



Frequently asked questions

Based on your feedback, we've collated some questions and answers to help you take your water efficiency action plans forward – just click on the subject area below to browse the information.

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1. Water bills and charges

Question	Answer
1.1. What do you do if you receive a bill that is based on an estimated reading, but find there is a difference between the estimated and actual meter reading?	<p>Metered properties are responsible for the water use recorded on their meter, which will include wastage and leaks. However, your water supplier will often provide an estimated reading (rather than actual) of consumption on your bill which is based on your previous water use. If there is any variation between the estimated water use stated on your bill and your actual meter reading, contact your water supplier directly and ask for the meter reading to be updated. The water company may come out to read the meter or may ask you to provide a current meter reading.</p> <p>If you are not able to access your meter to check the accuracy of an estimated reading, and it has been a long time (for example, over a year) since your last actual reading was taken, then talk to your water company.</p>
1.2. Is there anything that can be done to reduce surface water drainage charges?	<p>If surface water (including rainwater) drains from your property to sewer, then you will be charged for surface water drainage by:</p> <ul style="list-style-type: none">• a fee in the standing charge;• a charge based on the rateable value of the property;• as part of the volumetric rate; or• a charge based on the area of your property. <p>If your surface water drainage charge is not based on the site area then, to obtain a reduction in your charge, it is likely you will need to show that no surface water drains from your property to sewer.</p> <p>Your water company will explain what evidence they need for you to qualify for a surface water drainage rebate.</p> <p>If your charge is based on the area of your property, you can take steps to help reduce your bill by decreasing the volume of surface water that drains to sewer from your property. This can be done by:</p> <ul style="list-style-type: none">• installing a soakaway, which is an underground pit filled with gravel that collects surface water and allows it to drain away naturally; or

1. Water bills and charges

Question	Answer
	<ul style="list-style-type: none">• replacing surfaces that do not allow rainwater to soak through, such as asphalt, with ones that do, such as gravel. Although this may be expensive in the short term, you should recover the cost over time through lower surface water drainage charges. <p>If you think your bill is excessive, you should ask your water company to reassess it. Check that any surface water that drains away naturally on your property has been accounted because this does not go to sewer and is not subject to the charge. Charges also vary according to the charging band. Therefore, check whether your property is in the correct charging band.</p> <p>Further guidance on surface water drainage can be found on the Ofwat website.</p>
1.3. My water bill shows a charge for 'Measured drainage – band 12'. What does this relate to?	<p>It is likely that this charge relates to the discharge of surface water from your property and reflects the costs incurred by the water company for conveying it to the sewage works and for its treatment. The band number relates to the area of your site that drains to sewer and is set by your water company. For example, Band 12 in Severn Trent's region is 7,500m² to 9,999m², but in United Utilities' region it is 75,000m² to 99,999m². Further information can be found at:</p> <ul style="list-style-type: none">• Severn Trent Water: www.stwater.co.uk/upload/pdf/Scheme_of_charges_web.pdf• United Utilities: www.unitedutilities.com/documents/Charges_scheme_summary_-_business_and_non-household_2014-2015.pdf <p>A rebate might be obtained if you have any areas at your site that do not drain to sewer, such as direct run-off to a stream, drainage to a soakaway or permeable areas (for example lawns and flowerbeds).</p> <p>Further details will be available on your water company's website under 'Scheme of Charges'. Check with your supplier if you think you may be in the wrong charging band.</p>

1. Water bills and charges

Question	Answer
<p>1.4. Some of our water is used to clean the terraces and around the pitch. Can we ask for reduced charges for wastewater because it evaporates and does not go to sewer?</p>	<p>Water companies base their charges for the treatment of wastewater on the volume of water that is metered to a site. If you can demonstrate that a proportion of the metered water supply is 'not returned to sewer' you may be eligible for a rebate. Data would need to be provided to substantiate the claim. This normally means installing a water meter on the supply to the process or area of use where water is not discharged to sewer. You may be able to make a claim for overpayments on previous years' bills.</p> <p>When using water to clean terraces and around the pitch, it is important not to allow any pollutants to enter surface water drains.</p> <p>Monitor your washing and cleaning operations by recording hose or tap use (such as frequency, duration and flow rate) and calculate the quantity of water you use. Once you have this information, check to see if you can reduce the amount of water you use for cleaning.</p>
<p>1.5. All wastewater at our sports centres is charged for as trade effluent. The pool water is also considered trade effluent. Would we be better to separate domestic and pool effluent for charging purposes?</p>	<p>The cost of collecting, treating and disposing of trade effluent depends on the volume of effluent discharged and the strength of the wastewater. Companies assess the volume and strength of trade effluent before it enters the sewers and charges are calculated using the Mogden Formula which includes fixed charges for conveyance of the effluent and treatment at the local sewage works.</p> <p>Volumetric trade effluent charges are often calculated using water supply information, less standard domestic and non-return allowances.</p> <p>Domestic allowances attempt to account for standard water usage within the business such as canteens and welfare facilities. Non-return allowances are likely to be applied when a proportion of the supply is not returned to sewer (e.g. evaporative losses from swimming pools).</p> <p>Check your water bills and establish on what basis charges are being made. You should determine if these allowances are being applied to your site and if so, whether they are at the correct level. If you are unsure contact your sewerage undertaker to discuss the matter further.</p>

