

RAIPUR INSTITUTE OF TECHNOLOGY

(Under the aegis of Mahanadi Education Society)

Approved by AICTE, New Delhi, Affiliated to CSVTU, Bhilai



7.1.4 Water conservation facilities available in the Institution:

1. Rain water harvesting
2. Borewell /Open well recharge
3. Construction of tanks and bunds
4. Waste water recycling
5. Maintenance of water bodies and distribution system in the campus

Response: A. 4 or All of the above


PRINCIPAL
RAIPUR INSTITUTE OF TECHNOLOGY
CHHATAUNA, MANDIRHASAUD, RAIPUR (C.G.)

Campus: NH-6, Chhatauna, Mandir Hasaud, Raipur (C.G.) - 492101 Ph.9522173000, 9522174000 Website: www.ritengineering.education E-mail: principal.eng@rit.edu.in, H.O: Near Bal Ashram, Kutchery Chowk, Jail Road, Raipur 492001 Chhattisgarh, Ph.:0771- 9522292121, 4036053

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19-06-2023

To Whom So Ever It May Concern

This is to confirm that the Institution uses the water conservation facilities such as rain water harvesting, open well recharge, overhead tanks, waste water recycling and distribution system in the campus.

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WATER CONSERVATION POLICY

Water scarcity is the biggest challenge for both rural and urban committee in India, the prospect of climatic change adds to the difficulty of planning sustainable water supply systems, accounting the increasing uncertainty about future supply and demand for water and of predicted reductions in water availability.

The basic use of water in the institution is in the washrooms, kitchen, laboratories and cleaning purpose. The primary goal of RIT is to reduce wastage of water, efficiently conserve water, retain groundwater and ensure recycling of sewage and rain water. The policy comes with effect from January 1 2021.

Policies:

- Construction of overhead tanks for storage of water to minimize water scarcity.
- Reducing water wastage in the campus by repairing leaky pipes on time and closing the taps properly after usage.
- To have well defined infrastructures for collecting rain water.
- Deployment of signboards at appropriate location in the campus for creating awareness to save water.
- Students and staff play a major role in water sustainability strategy.

Goals and Plans:

- All existing buildings to be used for water conservation and rainwater harvesting.
- Establish a sustainable balance between demand, management and maintenance of efficient water infrastructure.
- Establish waste water treatment technologies.
- Water conservation education and create awareness among all the students and staff members.

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Maintenance of water body open well / bore well

The institution makes use of open well to meet its water requirements. Maintenance of water is meticulously planned with no leaky pipes and stagnation of water. The water is taken from larger tanks & stored in syntax tanks and distributed to required places.

Filtered Water is used for drinking purpose and in canteen, Laboratory and various purposes.

Well water purifying process: Dissolve the required amount of chlorine powder (9 mg/l) in a bucket of water before adding it to the water to be disinfected. Pour the bucket of chlorine solution into the water to be disinfected.

Let the chlorinated water stand in the plumbing system for 12 to 24 hours & wait at least 12 hours before turning faucets back on.

The technique used to store rain water by making the underground water resource. It can be one method that can be used to conserve water.

Benefit of rain water harvesting

Rain water is more effective for plants and trees because of rain water contain more oxygen. When this water reaches to soil it helps to release manganese, copper, zinc and iron like micronutrients which are essential to plant growth.


