



Draft **Water Resources** **Management Plan** **Consultation**

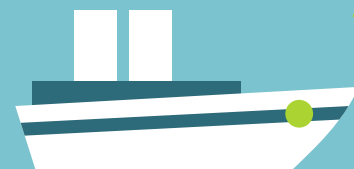
5 March – 25 May 2018



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Welcome to our consultation on our draft Water Resources Management Plan

This document sets out how we will continue to supply you with clean, healthy drinking water, now and in the future.

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Introduction

Planning water resources is a long-term business. Our plan looks 60 years ahead and considers a range of different factors that we need to be ready for - such as population growth, the impact of climate change, enhanced protection of the environment, more advanced technology and changes to how you use water.

The impact of many of these things is uncertain, particularly in the later years of the plan. This is why, every five years, we review and update it to make sure it reflects how the world around us is changing and adapts to meet future challenges and opportunities.

Making our service more resilient to both short-term events and long-term trends is at the heart of our plan. We have considered a wide range of different drought events - including those we have experienced in the past and those we might experience in the future.

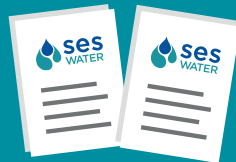
This is critical to providing you and our future bill-payers with a reliable and excellent service. To achieve greater long-term resilience, our plan focusses heavily on lowering demand for water and we are committed to reducing leaks and helping you use water more efficiently.

We would like to hear what you think about our plans to secure water supplies. At the end of this document there are some questions we hope you will answer so we can take your views into account as we develop our plans - we look forward to receiving your feedback.

Developing our future plans

This plan looks ahead 60 years, the first five years of which will be delivered through our Business Plan for 2020 to 2025. We are currently working on our Business Plan which brings together all the actions we will take to improve our services. Our economic regulator, Ofwat, will make a final decision on our Business Plan in 2019, which will set your bills for the next five years. We've also recently published our long-term vision which sets out our priorities based on what you have told us is important.

At the heart of our plans are four key themes:



Affordable bills
Making sure water is affordable for all



Great customer service
Providing you with an effortless experience



Innovation
Finding new and different ways to do things so it's better than before



Long-term resilience
Ensuring all aspects of our service are reliable now and in the future

Your water supply today

We supply high quality drinking water to more than

688,000

people in parts of Surrey, West Sussex, Kent and south London

85% of our water comes from underground sources beneath the North Downs

15% is abstracted from the River Eden and stored in Bough Beech reservoir at Edenbridge

54%

of our customers have a water meter



Our household customers on average use **150 litres** of water each day

Those with a water meter tend to use less, around **139 litres** per person

While those without a meter generally use more, around **163 litres** per person

The average amount of water we put into supply each day is **160 million** litres. This can rise to

260 million

litres on a hot summer's day



Most of our water comes from underground sources beneath the North Downs and is abstracted via a network of boreholes, before being treated at one of our eight water treatment works.

We are fortunate as this water is very high quality and requires less treatment than river water. However, it is described as "hard" water, and in some areas, we treat it to make it softer, so you receive a better service from us.

Bough Beech reservoir stores water that is abstracted from the River Eden during the winter when flows are high. It supplies customers in the east and south of our supply area and water can also be transferred to northern areas when needed.

Most of the south east region has been classified by government as being an area of serious water stress. Companies operating in water-stressed areas must plan to manage demand effectively.



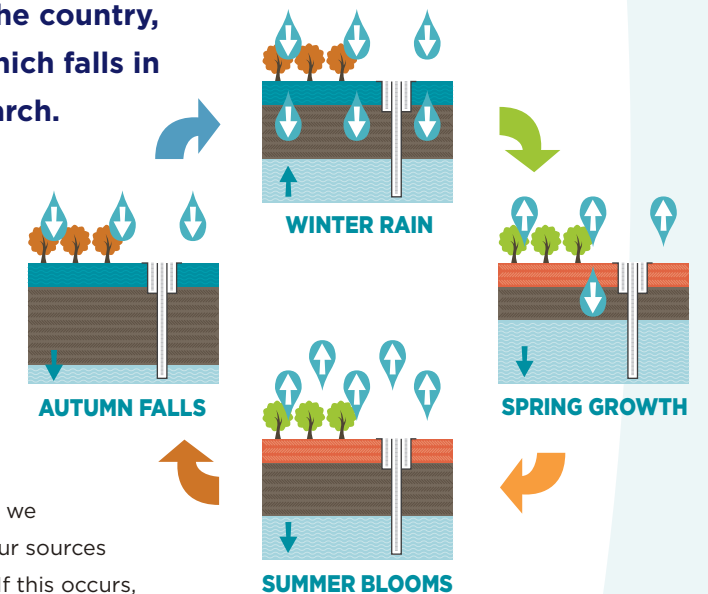
The importance of winter rainfall



We operate in one of the driest regions of the country, yet our water supply relies on the rainfall which falls in the winter months between October and March.