1. Water bills and charges

Question	Answer
1.6. We are being charged for trade effluent on a supply that has had no consumption for several years. Should we request that the trade effluent charges are removed?	You will need to contact your water supplier and sewerage undertaker to discuss the situation. In the first instance, collate all the appropriate information so that you can present the facts clearly.
1.7. Our bills exclude details of trade effluent charges – sewerage charges show as blank. How can I get the breakdown of charges/rates/volumes and so on?	<p>Information on water, wastewater and trade effluent charges is provided on your bills, however you may need to locate more than one bill to access all the information. If your site discharges trade effluent and domestic wastewater, the sewerage charge will usually appear on a separate trade effluent bill. However, some water companies provide one bill that covers water supply, trade effluent and wastewater.</p> <p>If your site only generates domestic wastewater (sewerage), you should not receive a trade effluent charge. Your sewerage charge will appear on your water bill and may be based on:</p> <ul style="list-style-type: none">• incoming water, less a non-return to sewer allowance; or• the number of people on your site. <p>More information can be found at: www.ofwat.gov.uk/nonhousehold/yourwaterbill/hownonhousehold/</p> <p>Contact your water supplier and sewerage undertaker to find out how you are being billed for trade effluent.</p>
1.8. Who establishes what tariff a business is on – is it the judgment of the water company alone?	Your water supplier will establish your water tariff, which will be based on how much water you use. Contact your supplier for further information about your tariff or if you think you are being charged incorrectly.
1.9. Unlike electricity and gas suppliers, is the local water company the only supplier for the services or is it possible to opt for a cheaper supplier?	<p>If you are likely to use more than 5 million litres of water a year on a site you may be eligible to choose your water supplier. Ofwat or the Consumer Council for Water will be able to help you work out if you are eligible and give you information on the opportunities available.</p> <p>In 2017, all non-domestic customers will be able to choose their water supplier. You can read more on the Ofwat website.</p>

2. True cost of water

Question	Answer																		
<p>2.1. What are the real costs of water if I treat or heat water on site?</p>	<p>The true cost of water at your site will be the cost of the incoming water supply and disposal, plus any costs for treatment (such as chlorination), pumping and heating. Various treatments and their costs are shown below (excluding disposal costs):</p> <table border="0"> <thead> <tr> <th data-bbox="775 501 985 528">Type</th> <th data-bbox="1249 501 1391 528">Typical cost</th> </tr> </thead> <tbody> <tr> <td data-bbox="775 536 981 563">UK mains supply¹</td> <td data-bbox="1249 536 1435 563">£0.52 – 1.93/m³</td> </tr> <tr> <td data-bbox="775 571 987 598">Chlorinated water</td> <td data-bbox="1249 571 1451 598">£0.77 – £2.30/m³</td> </tr> <tr> <td data-bbox="775 606 958 633">Softened water</td> <td data-bbox="1249 606 1451 633">£1.02 – £2.43/m³</td> </tr> <tr> <td data-bbox="775 641 1144 668">Demineralised/deionised water</td> <td data-bbox="1249 641 1451 668">£1.92 – £3.80/m³</td> </tr> <tr> <td data-bbox="775 676 1115 703">Hot water (60°C) gas heated²</td> <td data-bbox="1249 676 1435 703">£2.79 – 4.20/m³</td> </tr> <tr> <td data-bbox="775 711 1205 738">Hot water (60°C) electrically heated²</td> <td data-bbox="1249 711 1451 738">£8.63 – 10.04/m³</td> </tr> <tr> <td data-bbox="775 746 1077 774">Condensate – gas heated²</td> <td data-bbox="1249 746 1435 774">£5.31 – 6.72/m³</td> </tr> <tr> <td data-bbox="775 782 1016 809">Steam – gas heated²</td> <td data-bbox="1249 782 1518 809">£29.24 – £30.65/tonne</td> </tr> </tbody> </table> <p>¹ – UK mains supply based on standard 2014/15 tariffs ² – Energy costs at 4.2p/kWh for gas and 13.5p/kWh electricity, using a boiler with 90% efficiency</p> <p>These added costs can be significant, especially if your water use is high, therefore, any initiatives to reduce water use will also reduce costs.</p>	Type	Typical cost	UK mains supply ¹	£0.52 – 1.93/m ³	Chlorinated water	£0.77 – £2.30/m ³	Softened water	£1.02 – £2.43/m ³	Demineralised/deionised water	£1.92 – £3.80/m ³	Hot water (60°C) gas heated ²	£2.79 – 4.20/m ³	Hot water (60°C) electrically heated ²	£8.63 – 10.04/m ³	Condensate – gas heated ²	£5.31 – 6.72/m ³	Steam – gas heated ²	£29.24 – £30.65/tonne
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<p>2.2. Most of the water used in our office block is cold water for toilets. Would there be any significant energy costs due to its distribution?</p>	<p>Offices do not tend to distribute large volumes of water, but in some office buildings water is pumped to a header tank and this will incur a pumping cost.</p> <p>The amount of electricity used by a pump is a function of flow rate, distribution pressure and pumping efficiency. To determine your energy costs for pumping water around your site, you will need to know the energy use (kWh). Contact your pump supplier/manufacturer if you are unsure of its power rating (kW). Alternatively, you could fit a permanent or temporary meter to measure use.</p> <p>If you have a pressure control booster pump, consider the pressure setting and whether it is really necessary. For example, if you are boosting water pressure to 5 bar, would 2 bar be sufficient?</p>																		

