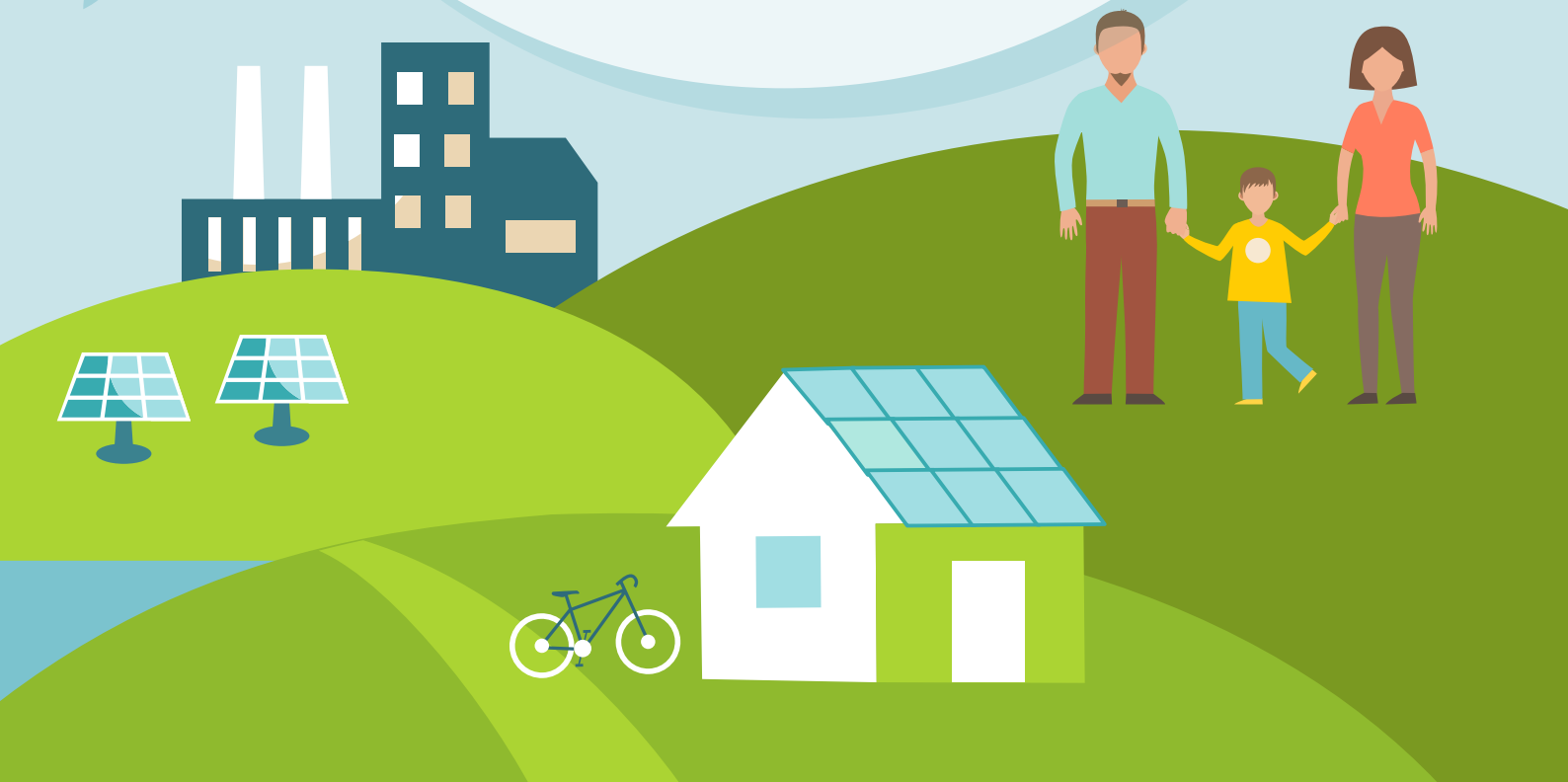




Your water supplies today and tomorrow

A guide to how we manage our water resources



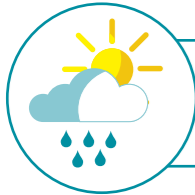
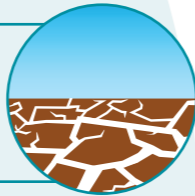
At a glance

We supply around 160 million litres of water each day to over 730,000 people.



The water comes from underground sources beneath the North Downs and Bough Beech reservoir in Kent, and we rely only on winter rainfall to refill them.

