



The Consumer Council

Every Drop Counts

A guide for agricultural water users on saving money and getting the most from your water service



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northern ireland
water

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This publication is available in the following formats on request:

Braille
CD/Audio format
Large Print

1. Introduction

Being more water efficient can:

- Lower your bills and save you money;
- Increase your profits; and
- Help the environment.

The Consumer Council represents consumers on water and sewerage matters. We do this by working with the Northern Ireland Assembly, Northern Ireland Water (NI Water) and the economic and environmental regulators to make sure consumers are at the centre of all decisions and policies.

We work with stakeholders to ensure NI Water focuses on customer service, customer care and delivers value for money in providing its services.

In addition we help individual consumers with complaints about buses, trains, planes, ferries, natural gas, electricity, coal and water.

Water costs can be between one and two per cent of a company's turnover. Savings of between 30 and 50 per cent can be achieved by implementing no or low cost water reduction techniques and technologies.

This guide has been produced to help businesses across all sectors find the right information to improve their water efficiency, get the best from their service and save money on their bills. It is principally aimed at businesses that obtain water from NI Water. However businesses can also collect rainwater or abstract water from surface sources like rivers or from groundwater sources (boreholes)* but the same principles, as outlined in this guide, to improve water efficiency can be applied.

*Abstracting or impounding water from surface or groundwater is regulated by the Northern Ireland Environment Agency. See: www.nibusinessinfo.co.uk/bdotg/action/detail?itemId=1086852799&site=191&type=RESOURCES

2. Quick Water Saving Tips:

- **Monitor your usage:** If you are a metered customer keep a regular log of the water going through your meter. This will help you keep an eye on your usage and help you notice any leaks. We have included a table for recording your usage in section eight. If your business consumes un-metered water supplies of any description then consider installing appropriate meters so you can record and monitor usage.
- **Check your bills:** Make sure you are getting the correct allowances, your usage is correct and contact NI Water with any queries.
- **Regularly check your pipes and fittings:** Check for leaks and ensure your pipes are well insulated against frost. It is worth remembering that any leakage from private pipes will be billed to you or your company.
- **Small changes can make a big difference:** Switch off taps and hoses when not in use - a dripping tap can waste up to 30 litres a day.
- **Know where your supply pipes and shut off valves are:** Shut off water to unused areas of your premises to stop waste from leaks or unmonitored usage.
- **Deciding on the most appropriate cleaning methods:**
 - Pressure washers only use 8 to 12 litres per minute and are more effective for dried-on dirt;
 - Volume hoses can have a flow rate up to 10 times normal mains flow rates (typically 80 to 150 litres per minute). Volume hoses can be very efficient for rapid washing of loose dung but if used for extended periods they can use huge volumes of water.
- **Water troughs:** Overflowing water troughs and incorrectly set or damaged ball-valves can waste significant amounts of water. You can adjust ball-valves to lower the float so that there is less risk of spillage and overflowing. Water leakages in fields can result in increased damage and erosion to wet areas by livestock which

can contribute to diffuse pollution and increase rates of infection in livestock. Troughs not in use during the winter months should be drained to reduce frost damage.

- **Rainwater harvesting:** Where possible, use a water butt to harvest rainwater, (see section six).
- **Consider installing more water efficient equipment:** See section five on the Enhanced Capital Allowance (ECA) on how you may be able to get financial help towards this and ideas on what's covered.

3. Getting to grips with your water usage and your water bills

Get an idea of how much water you are using on a daily basis and how that relates to how much you are billed.

Water bills are charged in cubic metres (**m³**), a cubic meter is equivalent to **1000** litres of water.

1 m³ is roughly equal to:

- **15** washes using a washing machine at **65 litres** per wash;
- **30** minutes using a standard hose pipe at **30 litres** per minute;
- **111** to **200** toilet flushes at **5 - 9 litres** per flush; and
- **4444** cups of tea at **225 ml** or **0.225 litres** per cup.