3. Hot water

Question	Answer
3.1 What's the best way of avoiding wastewater from hot taps?	<p>Establish why hot water is being wasted and then identify actions to reduce the waste. For example:</p> <ul style="list-style-type: none">• Are people running a tap longer because they are waiting for the hot water to reach them? If so, you may need to improve the lagging of the supply pipe so that it doesn't lose heat. Alternatively, you might need to consider installing a point-of-use heater.• Are push taps running longer than necessary? A flow duration of 15 seconds is adequate for hand-washing purposes. Adjust the setting as required as part of a regular maintenance programme. Prevent soap or limescale deposits from building up as they can cause some push-down tap mechanisms to jam.• Is water being wasted because the flow rate is more than is needed? If so, you may want to install flow rate controllers. Some of these devices are included on the Water Technology List (WTL). <p>You might also consider installing water efficient taps, such as percussion taps or spray taps. These can also be found on the WTL. Reducing wastewater arising from hot taps will have greater benefits in that it will not only reduce your water costs, but also your energy costs as less water is heated.</p>
3.2 What is the recommended temperature for hot water in an office environment?	<p>Hot water systems must be properly maintained to control the risk of Legionnaires' disease. In the UK, legionella management is primarily driven through The HSE Legionnaires' disease - the control of legionella bacteria in water systems Approved Code of Practice and Guidance L8 (HSE, 2000).</p> <p>In hot and cold water systems, the risk of legionella is controlled by storing hot water above 60°C and distributing it at above 50°C – and keeping cold water below 20°C. For more guidance, refer to the Health and Safety Executive's guidance for managing hot and cold water systems. The risk of scalding is low for most people at 50°C, but rises rapidly above 55°C. Therefore, caution is needed to prevent higher temperatures at the tap and warning notices should be posted at known problem areas. The use of thermostatic mixing valves, particularly on baths and showers, should be considered to reduce the temperature of the water.</p>

3. Hot water

Question	Answer
3.3 Is the mains water treatment process a carbon intensive one?	<p>The water treatment process itself has a relatively small carbon footprint. Defra reports that, for 1,000,000 litres (1,000 m³) of mains water, the carbon dioxide equivalent (CO₂e) emissions:</p> <ul style="list-style-type: none">• to supply the water are 344.1 kg; and• for water treatment are 708.5 kg. <p>See www.ukconversionfactorscarbonsmart.co.uk/</p> <p>However, the on-site energy use associated with heating, pumping and water treatment will add to the carbon footprint of the water you use.</p>
3.4 What is a 'hot well' and would it be worthwhile installing one?	<p>The term 'hot well' normally refers to a boiler's feed water tank. Significant amounts of water are needed to feed steam-raising boilers and where possible the condensate (hot water derived from the steam cooling) should be collected and returned to the boiler hot well to top up (or make-up) the boiler feed water. Collecting condensate and returning it to the 'hot well' avoids using cold water to top up the feed water tank which has the added benefit of reducing energy costs.</p> <p>If condensate is not currently being recovered and re-used, then a hot well and return pipework, condensate traps and pumps would need to be provided. The economics and practicality of installing such a system would need to be assessed on a site-specific basis.</p> <p>Costs will vary according to your requirements. You will need to contact the manufacturers/suppliers directly to ensure you identify the most appropriate equipment. Be sure to shop around for several quotes so that you can compare costs.</p>

