



**Dr. D. Y. Patil College of Engineering and Innovation
Varale, Talegaon, Pune 410507**

Water Conservation Initiatives



Dr. D. Y. PATIL
COLLEGE OF ENGINEERING AND
INNOVATION

CONTENTS

1.	PREFACE	03
2.	RAIN WATER HARVESTING AND GROUND WATER RECHARGING	04
3.	GRASS BLOCK PAVEMENTS FOR GROUND WATER RECHARGING.....	05
4.	DRIP IRRIGATION FOR WATER CONSERVATION.....	06

PREFACE

Water scarcity is one growing concerns of the present times, the ultimate solution for which is water conservation. Issues related to water governance have not been addressed adequately. Mismanagement of water resources has led to a critical situation in many parts of the country. In this context our institute is committed to Rain water harvesting and sustainable water management. We have taken several initiatives to conserve water such as rain water harvesting from rooftop run-offs, Efficient & Effective Water Irrigation Methods like Drip Irrigation etc.

Therefore, institute has made a policy for water conservation and sustainable maintenance of resources. To ensure this a Proper water conservation measures are adopted to increase recharge of groundwater. The College views water from the three inter-related dimensions of Efficient Conservation, Responsible Consumption and Restoring and Retaining surface and groundwater.

RAIN WATER HARVESTING AND GROUND WATER RECHARGING

Rain water harvesting is a technique of collection and storage of rainwater into natural reservoirs or tanks, or the infiltration of surface water into subsurface aquifers before it is lost as surface runoff.

Rain water harvesting system was incorporated in the architecture plan and has been installed in the college building 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 in the campus. The system ensures percolation of the rainwater into soil.



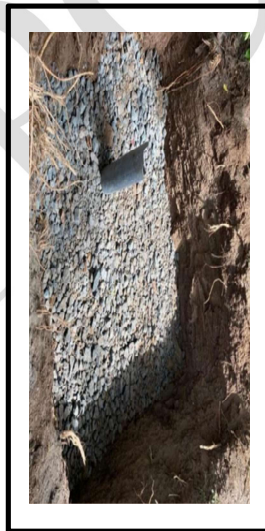
**Down Pipelines to collect and drain roof top water for ground recharging at
Dr. D. Y. Patil College of Engineering & Innovation**



Pits Connected to roof top water for ground recharging.



Material Filling in Pit



Material Filling Layers in Pit



Recharge Shaft

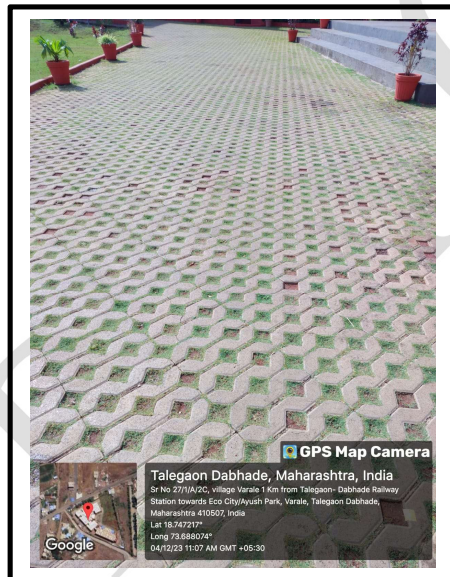
Typical Process adopted for constructing Pits.

GRASS BLOCK PAVEMENTS FOR GROUND WATER RECHARGING

The Grass Block Pavements are made of concrete with open cells that allow grass to grow through them. They're a porous and eco-friendly option for driveways. Grass block pavers reduce storm water runoff and help in infiltration of this storm water.

Functions of Grass Block Pavements:

- Grass block pavers recharge groundwater. The spots of grass allow rain to seep into the ground, putting it back into aquifers. The grass and soil in the grow-through pavers will filter out the pollutants, so the water that returns to the earth is clean.
- Porous pavers keep the air around your driveway cooler, due to the magic of transpiration from that grass.



Grass Block Pavement Walkway at Dr. D. Y. Patil College of Engineering & Innovation

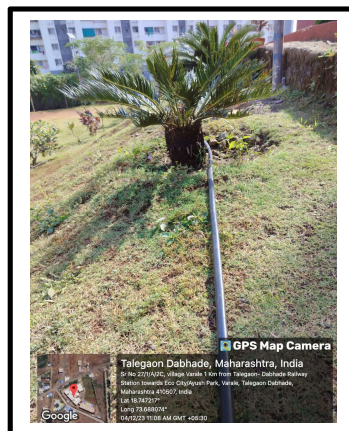
DRIP IRRIGATION FOR WATER CONSERVATION

Drip Irrigation System is adopted in entire DYPCOEI Campus for following reasons:

- It is an efficient and effective way to water plants and benefits both small and large-scale gardening.
- It conserves water by allowing it to seep slowly and directly into the roots of plants.
- Drip irrigation minimizes evaporation and runoff, both of which can waste water.
- It Helps to reduce soil erosion and runoff by delivering water slowly and evenly to the roots.



**Drip Irrigation System laid around Plantations at
Dr. D. Y. Patil College of Engineering & Innovation**



**Drip Irrigation System laid around Plantations at
Dr. D. Y. Patil College of Engineering & Innovation**