



गेल (इंडिया) लिमिटेड



GAIL Rainwater Harvesting Initiatives

November 2020



Water Management at GAIL

Water is an essential commodity. We, at GAIL, understands the effect of the scarcity of water in our society. Hence, over these years, we have set-up systems and explored technological advancements that are having a quantifiable impact on conserving water through innovation.

We are mindful of the way we utilize water during our operations. We have pledged to use natural resources effectively and efficiently. With this in mind, we are encouraging innovative approaches to conserve water at our sites through various water conservation initiatives such as rainwater harvesting, fresh-water consumption minimization, monitoring and management of waste-water discharge, wastewater treatment and recycling based on our Sustainability policy, national, local, and regional guidelines. GAIL is committed towards objectives of National Water Mission. Water conservation awareness workshops were also organized at GAIL sites regularly.

All GAIL sites have rain water harvesting structures. GAIL is committed to utilize its maximum rainwater harvesting potential. Sites have been instructed to enhance their rainwater harvesting area including full utilization of rooftop available area. To monitor the adoption of the rainwater harvesting a corporate level monitoring is being done. Further, cleanliness is also ensured for rainwater harvesting structures, water pipes and water channels. Encroachments were also removed regularly from water channels. Desilting of water tanks is a standard practice at GAIL.

We have collated 1 lakh square meter area and 161 number of rainwater harvesting structures. This number will be increased significantly in the future as many GAIL sites have planned increasing artificial recharging for rainwater harvesting in next financial year. Additionally, we have also started enhancement of data capturing of rainwater harvesting initiatives through digitization.

Rain Water Harvesting Management Initiatives at GAIL Sites

GAIL Pata Plant Complex

- There are 22 Number of Rooftop Rain Water Harvesting Structures at GAIL Pata of over 34000 square meter area.
- There is 1 No. Ecological Pond where rain water gets collected and serves as natural ground water recharging pond
- Laying of treated wastewater pipeline network for horticulture purpose was completed for 6 km.
- Bore wells were revived at site.
- Rainwater harvesting systems are put in place at major buildings of GAIL Pata

GAIL Pata Gaon Township premises

- There are 7 Nos. of Rooftop Rain Water Harvesting Structures at GAIL Gaon Township.

- In addition to the above, rain water collected In Storm Water Network in Phase-3 of the Township is diverted to the eco-ponds which serve as natural ground water recharging ponds.

Bengaluru (PL)

- *Kolhapur*-35,000 Litre capacity Rain Water Storage Tank and 2 Nos Rain Water Harvesting Pits Interconnected with Storm Water Drain
- *Belgaum*- Total 8 Nos Rain Water Harvesting Pits Interconnected with Storm Water Drain
- *GOA* -50,000 Litre capacity Rain Water Storage Tank and 2 Nos Rain Water Harvesting Pits Interconnected with Storm Water Drain
- *Hubli*- Total 10 Nos Rain Water Harvesting Pits Interconnected with Storm Water
- *Chitradurga*- Total 10 Nos Rain Water Harvesting Pits Interconnected with Storm Water Drain
- *Bidadi*- Total 4 Nos Rain Water Harvesting Pits Interconnected with Storm Water Drain
- *Singasandra*-Total 2 Nos Rain Water Harvesting Pits Interconnected with Storm Water Drain

Vijaipur

- Through innovative ideas, we have managed to conserve a significant amount of water. By diverting the ETP water, stormwater and drain water at the site to the lawns of SS – 12 in the C2/C3 plant area, we have successfully saved around 100,000 L/day. To supply water for irrigation of lawn area near SS-12, one pump of 20 HP has been commissioned for draining stormwater.
- At Vijaipur plant, ETP water, DM Plant water, stormwater and drain water header of 4” to 6” diameter GI/MS pipe is under development. Sites/plants such as MCR building, parka area at C2/C3 plant area can access the header.
- New areas of development such as N2 plant, DM plant, and other open plots will not receive access to this header. It is estimated that a cost-saving of INR 50 lakh including a freshwater saving of 300,000 Liter/day can be achieved through this initiative.