4. Wastewater and effluent

Question	Answer
4.1. Is the Mogden Formula Tool relevant in an office environment?	<p>Water company charges for trade effluent discharged to sewer are based on the Mogden formula. This formula links charges for a particular customer to the cost of treating the effluent (that is, customers pay according to the volume and strength of their effluent).</p> <p>Most offices are only likely to produce wastewater from typical domestic activities (washroom, taps, kitchen area or canteen). This is regarded as sewage and would not be charged as trade effluent. However, there may be instances where wastewater is produced which could be classed as trade effluent, e.g. if cars are washed on the premises. If this is the case you need to speak to your water company.</p>
4.2. How do you monitor water leaving a building?	<p>It is often the case that trade effluent and wastewater discharge volumes are not directly monitored. Instead, they are based on the incoming water supply. If you have commercial premises, it is likely that water is used mainly for domestic purposes (washrooms, taps and kitchen/canteen area). In the main, wastewater discharges do not need to be monitored as it can be assumed that most of the water entering your premises leaves as sewage (typically 90-95% of the incoming supply).</p> <p>However, if you pay for trade effluent discharges, then you may be able to install a meter at the point of discharge, but some industrial sized meters can be expensive. An alternative approach may be to install water meters at the various points of use (sub-meters) so you can calculate the volume of water use at each point. This will also help you to identify the points at which water may leave your site either as domestic wastewater and/or trade effluent, and losses such as steam or in manufactured products. The cost of meters and their installation varies according to the type of meter and monitoring system required. A simple water meter would cost around £50, plus installation costs.</p> <p>Your trade effluent bills will show a breakdown between trade effluent and sewage discharges, these are based on incoming water to your site. Sewage will be a proportion of what goes out of your discharge pipe to sewer, typically it is assumed to be between 5% and 10% of your supply.</p>

4. Wastewater and effluent

	<p>It is worth noting that if you add significant volumes of water to your product or water evaporates from processes, the amount of water you discharge compared to the volume of supply could be significantly less. Therefore, you may be able to get a reduction in your effluent charge and it is worth talking with your water company.</p>
<p>4.3. Does the water used for washing commercial vehicles require a trade effluent consent or would it be considered normal sewage?</p>	<p>Yes, a business does need to have trade effluent consent to discharge water used for cleaning commercial vehicles. This is to avoid environmental pollution from chemicals used for cleaning, and from other substances such as oil and fuel, grease and antifreeze. For further information, please refer to the guidance published by the Environment Agency PPG13 – Vehicle washing and cleaning. The Netregs website offers more information for Northern Ireland and Scotland.</p>

5. Funding and financial help

Question	Answer
5.1 Are there any grants or help available to install a water borehole?	<p>Unfortunately, we are not aware of any grants or help.</p> <p>In England and Wales, if you abstract more than 20m³ of water per day from surface water or groundwater, you must have an abstraction licence from the Environment Agency. It is an offence to abstract more than 20m³ per day without a licence.</p> <p>Please visit www.gov.uk/water-management-abstract-or-impound-water for more information on the rules governing water abstraction.</p>
5.2 Is there any Government funding to support businesses in: <ul style="list-style-type: none">• reducing water use;• improving water quality; and• installing sub meters?	<p>The Enhanced Capital Allowance (ECA) Scheme enables businesses to claim 100% first year capital allowances on investments in technologies and products that encourage sustainable water use. The Water Technology List (WTL) is central to the scheme and provides a list of eligible products and technologies. Businesses investing in products on the list are now able to write off the whole cost of their investment against their taxable profits of the period during which they make the investment. So, they will not only benefit from saving money on their water bills, but can also claim ECAs that provide up-front tax relief on the capital cost of the equipment, which can deliver a cash flow boost.</p> <p>Water meters that meet the current eligibility criteria are supported by the WTL. Access and search the WTL product list here.</p> <p>Other Government-backed support and finance for business can be found here. It includes:</p> <ul style="list-style-type: none">• grants;• finance and loans;• business support, such as mentoring and consultancy; and• funding for small and medium-sized businesses and start-ups. <p>It may also be worthwhile visiting websites such as www.greengrantsmachine.co.uk which enable businesses to search for funding schemes that can help them reduce their environmental impact.</p>

6. Managing water reduction

Question	Answer
6.1 Why should I have a separate water efficiency project – wouldn't it make sense to run an energy and water efficiency project?	Companies often address water efficiency as part of a broader resource efficiency or environmental improvement project. This makes sense, but having a dedicated water efficiency project will help to focus on reducing water use, especially if you are not aware of the efficiencies that can be made and their cost benefits.
6.2 Is there a simple and concise checklist that could be used to review a site and identify possible water saving opportunities?	<p>Use the Rippleffect Action Checklist to guide you through the main steps of a water efficiency project. This will help you understand where water is being used in your business and how to take action reduce it and save money.</p> <p>Developing a water mass balance will help you to understand the main uses of water on your site, and to identify and prioritise which actions will achieve the greatest savings. It will also help you to identify potential leaks and any unauthorised use that might be taking place. Refer to Tracking water use to cut costs for further guidance.</p>
6.3 How often should a water saving action plan be reviewed?	<p>This will depend on the actions you identified and how quickly they can be implemented.</p> <p>You should aim to formally review your plans on a quarterly basis, but you will benefit from having more frequent informal reviews with your implementation team. These may take place with individuals or as part of a wider team meeting, or even be a casual walk around your site to assess implementation progress.</p> <p>The guide Tracking Water Use to Cut Costs discusses how to implement and monitor action plans to save water.</p>
6.4 What pressure should my mains water be supplied at?	On average, water pressure is supplied between 2 bar and 4 bar.

