

# Water Efficiency Plan



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## INTRODUCTION

Northern Ireland Water (NI Water) supplies approximately 710 million litres of high quality drinking water each day to Northern Ireland's 1.7 million population, with each person using an average 150 litres per day. Research has indicated that demand will increase over the next twenty years. Water is a valuable resource and it makes sense to use it wisely and reduce waste as much as possible. This plan describes how NI Water is promoting the efficient use of water throughout Northern Ireland.

Modern living has a continuous increasing demand for water. To meet this demand, more water must be taken from the environment, treated and transported. For every cubic meter of water and wastewater that NI Water produces and treats, there is approximately 1.2 kW/h of electricity used. This represents approximately 0.6 kg of CO<sub>2</sub> emissions. If NI Water and its customers are efficient in water use, this will reduce the amount of water that has to be extracted and help to ensure that there is enough water, both now and in the future. Using water wisely may help to lessen the effects of climate change.

NI Water monitors the demand for water to ensure that supplies are sufficient and regularly reviews its policies to achieve this.

## WATER EFFICIENCY PROMOTION

1. NI Water will promote both within the company and externally the efficient use of water
2. Utilise local media to raise public awareness about water efficiency
3. NI Water has an extensive schools and community education programmes which are used to raise the awareness about water efficiency
4. School education programme highlights the potential for water reduction usage in schools
5. NI Water will seek to engage with other public and private to promote water efficiency
6. Utilisation of the company's website
7. Public education:
  - Leaflets and brochures
  - Public displays
  - Public speaking engagements
  - Editorials
  - Exhibitions
  - Events





## WATER EFFICIENCY WITHIN NI WATER

Water efficiency starts within the organization of NI Water.

- It will be an integral part of the new NI Water Head Office
- Where possible within existing buildings, NI Water will fit a number of water saving devices into offices and operational sites and minimize the use of water
- Promotion of water efficiency advice will be given for NI Water staff in the work place and through the company's in-house magazine, "Waterline"
- It will undertake audits of its own offices and operational sites
- NI Water is committed to minimising water use, as part of the process of producing water for delivery into the public water supply system. The company has reviewed its water treatment plants across Northern Ireland and has improved water efficiency, where it was practical to do so
- In wastewater treatment works, NI Water where practical to do so, re-use effluent for screening
- Operational procedures will be kept under review to help ensure good management practices are with respect to the operational use of water
- The efficient use of water is incorporated into the design of all proposed water and wastewater plants
- Sewer jetting encourages a contractor to re-use water to wash the blockages within the sewers so saving water.
- Our suppliers have been looking at minimizing the use of water



**NI Water will continue to highlight to customers the need to use water wisely.**

**This is done in a variety of ways**



## COMMUNICATION

NI Water fully recognise that the success of the Water Efficiency Plan depends on a partnership approach with its customers and stakeholders, encouraging customer participation. As part of the initiative, a small-scale and complementary promotional and awareness campaign will be delivered, to attempt to encourage people to take up the initiative and reduce their water consumption. NI Water will make this Water Efficiency Plan freely available to the public on request from Customer Services and downloadable online. Its availability will be advertised through press involvement at its launch.

## EDUCATION

NI Water has an excellent education programme which includes school, community and public components. It is extremely diversified, and at the numerous events we attend, water saving devices ('Hippo' Bags, shower timers, key rings with leakline number and various bookmarks) are distributed, along with other educational material and leaflets.

NI Water's Education Team was established in April 2007, with two members of staff, it consists of the Education Manager and the Outreach and Learning Officer who service the whole of Northern Ireland.