Droughts occur when there is a period of exceptionally low rainfall – the actions we take to manage this are set out in our Drought Plan.



Climate change, population growth and the need to protect and improve the environment are putting pressure on our water supplies.

We plan for this by developing a Water Resources Management Plan (WRMP) to ensure there is enough water available for all our customers in the future.



This includes considering new sources of water, transfers between water companies and measures to reduce demand.

Our current plan is focused on more than halving leakage and reducing household water use to 118 litres per person per day by 2045. We'll install meters in at least 90% of homes, including some smart meters.



We update our plan every five years and our next one will be informed by a regional plan that will consider the needs of the environment and all water users in the South East.

We'll continue to work with our customers, stakeholders and regulators as we develop our plans.



Your water supplies today and tomorrow

Water is our business and we take great pride in supplying you with some of the highest quality tap water in the world – day in and day out. Understandably, many of us give very little thought to where our water comes from when we turn on the tap or flush the toilet and it is a resource that some of us do take for granted.

The reality is that our water resources are under pressure. The effects of climate change are starting to bite, and we are seeing much more extreme weather – both drought and flood – which will affect the availability of and demand for water in the future. More people will move into our area over the coming years and we have a duty to supply them all.

The environment that we rely upon for our water supplies needs to be protected and improved, which means reducing how much we abstract from some sensitive sources and finding new water to replace it. Furthermore, as we face the prospect of severe droughts becoming more frequent in the future, we need to increase our resilience so that we avoid the need to bring in

emergency measures to restrict water use and the negative impact that would have on our customers, economy and wider society.

This document explains how we supply your water today and what we are doing to ensure there are plentiful supplies in the future. It sets out what we will be doing over the coming years, so we all use the water we have more efficiently and value it more. This is focused primarily on reducing leakage and how much we all use at home and at work.

It also introduces the changes we are making to how we plan our water resources, by working more closely with our neighbouring companies to take a regional view of the water needed in

the future and how we can best provide this so supplies for everyone living in the South East are more resilient.

We all have a role to play in ensuring there is enough water for everyone and valuing this precious resource.



Ian Cain, Chief Executive Officer, SES Water

Your water supply today

We supply high quality drinking water to more than **730,000**

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 near Edenbridge

60% of our customers have a water meter



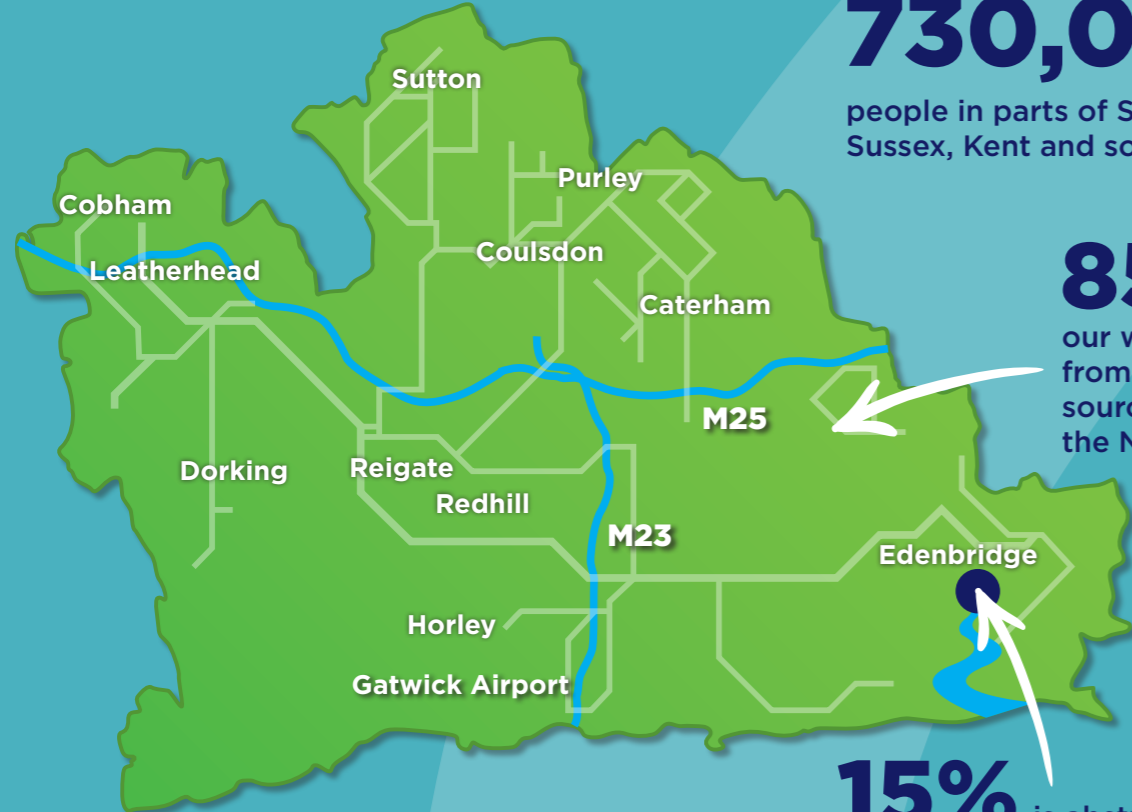
Our household customers on average use **150 litres** of water each day

