamber followed by carbon (charcoal) chamber to the Ozonator, where it is processed and sent to **Tertiary Treatment chamber** through a pipe, from where, the water is released to a soil-bottomed reservoir, from where, the treated water percolates into soil and finally reach creek and river. After drying the sludge is converted to manure soil, which is stored in sacks behind the STP and given to farmers and gardeners. Chlorinated water is sprinkled by the workers in and around the area of STP.



Fig 1: Sewage Treatment Plant at IIT Mandi

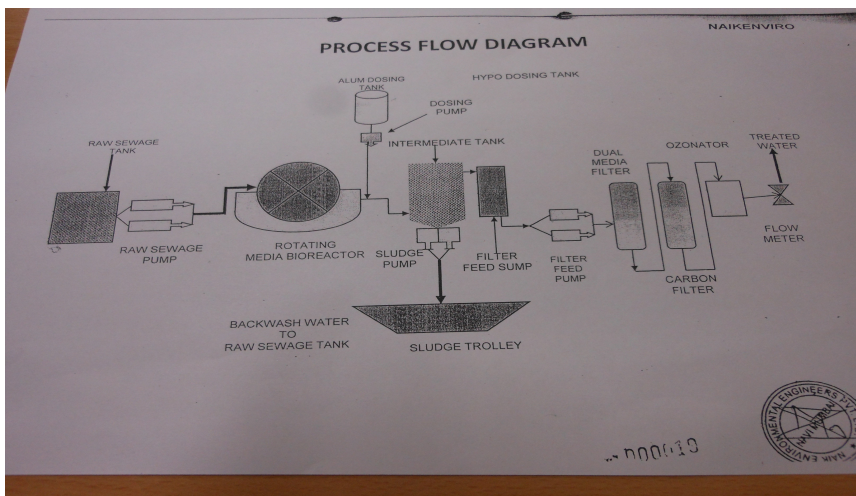


Fig 2: Sewage Treatment Plant – Process Flow Diagram