



Drought Management Plan

Non-technical Summary

November 2017



If you have any general drought enquiries or require assistance in making a response, please contact our customer contact centre on Tel: **01223 70 60 50**.

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November 2017

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Introduction

Welcome to the non-technical summary of the Drought Management Plan for the Cambridge area from South Staffs Water. We have developed this document from the full Drought Management Plan to give you an insight into our plans to manage water supplies, in the event of prolonged dry weather and a lack of rainfall. It sets out the short and medium-term operational steps that we will undertake before, during and after a drought event to ensure that we can provide you with a secure water supply, with minimal impact on the environment. It shows you the triggers that are used to determine our actions, how they will impact on you and identifies how we will keep you informed of the measures we will put in place.

The first statutory drought plan for the Cambridge region was published in February 2008, in accordance with the legislation and Environment Agency's (EA's) supplementary guidance current at the time. The plan was revised in 2012 following the introduction of the Flood and Water Management Act. In 2012 Cambridge Water merged with South Staffs Water. However, as the Cambridge region has a distinctly separate geographical and water resource area, it continues to publish its own Drought Plan. If you would like to view the full Drought Management Plan, details can be found at the end of this document.

In the Cambridge region, South Staffs supplies drinking water to a population of 315,000. The water comes from groundwater sources, which are recharged by rainfall, mainly during the winter months. The water is abstracted using boreholes sunk into the ground at 26 locations.



Cambridge Region
Area of Supply

Who we consult with

The threat of drought is never far away in the East of England, where our average rainfall is the lowest in the country. We work with all the key regulatory bodies to ensure that our plans are in line with best industry practice and take advice where necessary. This document has been developed to help you understand what we propose to do should we enter a drought period.



What is drought?

There are many different definitions for drought. For the purpose of this document, a drought is a prolonged period of abnormally-low winter rainfall, leading to lower than expected groundwater levels in our sources of supply. When this occurs, we need to consider how to manage our supplies and meet the demand for water.

Our experiences of historic drought activity since the early 1900s enables us to categorise droughts as short, medium or long-term duration, as these descriptions help us identify the triggers and what measures we would need to have in place.

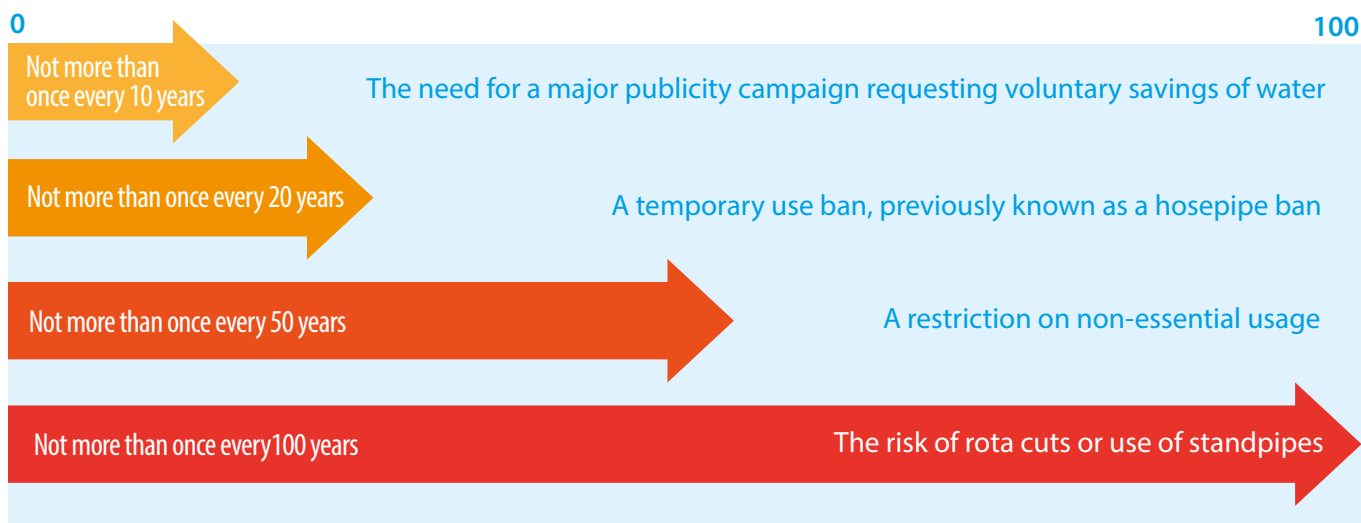
Short duration
A short duration drought generally lasts six to 12 months and tends to include a single dry winter with less than 80% of the average rainfall. This means that our groundwater sources are not adequately replenished over the winter months.

Medium duration
A medium duration drought comprises two successive dry winters, with an intervening dry summer. In this scenario, we may need to consider introducing some water use restrictions.

Long-term duration
A long-term duration drought would be signified by three consecutive dry winters and at least one intervening dry summer. This would be a critical drought scenario for Cambridge Water and would involve the introduction of restrictions to water use. In these circumstances, we would require everyone to work closely together to help manage the situation.