It is during this period that our water sources are restocked. Rain that falls during the rest of the year is generally lost through evaporation, taken up by flowering trees and plants or runs off the land into rivers and streams. It doesn't usually reach the underground sources that we use to supply your water.

The diagram to the right shows why winter rainfall is so important and why without it, sources can become low. When we see below average rainfall levels over the course of a winter, our sources can end up being lower than usual when we enter the spring. If this occurs, particularly over more than one successive winter, it can lead to drought conditions.



Managing drought



Droughts occur when we experience periods of low rainfall. They vary in nature – some can be quite short and intense while others can develop over a much longer period. Some are very localised while others will affect large parts of the country at one time.

In developing this plan, we have considered a wide range of droughts and have planned to maintain your water supplies, without rationing, during a severe drought (the kind we'd expect to see once every 200 years). A range of measures would be taken to manage a drought event – both to reduce demand and increase supplies. We have set some clear levels of service around this that we aim to meet or exceed.

- We plan to introduce temporary use bans (previously hosepipe bans) to reduce household water use once in every ten years.

- If the situation worsens we could apply for a drought order to limit water use by commercial customers, which we'd plan to do no more than once in every 20 years.

- We can also apply for drought permits to take more water from the environment and would generally do this at the same time as introducing temporary use bans.

- Emergency drought orders to introduce standpipes or limit water supplies to a few hours each day would only be needed in extreme events and after all other measures have been taken (around once in every 500 years).

The way we manage droughts is set out in our Drought Plan which can be found on our website.

How we plan for the future

It is important we take a long-term view when planning our water resources to make sure the decisions we make today are the best ones for tomorrow.

This plan looks 60 years ahead, starting from 2020, and compares how demand for water will change over the coming years with the amount of water that will be available for us to supply. This is known as our supply-demand balance.

Because demand can rise during hot spells it is important we plan for these “peak” periods as well as average conditions. We also consider the amount of water available during droughts when we typically see a reduction in the amount of water we can supply.

When the demand for water is higher than the supplies available we must plan to make up the difference.

There are a number of other factors that we consider when calculating our future supply-demand balance including:

- Housing and population growth
- Climate change impacts
- Environmental protection through changes to how much we can take from our sources
- Water consumption trends

These are uncertain, particularly in the later years of the plan, which is why we review and update it every five years.

When we calculate that demand is likely to become higher than the supplies available we look at options to secure more water for the future. These include schemes to provide more water such as building reservoirs and developing new boreholes; schemes to move water from areas where it is plentiful to where there's less; and schemes that will lower demand such as leakage reduction and metering.

We start with a very wide range of actions we could take and each is assessed according to:

- How much water it will provide
- How resilient it is to drought
- The impact it will have on the environment
- The cost and timescale to build and operate it
- Customer preferences
- The carbon footprint
- Its social impact

We then choose the best value option or options that will make up the difference between the anticipated supply and demand in the time available.

What have we done so far?

The development of water resource management plans is required by law and began when the water industry was privatised in 1989. Since then, these plans have led to us investing millions of pounds to improve our water supply network.

The largest investment has been in reducing leaks from our 3,445 kilometres of water mains. The amount of water lost through leakage has reduced by a third since 1990.

We have also **helped you to use water more efficiently**. The amount of water you use (on average) is now 150 litres per person per day. In previous years we have seen demand above 170 litres per person per day. However, it is still higher than most other areas of the country, so we know there is more we can do to help you reduce demand.

One way is by installing water meters. Currently, just over **half of households in our area pay by metered charges** and have information about how much water they use. Many of our neighbouring companies are carrying out large-scale metering programmes and some have seen water usage fall by around 16%.

The **reduction in demand** we have seen means that the amount of water we are taking from the environment is similar to 25 years ago, despite a population increase of nearly 10%.

We have also **invested in the connectivity of our network**, so we can move water around more easily and share resources with other

companies. This has included transfers to Scottish and Southern Energy and Southern Water. In the next two years, **a new pipeline will be constructed** to transfer water from Outwood to Whitely Hill – which will provide a bulk supply to South East Water.