7. Measurement and monitoring

Question	Answer
<p>7.1 I am responsible for understanding and monitoring water use in my company. Does that mean that I need to contact my water provider if I suspect something is wrong? For example, if I notice a drop-off in my consumption that cannot be easily explained, do I need to contact my provider to check whether there is a potential meter failure?</p>	<p>It could be worthwhile checking and reading the meter yourself if you have access to it.</p> <p>Monitoring and recording your water use on a regular basis and developing a water mass balance will help you to pinpoint where and understand why there are any significant changes in water use on site. The detail in your water mass balance can be built up over time. However, in the first instance, identify your main points of water use to see why there may be a significant change.</p> <p>It is important to understand what your current water demand is. If you cannot account for any major discrepancy in your water consumption, contact your water supplier to investigate whether your meter is faulty.</p>
<p>7.2 Would an office-based business expect to see any obvious seasonal water use trends?</p>	<p>In the case of an office environment, trends will vary with occupancy as most of the water is used by staff using the toilets, taps and showers. Seasonal trends would not be expected unless there is, for example, greater use of showers during the hotter summer months. It is advisable to look at your consumption on a per employee basis to establish any trends.</p> <p>A best-practice office building should be using no more than 2m³ (2,000 litres) of water per employee per year (or 7.9 litres per employee per day)¹. Where an office has a canteen where meals are cooked from raw ingredients, then the water use associated with the preparation, cooking and cleaning will increase this to around 40 litres per staff member per day.</p> <p><small>¹CIRIA C657 Water key performance indicators and benchmarks for offices and hotels, London 2006</small></p>
<p>7.3 In an office environment, what are the largest water savings that can be achieved?</p>	<p>The typical major uses of water in an office² are:</p> <ul style="list-style-type: none"> • urinal flushing (20%); • WC flushing (43%); • washing (27%); • canteen use (9%); and

7. Measurement and monitoring

Question	Answer
	<ul style="list-style-type: none"> • cleaning (1%). <p>²Tracking Water Use to cut costs, WRAP</p> <p>Urinals not fitted with flushing controls can use between 30% and 50% of the water in an office environment. Other areas that are important to investigate include canteens and showers.</p> <p>Refer to the following guidance for further information:</p> <ul style="list-style-type: none"> • Reducing Your Water Consumption; • Cost-effective water saving devices and practices- for commercial sites; and • The Water Technology List.
7.4 Are temporary, non-intrusive meters, such as strap-on meters, reliable?	The use of strap-on ultrasonic flow meters can give good results, but some older pipework may cause problems with their accuracy, particularly if they are corroded, as pipe walls should be free from dirt, paint or corrosion. Make sure you discuss how you intend to use such meters with potential suppliers/manufacturers to ensure you purchase the device that matches your needs.
7.5 Our water meter is a couple of feet underground down a man hole and it is difficult to obtain the meter serial number. What should we do?	If it's not practicable for you to access the meter yourself, you may want to contact your water supplier and ask if you can be present the next time your meter is read. You can then ask for the serial number to be checked.
7.6 How accurate are 'turbine' type meters used to measure water on site?	Turbine flowmeters tend to be used to measure higher flow rates and are less accurate at low flow rates. Remember, the accuracy of flow measurement equipment is affected by the proximity of valves, bends in the pipework and other items which affect flow. Make sure you discuss how you intend to use such meters with potential suppliers/manufacturers to ensure you purchase the device that matches your needs.

7. Measurement and monitoring

Question	Answer
<p>7.7 For an office-based business, what is a good water use target to aim for on a per-employee, per year basis? We use around 7m³ per full-time employee (FTE) per year and have set a target of 4.4 m³ per FTE per year. Is this a strong enough target from a water sustainability viewpoint?</p>	<p>It is important to ensure that you set SMART targets (Specific, measurable, achievable, relevant and timebound). Benchmarking water use per FTE is a good approach. When setting water use targets you will need to consider whether your office has a canteen and/or showers.</p> <p>A best-practice office building should be using no more than 2m³ (2,000 litres) of water per employee per year (or 7.9 litres per employee per day)¹. Where an office has a canteen where meals are cooked from raw ingredients, then the water use associated with the preparation, cooking and cleaning will increase this to around 40 litres per staff member per day.</p> <p><small>¹CIRIA C657 Water key performance indicators and benchmarks for offices and hotels, London 2006</small></p>
<p>7.8 Where can I find benchmarking information for different facility types and industry?</p>	<p>There are several WRAP publications that provide benchmarks for different activities across a range of industry sectors. These can be downloaded from the WRAP website and include:</p> <ul style="list-style-type: none"> • Water Efficiency in the UK Drinks Sector; • Benefits of Water Metering and Monitoring for Food & Drink and Hospitality & Food Service Sectors; and • Saving Money Through Resource Efficiency: Reducing Water use. <p>Further information can also be found in CIRIA publication Water key performance indicators and benchmarks for offices and hotels.</p>
<p>7.9 Are there any benchmark statistics on water consumption in hospitals?</p>	<p>The Department of Health has produced Environment and sustainability - Health Technical Memorandum 07-04: Water management and water efficiency - best practice advice for the healthcare sector. Tables 2,3 and 4 give details of benchmarks for hospital water consumption.</p>