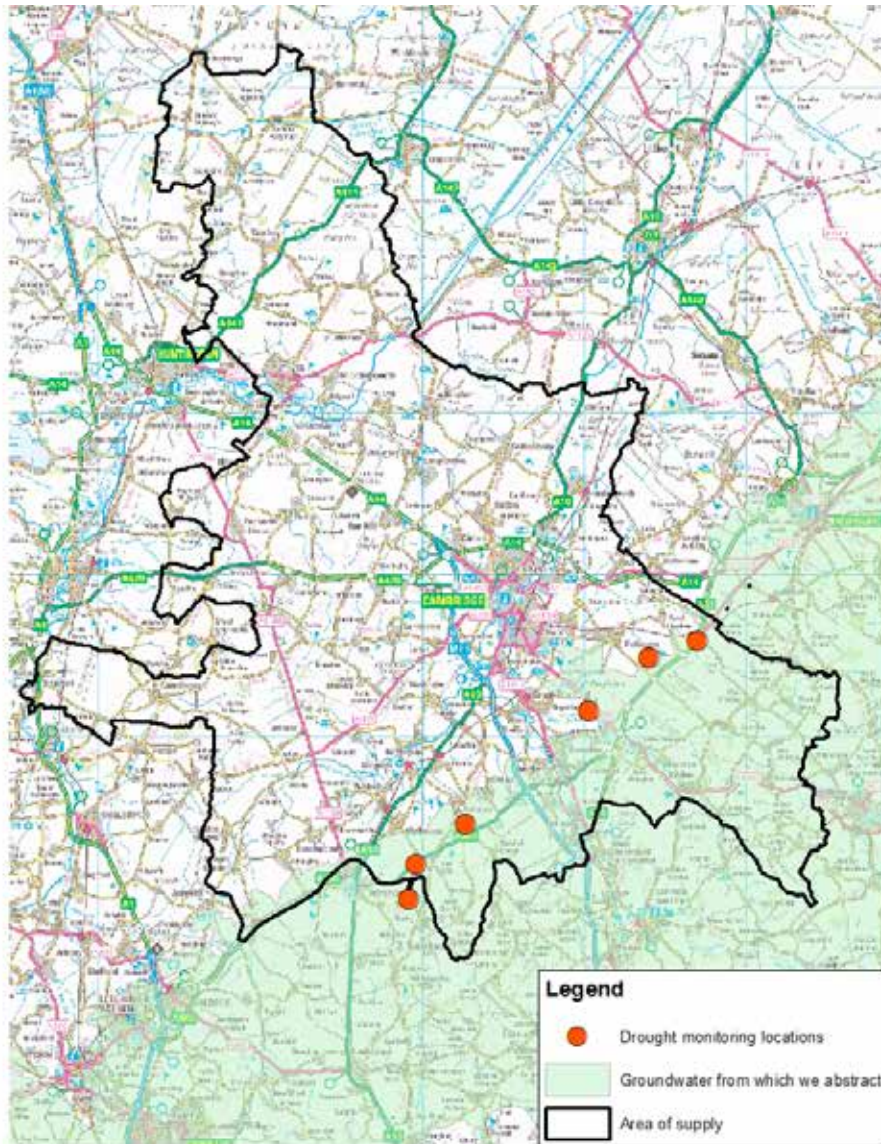
Our levels of service and what this means for you

Our understanding and analysis of historic droughts and how these have been managed with our water supply system is the basis of our Levels of Service. This demonstrates how frequently, on average, we might expect to implement different stages of the drought plan.



How we monitor for drought

We have six sites across the area where we constantly monitor conditions. These sites have been selected as they provide a good representation of how different parts of the groundwater source behave during a drought. We also monitor conditions at all our sources during dry periods. There are a further six observation boreholes, which are monitored by the EA – and during drought conditions, this data is also used to inform our decisions.