We are carrying out **a major redevelopment** of our Woodmansterne Water Treatment Works to increase the amount of water it can treat and supply – to help meet local demand and provide more resilience to dry weather.

We are also **working with local farmers** to reduce the amount of pesticides such as methaldehyde that enter our storage reservoirs. This helps to improve the quality of the water we abstract and makes sure it remains available for your supplies.

Taking a regional approach

Water Resources in the South East

We are one of a number of companies that supply water in the south east of England, so as well as calculating our own water supply requirements we are part of a group called Water Resources in the South East (WRSE) that looks at the needs of the whole region. This is important as it means we can consider a wider range of options and whether we can benefit from new water resources developed by other companies. It also identifies opportunities to transfer water between companies so there is greater connectivity to move water around the region – and between regions.

Future challenges and opportunities

As we plan to secure future water supplies we need to address many challenges and embrace new opportunities, while keeping bills fair and affordable for all. Among the things we need to consider are:

Population growth – the number of people living in our supply area is expected to increase by 40% to around 1 million customers by 2080. We also need to consider people's lifestyles and how they use water in their homes, for example the growing trend for smaller households and people living alone.

Housing growth – the number of new homes in our area is another important consideration. The types of homes that are built and the fixtures and fittings such as toilets and showers that are installed will impact on household water use.

Climate change – our changing climate is likely to make weather extremes more common. This means we could experience more frequent and severe droughts as well as changes to typical seasonal demands for water – together putting more pressure on our water supply system. It is expected that over the long-term, climate change will reduce the amount of water that is available to supply.

New technology – advances in technology, such as innovative new ways to detect and repair leaks and water efficient appliances have the potential to reduce demand further. However, it is hard to predict with certainty when such technology will be available and how effective it will be.

Environmental protection – the amount of water we can take from the environment is carefully controlled through a system of licensing, regulated by the Environment Agency. These licences are subject to regular review to make sure that the environment is not being damaged. In some cases, the amount of water we take from a source can be reduced – this is known as a sustainability reduction. At present, we are not expecting any significant reductions to our existing licences, but this could change in the future. As the UK exits the European Union, we may see further changes to the environmental laws that we must abide by.

Energy use – we use a large amount of energy to abstract, treat and pump water around our supply area. One thousand litres of water weighs approximately one tonne so every day we use around 142,000 kWh of electricity. This is enough to supply nearly 50 houses for a year. As we plan for the future we need to understand how much energy we will need to build and operate different water resource options. We must also consider the impact of varying energy charges and alternative sources of energy so we keep our costs as low as possible and reduce our carbon footprint.

Economic conditions – the state of the economy and changes to the cost of living could impact on you and your ability to afford your water services. We need to make sure our plan is efficient and offers the best value for money at a price that is fair and affordable for all.

What our customers have told us

It's important that we understand your priorities and deliver the service you expect at a price that you can afford.

You have told us that you want:



A reliable and resilient water supply now and in the future



More use of smart technology to help you take control of your water use and bill



Us to continue to protect rivers and wildlife



A wide range of support to help you reduce your water use



Our plans to be future-focussed to address climate change and environmental concerns



More water to be recycled and rewards for those who use less



Ongoing investment – particularly to reduce leaks



Innovation to develop more sustainable and resilient water resources in the future

Talk on Water – to tell us your views on your water services visit
seswater.co.uk/talkonwater