(All figures above are approximate)

The table below gives an idea on water use for livestock and can be used to give you an idea of how much water you should be using:*

Livestock watering requirements				
Animal	Product cycle (wks)	Drinking L/day/animal	Washing L/day/animal	Other needs L/day/animal
Cattle				
Dairy cows	56	92	25	
Growers & replacements	52	20		
Beef cows & heifers	52	20		
Dairy & beef bulls	52	20		
Beef store cattle	52	20		
Dairy & beef calves	9	5		
Pigs				
Dry sows & gilts	52	6	0.09	
Boars	52	6	0.09	
Farrowing sows	5	30	5.63	
Maiden gilts	10	5.5	0.09	
Barren sows	10	5.5	0.09	
Weaners (<20kg)	4	2	0.29	
Growers (<50kg)	5	4	0.37	
Finished pigs	11	5.5	0.23	
Sheep				
Total ewes	55	4.5		Dipping p/day 2.25
Rams & other adult sheep	52	3.3		2.25
Lambs under 1 year	52	1.7		2.25
Poultry				
Pullets	16	0.09	5	
Broilers	7	0.2	5	
Laying hens - caged	56	0.2	6	
Laying hens - non-caged	56	0.22	6	
Broiler & layer breeders & cocks	44	0.19	5	
Ducks	7	1.22	5	
Turkeys (male)	20	0.71	5	
Turkeys (female)	16	0.45	5	

*Source: The Department for Environment, Food and Rural Affairs (Defra)- figures for guidance only.

Water Balance: measuring how much water your business uses

A water balance is a way of working out how much water is coming in and going out as well as where and how it is used in between. It provides a way of gathering and presenting information about water use that can help you to:

- Understand and manage your water and wastewater more efficiently;
- Work out where you can cut water and water treatment costs; and
- Detect leaks.

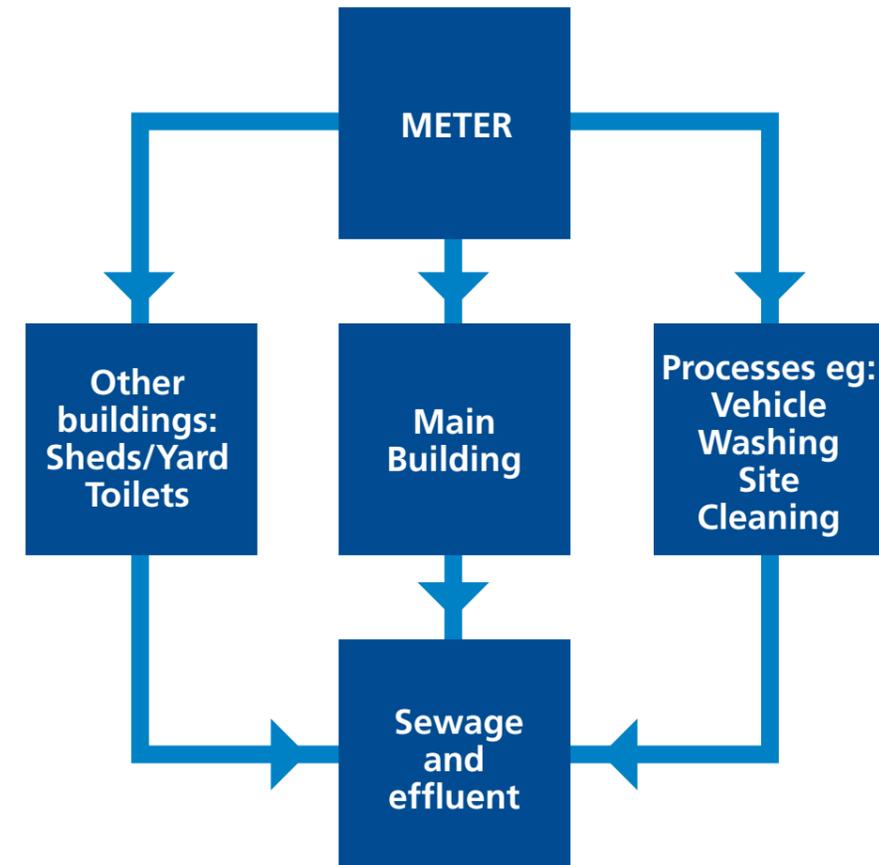
Working out how and where your water is used and where it goes can benefit any business large or small.

Developing a water balance is a simple step-by-step process:

- Draw a diagram of your site, showing the main water inflows and outflows;
- Record your water use;
- Review your water use by reading your meter and the areas where water is used in your business and where it goes;
- Benchmark your usage to get an idea of how much water you use compared to other customers; and
- Use the information you have gathered to reduce your usage and your costs.



The size and type of your business will determine how complicated your water balance diagram is. A simple example of a water balance diagram might look like this:



By looking at different parts of the business and different processes where you use water you will be able to see if there is any way that you can reduce your usage or reduce the amount of water that goes out as sewage. If you can reduce this amount or recycle and reuse drainage water this can reduce your bill and you may also be able to apply for an increased non return to sewer allowance through NI Water (see section four).