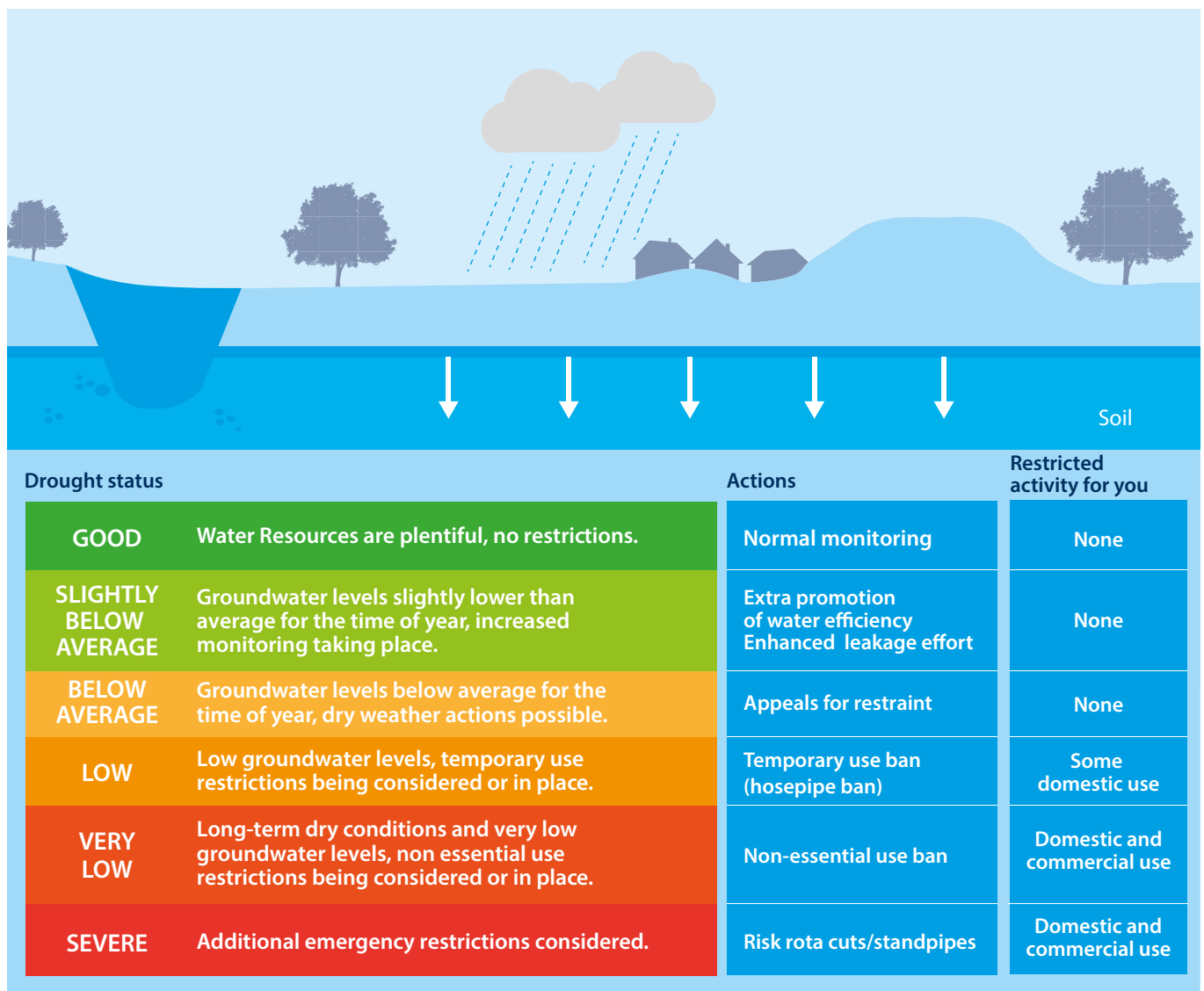


Monitoring is also carried out based on levels of recharge deficit. This uses Meteorological Office data to determine how much rainfall is effectively replenishing the groundwater source. It considers temperature, evaporation and rainfall taken up by plants. This data is known as MORECS.

Borehole rest water levels continue to be used as a primary indicator of the overall condition of the groundwater source during a drought. Measurement of cumulative recharge deficit begins in the month when the rest levels of three or more of the indicator sites fall below their long-term average level. These continue to be monitored until normal conditions have resumed. If the drought conditions continue, further triggers will be reached, changing the level of action required.

Our drought triggers

We have adopted a colour-coded system, based on a traffic light style system, to identify the severity of a drought and help make it easy to understand the implications. The following diagram identifies the conditions – normal through to unprecedented drought – along with the actions and levels of service to be expected. This is updated on the company website with current conditions.



Our drought management plan explores how we would manage resources and demands through a number of variable but plausible drought scenarios, by implementing a range of viable management options. However, it is not prescriptive as our operational managers need to be able to make informed decisions and develop an action plan based on the specific situation in which they find themselves.

Actions we take during a drought

When we find ourselves in a drought situation, we work hard to balance your needs against the needs of the environment. We do this using a variety of supply and demand management actions. We aim to avoid restrictions on water use wherever possible. However these are sometimes necessary to manage demands. The most severe restrictions would only be introduced in unprecedented drought conditions, and following agreement with Defra.

Managing our water supplies

As the available supplies are reduced, we manage our abstractions and available sources to balance and maintain the available supplies. This involves increasing the use of less drought impacted sources, whilst spreading abstractions over other sources, and includes the re-introduction of currently unused sources to increase supplies. Some of these actions take a long time to implement, so early decisions are needed to ensure these are available when required. However, these decisions will not impact on you, but are likely to be made at the same time as we are appealing to you to restrict your water use.

Managing the demand for water

In many instances, the impact of drought conditions can be reduced by engaging with the whole community, from customers to businesses and environmental regulators. Wise water usage and leakage reductions play a big part in protecting our community against tougher measures.

We always urge customers to use water wisely. We have an ongoing awareness programme and provide advice on water saving on our website and via our partner, www.savewatersavemoney.co.uk. Customer focus groups have told us this is the preferred method for encouraging and informing customers to use less water. We will revisit these findings in 2017 during the customer consultation for the next water resources plan. At times of dry weather our water saving message is enhanced to highlight the importance of using water wisely. Examples of leaflets that may be used in a wider communication campaign are included within this document.

In an emerging dry period, one of the early demand management actions that we take is to enhance our efforts to reduce leakage, beyond what is normally considered economical. This involves considerable additional work. We ask you to help, by reporting any leaks that you see promptly. We will also ask you to use water wisely. However, if a dry period continues to progress, then we will consider imposing restrictions to further manage demands.

A temporary use ban (previously known as a 'hosepipe ban') will only be introduced in circumstances which are in-line with the requirements of the Flood and Water Management Act (FWMA). The water industry complies with published best practice and four fundamental principles for good drought management:

- Ensure a consistent and transparent approach
- Ensure that the water restrictions are appropriate
- Communicate clearly with customers and the wider public/users
- Consider representations in a clear way

In the event that we need to consider temporary restrictions, we will make any decision to introduce restrictions in consultation with the EA and neighbouring water companies. We will ensure a consistent approach and messaging across the region.

