



WATER CONSERVATION TIPS



**DEPARTMENT OF SOIL AND
WATER CONSERVATION,
PUNJAB**



Conserving Water at Home

- ✚ **Fix your Leaks** – Always check all your bath fittings for any leakage and get it repaired immediately.
- ✚ **Flush with Less** – Convert your old flush toilet to a dual-flush toilet that saves water



- ✚ **Turn Off the Tap While Brushing or Shaving** – Don't leave the tap open while brushing or shaving as an average tap throws approximately 10 liters of water every minute.
- ✚ **Bathe for Shorter Duration** – Reduce the duration of shower to bare minimum.

- ✚ **Use Bucket to Wash your Car or backyard** – While using a bucket may require a little more effort but using it instead of running water will definitely reduce the wastage of water.



- ✚ **Use Less Electricity** - Power plants use thousands of gallons of water to cool. Do your part to conserve power, and you're indirectly saving water, too!

- ✚ **Re-use RO Waste Water** – An average RO purifier wastes approx 3 litres of water for every litre of purified water. Re-use waste water in cleaning dishes and watering plants.



- ✚ **Washing Dishes by Hand** – Don't leave water running for rinsing. Fill sink with water or use a large pan for rinsing dishes.

- ✚ **Washing Dishes by Dishwasher** – Always remember to load your dishwasher to its full capacity. This will avoid multiple running cycles of the dishwasher

- ✚ **Clean Fruits & Vegetables in a Pan** – Clean fruits and vegetables in a pan instead of cleaning under running water.



- ✚ **Wash Less Often** – Several clothes like sweaters, jeans, towels, track pants and jackets do not require washing every time you wear.

- ✚ **Use Smart Watering Tactics on your Garden and Plants** – Water only root zone of plants. Keep your home garden and plants green and healthy without wasting water.

Conserving Water in Agriculture

- ✦ **Micro Irrigation System** – Sprinkler and Drip irrigation is most efficient system of irrigation water application. Drip irrigation is highly efficient as it applies water directly to root zone saving upto 80% water



- ✦ **Underground Pipes for Irrigation Water Conveyance** - Laying of underground pipes for irrigation water conveyance helps conserve upto 30% of water otherwise lost to evaporation or seepage.

- ✦ **Sub Surface Irrigation** - This advanced drip irrigation water application methodology irrigates crops through sub surface drippers near root zone.

- ✦ **Residue Management** - In-situ residue management helps improve soil structure and its water holding capacity thus reducing irrigation water requirement. It is absolute necessity to prevent air pollution caused by residue burning.



- ✦ **Irrigation Scheduling:** To avoid overwatering, farmers should monitor the weather forecast and soil moisture, and adapt their irrigation schedule as per prevailing conditions.

- ✦ **Conservation Tillage** - Conservation tillage has marked influence on soil hydraulic characteristics helping in reducing runoff. Zero tillage is highly effective in conserving water.

- ✦ **Contouring and Terracing** - Tillage practices such as contour cultivation, contour bunding, terracing and ridging increases soil water profile in sub-mountainous region.



- ✦ **Harvesting Rainwater** - Harvesting of rainwater by construction of farm ponds and its utilization when required conserving the ground and surface water resources.

- ✦ **Compost and Mulch** - Compost, or decomposed organic matter used as fertilizer, improves soil structure, increasing its water-holding and retention capacity.

- ✦ **Crop Selection** - Growing crops that are appropriate to the region's climate is another way of farmers getting more crop per drop.
- ✦ **Direct Seeding of Rice (DSR)** - Puddled Transplanted Rice(PTR) requires large quantity of water. Direct rice seedling in the field saves about 30% of irrigation water.
- ✦ **Using Treated wastewater** - Utilization of treated waste water in agriculture offers a great opportunity in ensuring conservation and longevity of available water resources.

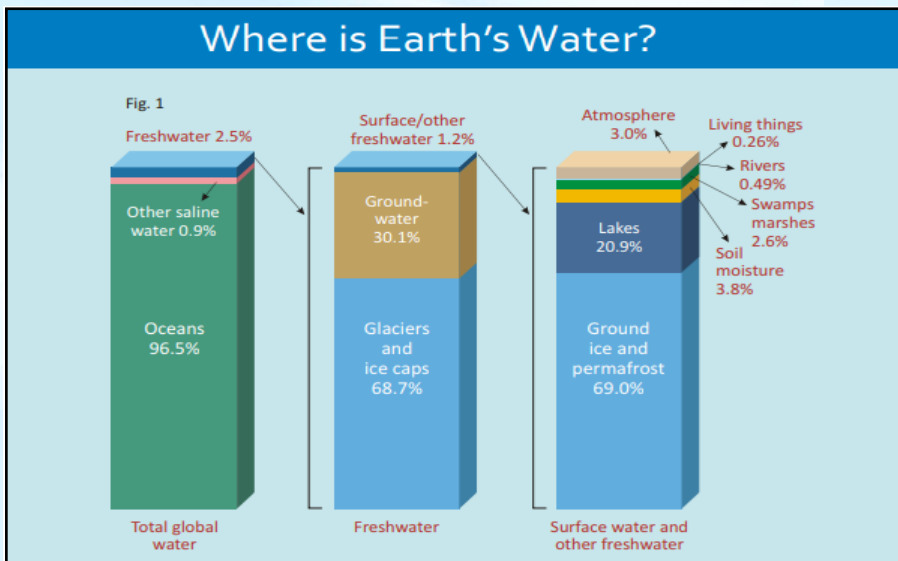
Water Conservation in Industrial & Commercial Sector