4. Is your bill correct?

All of NI Water's charges are outlined in its Scheme of Charges. Check the list below to see if any of the following allowances or tariffs apply to your account.



Domestic allowance for metered water customers

Metered customers who pay business rates for their property can apply for reductions on both the water and sewerage parts of their bill. This is 100 m³ per six months for water and 95 m³ per six months for sewerage (the allowance must be used within the billing period and is not carried over). These allowances are subtracted from the usage recorded on the water meter. NI Water will need to see a copy of your business rates bills before applying this. The allowance can be backdated to the date that you started paying rates for your premises, up to a maximum of six years.

Non return to sewer allowance

NI Water automatically applies a five per cent reduction to the measured sewerage charges on your bill. This is because in most businesses, most of the water used is returned to the sewer. If your business returns less than 95 per cent of water to the sewer, you can apply to have your bill reduced accordingly. NI Water charges a fee for this application and may charge for a site visit if required to assess your allowance. All fees are refundable if your application is successful.

Large user tariff

Customers using over 100,000 m³ of water per year and who have implemented a range of water efficient practices can apply for the large user tariff. Once you have successfully applied for this tariff any water you use over this amount will be charged at a reduced rate with reductions of up to 30 per cent for customers using over 500,000 m³. Terms and conditions apply to this tariff; contact NI Water for further information.

Net Annual Value Charges (NAV) and Assessed Charges

Where it is not possible to install a meter at a property NI Water will bill the customer using one of these two methods:

- Customers billed by NAV (Net Annual Value) pay a bill that is based on the rateable value of their premises.
- Assessed charges are a way of estimating water usage for businesses.

Assessed charges have two elements; a standing charge and a variable charge based on the water using appliances at the property. This will apply to both the water and sewerage parts of your bill as appropriate. If you are being billed using NAV you may be able to save money by switching to assessed charges.

If you believe any of these billing measures above may apply to your account or you would like further information contact NI Water.

5. The Enhanced Capital Allowance (ECA)

What is ECA?

The ECA scheme offers a 100 per cent first year allowance for investments in certain water efficient plant and machinery. It means you can write off or deduct 100 per cent of the cost of qualifying plant and machinery against your taxable profits in the first year of purchase.

To qualify, the plant and machinery must be on the **Water Technology List (WTL)** at the time of purchase which is compiled by the Department for Environment, Food and Rural Affairs (DEFRA).

You can check the list on DEFRA's website: http://wtl.defra.gov.uk/product_search_landing.asp?section or by contacting the **WTL** advice line on: **0844 875 5885** or email: wtl@aeat.co.uk

These are some of the kinds of equipment covered:

- Efficient taps - automatic shut-off taps, electronic taps, low-flow screw-down/lever taps and spray taps;
- Efficient toilets - low-flush toilets, retrofit WC flushing devices and urinal controls;
- Sub-metering – to monitor usage for different parts of your premises; and
- Water efficient industrial cleaning equipment - i.e. scrubber/driers (walk behind and ride on machines) and steam cleaners.

How do I claim an ECA?

You can claim ECAs for water efficient equipment in the same way that you claim other types of first year allowances. This is done through your income tax self assessment or your corporation tax self assessment return.

If you need help making your claim for ECAs, contact your tax adviser or call the HM Revenue & Customs (HMRC) Self Assessment Helpline on 0845 900 0444.

6. Rainwater Harvesting

Rainwater harvesting systems enable you to collect rainwater for use in your business. This reduces the amount of water you need from the mains water supply. Harvesting can be done on a large scale by connecting harvesting equipment to your existing supply or on a smaller scale using water butts to collect smaller amounts of water for external use.

You can find out your mains water supply costs by checking your water bills carefully. If you want to quantify how much rainwater you can harvest in a year you should use the following equation:

$$\text{Annual rainwater yield in cubic metres (m}^3\text{)} = P \times A \times 0.8$$

P = annual precipitation (in metres)

A = collection area (in square metres)

0.8 = you should expect to collect approximately 80 per cent of this water each year, due to small losses in filtering and small rainfalls that do not generate enough runoff.

You can get the annual precipitation figures from the Met Office website: www.metoffice.gov.uk

The information for annual precipitation is in millimetres (mm) so you will need to convert these figures into metres (m) by dividing by 1000 (for example the figure for 2010 was 1047.1 mm which equals 1.047 m).