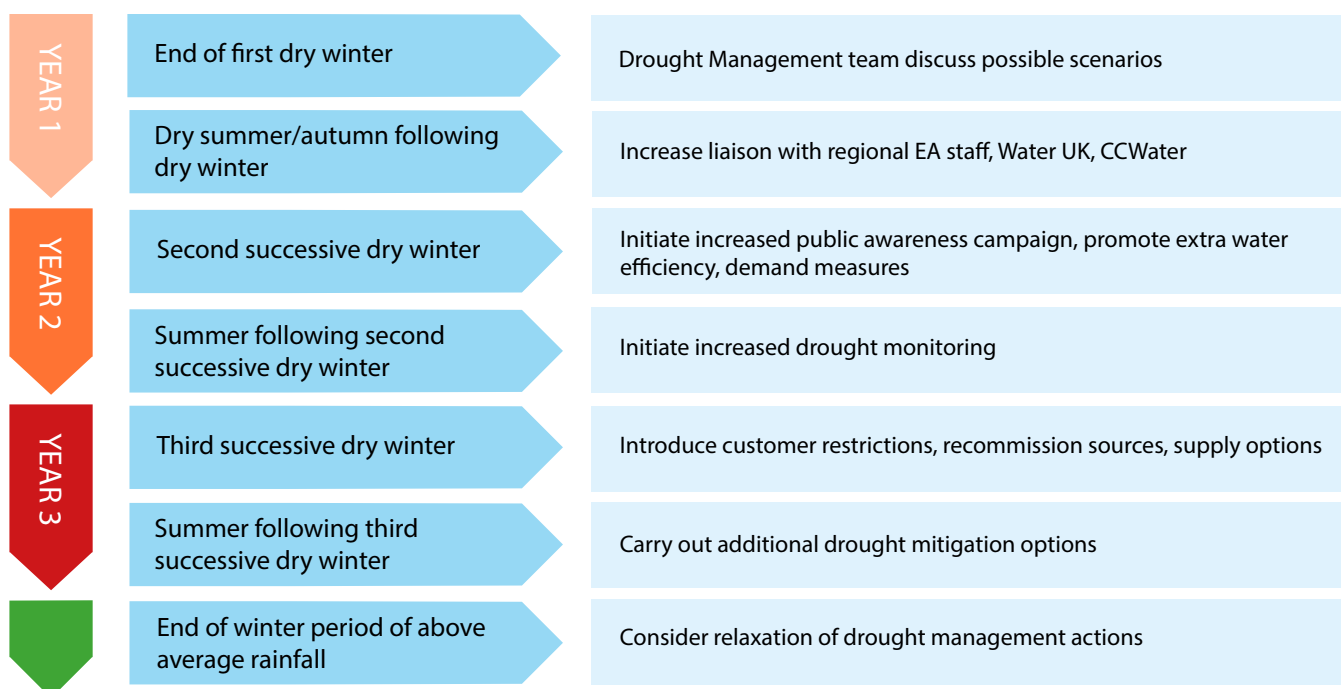


What activities are covered by a temporary use ban?

Only the following uses of water may be prohibited:

- Watering a garden using a hosepipe
- Cleaning a private vehicle using a hosepipe
- Watering plants on domestic or other non-commercial premises using a hosepipe
- Cleaning a private leisure boat using a hosepipe
- Filling or maintaining a domestic swimming pool or paddling pool
- Drawing water, using a hosepipe, for domestic recreational use
- Filling or maintaining a domestic pond using a hosepipe
- Filling or maintaining an ornamental fountain
- Cleaning walls, or windows, of domestic premises using a hosepipe
- Cleaning paths or patios using a hosepipe
- Cleaning other artificial outdoor surfaces

Timescales for our drought management actions



Our timescales and process for introducing a temporary use ban

The impact of a temporary use ban can be far-reaching, so there is a clear timetable and process before this can be done:

	Trigger to consider temporary use ban	Week one – two	Week three – five	Temporary use ban in place
Communication		Internal communication and governance. External communication with EA and neighbouring water companies.	Publication of notice, receipt and consideration of representations – including intention to introduce, terms of the ban, concessions, exemptions and phasing.	
Method		Internally	Two local newspapers Our website (www.cambridge-water.co.uk)	

As the notice is a formal and legal requirement it must be in a certain format and contain certain information. It must be published in full in appropriate media. However, we will also use other channels of communication to make you – our customers – aware of the proposed restrictions in a format that is clear and easy to understand. Once decided, it is of most benefit to implement quickly. However, developing drought conditions and the possible need for restrictions would have been communicated well in advance, so when the process starts it should not be a surprise to you. You'll find an example of the leaflet at the end of this document.

Concessions and exemptions to temporary use restrictions that may apply to you

A temporary use ban will impact different people in different ways and where necessary, we do have the power to make concessions and exemptions. Blue badge holders have Discretionary Universal Exemptions to the restrictions, and the use of a hosepipe to fill or maintain a pond containing fish will be included as a Statutory Exception.