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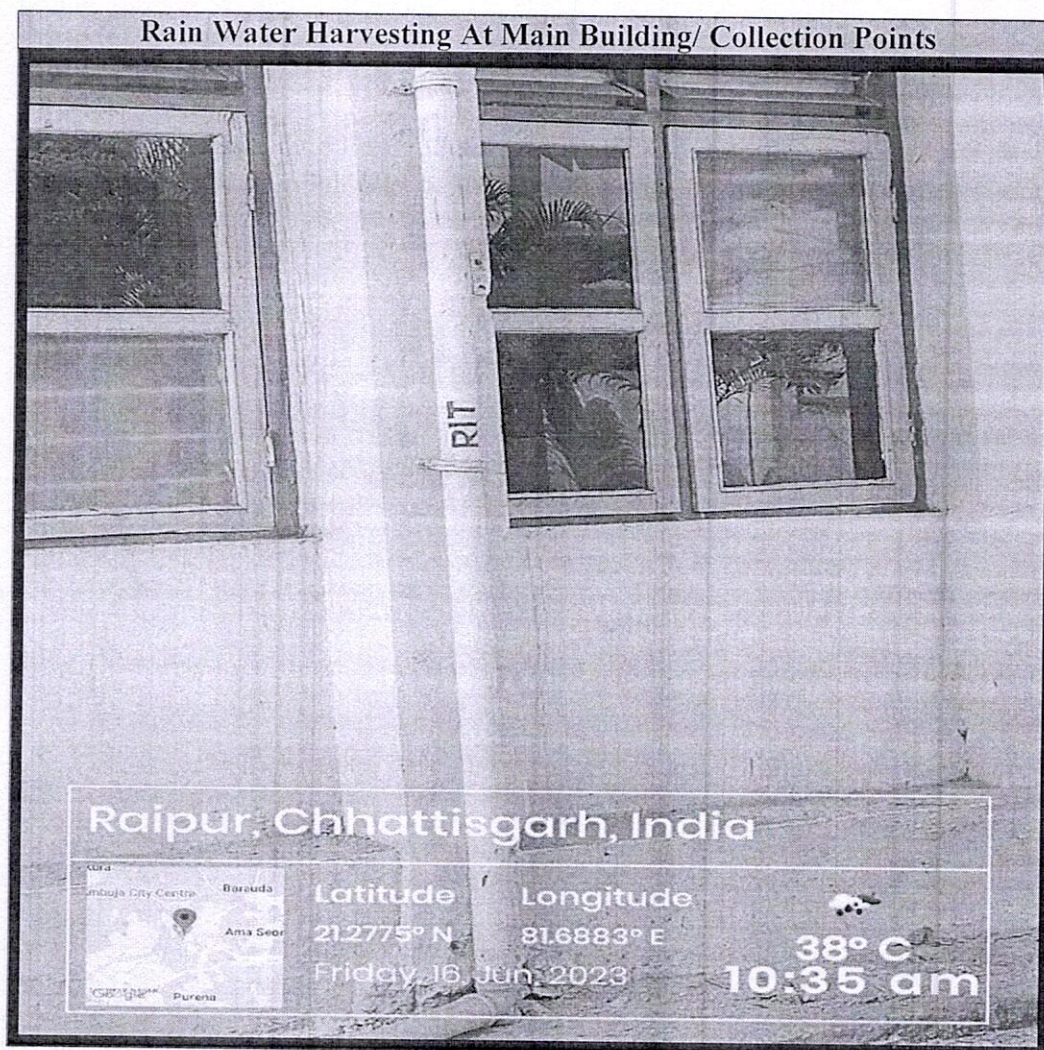
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RAIN WATER HARVESTING

Rainwater harvesting system has been installed in the college campus right from its inception. The water from rooftops and floors is collected through down pipes and discharged in the ground as well as in recharge pits near borewell through pipe lines in the campus.



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BOREWELL/OPEN WELL RECHARGE AND TANK

The rainwater from rooftops is collected through down pipes and discharged in recharge pits near bore well through pipe lines in the campus.