8. Water efficient equipment

Question	Answer
8.1 The prices of water saving showers vary significantly. Does this mean that there is a difference in water savings across the range you can buy?	<p data-bbox="779 363 2018 464">There is little difference between the cost of water efficient showers and less efficient models. Water efficient showers vary in the amount of water savings they deliver, but these models are not necessarily more expensive; the price will vary depending on quality and design.</p> <p data-bbox="779 507 2040 608">Efficient showers deliver less water than ordinary showers, without compromising shower performance. Through their unique design and/or particular way of delivering the water, efficient showers save not only water, but also reduce energy consumption because less hot water is used.</p> <p data-bbox="779 651 2033 751">Investment in efficient showers qualifies for an Enhanced Capital Allowance (ECA) provided the equipment is listed on the Water Technology List (WTL). Check whether the products you are considering buying are included on the WTL. The following showerheads and shower sets are supported:</p> <ul data-bbox="779 762 1361 970" style="list-style-type: none">• low-flow showerheads;• aerated showerheads;• thermostatically controlled shower sets; and• automatic shut-off showers:<ul data-bbox="815 906 1227 970" style="list-style-type: none">– electromagnetic systems; and– mechanical and pneumatic push systems. <p data-bbox="779 1013 1532 1038">The amount of water used by a shower can also be reduced by:</p> <ul data-bbox="779 1050 1912 1182" style="list-style-type: none">• installing a flow restrictor in the pipework upstream of the shower fitting;• installing a flow restrictor in the shower head;• using a ‘water saver’ showerhead (this usually aerates the water or causes a fine spray); and• using a push button to control water use. <p data-bbox="779 1225 1644 1251">For more information, please refer to Reducing your water consumption.</p>

8. Water efficient equipment

Question	Answer
8.2 Is it worth considering waterless urinals?	<p>Up-to-date waterless or 'flush free' urinals are highly water-efficient and hygienic, and should be considered providing the circumstances allow adequate function. For example, careful scrutiny and survey should be undertaken in areas where usage rate is high or there are local drainage limitations. Furthermore the waterless system should always be installed with the full involvement of cleaning staff and implementation of the correct cleaning regime as recommended by the equipment suppliers.</p> <p>All flush free urinals need a small amount of water for maintenance which is dependent on the manufacturer specifications, and ultimately, end user behaviour. The price of flush-free urinals is similar to flushing urinals.</p> <p>For further information on water efficient procurement refer to the following guide Procurement requirements for water efficiency.</p>
8.3 Are there any hygiene issues associated with sensor controlled urinal flushes or WC flush reducing devices?	<p>Most sensor controlled urinals have a 'hygiene flush' that can be set to provide a flush following period of low or zero occupancy. Typically, the hygiene flush can be set on a 12 hour or 24 hour basis.</p> <p>Water saving toilets do not compromise performance (or hygiene) if installed correctly. Flush-reducing devices can be an effective way of reducing water use in older WCs (installed before 1991). Fitting older 9-litre WC cisterns with volume adjusters such as a 'hippo bag' or 'save-a-flush' will reduce the amount of water per flush by up to 2 litres. An office fitted with 9-litre WC cisterns and employing 100 staff could save around £500/year in water and sewerage charges.</p> <p>However, in newer WCs and cisterns with a maximum flush volume of 6 litres, using these devices may reduce the flush volume to such an extent that adequate flushing is not performed which can lead to double flushing - increasing water consumption.</p> <p>To ensure that the devices are suitable for your premises request a 2-week trial so that an informed judgement on the devices can be made.</p> <p>For further information, please refer to Reducing Your Water Consumption.</p>

8. Water efficient equipment

Question	Answer
8.4 Is it possible to reduce water flow through taps by using spray fittings?	<p>In commercial premises, taps account for around 25% of 'domestic' water use. A tap can deliver a flow rate of up to 20 litres/minute depending on the supply pressure. Spray fittings are among several water saving devices that are available to reduce water use. Refer to Reducing Your Water Consumption for further guidance on what you need to consider and how to evaluate the best solution to meet your needs.</p> <p>Spray taps (manually operated taps with spray attachment) are supported by the Water Technology List. Other efficient tap categories include automatic shut-off; electronic; low-flow, screw-down/lever; and spray.</p>

