

## Water Conservation

Water conservation saves money and energy and is good for the environment! There are always opportunities to save water in schools. These range from very simple methods which have little or no cost impact to the school and can be carried out by school staff, to fitting water saving devices which will help reduce the amount of water used in the school.

Schools can reduce their water consumption by assessing how much they use every day, identifying leaks and drips, adapting the flow rate on taps and by reducing the amount of water used in toilets.

### Top tips

- Guidelines for water efficiency in schools and preparing a water management plan are available via <https://www.gov.ie/en/circular/d38121736f384083/812eef4a715ac2ed/>
- Read the water meter regularly
- Carry out a water audit. A water audit will allow you to assess your plumbing appliances and fittings for water efficiencies.
- Eliminate automatic flushing cisterns. Many urinals flush 24 hours per day, 7 days per week, 365 days per year whether there is anyone in the school or not
- No hose policy. Use watering cans to water plants and trees.
- Awareness campaign. Involve all staff and students and make everyone aware of water conservation.

### No cost methods

Don't leave taps running. Ensure cleaning staff are briefed on the school's ethos for water conservation and use mop buckets rather than excessively running taps.

Prepare a water management plan which will help reduce water consumption. A water management plan will allow you to be familiar with the school's water distribution and areas where water is used in the school. A water management plan should include:

- A drawing of the school which highlights the location of the school's water meter(s) and incoming water supply pipe locations. Irish Water may be able to assist in locating water pipes in the ground with detailed drawings that they may have.

- A water meter reading log. Water meter readings should ideally be noted weekly, and a log kept of all meter readings including the dates checked. If possible, try to take some readings over the holidays. This will identify whether or not the school has a leak or is using water outside of hours. Remember, always report any leaks or dripping taps to the person involved in the water management plan.

### Try this!

Check for leaks by turning off all the water fittings and taking a meter reading. Leave overnight and take a reading the next day. The figures should be the same, if not, you may have a leak somewhere.

### Low cost methods

- Repair leaking taps. The tap may only require a new washer in order to stop the dripping. A tap dripping once a second wastes 45,000 litres of water a year!
- Insert a cistern displacement device. These inexpensive special devices are used to displace water and should be available from your local plumbing supplier. It requires no plumbing experience to fit.



Cistern Displacement Device

- Install a water butt or water vessel under rain water downpipes to collect water for watering plants. Make sure it has a lockable lid for safety reasons.
- Frost protection is very important in preventing burst pipes and subsequent water loss. Make sure to protect from frost by adequately insulating water tanks and lagging pipework.
- Water can be wasted by running a tap to wait for hot water to come through. To prevent this, ensure that pipes are properly insulated. Where insufficiently

lagged pipework runs close to drinking water pipes, water can also be wasted trying to get a cool drink. It makes sense to keep your pipework well insulated.

## Helpful hints

- Do** - Install push type spray percussion taps which turn off automatically.
- Don't** - Leave taps running unnecessarily when washing hands, equipment etc.
- Do** - Install water displacement devices in toilet cisterns.
- Do** - Avoid flushing the toilet unnecessarily. Dispose of tissues and other such waste in a bin rather than in the toilet.
- Do** - Raise awareness amongst students about their role and responsibility in water conservation

## Medium cost methods

- Fit percussion spray taps (push type, with automatic closing). Aerators will also help to reduce the amount of water that comes out of the tap.
- Fit automatic urinal control valves on urinals in the school. Urinal control valves work on presence detection and only flush the urinals after use. They also have a setback time to ensure minimum flushing during the holidays for hygienic purposes.



Fit urinals fitted with automatic urinal control valves to conserve water

## Rainwater harvesting

All new schools and major extensions have rainwater harvesting installed at time of construction. Currently it is not economically viable to retrofit this into existing schools. However, there are other measures to promote efficient water and energy use which should attract investment first, and have much shorter payback periods.

Under no circumstances can rainwater harvested from roofs be used to supply taps on wash hand basins and sinks. It can only be used to flush toilets and urinals. If rainwater harvesting is installed in a school, it is necessary to not only harvest and store the rainwater, but also to re-pipe each toilet room so that cold water to basins is from the normal supply, and the toilets are from the rainwater system. Even then, the rainwater water must be suitably filtered.

Rainwater use in wash hand basins and sinks is not acceptable because, even if treated, health issues can arise. It is impossible to prevent students from drinking water from basins and not viable to ensure continuous safe operation of treatment equipment for drinking water in schools.

## Did you know?

99% of the World's water cannot be used because it is either saline (contains salt) or is locked up in glaciers or ice sheets.

Source: National Geographic April 2010

## Further Information

If you and your students would like to learn more about how you can save water, consider joining the Green-Schools programme which has a designated water theme sponsored by Irish Water. In 2016 alone, enough water to make 450 million mugs of coffee was saved by schools participating in the Green-Schools programme.