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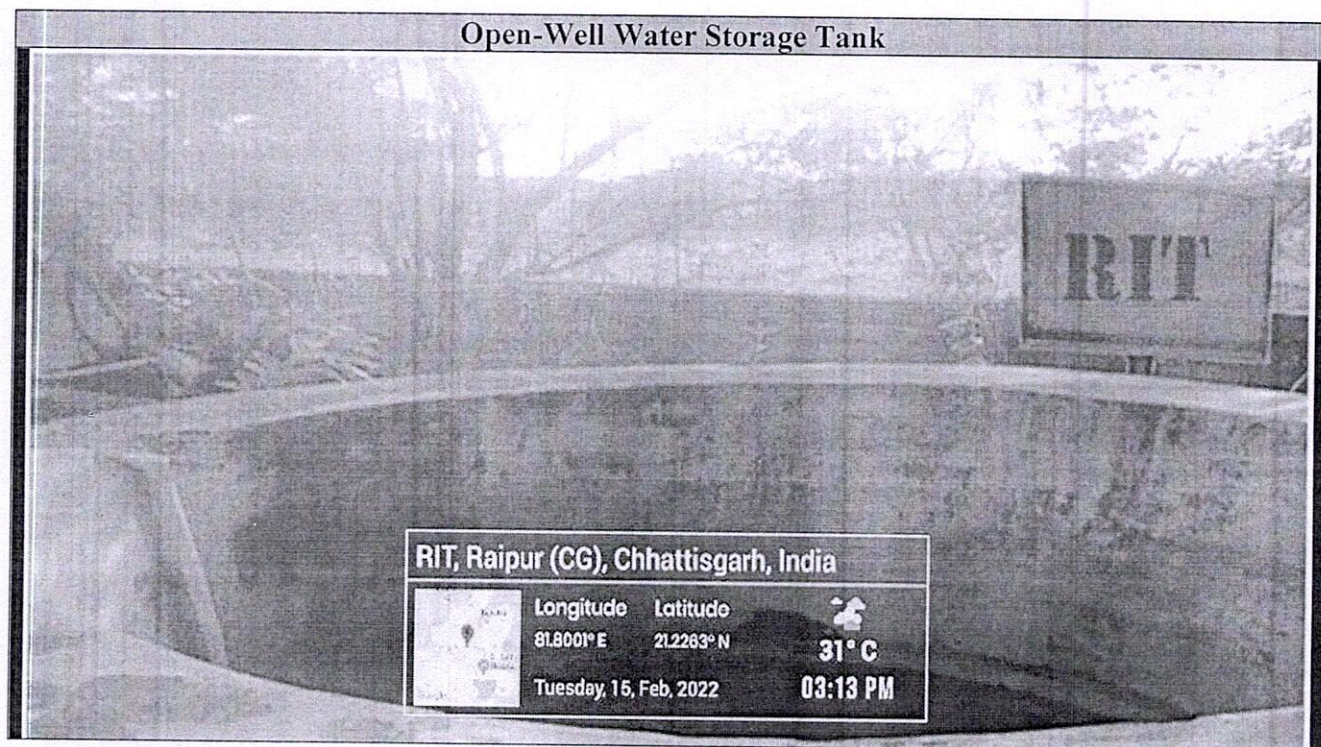
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The college campus depends on the ground water for all its water needs. An open well located in the campus is recharged by rainwater. The capacity of open well is 70420 L.

Open-Well Water Storage Tank



RIT, Raipur (CG), Chhattisgarh, India



Longitude
81.8001° E

Latitude
21.2263° N

31° C

Tuesday, 15, Feb, 2022

03:13 PM

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TANKS

The water from the bore well is stored in the overhead water tanks. The water is distributed to the entire campus from these overhead water tanks. The water from the overhead tanks is distributed to various sections of the college campus like washroom, kitchen, labs etc. through these connecting pipes. The capacity of the overhead tank is 10500 L.