Mansarampura

- Total 06 Nos. RWH pit with interconnecting filter pits with storm drains
- Additional 04-05 RWH to be constructed in SV stations in future to cater approx. 5000 sqm area of Sectionalising Valve (SV) stations
- Augmentation of Rainwater system resulted in increased groundwater recharge with approximately 9,666 cubic meters being charged in the ground per year. The reported expenditure for this initiative is INR 2.4 lakh.
- Rainwater harvesting project at all SVs under IPS Mansarampura is under progress

Vizag

- A drip irrigation system project was taken up by GAIL Vizag Civil Department for the entire green-belt of DT-Vizag.
- To replace the old water network at DT-Vizag which had underground leakages, a new HDPE pipeline was laid.

- A damaged pipeline at DT-Vizag was replaced by a new HDPE pipeline municipality tank. A total of INR 3,479,868 was spent on this initiative.

Dibiyapur

- Water meters have been installed for regular monitoring of water consumption
- Rainwater harvesting project at Dibiyapur compressor will be undertaken during FY 2020-21
- Renovation of the sewage treatment plant is under progress at GAIL Vihar colony

Gandhar

- Water sprinkler system for horticulture management was installed, the awarded cost of which is INR 36.93 lakh. The sprinkler system will help optimize the use of water consumption and will also enhance wastewater utilization capacity.
- GAIL Gandhar has also created a rainwater harvesting pond within the premises for the collection of natural run-offs and recharging of groundwater.
- Constructed structure for collection and ground water recharge is available.

Vaghodia

- 2 Nos (ground water recharge available from water collected in ponds near Fire training ground and Eco pond). 1 (Proposed for harvesting rainwater/Ground water recharge collected on rooftop of ADM 2 and ADM -1 building)

Abu road

- 18 Nos. System for collecting Rain Water from the Roof of SV Building is available through an open drain up to new Rain Water Harvesting Pit measuring
- The initiative has been taken for the installation of level indicator and valves with auto close to reducing the wastage of water from the overhead tank of buildings
- Rainwater harvesting has been implemented at all remote stations under Abu road jurisdiction

Chhainsa

- Total 7 nos rain water harvesting pits interconnected with storm water drain a newly constructed waterbody of approx 30000 m3 capacity for collecting all storm water flowing in drains and helping in ground water recharge.
- 3 nos additional rain water pits can be constructed (near watch tower no 2, in open lawns behind administrative building) approx area for collecting surface runoff-9000 sq meters
- The Rain water pits will be completed by March 2021.To optimise water consumption, the rainwater harvesting pits were renovated to increase water penetration. Micro-irrigation system has been made the functional and additional deployment of micro-irrigation systems are also planned. Sensor-based taps have been installed to reduce water wastage in bathrooms and kitchens. There is currently zero water discharge from the plant as water discharged is being used for irrigation.

Khera

- Total 62 nos of Rainwater Measure exist. To optimize water consumption, a rainwater harvesting project was completed at Khera Compressor station and colony
- Rainwater Harvesting area details
- Workshop building – 1280 m² and canteen building- 150 m²
- Transit accommodation-120 m²
- Pipeline office -300 m²

Jhabua

- Total 12 nos of Rainwater Measure exist in the Jhabua Region. The system capture rainwater by directing it from Control Room Building/Office Building (e.g. roofs) to an underground holding pit measuring approx. 3.0 m x 2.0 m.
- Additional two more Rainwater Measure envisaged for next FY and identification of potential area for setting up of RWH system shall be done with the help of experts. Rainwater measure and hiring of experts services etc will be proposed in next FY.

Pictures of RWH Structures of GAIL sites

GAIL Abu Road



GAIL Chhainsa



GAIL Gandhar



GAIL Vijaipur



GAIL Mansarampura



GAIL Pata



Bengaluru Pipeline Jurisdiction


