

# CREATING A WATER MANAGEMENT PLAN FOR YOUR SCHOOL...



Water is a precious resource - and yet we are using it as if it was free and available in unlimited quantities. **It's not!** Although we appear to have plenty of rain in Guernsey, our water resources are constantly under pressure.

**We use 70% more water today than we did 40 years ago**, mainly due to our change in lifestyle. Population growth also puts strain on supplies, and with the unknown effects of climate change we must ensure that water is used as sensibly as possible. The production of drinking water requires huge amounts of energy to collect, treat and pump, so our thirst for water is damaging our planet in more ways than one.

The good news is that there are many simple things that can be done to reduce the consumption of water including the creation of a **Water Management Plan**.

## WHAT IS A WATER MANAGEMENT PLAN (WMP)?

**A**  
*simple document that can be created for a school, a business or a home*

**Its**  
*main function is to save water, but it can also save money and energy, and reduce waste*

**A**  
*WMP consists of a series of simple steps which make your school more water efficient*

## WHAT ARE THE BENEFITS OF A WMP?

**A WMP can...**

- Reduce water and energy bills (e.g. electricity, gas, oil etc.)
- Reduce the possibility of water shortages and summer water rationing
- Reduce greenhouse gas emissions which have a significant impact on climate change
- Reduce the amount of energy and chemicals used in the treatment and pumping of water, thereby reducing the carbon footprint of water

**More specific benefits for schools are:**

- Pupils will be educated about the value and importance of water, and taught various water efficiency methods
- Pupils and/or teachers can take ownership of an important environmental project which has major implications for future generations
- Potential to transfer funds saved from reduced bills into other priority school initiatives

## OUR WATER - HOW DO WE USE IT?

*Waterwise* has calculated that the activities which use the most water are toilet flushing and personal washing in the bath or basin.

A school-focused list of how and where water is used is shown here:



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## HOW TO IMPLEMENT A WMP IN YOUR SCHOOL

**1). APPOINT AN INDIVIDUAL OR GROUP TO TAKE RESPONSIBILITY FOR THE WMP** - It is vital that there is an individual or group that have prime responsibility for the WMP. If this does not happen, then ideas won't get past the drawing board and momentum will be lost. Giving responsibility to a group of pupils will empower them and give them ownership of a vital project. It will also give them the opportunity to liaise with other pupils that they might not do ordinarily.

**2). COMMUNICATE TO OTHERS THE WHAT, WHY, WHEN AND HOW OF THE WMP** - In order for any initiative to succeed within an organisation, there must be buy-in from all levels. If all pupils, teachers and support staff are aware of the WMP and why it is being carried out, then there is a much better chance of success. Updates on how the plan is progressing could be put up on noticeboards, on internal newsletters & communications or referred to in classes.

**3). HAVE A 'WALKTHROUGH' OF THE SCHOOL (INSIDE & OUTSIDE). IDENTIFY WATER SAVING CHANGES** - Also known as a water efficiency audit, this involves the WMP person/team visiting every area in the school that has a water supply. The obvious places are kitchens, canteens, toilets, bathrooms etc., but don't forget about outside taps, swimming pools, club houses etc. Make a note of the location and condition of every water connection that you see (e.g. tap/pipe/sink/appliance).

**4). PREPARE A PLAN TO IMPLEMENT IDENTIFIED MEASURES AND RANK APPROPRIATELY** - Study the list of water efficiency measures on the following pages, and compare these to the list of findings from the walkthrough. It should be possible to come up with a number of objectives that will improve the water efficiency of the school. Ranking the objectives in terms of cost and impact will ensure that the most effective and efficient methods are considered first.

**5). IMPLEMENT CHANGES. AIM FOR EARLY 'QUICK WINS' TO GIVE MOMENTUM TO THE WMP** - This is the core function of the plan - implementing the changes that have been created from your walkthrough. By choosing some simple initiatives first e.g. putting together a 'Water Savers' group to check for leaks, you can get some early successes which will maintain the initial enthusiasm and catalyse the plan.

**6). CHECK METER READINGS TO SEE IF THE CHANGES ARE MAKING AN IMPACT** - As all schools on the Island are metered, a reading will be taken on a quarterly basis in order for Guernsey Water to calculate your water bill. On the bill, the number of cubic metres (m<sup>3</sup>) of water used by the school is noted - this can be compared with previous quarters in order to measure whether or not the implemented changes are reducing the amount of water used.