Harvesting considerations

1. Think about the quality of the water you will gain from rainwater harvesting and the quality of water you need to operate your business efficiently. If you need high levels of purity, rainwater may not be suitable.
2. You should consider getting a tank large enough to collect water without it overflowing at the wettest time of year. There are many businesses that can help you develop bespoke rainwater harvesting systems. You can find information on rainwater harvesting on the UK Rainwater Harvesting Association (UKRHA) website (see useful contacts).
3. To comply with water regulations, in most cases before you start work on the installation or make any changes to your water system, you as the owner, occupier or installer must get approval from NI Water by giving advance notice of the work. However, this does not apply to items that are not connected to the water network such as water butts. If you are discharging water to the sewer you will still have to pay a charge to NI Water although this will be at a reduced rate.
4. You may also be able to benefit from tax allowances under the **ECA** scheme. The rainwater harvesting system must be on the Water Technology List before your business can claim the 100 per cent first year capital allowance on its cost.

Work affecting meters

Things to remember about meters:

- They remain the property of NI Water;
- If you need to do any work which may affect the meter at your premises it is important that you contact NI Water before doing this. Not doing so may constitute an offence of tampering with a meter; and
- If in doubt, please contact NI Water.

7. Borewells and Abstraction

Borewells can provide an alternative private supply for farms and homes. It may be possible to make savings by installing a borewell at your premises. However, it is worth remembering that:

- Abstracted water can be cheaper than metered water but it is not free. Inefficient water use can significantly add to waste water disposal costs (since April 2012 NI Water charges for water distributed to the foul sewer from private supplies such as borewells, please contact NI Water for further details).
- Test bores can be expensive and there is no guarantee of finding suitable quality or quantities of water.
- Anyone who intends to drill a borehole or sink a shaft or well more than 15 m deep, anywhere in Northern Ireland, is required, by law, to inform the Geological Survey of Northern Ireland (GSNI).
- If you plan to have a connection to the water main and a supply from a borewell you must comply with water regulations and give advance notice to NI Water that the work is being carried out.

For more information on borewell construction you can contact Northern Ireland Environment Agency (NIEA), details provided in the useful contacts in section 10.

Abstraction

If you abstract more than 20 m³ of water per day, you must get an abstraction licence from NIEA.

If you abstract 20 m³ or less of water per day you must:

- be able to demonstrate the volume of water you abstract;
- minimise water leaks; and
- prevent any contamination or pollution.

If you abstract between 10 m³ and 20 m³ of water per day you must also notify NIEA. For more information on abstraction contact NIEA.

9. Complaints

Consumers sometimes feel that it is not worthwhile complaining. However, complaining can be beneficial to your business, NI Water and other customers. If you have contacted NI Water and remain dissatisfied with the response you receive or the outcome of your complaint, you can contact the Consumer Council.

The Consumer Council has legal powers to investigate complaints on your behalf. We have a dedicated Consumer Support team which assists consumers with their complaints and enquiries in our statutory areas of transport, natural gas, electricity, coal and water. **Our service is free, independent and confidential.**

Tips on effective complaining:

- Give the company an opportunity to put things right;
- Before contacting any organisation, know exactly what you want to say and how you would like your concerns to be addressed;
- Make sure you have the necessary documents to hand, for example bills and letters;
- Always make a copy of any original documents and where possible keep the originals; and
- Have a pen and paper ready to keep a record of the three Ws:
 - Who you have spoken to;
 - When you spoke to them; and
 - What was said.

If you would like more advice visit the Consumer Council website: www.consumercouncil.org.uk or contact our Consumer Support team on 0800 121 6022.

10. Useful Contacts



The sole provider of water and sewerage services in Northern Ireland.

Northern Ireland Water
PO Box 1026
Belfast
BT1 9DJ

- ☎ **Waterline** (Enquiries and complaints)
0845 744 0088
Customers with hearing difficulties can use 'Text Relay' through Waterline 08457 440088
Leakline: 0800 028 2011
Billing queries: 0845 877 0030
- ☎ **Text phone:** 0800 0515 446
- ✉ **Email:** waterline@niwater.com
- 🌐 **Website:** www.niwater.com

Telephone lines open from 8.00 am to 8.00 pm, Monday to Friday, Saturday from 8.00 am to 6.00 pm and Sunday from 12.00 pm to 6.00 pm



The official online channel for business advice and guidance in Northern Ireland.