The following activities within a restriction are also already exempt:

Restriction	Exemption
Watering a garden using a hosepipe	Agricultural land, commercial use for the growing of crops, fruit, vegetables and other plants Temporary flower displays Land used for National Plant Collections
Cleaning a private vehicle using a hosepipe	Public service vehicles and goods vehicles defined by legislation
Watering plants on domestic or other non-commercial premises using a hosepipe	Plants in outdoor pots and in the ground, under cover in public authority or commercial premises Plants grown or kept for sale or commercial use Plants as part of a National Collection or flower display
Cleaning a private leisure boat using a hosepipe	Vessels used in course of a business Vessels made accessible for use by the public Cleaning any area of a private boat enclosed by a roof and walls, other than doors and windows
Filling or maintaining a domestic swimming pool or paddling pool	Where necessary during construction Using a hand-held container filled directly from a tap Where it is designed, constructed or adapted for use in medical treatment Where it is used for decontaminating animals for infection or disease, or in the course of veterinary treatment In which fish or aquatic animals are being reared or kept in captivity
Drawing water, using a hosepipe, for domestic recreational use	No exemptions
Filling or maintaining a domestic pond using a hosepipe	Where fish or other aquatic animals are being reared or kept in captivity
Filling or maintaining an ornamental fountain	On or near a fish pond, which is designed to supply sufficient oxygen to the water to maintain fish health
Cleaning walls, or windows, of domestic premises using a hosepipe	Cleaning activities for Health and Safety reasons and likely to be removing risk to human or animal health and safety or the prevention or control of disease
Cleaning paths or patios using a hosepipe	Cleaning activities for Health and Safety reasons and likely to be removing risk to human or animal health and safety or the prevention or control of disease
Cleaning other artificial outdoor surfaces	Cleaning activities for Health and Safety reasons and likely to be removing risk to human or animal health and safety or the prevention or control of disease

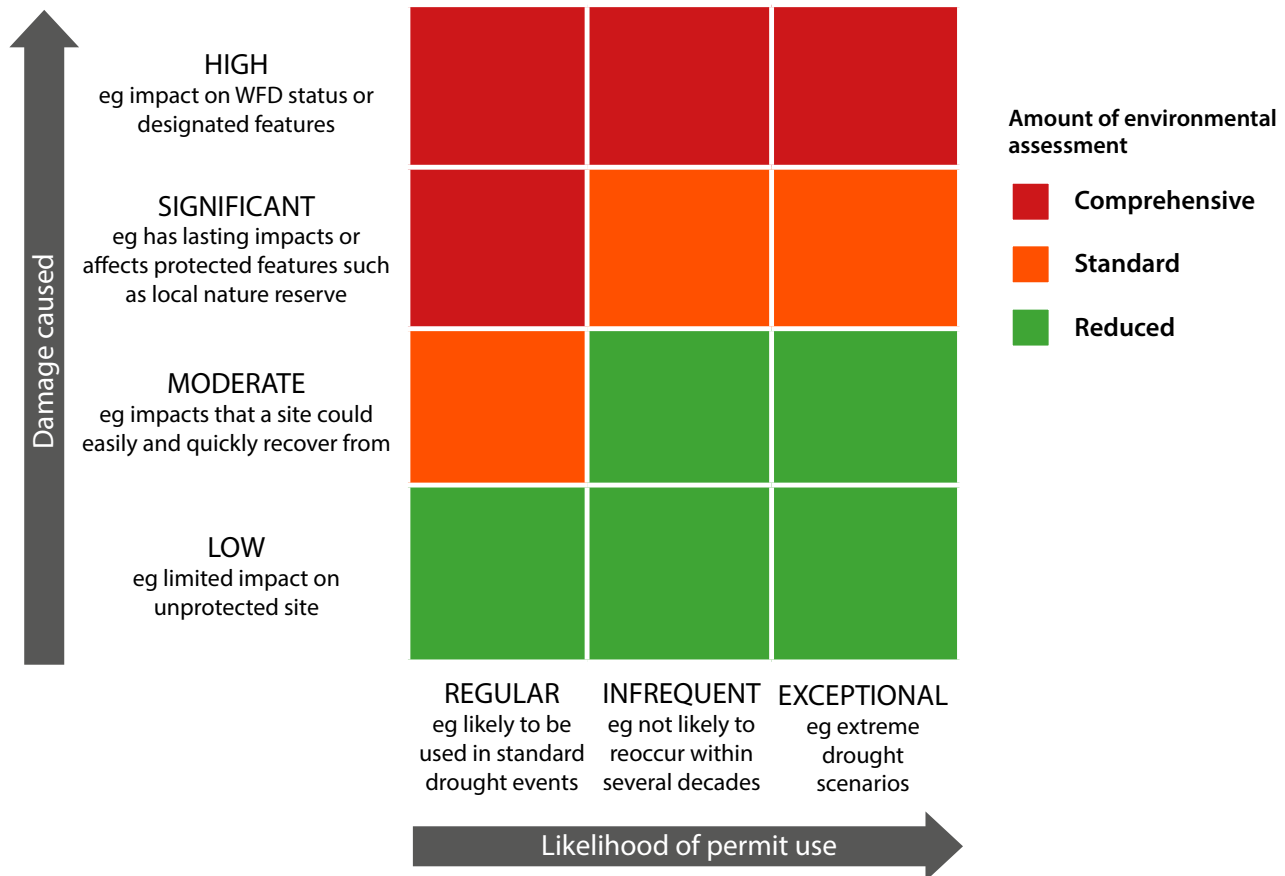
Other exemptions that we will consider include:

- Vulnerable customers – for example, customers who may have extra needs such as those with a disability or have a medical condition can register with us for priority services as a vulnerable customer. If you or someone you know might be considered vulnerable to restricted use of water, you may apply to be considered exempt by registering for our confidential priority services www.cambridge-water.co.uk/customers/priorityservicesregister
- Those demonstrating water reuse technologies for watering using a hosepipe
- Where it is felt to be in the best interest of the community

Our monitoring of environmental impact

Although our priority is maintaining a safe, clean supply of potable water to our customers, we also want to minimise any impact on the environment. We carry out environmental risk assessments into the potential impacts of our drought options, and mitigate any impacts identified. Our approach to this follows the recommended method of assessing the level of impact and the likelihood of the need for the option. The level of detail of our risk assessments depends on the likelihood of the course of action being assessed and the level of damage that could be caused.

