



AMITY UNIVERSITY

HARYANA

(Accredited with Grade 'A' by NAAC)

Report On

Sustainable Development Goal



SDG 6: Clean Water and Sanitation

Year 2021



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WATER CONSUMPTION

Amity University Haryana uses underground bore wells to extract all of the water needed for domestic and drinking purposes on its campus. For flushing, gardening, chiller plant cooling towers, and civil construction projects, recycled water is employed.

Daily records of submersible pump operation are kept. Total groundwater extraction is gathered in subterranean water tanks (6 tanks of 50000 Liter capacity each). About 3 Lac litres of water are retrieved everyday while the university is operating at full capacity. At the moment, there are no water metres installed at the underground sump's inlets (installation of water metres are under process).

Approximately 4 lakh gallons of water are used each day in the university. The necessary water is drawn from the previously mentioned bore wells. The overhead tanks are equipped with sensors, which detect when the water is used and automatically refill them with bore-well water so that there is always access to water.

There are about 6000 people who are utilizing the water resources on campus, including staff, faculty, housekeepers, and students.

WASTEWATER TREATMENT: A PROCESS IN PLACE TO TREAT WASTEWATER

To treat waste water, Amity University Haryana now has two operating sewage treatment plants (STP) and two operational effluent treatment plants (ETP). Both STPs have a combined daily capacity of 9 Lac litres, while the ETP has a daily capacity of 50,000 litres. Flushing, gardening, cooling tower maintenance, and civil building all make use of reclaimed water.



ETP



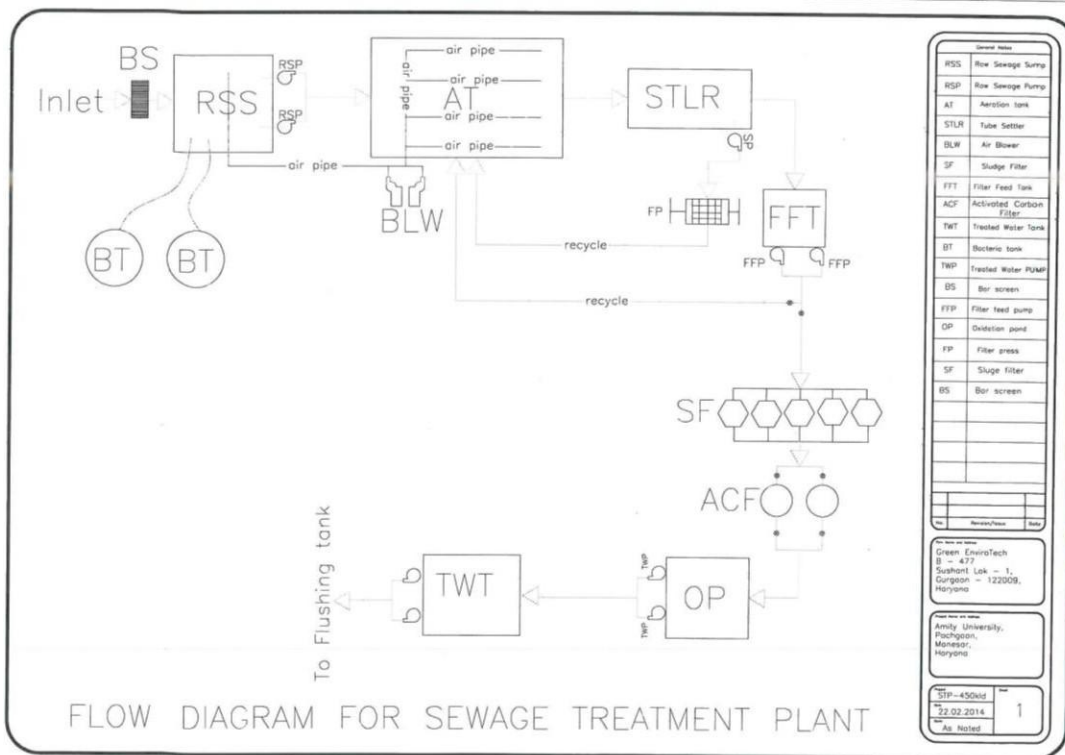
ETP Laundry



Pump Room



Oxidation Pond



PREVENTING WATER SYSTEM POLLUTION

To prevent contaminated water from entering the water system, Amity University Haryana has implemented the necessary preventative measures.

The procedures listed below are used on our campus to prevent water pollution.

1. Regular cleaning of all buildings' overhead water tanks and water coolers.
2. To prevent any potential water system contamination, all above water tank covers are correctly closed and latched.