9. Staff engagement

Question	Answer
9.1 What tools are useful to encourage staff engagement in a water saving initiative?	<p>Have a clear vision of what your company wants to achieve in terms of reducing water use and set achievable targets. The benefits of the project need to be clearly visible to staff across the organisation.</p> <p>To get staff buy-in, they need to feel involved in the project, so engage them and keep them informed from the start. It's also important that everyone understands that senior management is supporting the programme of change.</p> <p>Staff need to understand how the water efficiency programme applies to them as individuals and what the benefits are to the business.</p> <p>Good co-ordination is key to getting everyone working together. Assign responsibilities to relevant staff and ensure they are adequately trained to meet the project needs.</p> <p>Regular communication of progress will help to maintain staff buy-in. Simple tools can be effective in encouraging and maintaining staff engagement, and can include a mix of the following:</p> <ul style="list-style-type: none">• posters on noticeboards to raise workplace awareness;• include information on the staff intranet or newsletter;• team meetings; and• staff suggestion schemes. <p>Give recognition to those staff that have achieved specific targets. You may even consider offering a reward.</p> <p>For further information visit our online tool on 'Embedding Change' or Workforce Partnerships for Resource Efficiency.</p>

9. Staff engagement

Question	Answer
9.2 How can I achieve water saving through behavioural changes in an office environment?	<p>A staff awareness campaign is one of the steps to help people recognise the benefits of using water more efficiently and changing their behaviour.</p> <p>Demonstrate how much water can be saved by everyone taking some very simple measures. Make use of different messages and factor in some thought-provoking facts.</p> <p>For further information, please refer to Resource Efficiency Publications.</p>
9.3 My senior management is more interested in saving energy. How can I persuade them to be more interested in water efficiency?	<p>Like any resource efficiency improvement, the best way to secure management buy-in is to present a strong case for support.</p> <p>Ensure you present recommendations with robust cost-saving forecasts. Demonstrate the link between water efficiency and energy efficiency if this is your manager's key focus. Reducing the use of hot water where it is unnecessary will help to reduce energy and water consumption.</p> <p>Work with your manager to prioritise improvements without necessarily categorising them into either 'energy efficiency' or 'water efficiency'.</p> <p>Rippleffect Module 4 (available here) provides useful tips on developing a business case for improvements, and getting the support and commitment you need.</p>
9.4 I'm the only person with responsibility for reducing our impact on the environment in our team. How can I get others involved so that we can make changes?	<p>Approach your senior management team and seek their approval for your implementation plan and for the resources required to put it into place. Let them know what the implications would be if you don't receive the support you need. Ideally, you would look to get support from relevant departments across your organisation rather than specifically 'recruit' colleagues to join a separate 'environment team'. Once you have approval from your managers you will need to explain what is needed with the rest of the team so that you get their buy-in and change takes place.</p>

10. Water abstraction

Question	Answer
10.1 We abstract water from a local river. How do I find out how much 1m ³ of water costs?	<p>You will need to know how much you pay for your licence and what volume of water you abstract each year to calculate the cost per m³.</p> <p>The annual charge is calculated from the volume specified on the licence rather than the volume extracted. Visit the Gov.UK website for further details on how the annual charge is calculated.</p>
10.2 Are there any grants or help available to install a water borehole?	<p>Unfortunately, we are not aware of any grants or help.</p> <p>In England and Wales, if you abstract more than 20m³ of water per day from surface water or groundwater, you must have an abstraction licence from the Environment Agency. It is an offence to abstract more than 20m³ per day without a licence.</p> <p>For more information on the rules governing water abstraction visit www.gov.uk/water-management-abstract-or-impound-water</p>
10.3 How much water can I abstract?	<p>If you abstract (take) water or plan to do so, you may need to apply for an abstraction licence.</p> <p>Applications to abstract water are assessed against local water availability and the approach is set out in Abstraction Licensing Strategies. To see how much water is available in your river catchment area and understand the likelihood of your application being successful view your local Abstraction Licensing Strategy.</p> <p>Some abstractions don't need a licence, for example:</p> <ul style="list-style-type: none">▪ abstractions of 20m³ or less a day, provided your abstraction is part of a single operation. If you abstract from the same source at multiple points, the exemption only applies if the combined total of all abstractions is 20m³ or less a day▪ some land drainage operations (for example, flood protection)▪ filling ships or boats with drinking or ballast water▪ water used for fire fighting▪ abstractions in relation to dewatering quarries, mines and other building or engineering

operations

- trickle irrigation

For further information on water abstraction visit the Gov.UK website at: www.gov.uk/water-management-abstract-or-impound-water