How we determine the level of detail required for our risk assessments



WFD – Water Framework Directive: A legislative framework for water policy to protect and improve the water environment.

It is a requirement of the Water Industry Act 1991 for water companies to monitor the effect of drought and of the measures taken under the drought plan. In addition, the EA Drought Plan Guidelines require an Environmental Monitoring Plan, to monitor the impacts of drought actions and recovery following a drought. Our monitoring plan sets out what we will monitor, such as water flows, levels and ecological data, which locations we will use, and the frequency of data collection.

How we monitor the environment in a drought

As a drought progresses, and prior to any formal drought measures being undertaken, normal communication with the EA and Natural England will be escalated. We will provide weekly and monthly updates on our water resource situation.

Type of monitoring	What it involves
Meteorological and hydrometric monitoring	<p>Regular monitoring of rainfall against historic records is undertaken, which provides an indication of cumulative rainfall through the year.</p> <p>Weekly data on Soil Moisture Deficit and effective rainfall over the catchment area from the Met Office.</p> <p>Groundwater monitoring and Rest Water Levels are recorded at six key locations monthly.</p> <p>Telemetry provides daily pumping water levels data from all our sites</p> <p>Long-term trends are monitored on a monthly basis.</p> <p>Essential hydrology and ecological data of baseline conditions is available from the EA on request.</p>
Ecology monitoring	<p>Historical data on flow and ecology is available from the EA.</p> <p>We undertake additional monitoring at key sites.</p>

All this monitoring will be increased in frequency if a drought looks imminent.

Keeping you informed

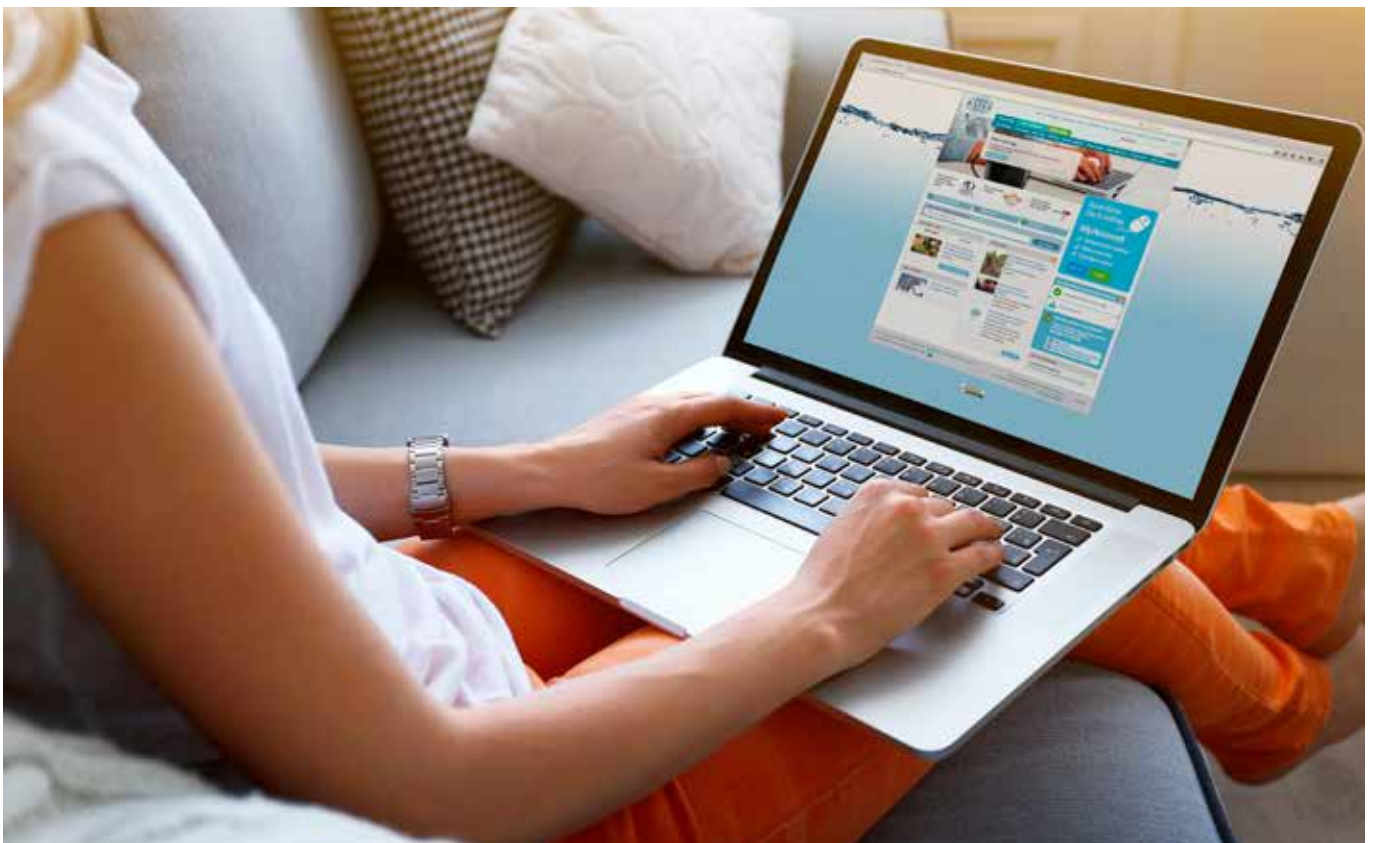
We understand how important it is to keep you informed at all times – before, during and after – a drought. We will use a variety of media channels from newspapers, TV and radio, through to social media and our own website to share timely, accurate information on the situation and the actions required.