The current and on going water efficiency initiatives are summarised as follows:

- Schools - Water Bus - a double decker bus transformed into a mobile education unit. It concentrates on the many aspects of water and is suitable for Key Stage 1 and 2 pupils
- Schools – Classroom Visits
- Treatment Works Visits
- Education Centres - Silent Valley (Co. Down) and Heritage Centre (Belfast)
- Summer Camps Schemes
- Community Events
- Web Site
- Save Water Competition
- Promotional items
- Conservation presentations to community, residential and local groups

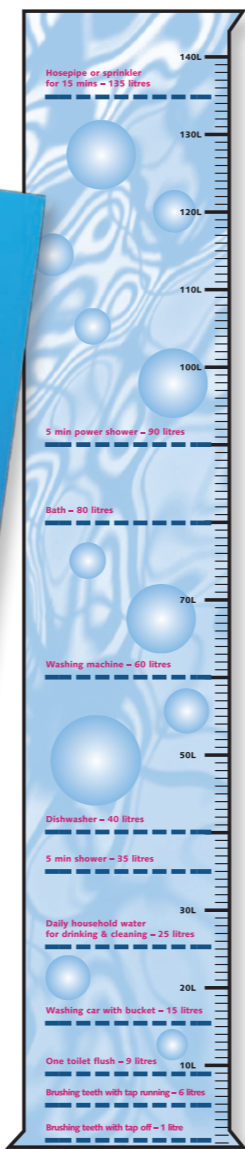






### Promotional Materials

- Each pupil (P1 -P7) receives a pencil – “Use water wisely”, a fridge magnet “Save water”, P4-P7 bookmarker (measuring cylinder), Flo bookmarker (conservation) also water cycle leaflet
- Teachers receive a ‘Hippo’ Bag, conservation Snakes and Ladder game, bookmarker (measuring cylinder), fridge magnet, water cycle, “Bag it and Bin it” and Use Water Wisely leaflets, School Water Audit, “Water Family” PC game (conservation presentations only)



Lifestyle Green Show Castle Espie.



World Water Day 2009, at IKEA.

- Community presentations each person receives a ‘Hippo’ Bag, bookmarker (measuring cylinder), fridge magnet, shower timer, “Bag it and bin it” and “Use Water Wisely” leaflets
- At external events the conservation message is widely re-enforced, staff are available to give advice, distribute leaflets and engage children in activities such as making water basket feeders, playing giant conservation snakes and ladders, conservation bingo and making conservation badges



## WEB SITE

- NI Water Education Department. launched an new "Education" microsite in 2008, called- "What are you doing with water"
- The site includes a "Saving Water" section with "Water Use Calculator" including rollovers on a house and garden informing of saving methods
- On the web site we continue to part finance the maintenance and support of [www.waterintheschool.co.uk](http://www.waterintheschool.co.uk) and [www.thewaterfamily.co.uk](http://www.thewaterfamily.co.uk), on-line websites for primary school use
- We are partners for Eco School Award which encourages pupils to monitor water demand within their school and learn about the need for water efficiency at school and at home
- Advice is available online for customers on aspects of conservation and domestic audit can be completed



Education micro-site launch – Chairman, Chris Mellor, at East Belfast school.

## WATER AUDITS

Customers are widely encouraged to carry out water consumption audits. Leaflets advising on how to carry out a do-it-yourself water audit are available on request through NI Water Customer Services or downloadable online. This enables all customers to examine how much water they use and includes practical tips for saving water. The Water Audit leaflets have been produced for:

- Commercial Premises
- Home
- Schools



## Information Leaflets

As well as Water Audit leaflets, NI Water has a number of leaflets on various subjects relating to Water Efficiency. All are available for download at [www.niwater.com/informationleaflets.asp](http://www.niwater.com/informationleaflets.asp).

- How Water Wise Are You?
- Drought Resistant Gardening
- Waterbutt Leaflet

These provide advice on the sensible use of water whilst giving practical tips on saving water.

The "How Water Wise Are You?" leaflet provides useful tips for saving water in the home and the garden.

