



TERNA ENGINEERING COLLEGE

**Environmental Consciousness and
Sustainability**

7.1.4 – Water conservation facilities available in the Institution:

- a. Rain water harvesting
- b. Bore well /Open well recharge
- c. Maintenance of water bodies and distribution system in the campus

a. Rain water harvesting structures and utilization in the campus:

TEC has taken sustainable initiative towards conserving water through a wide expanse of well-maintained green landscape which has been deliberately included on the campus to keep the ground porous so that rainwater can be collected through natural means to recharge the water table.

It helps in improving the quality and increasing the level of ground water. It also helps in improving the overall floral system and reduces the loss of the top layer of the soil. Rainwater harvesting practices at TEC include water table recharging.

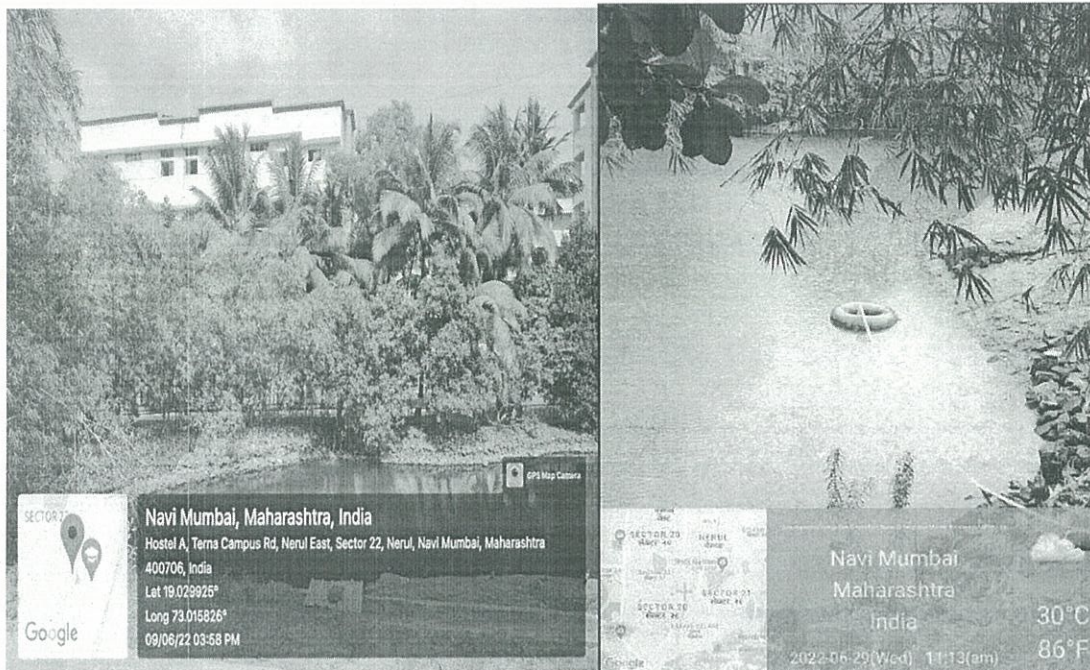



Fig. Rain water harvesting

TEC focusses on water conservation, use of push taps to reduce water wastage, use of pond water for gardening. TEC students carried out project to purify pond water by using waste water techniques. These efforts have resulted in lesser usage of the NMC water supply.




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PURIFICATION OF TEC POND WATER

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 Under the Guidance of: Prof. Ritesh Tandekar
 Class & Semester: SE & IV

Introduction

- The pond water (TEC) is basically ground water.
- It contain large amount of physical impurity
- It's used only in gardening, washing and construction work in college

Problem Statement

- Reducing the need for freshwater.
- Reusing the TEC pond Water.

Aim & Objective

AIM:

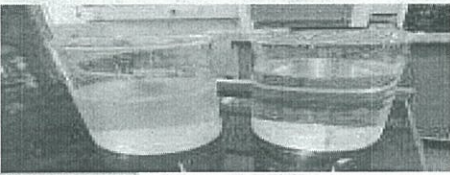
- To Purify the Pond water
- To construct an economical filter.

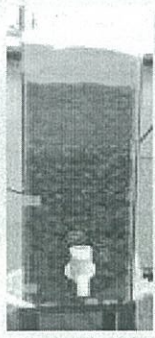
OBJECTIVE:

- To purify pond water by using waste-water techniques.
- To reuse pond water.

Methodology

- Literature Review
- Collecting pond water
- Preparing model formation.
- Calculating physical, biological, chemical impurities before filtration.
- Filtration
- Calculating physical, biological, chemical impurities after filtration.
- Comparing results
- Report writing.
- Paper Publication.





Result

TEST NAME	BEFORE FILTRATION	AFTER FILTRATION
TURBIDITY	9.2	1.8
pH	7.31	7.2
TSS	244 mg/l	108 mg/l
TDS	308 mg/l	256mg/l
TS	552mg/l	364mg/l
COB	20mg/l	12 mg/l
BOD	2.0 mg/l	< 1 mg/l

Conclusion

- So we conclude that before filtration and after filtration the difference between results is much better.
- We can use that water for drinking, washing cars, for plantation and other works.
- This method is economically and environmentally friendly.

Fig. Project on pond water purification

Students and staff are sensitized on contributing towards the importance of water conservation and reducing water wastage through events to mark World Water Day and displaying presentations and posters on digital notice boards.

b. Bore well /open well recharge:

Bore well recharge is done with rain water .It is installed in campus near to boys hostel and rain water is collected from terrace used to regenerate water in the bore well by absorbing it.




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Fig. Bore well Recharging




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