The frequency of the communication will depend on urgency of the message, but our messages will aim to:

- Make you aware of the developing situation
- Make you aware of the measures we are planning to put in place and how they will impact on you
- Raise awareness of the need to reduce water demand, and use water wisely and efficiently

Depending on how widespread the drought is, there may be coordination of communication via the EA or Water UK. We will also work closely with other water companies to ensure a consistent message.

The drought situation and the effectiveness of the communication measures will be consistently monitored and the decisions to develop or modify future messages and actions will be made accordingly. In particular, the number of hits on the relevant pages of the website will be used to determine the effectiveness of the online campaign. Requests for water efficiency services, packs and information will also be monitored. Activity via social media platforms will also be used as an indication of engagement.

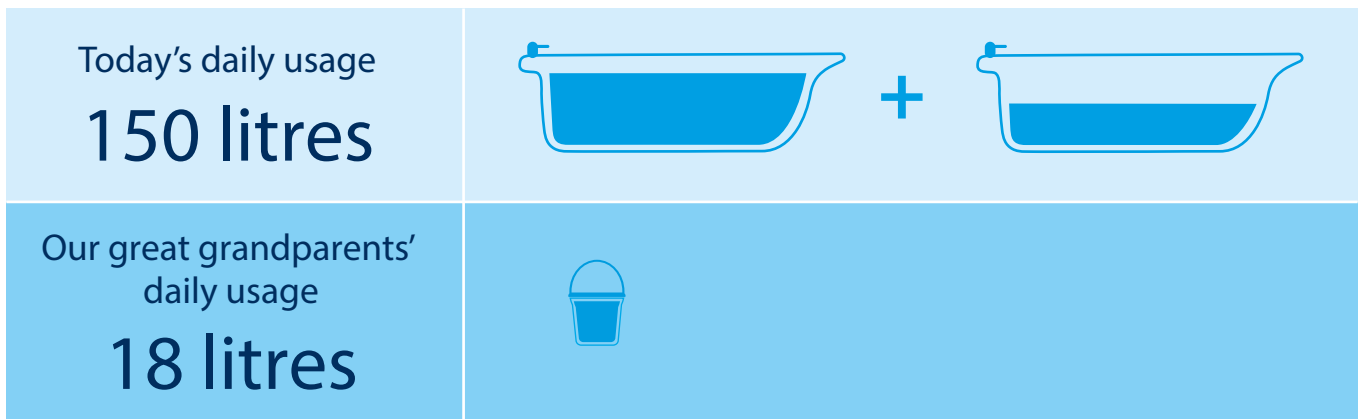


Communications channels	Audiences						
	Key regulatory stakeholders	Other stakeholders	Staff	Domestic customers	Vulnerable customers	Business customers	School pupils
Meetings – face-to-face and one-to-one	●	●	●		●		
Customer website				●	●	●	
Social media	●	●	●	●	●	●	●
Editorial via traditional media	●	●	●	●	●	●	●
Advertising via traditional media	●	●	●	●	●	●	●
SMS/text messages			●	●	●	●	
Email			●	●	●	●	
Call centre contact				●	●	●	
Regular billing cycle mailings				●	●	●	
Bespoke mailings	●	●	●	●	●	●	
Events	●	●	●	●	●	●	●
Stakeholder-owned channels	●	●	●	●	●	●	●

The full Technical Drought Management Plan can be found on our website www.cambridge-water.co.uk

What can you do to help?

Saving water benefits everyone. Every day, each one of us uses on average enough water to fill one and a half baths (approximately 150 litres). Many of us use a range of appliances that need large amounts of water from dishwashers to jet washers. Often, we don't realise how much water these take up. In comparison, our great grandparents managed with about 18 litres a day.



Look out for our water efficiency campaigns that we run throughout the year and visit our website to find out more ways you can be wise with water. In the meantime, here are some interesting facts and suggestions to think about:

With a little care and attention, it is easy to save water outside your property



The average hosepipe can use as much as 500 litres an hour – enough water to have six baths, or 10 showers! If possible avoid using sprinklers and hosepipes. If you do use a hosepipe, ensure it is fitted with a trigger nozzle that will stop the flow of water when you release it.



Water wisely – never water in the heat of the day – most will evaporate and if it's sunny you run the risk of scorching your plants. It's better to water in the evening or early morning.

Consider using an irrigation system that will deliver water directly to your plants.

Maintaining your garden will ensure water is not wasted on dead, diseased or damaged plants.



Washing the car – instead of using a hosepipe or pressure washer, use a bucket when shampooing your car and a watering can when rinsing off the soap.

Ensure pools and ponds are watertight as topping them up can use a lot of water. If possible try and keep pools covered to prevent evaporation.



Drinking water – this is one area where you should NOT cut back on your usage. UK tap water is one of the best in the world. Enjoy it.

Fridge it, putting a large bottle of tap water in the fridge will ensure you can have chilled water all the time. Waiting for the tap to run cold can waste more than 10 litres of tap water a day.