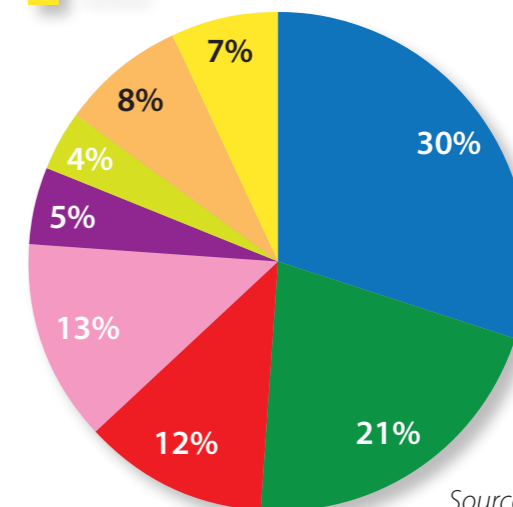
Drought Resistant Gardening suggests the type of plants to select for dry conditions and wise watering tips when caring for your garden in the summer.

## WATER EFFICIENCY IN THE HOME

NI Water will actively seek to engage with other organizations to promote water efficiency in the home.

At present the company is working with Northern Ireland Energy Agency to:

- Conduct water audits with domestic customers
- Provide guidance through its website and literature in relation to water efficiency in the home, e.g. "How Water Wise Are You?"
- Provision of free "Cistern Displacement Devices" (CDD's) such as 'Hippo' Bags for domestic customers, with cisterns of 9 litres or more
- Encourage customers to undertake water audits and review how they use water. Customers on average use 150 litres each per day



Source: Waterwise



## WATER SAVING DEVICES

### 'Hippo' Bag

Approximately one third of all water used in the home is flushed down the toilet. Water saving devices, in the form of a 'Hippo' Bag, best suited in older/larger cisterns can reduce the amount of water used to flush the toilet. The bag is easy to install and can save up to 3 litres per flush. These 'Hippo' Bag, with installation instructions, are available free from the Education Department and Customer Services (08457 440088) on request. The introduction of more water efficient double flush toilets indicates the demand for these bags will decrease.



### Shower Timers

Five minute shower timers are distributed to conservation groups, schools groups and at community events. Thirty five litres of water are on average used in a five minute shower.

These devices reduce our water consumption, energy and money by saving the time spent in the shower. Many litres of water can be saved daily by taking shorter showers and using water efficient shower heads.



### Waterbutts

NI Water also encourages customers to use other water efficient devices, such as water butts and hosepipe trigger nozzles which are readily available at commercial outlets.



## ENCOURAGING CUSTOMERS TO USE WATER WISELY

- Turn off the tap when brushing teeth. A running tap wastes over 6 litres of water per minute
- A dripping tap can waste 5,500 litres in one year
- Approximately one third of all clean drinkable water used in the home is flushed down the toilet. When selecting a new toilet system choose a low flush model with a dual flush, this uses only 6 litres or 3 litres on flushing
- In older toilets pre 2001, using 9 litres plus, water can be reduced by placing a 'Hippo' Bag in the cistern. These CCD's save 3 litres per flush
- Take a shower. Use our 5 minute shower timers to help with time/water consumption, 35 litres is the amount used in a normal shower and 90 litres the amount used in a power shower for 5 minutes respectively
- Use water efficient fittings and equipment, e.g. spreading out the tap water by fitting an aerator to taps, makes it feel stronger
- When selecting a new kitchen device i.e. a washing machine or dishwasher check the machine labels to find an energy and water efficient model
- Fully load machines to save water, energy and carbon emissions by using a half load or economy setting
- Filling the kettle to the amount needed for a hot drink saves both water and energy