3. Minimizing the amount of chemicals used to clean water tanks.
4. Locals were warned against pouring fat and grease down the drain. Residents advised to use phosphate free detergent and dish-cleaner.
5. Proper medical waste disposal is being done at AUH.
6. Residents are informed not to flush anything down the toilet.
7. AUH employs organic farming methods and refrains from using pesticides and herbicides.
8. All effluents are sent to ETP including waste from the kitchen, laundry, and labs.
9. Sewage treatment and effluent treatment plants recycle all waste water. To guarantee the use of safe water, daily process control and periodic quality tests are performed.
10. Daily in-house RO treated water quality testing (pH, TDS & physical testing) is done. Important parameters go through quality testing twice a year from test labs that have been approved by NABL.
11. CPVC pipe lines are used to prevent the bacterial growth in drinking water (Coliform, E- coli).
12. To avoid leaks or other damages, regular inspection of water pipe lines is conducted.
13. Various measures such as awareness camps, seminars, workshops and street plays are conducted on regular basis to promote a pollution-free campus.



STP Plant at Amity University Haryana



RO Plant



Drinking Water Facility

FREE DRINKING WATER PROVIDED

AUH makes a special effort to provide students, staff, and visitors with free access to safe, clean drinking water. At the campus, there are 47 water coolers spread across the dorms, academic blocks (A, B, C, and D), AIMC, and other sites. The specifics of the location of water coolers are annexed.

WATER-CONSCIOUS BUILDING STANDARDS

Rain water harvesting is absolutely adopted at AUH. There is no water discharged outside of the AUH Campus, making it a zero-water discharge campus. Every drop of used water is recycled, cleaned, and reused for toilet flushing and other horticulture purposes. Groundwater and water supplied from government plants is preserved for drinking. Every year STPs, RO water plants, and effluent treatment plants are audited. Following measures are taken by the university to promote water efficiency and conservation.

1. Encourage water-saving techniques among all stakeholders.
2. Keep an eye on and reduce water usage.
3. Native plants are planted to conserve water.
4. Encourage the planting of native trees near the university to cut down use of water.
5. Evaluate potential locations on campus where alternative water systems could be installed on a regular basis.
6. Continue to use innovative water-saving technologies like reusing water and rainwater harvesting.

Throughout the aforementioned interventions, the campus continues to support student, faculty, and staff initiatives to establish sustainable water usage systems. Additionally, the National Building Standard Code 2005–2016's building standards to minimize water use is utilized.

Amity University Haryana protects the environment by using water sparingly in its plant landscaping. On campus, there are 28 different varieties of water-wise plants and trees, which

reduce water consumption. There are over a thousand different types of plants and trees.

Amity University Haryana (AUH) is dedicated to making sure that water is utilised as wisely as possible and reused as much as possible to lessen the burden on the water sources on campus. Based on the anticipated demand, we have set up sufficient water treatment plants to accomplish the same.

Water-saving techniques adopted at AUH campus:

Water is continuously available for drinking and other uses round-the-clock. This stops homeowners from unnecessary water storage in case of a water crisis.

To minimize dependence on a single source of water, Amity University uses water from a variety of sources, including wells, bore wells, rainwater, recycled water, etc.

To encourage rainwater collection all units, including academic buildings, dorm buildings, faculty/staff housing, and the military training complex, are designed to aid-in groundwater recharge.

The storm water that accumulates on the paved and unpaved surfaces is channelized to numerous rain pits that are structured for the purpose. This minimizes water logging and water wastage at the same time.

Leaks are immediately corrected and routine maintenance is carried out to stop water loss. To provide laundry services for residents as well as workers in order to conserve water. Laundry services are provided to residents as well as workers to promote water conservation. The waste water from here is recycled for further uses. Similarly utensils from canteens and mess are cleaned in proper batches.

Students at AUH are advised to use water wisely during brushing, shaving, bathing etc. through awareness programmes and posters.

In order to prevent overflow, water tanks have been automated (sensor based), with 24 hour monitoring of water levels (high/low) and pump ON/OFF.



WATER IN THE COMMUNITY

Amity Centre of Nanotechnology, Amity University Haryana has been awarded a high societal project to rejuvenate a waste water pond at nearby village named Bilaspur in Haryana. The project has been carried out using nanotechnology and then it is transferred into a fresh water pond. The project is funded by Gurujal an undertaking of Ministry of Jal Shakti, Government of India. Firstly, the cleaning of pond was done for 100 KLD MBBR (Moving Bed Biofilm Reactor) technique along with Ferrite based nanoparticles as heavy metal adsorbents. The pond is currently being revived. Once the project will be completed the ecosystem of the area will be enhanced by improving and impacting the lives of more than 10,000 villagers. Based on invention for waste water treatment two patents have been filed and three research articles have been published.

The project offers the following benefits to the society:

- Rejuvenation of the local water body into fresh water pond.
- Enhanced Cleanliness and hygiene.
- Availability of consumable water.
- Solar green energy is being used to run the plant



ARRANGEMENT OF STP