Our plan for the future

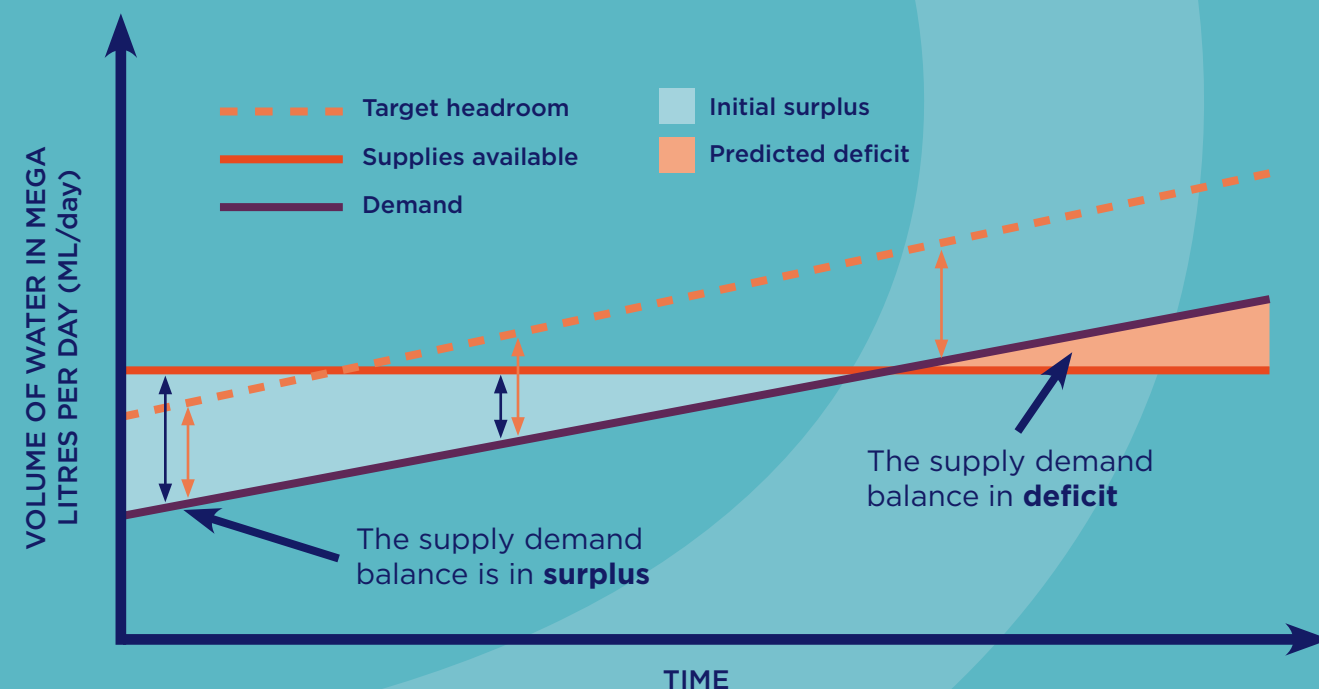
We have calculated how much water will be available in the future compared to the demand we expect to see. We add a little extra on top of our expected demand to provide some headroom, should anything significant change over the coming years. This has given us our supply-demand balance.

This shows that demand for water does not exceed the supplies available until around 2050.

Despite this, we believe it's important that we act in the early years of the plan to reduce demand further to put us in a stronger position for the future. Reducing water wastage through managing leakage and water use is vital for delivering a resilient network in the long-term. It also leaves more water in the environment.

At present, you are using more water than most of other parts of England – 150 litres per person per day. Some of our neighbouring companies have helped their customers lower their daily usage to around 130 litres so we know there is more that we can do to help you.

In addition, we plan to step up our efforts to reduce leaks – something that we know you think is a priority.



Our plan over the next 10 years includes:

Reducing leakage by at least a further 15% by 2030

We'll do this through replacing more of our older water mains more quickly, finding and fixing more leaks on our pipework, improving the way we manage the pressure within our network to reduce the likelihood of leaks and bursts and by helping you find leaks on the pipes that serve your home.

Metering 90% of our customers by 2030

To help you understand your water usage, take control of your bills and reduce demand, we plan to meter most of our customers over the next ten years. This will bring us in line with the other companies in the south east, some of whom have seen reductions in water use of around 16%. It will also help us find leaks on the pipes that serve your home. We recognise that some of you will be concerned about your bill and we'll make sure we introduce a range of support, so water remains affordable for all.

Household water efficiency activity

The roll-out of metering will be supported by a programme of household visits and online support to help those of you using the most water and if you have financial concerns. We will provide advice and fit water efficient devices in your home where we can.

Non-household water efficiency activity

The water retail market opened in 2017 so we no longer provide customer services such as billing and meter reading to businesses, charities and public-sector organisations in our region. However, we do still supply the water they need, so we will look at opportunities to work in partnership with the water retailers to help their customers cut their water use.

Introducing smart meters

Our plan is to install smart meters in 10% of homes by 2025. This builds on our current smart meter pilot and will provide near real-time consumption data, which is predicted to reduce consumption by at least another 1.5% compared to normal meters. It also helps find leaks on the pipes that supply your home more quickly. If this proves successful and customers are supportive we would install smart meters as standard from 2025.

In the longer term we could:

Share water with neighbouring companies

A scheme to transfer water from our Bough Beech treatment works to Sevenoaks in Kent to provide a bulk supply to South East Water was identified through the WRSE modelling work. This would enhance our ability to move water around the region and is planned to be operational from 2035, providing 2.5 million litres a day across the course of the year.