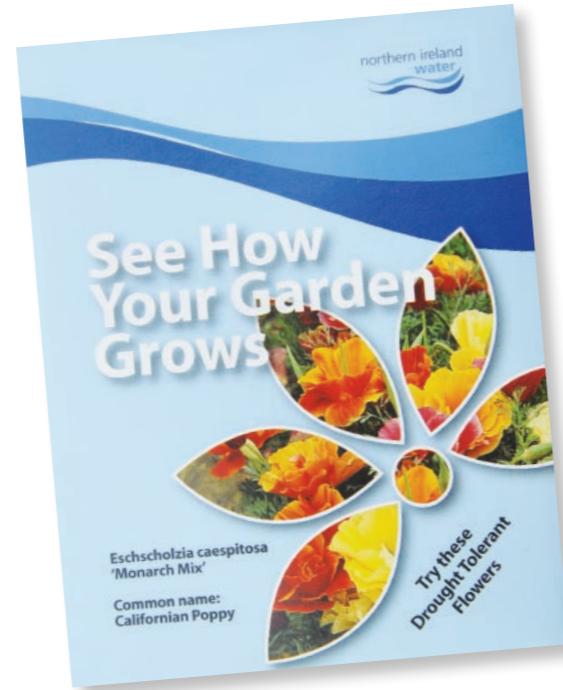




## WATER EFFICIENCY IN THE GARDEN

The effects of climate change and rising temperatures will trigger droughts, food shortages, wars and floods over the next 100 years. Droughts and floods will make agriculture even more vulnerable in developing countries causing wars over water, food and land. This potential for drier summers means we must encourage our customers to use water wisely.

- Rain collected in a water butt can be used to wash windows or water plants, top up ponds or wash cars
- Water loss by evaporation is lessened by watering in early morning or evening when it is cooler
- Placing a planter under hanging baskets to catch the drips reduces the water needed
- Using a watering can instead of a hose. A hose produces 135 litres in 15 minutes, by fixing a trigger nozzle will help to reduce water waste
- Choosing drought resistant plants will help in areas which are prone to dryness
- By placing water retaining crystals into planters, moisture can be kept in the soil
- Recycle washing up water from rinsing and peeling, or washing vegetables or dishes, onto plants in the garden
- Leaflets on gardening advice are widely available at "green events", NI Water events and on request



## WATER EFFICIENCY FOR COMMERCIAL CUSTOMERS

- NI Water will continue to meter non-domestic properties for charging purposes. Raising the awareness of water consumption is achieved by the metering of non-domestic properties
- This encourages business and commercial customers to use water efficiently and to monitor its use. Most customers have their meters read twice yearly but larger water using customers have their meters read more frequently. The data collected for billing purposes is also analysed to monitor any large changes in consumption patterns, which can be an indication of leakage or increase in use
- Reduced tariff for large users who demonstrate the implementation of water efficiency measures
- NI Water will work with commercial customers to enable them to carry out water audits
- Water supply (Water Fittings) Regulations Northern Ireland 2009 which were out in August will also help prevent misuse and waste of water





## RESEARCH

As well as carrying out its own research, NI Water will continue to take part in the UK Water Industry research projects into water efficiency. NI Water will work with public bodies in promoting water efficiency techniques. NI Water is committed to the promotion of efficient use of water into the future. Water efficiency will continue to take a high priority as a cost-effective way of minimizing demand for water. As a result NI Water will be reviewing its Water Efficiency Plan on regular basis in line with research into best practice.



## SUMMARY

Today's image of NI Water may be a water company bringing clean drinking water to all mending and replacing pipes, renewing wastewater centers and monitoring the Governmental approach to billing.

But NI Water's vision over the next ten years and onward must include a strategy to deal with climate change which is already influencing the thinking of those who realise the importance of water, in the environment of the future. The populations use of water will change, wetlands which help with carbon storage will disappear, as the sea level rises and flooding becomes a huge danger. We have to find new ways of dealing with this extra water, we already have the Belfast Sewer Project, but this is only the beginning.

NI Water are becoming more and more aware of the impact of their work on the environment of Northern Ireland and the need to form partnerships with a range of stakeholders. This is in order to educate and give guidance on the biodiversity and economical use of water.



*Pupils learn about the importance of water conservation during a visit to Silent Valley Reservoir.*