

# WATER CONSERVATION AND RAINWATER HARVESTING PRACTICES



## JAMSHEDPUR UTILITIES SERVICES COMPANY LIMITED

Jamshedpur Utilities & Services Co. LTD. (The erstwhile Town Division of Tata Steel) is the only EMS 14001 certified civic service provider in the country. The area of operation is spread over 14000 acres approximately, while the ability & the infrastructure to service a vast and varied customer base of Jamshedpur Township. Jamshedpur is being recognized as a model town, not just in India, but globally. Jamshedpur has been selected as one of the cities for Global Compact Cities Pilot Programme by United Nations, the only one to be selected in South -East Asia.

**“Water is a strange natural resource.**

**It can unite a community as easily as it can divide it.”**

Water is considered the most miraculous, holy, supernatural and divine, that it has been given the name “Thirtha”. The presence and absence of water clearly determine the culture and growth of a community. With the growth of economy and subsequent upgradation of the very pattern of life, there is an increasing demand for water from different sectors.

Rain is one of the main sources of fresh water. Though India gets a high amount of rainfall, with an annual average of about 1100 mm, it is not evenly spread across the year. Most of the time, even in a year of normal rainfall, the country faces drought. It is unfortunate that we have to face the fury of the flood and the vagaries of drought year after year, in spite of the fact that India is a water rich country as per the record.

The issue of water conservation is an area of growing concern in the present day scenario and JUSCO very well understand the fact that this issue cannot be tackled by an organization alone. For its effective handling we very much need the help and co-operation of the general public. With this intention in view following activities were under taken

### MASS AWARENESS PROGRAMME

- Media campaign on water conservation.
- Public exhibits.
- Quiz and science Show on water conservation in schools
- Water theme marches on World Water Day.
- Water and Environment Awareness
- Programme on World Environment Day



Fig: Water theme marches on World Water Day.

### SEMINAR AND WORKSHOPS

- Seminar on “Water Conservation- Role of Civil Society”
- Artificial recharge of Groundwater and Rooftop Rainwater Harvesting Training Programme.



Fig: Seminar on “Water Conservation- Role of Civil Society”

### WATER HARVESTING/ CONSERVATION SCHEMES

- Construction of Water Harvesting Structures
- Revival of Traditional Water Bodies
- Water Quality/Quantity Audits



Fig: GM JUSCO at the Programme on World Environment Day

Rainwater harvesting is increasingly becoming the scientific and cost effective technology to get a lasting solution to overcome the emerging water shortage. Jamshedpur Utilities and Services Company Limited (JUSCO) has taken a swift decision to look

into the possibilities of introducing the innovative systems and techniques of Rainwater harvesting at Jamshedpur.

### OBJECTIVES OF RAIN WATER HARVESTING IN JAMSHEDPUR

- Reduce potable water consumption.
- To enhance the quality and quantity of ground water
- To use rainwater in toilet and latrine flush
- To create awareness among the common public about Rainwater preservation.
- Rainwater harvesting can be made as an essential eco-friendly green model project.
- By creating storage reservoir aesthetically and architecturally can increase the scenic beauty of the

surrounding areas and create an exquisite and lovely atmosphere.



Fig: Water and Environment Awareness

### JAMSHEDPUR RAIN WATER HARVESTING PROJECTS



Fig: MD JUSCO at the Inauguration of RWH system at Sarnath pond

#### We implemented two types of RWH system:

- Recharge & reuse
- Only Recharge

#### Locations for “Recharge & reuse RWH System”

- Golf View Flat Complex

- Tata Worker's Union Office
- Beldih Lake Flat Complex
- Green Enclave Flat Complex Phase - I
- Jusco School Kadma
- Jusco School South Park

#### Locations for Only “Recharge RWH System”

- Sacred Heart School
- Sarnath Pond – A community project
- Dayanand Public School

#### Projects Under Constriction

- Aerodrome at Sonari
- Green Enclave Flat Phase - I

#### RWH System - Tata Worker's Union Office



#### Project Overview

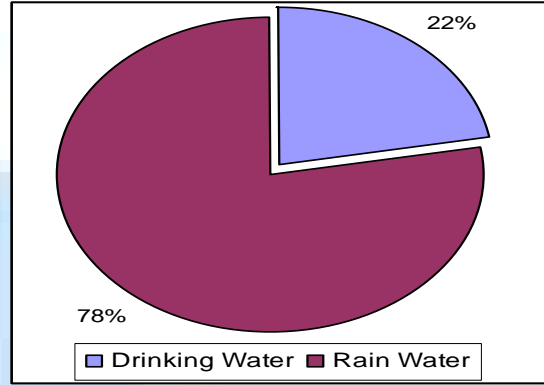
In Tata Worker’s Union office, the roof run-off is collected through down comers & ground run-off is collected through under ground collection chamber. This collection chambers & the down comers are connected with ground

recharge structures, through that we recharge ground water table. Beside that, a recovery structure is there which is connected to a deep bore well. From the recovery chamber water is pumped to the over head tank of building. Over head tanks are connected to the toilet flush tank with a dedicated line. For maintenance of garden lawn water line is also provided from these over head tanks.



**Salient Features**

- Catchments Area 4000 sq.mt
- Recharge structures 3 no.s
- Filtration Chamber 1 no.
- Recovery structure 1 no.
- Collection Chamber 13 no.
- Potable water consumption before RWH 4.8 KL/day
- Potable water consumption after RWH 3.8 KL/day
- Saving Potable water 1.1 KL/day



**RWH System - Beldih Lake Flat Complex**



**Project Overview**

In Beldih Lake Flat Complex, roof run-off is collected through down comers to the lined reservoir through a filter tank. From this reservoir water is pumped to the over head tank . This tank is completely isolated from potable water tank with a distinguish colour coding. From over head tank, rain water is supplied to the toilet flush tank of each flat. Maintenance of garden lawn & washing of car is dedicated to the rain water line only.

**Salient Features**

- Catchments Area 3718 sq.mt
- No. of flats 112 no.s
- Population 560 no.s
- Recharge structures 3 no.s
- Filtration Chamber 2 no.s
- Recovery structure 1 no.
- Collection Chamber 23 no.
- Potable water consumption before RWH 461 KL/day
- Potable water consumption after RWH 450 KL/day