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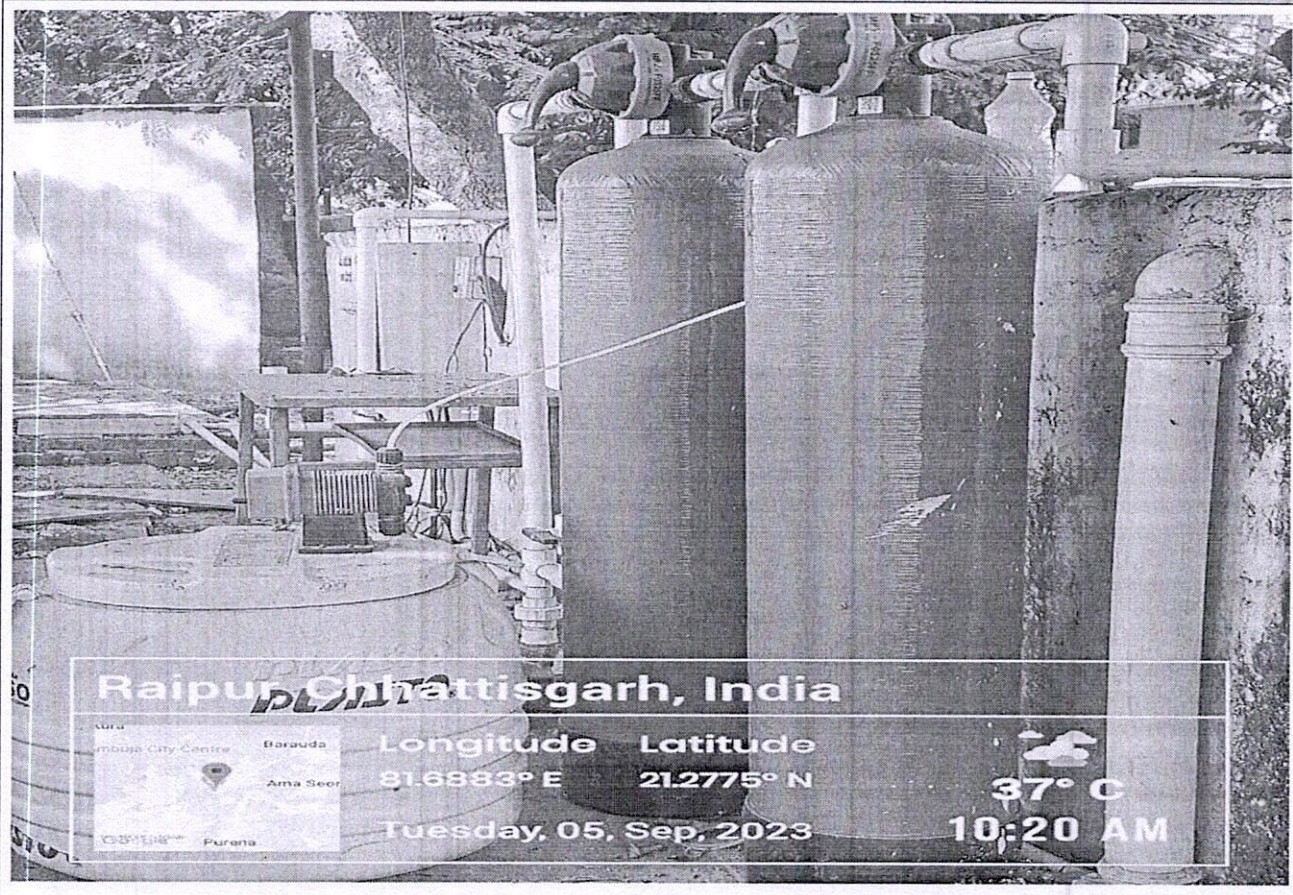
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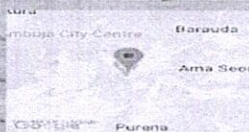
WASTEWATER RECYCLING

A sewage treatment plant operates by circulating air to encourage the growth of bacteria to break down sewage. The goal is to deliver much cleaner, more environmentally friendly effluent. It involves a similar process to a typical septic tank but has some key differences. Sewage treatment plants, depending on their size, can treat the waste of commercial properties or a number of domestic dwellings.

Wastewater Recycling



Raipur, Chhattisgarh, India



Longitude Latitude
81.6883° E 21.2775° N

Tuesday, 05, Sep, 2023

37° C

10:20 AM

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WATER DISTRIBUTION SYSTEM

1. **Rainwater Harvesting:** The rainwater harvesting and wastewater drain is made up of 3 feet concrete rings laid for a depth of 10 feet a bore is laid up to the recharge zone as per the government guidelines.
2. **Borewell:** A bore hole is a narrow shaft bored in the ground, either vertically or horizontally. A bore hole maybe constructed for the extraction of water.
3. **Underground Water Sump:** A sump is usually used for large water tank storage and can be built economically using cement like materials. It is usually part of a rainwater harvesting system, where the rainwater gets channeled into the tank from bore, when pumped out for use.
4. **Overhead Tank:** A water tank is a container for storing water and distribution through gravity flow. Water tanks are used to provide storage of water for use in many applications like drinking water.
5. **Water Distribution Network:** The WHO uses the term water transmission system for a network of pipes, generally in a tree like structure, that is used to convey water from water treatment plants to service reservoirs, and uses the term water distribution system for a network of pipes that generally supplies water from the service reservoirs to balancing reservoirs to consumers.
6. **Septic Tank:** A septic tank is an underground chamber made of concrete through which domestic wastewater (sewage) flows for basic treatment. Settling and anaerobic processes reduce solids and organics, but the treatment efficiency is only moderate (referred to as "Primary Treatment").