The end of a drought

We will work closely with the EA to determine when we can declare a drought is over. We appreciate the impact of temporary use bans and are committed to lifting any restrictions as soon as is reasonably practical.

We would expect the end of a drought to be when all the key indicators have returned to long term average levels, or that a sufficient number of indicators are showing a trend approaching long term levels, supported by meteorological outlooks with some certainty attached.

This is identified as when the risk of impacts from the drought are no greater than during a normal year, and where normal conditions have continued for a period of time. Once we have returned to a normal status we will review the actions taken and engage in a 'lessons learned' follow up. These are held internally and with industry regulators as appropriate.

FAQs

Can I access the Technical Drought Management Plan?

If you would like more detail on the technical aspects of the plan and would like to review the Technical Drought Management Plan please contact drought.consultation@cambridge-water.co.uk

I am worried about interruption to my supply on medical grounds, what should I do?

We will always ensure that our disabled or vulnerable customers are catered for. Please contact drought.consultation@cambridge-water.co.uk for more information or register for priority services by contacting us on 01223 706050.

The news reporters are talking about a hosepipe ban, what would this mean?

If a temporary use ban is introduced you would still be able to water your garden using a watering can or bucket filled with stored rainwater from a water butt or reusing 'grey' water from a bath or wash basin.

Is Cambridge in a drought?

You can find out the current status for your area by visiting our website www.cambridge-water.co.uk. We keep this up-to-date at all times.

How likely is Cambridge to enter a drought event?

As a geographical area, we get some of the least rainfall in the UK. However, we work hard to ensure that we have the supplies in place to meet the demands of prolonged dry periods. We have only had to impose restrictions once in the history of Cambridge Water, despite experiencing at least three extended droughts in the 21st century.

What are drought triggers?

A drought trigger is the specific value of a drought indicator that activates a management response. For example, a drought trigger could be 50% less than expected rainfall over a period of time, or a groundwater level 25% lower than average. In a drought contingency plan, trigger levels can be varied to alter the sensitivity of the response and the effectiveness of the plan.

What can I do to help during a drought?

During times of temporary use bans, you can do your part to reduce water use. Talk to family members about their water use and ways to reduce it too. For further information visit www.cambridge-water.co.uk/customers/water-in-the-home

Will climate change lead to more droughts?

Although climate change is expected to lead to slightly more rainfall at the global level, the timing and distribution of that rain is likely to change, increasing the chance of drought in some regions. The details are very difficult to predict.

What is a temporary restriction?

A temporary restriction, formerly known as a hosepipe ban, is a requirement for customers not to use water for certain purposes. It restricts certain activities as defined by law, such as watering your garden or washing your car using a hosepipe.

How will I know if there is a temporary restriction?

We will consult with customers prior to restrictions starting. This will be publicised in local newspapers, as required by legislation, and through all available communication channels.

How will I know when a drought has ended?

We will keep you informed through all available communication channels. Droughts rarely have a sudden end, but we will lift any restrictions as soon as is practicable. This will indicate that conditions are improving and that drought conditions are receding.

What is a Non Essential Use Ban (NEUB)? Will my business be affected?

A non-essential use ban is a requirement for businesses and institutions not to use water for certain purposes. It restricts certain activities by law, such as using hosepipes to clean vehicles, boats and buildings, operation of car washes and the filling of ornamental ponds and fountains. Also the use of automatic cisterns at certain times. Please contact drought.consultation@cambridge-water.co.uk for more information.

What is recharge deficit?

Recharge deficit is a measure related to the amount of 'effective' rainfall for recharge of the aquifer, versus the long term average. The calculation of effective recharge converts the amount of rainfall into the amount of rainfall that actually replenishes the water stored in the aquifer, taking account of evaporation and take up of water by plants.

Appendix

Sample leaflet



At Cambridge Water we are proud to be able to say that we haven't had a hosepipe ban since the drought of 1991. But, if that situation arises again, we need to work to maintain a healthy supply of water to our customers while also protecting our water sources for the future.

We are given the power to impose a hosepipe ban under the Water Use (Temporary Bans) Order 2010. This is so that we can make sure that our customers always have enough water for the essential uses of drinking, cooking and washing.

If we have to introduce a ban on hosepipe use, this is the list of things you won't be able to use a hosepipe or sprinkler for:

- watering a garden or allotment
- cleaning a private motor-vehicle or leisure-boat
- filling or maintaining a domestic swimming or paddling pool
- drawing water for recreational use
- filling or maintaining an ornamental pond (not containing fish) or fountain
- cleaning walls, windows, paths, patios, driveways or other artificial outdoor surfaces.

Exemptions to these are made for Blue badge holders and to fill or maintain a pond containing fish using a hosepipe.

You can still use watering cans and buckets, but we need your help to cut non-essential water use as much as possible. If you notice or suspect a leak, let us know as soon as you can. Please also try to cut your use of water at home. There are lots of things you can do, such as:

- using washing up and vegetable peeling water for your garden watering
- only putting on the washer or dishwasher for full loads
- having a quick four minute shower instead of taking baths
- switching off the tap while cleaning your teeth
- keeping a bottle of water in the fridge for cold drinks, rather than running the tap until it's cold
- getting dripping taps fixed.

As soon as weather and demand conditions allow, we'll end the ban, but while it is in place, please think about what you can do to save water so we can preserve stocks for essential needs in your community.