Take more water from existing sources

We could construct new, or improve our existing, boreholes in the River Mole catchment so we can abstract more water during the winter when levels are high and rest our other sources so more is available in the spring and summer. Before we do this, we will carry out detailed environmental investigations and studies, so we understand the impacts and the cost of the scheme. Because this scheme is not needed until the latter part of the plan, around 2050, it will be under regular review in our future water resource management plans.

The cost of our plan

The total cost of our plan over the 60 year period is £93 million. The investment will be delivered through our five-year business plans alongside other improvements to our service, and balanced to make sure bills remain affordable. Because this plan is reviewed every five years, the level of investment and the schemes we progress are subject to change, to make sure we are delivering best value to our customers and adapting to changing conditions.



Next steps?



We would like to hear your views on our plans to secure reliable water supplies for the future.

This document provides a summary of where we are now, the changes we expect to see in the future and how we will plan for them.

More detail on our plan can be found by downloading our full, technical report at seswater.co.uk

We are holding a public consultation on our plan between 5 March and 25 May 2018.

During that time, you have the **opportunity to respond** by filling out the short questionnaire that accompanies this document, or by providing written feedback.

Provide feedback:

Online by visiting seswater.co.uk and filling out the online form that will be sent directly to Defra

By emailing your comments to water.resources@defra.gsi.gov.uk and put SES Water draft Water Resources Management Plan in the subject line

By contacting SES Water on **01737 772000** to request a hard copy of the questionnaire form and stamped addressed envelope to send to Defra by post

By downloading the [questionnaire](#) form at seswater.co.uk/talkonwater and sending it to Defra by post to:

Secretary of State for Environment, Food and Rural Affairs,
Water Resources Management Plan Consultation,
Area 3D, Nobel House,
17 Smith Square
London
SW1P 3JR

SES Water draft Water Resources Management Plan

Consultation Questions

Your details

Name:

Job title (if applicable):

Organisation (if applicable):

Address:

Postcode

Email:

What best describes you?

Customer ☐

Government agency / regulator ☐

Local government officer ☐

Elected member (MP/MEP/Councillor) ☐

Environmental group representative ☐

Charity or consumer advice organisation ☐

Trade association or membership body ☐

Parish Council / community group representative ☐

Private sector organisation ☐

Other

Question 1

Do you support our approach to providing your water supplies in the future?

Yes ☐ No ☐ Don't know ☐

Question 2

Do you think we have considered all the challenges when planning our water supplies for the future?

All the challenges ☐

Most of the challenges ☐

Some of the challenges ☐

Don't know ☐

Comments

Question 3

Do you agree that we should do more to reduce demand for water?

Yes ☐ No ☐ Don't know ☐

Comments

Question 4

Do you think it would ever be acceptable to introduce standpipes (a shared water supply for a number of customers located in a public place) or rota cuts (water is only supplied to homes for a few hours each day) to manage water supplies during an extreme drought?

Yes ☐ No ☐ Don't know ☐

Comments

Question 5

Do you think it's acceptable that we introduce temporary use bans – previously known as hosepipe bans – once in every 10 years to help us manage droughts?

No, you should plan for this to happen less than once in every 10 years ☐

Yes, it's about right ☐

No, you should plan for this to happen more than once every 10 years ☐

Comments

Question 6

Do you support our plans to reduce leaks by at least 15% by 2030?

Yes ☐ No ☐ Don't know ☐

Comments

Question 7

The south east is a water-stressed region and most people now have a water meter. Do you support our plans to install water meters to charge people for the water they use and provide them with more information about how much water they are using?

Yes ☐ No ☐ Don't know ☐

Comments

Question 8

Do you think it's important that we help our customers use less water by providing water efficiency advice and home visits?

Yes ☐ No ☐ Don't know ☐

Comments

Question 9

Do you support our plans to trial smart meters to provide near real-time information on water use?

Yes ☐ No ☐ Don't know ☐

Comments

Question 10

Do you support our plans to develop new groundwater sources, so we can take more water from underground during the winter?

Yes ☐ No ☐ Don't know ☐

Comments

Question 11

Do you think it's important that we work with the other water companies in the south east and pipelines are built that allow us to share water with our neighbouring companies?

Yes ☐ No ☐ Don't know ☐

Comments

Question 12

Where did you hear about this consultation?

Comments

Do you have any further comments you'd like to make?

Following the public consultation, we will respond to the feedback we receive through our Statement of Response, which will be published later in 2018.

We will then update our Water Resources Management Plan and submit it to the government. Our final Water Resources Management Plan will be published once we have approval from the government.

To keep updated on our plans and to tell us your views visit
seswater.co.uk/talkonwater