- ✦ **Recycling and Reuse** - Industries may reuse water within their own premises to minimize their drawal of freshwater. Water used for one purpose can often be reused for another.
- ✦ **Equipment Changes** - Switch from water-cooled systems to air-cooled systems as using water to cool hot equipment is one of the largest drains on water resources.
- ✦ **Upgrading Rinsing Systems** - Using intermittent-flow rinsing systems for removing contaminants from equipment in industry in place of open tanks or continuous-flow systems significantly reduces water usage in these procedures.
- ✦ **Routine Checks** - Proper mechanism should be in place for periodic monitoring of water supply equipment and identification of leakage in pipes, joints or valves.
- ✦ **Steam sterilizers** - Deployment of steam sterilizers in hospitals, research institutions, and pharmaceutical units in place of water based sterilizers' helps in conserving water.
- ✦ **Installation of Effluent treatment plant** - Every industry should install effluent water treatment plant and ensure that treated water is utilized in appropriate manner.



✦ **Install Water saving Equipments** - Plenty of water Conservation equipments are available. Installing such equipment should be mandatory for high water consuming establishments such as hotels, educational institutes, hospitals, offices.

✦ **Education of Workforce** - Every commercial institute or industry should build an understanding among employees and co-workers about the importance of water conservation.



Ground Water Augmentation Techniques

Over 70% of the net irrigated area in state is irrigated by ground water. Over the past three decades, growing populations and increase in irrigation has led to excess withdrawal of ground water without commensurate recharging, resulting in a rapid fall in the water table. 110 blocks of state out of 138 studied by Central Ground Water Board have been declared as overexploited. Harvesting rainwater for recharging offers a comprehensive solution to this issue. Major techniques are discussed below:

Water Harvesting Structure/Check Dams:

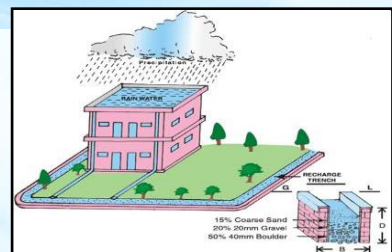
It is a structure constructed across a stream or drainage channel to store rain water. The structures retain excess water flow during monsoon rains from catchment area. Stored water not only augments groundwater recharging but is also used for irrigation. Check dams are built in a range of sizes using a variety of materials, including clay, stone and cement. Earthen check dams, are cost effective and easy to construct. Masonry and reinforced cement concrete (RCC) structures, require some degree of construction experience and monetary inputs.

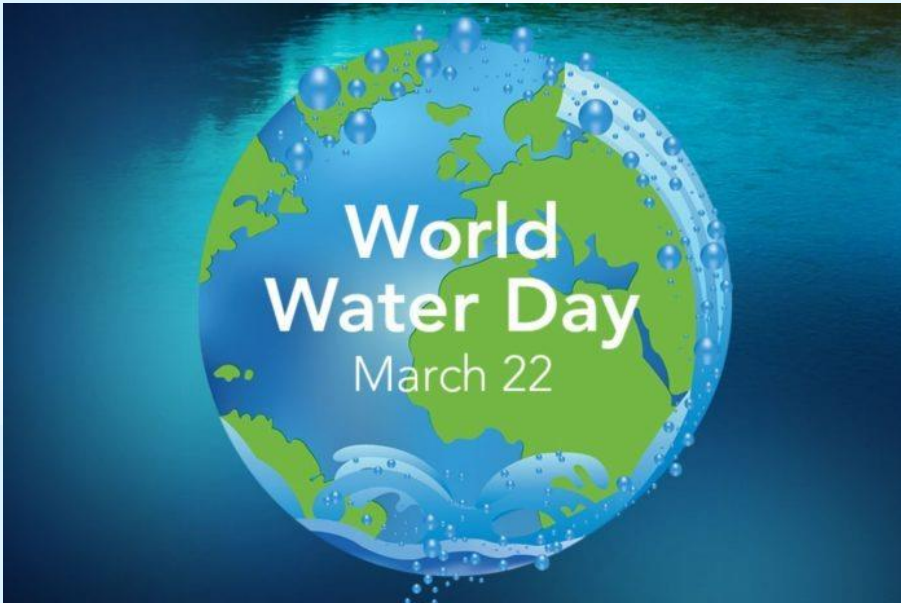


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Artificial Roof Top Rain Water Harvesting:

Rooftop Rain Water Harvesting-cum-recharging is the technique through which rain water is captured from the roof catchments and injected into shallow aquifers through a recharge pit with injection well. This method is inexpensive and effective. Recharge pit is filled with gravel and sand, which act as filter media for removing silt or other media whereas the injection wells are provided with screen filters at bottom. The recharge pit and filter media must be cleaned every two to three years for proper running of system.





Message from Dharminder Sharma, IFS, Chief Conservator of Soils, Punjab



It is my humblest request to every citizen to please do not waste water and don't let our future generations blame us for leaving them without clean water. Save every drop as it is better to conserve it today than to fight for it tomorrow

Please contact our district level offices for further details

Amritsar/Taran Taran	0183-2505449	Bathinda	0164-2211629	Faridkot/Moga	01639-251183
Ferozepur/Fazilka	01632-222025	Gurdaspur/Pathankot	01874-243626	Hoshiarpur	01882-240192
Jalandhar/Kapurthala	0181-2234242	Ludhiana	0161-2561273	Mansa	01652-230600
Mohali/Rupnagar	0172-2970216	Patiala/Fatehgarh Sahib	0175-2970738	Sangrur/Barnala	01672-230876
SBS Nagar	89266-70000	Sri Mukatsar Sahib	01633-510466	Machinery Services	0172-2025889



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This pamphlet is brought out on occasion of world water day