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## EXAMPLES OF WATER EFFICIENCY MEASURES

The following water efficiency measures are just examples, and there are many more which you may come across during your walkthrough:

### General...



- In addition to the WMP team, a 'water savers' monitoring team could be established to check and report on **leaks**, dripping taps and faulty toilets
- Ask pupils to **design signs** giving hints and tips on how to save water both in school and at home. Place them near taps/toilets/showers, reminding users to turn water off when it is not being used
- Ensure that **water efficiency education** is provided for pupils
- Ensure that the most efficient methods are used when **cleaning floors/equipment** e.g. using mops/sponges rather than hoses (if practical)

### Kitchen/Canteen...



- Only use **dishwashers** when they are fully loaded - half loads are neither water nor energy efficient. Long cycles should only be used for very dirty dishes
- When **washing dishes by hand**, don't rinse them under a running tap. If there are two sinks, fill the other one with rinsing water. If there is only one sink, stack washed dishes in a dish-rack and rinse them with a bowl of hot water
- Use washing up liquid sparingly as this will reduce the amount of rinsing required
- To avoid waste, collect running **water for drinking** in a bottle or jug and store it in the fridge until it is cool enough to drink
- When **boiling vegetables**, keep the lid on the saucepan. The vegetables will boil quicker and it will save water, power and preserve precious vitamins in the food
- When using **washing machines**, always wash with a full load - this could save 10 litres of water each wash compared to a half load

### Toilets/Bathrooms...



- Fit **toilets** with a **dual-flush** - this could save 3 litres of water every time the flush is used. Alternatively, consider getting a device which saves water on each flush e.g. a Water Hippo
- Encourage shorter **showers** - this will save water and reduce energy costs from heating the water. Do this by using an egg timer or stopwatch
- Make sure the **hot water thermostat** is not set too high. Adding cold water to reduce the temperature of hot water is wasteful
- Regularly check **sink and bath plugs** for leaks and replace as necessary
- Leaking **toilet cisterns** waste litres of water each day. Check for leaks by putting a few drops of food dye in the cistern. If there is a leak, coloured water will appear in the bowl before the toilet has been flushed
- **Leaking taps** can usually be fixed with a new washer. This is easy to do, but just remember to turn the water off at the mains before you start.
- **Dripping taps** can waste up to 200 litres of water per day - encourage pupils to make sure taps are fully closed
- If there are still tap dripping problems, call a plumber - the cost incurred will save money on the water bills in the long run
- Ensure that all **hot water pipes** are correctly insulated. This avoids wasting water while waiting for hot water to flow through and saves energy
- Install flow restrictors, aerators and/or mixers on all **taps**
- Install water-efficient aerated showerheads/flow restrictors and slow-release push buttons on all **showers**
- Fit solenoid (motion) sensors/infra-red controls on **taps** to ensure that they stop running when not in use

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## Outside Areas...



- A **water butt** can store the tens of thousands of litres of rainwater collected on your roof each year, and can be used to water your garden - saving water and money
- Use a brush (not a hose) to clean paths, paved areas and driveways
- Apply a **layer of mulch** at a depth of 7-10 cm around plants. This reduces the amount of water evaporating from the soil surface and results in healthier plants
- Add **water crystals** to any soil surrounding plants. This enhances water retention by up to 40% and creates better conditions for the plants, while reducing the volume of water required to keep them healthy
- It's ok to let your **lawn** go brown in the summer - brown lawns are eco-friendly and will recover immediately after rainfall
- **Sprinklers** can use as much as 1,000 litres of water per hour - more than a family of four can use in a whole day! If you must use a sprinkler, water early morning or late evening when evaporation rates are lowest.
- Water **plant roots**, not leaves. Make sure water is being delivered on or below the ground close to the root zone, not higher up or further away where it could blow off or evaporate
- Ensure that **water pipes** are protected against cold weather as leakage can increase after a burst due to frost

## FRAMEWORK FOR RANKING INITIATIVES

The table below gives an example of how initiatives can be ranked and prioritised to ensure that the most cost-efficient and beneficial initiatives are dealt with first (using two examples from the efficiency measures list):

**Cost:** 1 - 3 (with 1 being easy to implement, 3 difficult)

**Saving:** 1 - 3 (with 1 being a small saving, 3 a large saving)

Actions	Benefits	Cost	Saving
Use a trigger nozzle on your hosepipe to reduce the water used and direct the water flow to the roots of your plants. Alternatively, use a watering can	Significant reduction in water usage required for irrigation, more efficient use of water	1	2
Fit toilets with a dual-flush - this could save 3 litres of water every time the flush is used. Alternatively, consider getting a device which saves water on each flush e.g. a Water Hippo	Greatly reduces water usage - toilet flushing is the largest user of water in a property	2	3

## MEASURING SUCCESS

The Department for Education and Skills in the UK has stated that a benchmark water consumption figure for primary schools should be 2.9m<sup>3</sup> per pupil per year (or 3.2m<sup>3</sup> if the school has a pool). For secondary schools the figure is 2.7m<sup>3</sup> per pupil per year (3.7m<sup>3</sup> with pool). However, a WMP can be successful whether or not targets like these are reached. The fundamental basis of the plan is to raise awareness of water efficiency initiatives and why they are so important - if this is achieved, then the plan can be considered very successful!

For more general information about water, please visit our website at [www.water.gg](http://www.water.gg).