11. Legislation

Question	Answer
<p>11.1 Will the Government introduce compulsory water reduction programmes to industry as it has with energy through the CRC Energy Efficiency Scheme? If so, this could be used to help build a business case for senior management.</p>	<p>Every sector of the economy is dependent on water and some areas of the UK are already suffering water stress largely due to higher demand as a result of growing pressures from climate change and an increasing population.</p> <p>To tackle these issues Defra's Water White Paper (Water for Life) published in 2011 and the ensuing Water Act 2014, which came into force in May 2014, has introduced several key reforms to ensure water is valued for the finite resource it is. Major reforms to the water industry have been introduced to make it more innovative and responsive to customers, and better able to cope with natural hazards such as drought and floods. Also included are additional measures to restore the sustainable abstraction of water and improve the way water resource management and drought planning are managed. It also encourages the use of Sustainable Drainage Systems (SuDS).</p> <p>In terms of reducing water use within business, competition within the water industry will motivate water retailers to work with their customers to achieve efficiencies by driving down costs and water use. And the government's priority of restoring sustainable abstraction is likely to lead to tighter controls on the abstraction of water, for example, through conditions on licences such as 'hands-off-flow', which prevents abstraction during periods of low river flow, and the introduction of time-limited licences.</p> <p>So, while it is unlikely that the Government will introduce a specific compulsory water reduction programme on businesses, in the future less water will need to go further and everyone, including businesses, households and the water industry, will need to manage water more efficiently.</p> <p>Consider what the key drivers are for your company – is it cost savings, compliance, customer and other stakeholder expectations, or managing risk (the threat of water scarcity)? Understanding your key drivers will help you to present the main benefits of your planned improvements with your senior management.</p>

<p>11.2 What is retail competition in the water industry and what does it mean for business?</p>	<p>Through the Water Act 2014, the Government has made some changes to the provision of water services in England and opened up competition within the retail arm of the water industry. Competition will motivate water retailers to work with customers to achieve efficiencies by driving down costs and water use.</p> <p>Water companies' activities are split into two categories: retail and wholesale. Retail services include all customer-facing activities: meter reading, billing and customer services including services in relation to water services such as account handling, customer queries, as well as water-efficiency advice and tackling leaks on customers' pipes.</p> <p>Retail competition means that business, charity and public sector water customers in England are able to switch their water and sewerage supplier from 2017. Businesses with water intensive operations, for example, those in manufacturing and food and drink industries, are most likely to benefit from being able to competitively tender for water and sewerage services. Larger companies with multiple sites across the UK will also benefit from being able to contract with just one supplier and receiving a water and sewerage bill for all its sites.</p>
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12. Swimming pools

Question	Answer
12.1 What are the key actions for reducing water use in public swimming pools?	<p>Water is used in a number of ways to operate and maintain a swimming pool, including:</p> <ul style="list-style-type: none">• fresh top-up water to replace evaporation losses from the surface of the pool;• backwashing sand filters;• pool and pool deck cleaning; and• showers – for hygiene purposes, customers are advised to shower before swimming and, usually, they also shower after swimming. <p>The rate of evaporation from the surface of the pool depends on a number of factors, including:</p> <ul style="list-style-type: none">• the temperature of the water – ideally, water temperature should be between 27°C and 30°C;• the temperature of the air – if the air temperature is much higher than the water temperature, there is an increased risk of condensation; if the air temperature is much lower than the water temperature, there is increased heat loss from the pool water through evaporation and convection;• the relative humidity in the pool hall;• the surface area of the pool; and• the ventilation system. <p>Typically, mains water is used to top-up swimming pool water to replace losses from evaporation. Fitting a sub-meter to this system will allow you to monitor water use for this purpose.</p> <p>To optimise conditions:</p> <ul style="list-style-type: none">• keep the air temperature up to 1°C greater than that of the water, but no more than 30°C;• keep the relative humidity at between 50% and 70%; and• install a pool cover when the pool is not in use. Covers also reduce ventilation rates and the risk of condensation. Check covers regularly for deterioration. <p>A considerable amount of water (often mains water) is also used for backwashing sand filters. To optimise the amount of water used for this process, it is suggested you:</p> <ul style="list-style-type: none">• review requirements carefully to ensure water use is kept to a minimum without compromising

12. Swimming pools

- hygiene standards; and
- fit a sub-meter, if possible, to the system to monitor water use.

An in-line monitoring system is often used to measure disinfection efficiency – a sample of water is taken, tested and then discharged to drain. This can use significant amounts of water. It is suggested you review and optimise the volume of water that is used when checking disinfection efficiency.

13. Other sources of information

Question

13.1 Apart from WRAP, is there anywhere else I can go for more ideas on how to save water and help me implement my water saving ideas?

Answer

The Enhanced Capital Allowance (ECA) scheme offers a 100% first-year allowance for investments in certain water efficient plant and machinery. It lets businesses write off 100% of the cost of qualifying plant and machinery against taxable profits in the year of purchase. This can bring significant financial savings and reduce your business's impact on the environment.

Eligible products are detailed on the [Water Technology List](#).

Water companies – check with your water supplier to see what specific advice and support services are offered to business customers to improve water efficiency. Some water companies undertake on-site water audits.