It contains essential information, support and services for you and your business – whether you work for a large organisation or are on your way to starting up your own business.

nibusinessinfo.co.uk
Bedford Square, Bedford Street
Belfast
BT2 7ES

- ☎ **Tel:** 0800 181 4422
- ✉ **Email:** info@nibusinessinfo.co.uk
- 🌐 **Website:** www.nibusinessinfo.co.uk

Ulster Farmers' Union

The Ulster Farmers' Union (UFU) is the largest democratic voluntary organisation representing farmers and growers in Northern Ireland. Its central objective is to promote their interests both at home and abroad through professional lobbying.

Ulster Farmers' Union
475 Antrim Road
Belfast
Antrim
BT15 3DA

- ☎ **Tel:** 02890 370 222
- ✉ **Email:** info@ufuhq.com
- 🌐 **Website:** www.ufuni.org



The UK Rainwater Harvesting Association (UKRHA) is a company limited by guarantee and serves as a focal point for organisations with business interests in the rainwater harvesting industry.

In addition to regulating the activities and standards of its members, it serves as an enquiry centre for the public, industry and governmental bodies. UKRHA provides information to enhance the general understanding of the advantages derived from rainwater harvesting systems.

UK Rainwater Harvesting Association,
Millennium Green Business Centre
1 Rio Drive, Collingham
Newark
Nottinghamshire
NG23 7NB

- ☎ **Tel:** 0845 026 0240
- ✉ **Email:** info@ukrha.org
- 🌐 **Website:** www.ukrha.org



The Consumer Council

The Consumer Council's job is to speak up for consumers and give them a voice. We also ensure that the policy makers in Northern Ireland hear that voice and take it into account when they are making decisions that affect us all.

We do this by running information and education campaigns, influencing the public and private sectors, undertaking research and producing publications. We also help individual consumers with complaints about buses, trains, planes, water, natural gas, electricity and coal.

The Consumer Council
116 Holywood Road
Belfast BT4 1NY

- ☎ **Tel:** 028 9067 2488 or 0800 121 6022
- ✉ **Fax:** 028 9065 7701
- ✉ **E-mail:** info@consumercouncil.org.uk
- 🌐 **Website:** www.consumercouncil.org.uk

Lines open Monday to Friday 9 am to 5 pm



An Agency within the Department of Environment. NIEA takes the lead in advising on, and in implementing, the government's environmental policy and strategy in Northern Ireland. It carries out a range of activities which promote the government's key themes of sustainable development, biodiversity and climate change.

NIEA
Water Management Unit
17 Antrim Road, Lisburn BT28 3AL

General enquiries:

- ☎ **Tel:** 028 9262 3100
- ✉ **Fax:** 028 9267 6054
- ✉ **Email:** waterInfo@doeni.gov.uk
- 🌐 **Website:** www.doeni.gov.uk/niea/index.htm

Geological Survey of Northern Ireland (GSNI)

The GSNI is part of the Department of Enterprise, Trade and Investment (DETI). GSNI provides geoscience information and services to inform decision making.

GSNI
Colby House
Stranmillis Court
Belfast
BT9 5BF

-  **Tel:** 028 9038 8462
-  **Fax:** 028 9038 8461
-  **Email:** gsni@detini.gov.uk
-  **Website:** www.bgs.ac.uk/gsni/index.html

Northern Ireland Agricultural Producers' Association (NIAPA)

NIAPA is an organisation for the farming community of Northern Ireland offering a range of services including farm representation, appeals and nitrates calculations.

NIAPA
15 Molesworth Street
Cookstown
BT80 8NX

-  **Tel:** 028 8676 5700
-  **Fax:** 028 8675 8575
-  **Email:** niapa@hotmail.com

If you would like to be more water efficient at home you can find information on NI Water's website or by contacting them on the details provided. You can also check the water section of our website for updates on how you can save water:
<http://www.consumercouncil.org.uk/water>.

Notes



The Consumer Council

Elizabeth House
116 Hollywood Road
Belfast
BT4 1NY



Complaints line: 0800 121 6022



Tele/Textphone: 028 9067 2488



Fax: 028 9065 7701



E-mail: info@consumercouncil.org.uk
complaints@consumercouncil.org.uk



Websites: www.consumercouncil.org.uk
www.consumerline.org



Consumer Council Northern Ireland



ConsumerCouncil