

Water saving measures and management

Dr. Hafez Q. Shaheen

Associate Professor, An-Najah National University,
Nablus, West Bank



Water uses and consumption

- Domestic water- Drinking water
- Industrial and Commercial
- Irrigation
- Recreational
- Cleaning and flushing
- Fire fighting



Why should I save water?

- Limited water resources
- Water shortages don't just affect us: they can also seriously harm our environment
- It's vital that everyone does their bit to cut down on water-usage and not just during a drought. We must use water efficiently when we do have it, so that it lasts when water resources are low. We should all use water wisely every day – not just when there's a drought or if we live in an area with water restrictions.



Saving Water Management

- Saving water in home
- Saving water in garden
- Saving water in business and industry
- Saving water in the public sector
- Saving water in agriculture
- Saving water in schools
- Grey water
- Rainwater reuse



Saving water in the home

- By thinking carefully about your water use in the home and changing some water-wasting habits, it is easy to save water.
- Vegetables and fruit should be washed in a bowl rather than under a running tap and the leftover water can be used for watering house plants.
- Use the minimum amount of water required when you boil water in saucepans and kettles; that way, you'll save energy as well as water.



Saving water in the home

- Try keeping a bottle or jug of water in the fridge instead of running taps until the water runs cold.
- Half-load programmes on dishwashers and washing machines use more than half the water and energy of a full load. Therefore, wait until you have a full load before switching the machine on.
- Try not to leave the tap running while you brush your teeth, shave or wash your hands, as this can waste up to 5 litres of water per minute.

Saving water in the home

- A 5-minute shower uses about a third of the water of a bath.
- Old toilet cisterns can use as much as 9 litres of clean water every flush. Reduce this by placing a 'save-a-flush' in the cistern.



Saving water in the garden

It is possible to have a beautiful and productive garden using minimal mains water

- Water your garden in the cool of the early morning or evening. This will reduce the amount of water lost to evaporation
- If you water plants too often their roots will remain shallow, weakening the plant. Leave them alone until they show signs of wilting.



Saving water in the garden

- Plant flowers that thrive in hot and dry conditions.
- Mulches such as wood chips, bark and gravel help to prevent water evaporation and also suppress weed growth, saving you both water and time spent weeding.
- Lawns can survive long periods of dry weather if the grass is not cut too short. Even if the grass turns brown, it will quickly recover after a few days of rain.



Saving water in the garden

- Collect rainwater in water-butts and use a watering can instead of a hose. If you prefer to use a hosepipe, fit a trigger nozzle to control the flow.



Saving water in business and industry

- Being waterwise is good for your business. All commercial organisations use water, but how many know exactly how much of this precious resource they are using?
- If you are a manufacturing industry then water bills could be costing your company over 1% of business turnover.
- If you are in the retail, hospitality or service sector you could save up to 50% of your water bill. Even if your water use is only for the offices you occupy, there are ways to save water with pay back periods measured in months!

- The first thing you need to do if you want to save water is to work out how much you use. The simple guide (Waterwise good for business, great for the environment) will help you to conduct a water audit and produce a water management plan that will deliver savings and help the environment.
- [How much water can I save?](#)
- [How much does my water really cost?](#)



Saving water in the public sector

- Did you know that, all public bodies now have a duty to 'conserve water'? By monitoring your water use and comparing it to benchmarks you can save up to 50% of your water bill.
- The Water Law places a duty on all public bodies to 'take into account, where relevant, the desirability of conserving water supplied or to be supplied to premises'.
- This means that all public bodies should reduce the water used on their premises to an efficient level.



Saving water in agriculture

- **Why save water?**
- **Water is essential for a wide range of activities on the farm, from livestock drinking to crop irrigation and from milk cooling to machinery washing.**
- **Being waterwise is good for your business. All farms and businesses use water, but do you know how much you use and how much it costs? Are you using the right amount of water for your needs and no more?**
- **Being waterwise is also good for the environment. Farmers, as stewards of the countryside, are aware how vital water is to creating and maintaining a healthy environment.**



Saving water in schools

- How much money can my school save?
- Financial savings depend on many issues such as size of school and age of buildings. Some water-efficiency measures cost money to implement, but many cost little or nothing at all.
- How do I go about saving water?
- Reducing your school's water consumption is a straightforward process and there are many organisations that can help and advise you.
- How can I get my pupils involved?
- By focusing on water as a precious and vital resource, children can investigate and think about the ways in which they use water both at home and at school.

Grey water

- Using grey water can save up to 18,000 litres of water a year for each person. This represents 33 per cent of daily household water use.



Rainwater reuse

- Using rainwater for garden watering, toilet flushing and washing machines can save up to 50 per cent of household water use.



Showers and baths

- A quick shower uses a third of the water of a bath.
- Dual-flush and low-flush toilets can cut household water use by up to 20 per cent, and save more than half the water used in flushing toilets.
- Spray taps on handbasins typically save up to 80 per cent of the water and energy used with standard pillar taps