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 day



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.

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 be transferred to northern areas when needed.

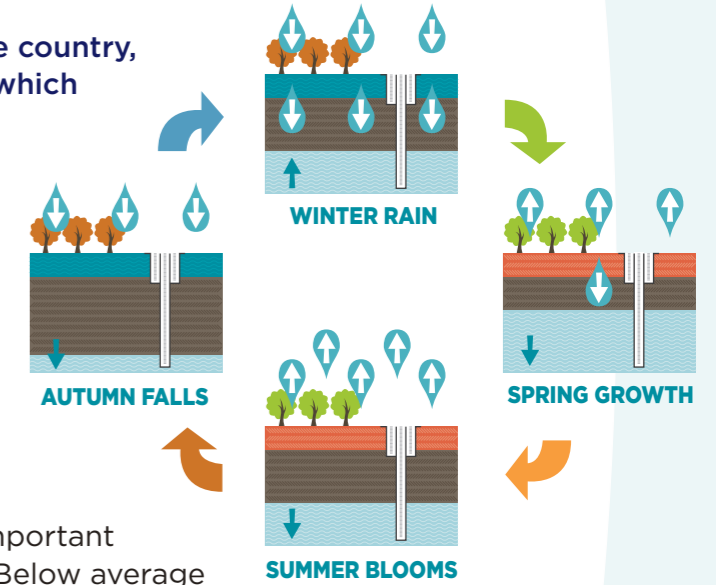
The importance of winter rainfall



We operate in one of the driest regions of the country, yet our water supply relies on winter rainfall which falls 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 shows why winter rainfall is so important and why without it, sources can become low. Below average rainfall levels and higher leakage during cold snaps over the course of a winter can result in our sources 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.



How we plan for the future



We develop a Water Resources Management Plan (WRMP) which sets out what we need to do to secure resilient water supplies for the future. Because demand can rise during hot spells, we plan for '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.

We compare 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. When the demand for water is expected to be higher than the supplies available, we plan to make up the difference by developing

options such as new water sources and demand reduction initiatives.

There are a number of pressures on water supplies that we consider when calculating our future supply-demand balance including:

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

The effect these pressures will have in the future is uncertain, particularly in the later years of the plan, so we review and update it every five years.

Managing drought

All water companies are required by law to have a Drought Plan which sets out the actions they will take should a drought occur and when these actions are enacted. It is an important part of our overall water strategy.

A drought is a natural event that we can't prevent. There are different types of drought, but all result in a period of water shortage caused by low rainfall.

The nature, timing and impact of droughts can vary. Some will only affect a small area while others will be more widespread. They can impact on sectors – such as agriculture, public water supply, industry and the environment – quite differently.

We constantly monitor rainfall, groundwater, river and reservoir levels in our area, and we use 'triggers' to identify when a drought is starting and becoming more serious. When a source reaches a drought trigger there are specific actions we will take to help manage the situation. As the drought develops, the actions will be stepped up to help manage demand and preserve water supplies.

Reducing demand

Customer awareness campaigns – we'll use a range of channels including newspapers, radio, social media, advertising on bills and events to reach our customers and work with water retailers and other stakeholders to reach businesses and other water users.

Leakage management – we'll step-up our activity to find and fix leaks both on our own network and on customers' pipes, and manage the pressure inside our pipes so less water is lost.

Temporary Use Bans (TUBs) – these will restrict some outdoor water use by household customers (including using a hosepipe to water a garden, wash a car or fill a paddling pool, pond or swimming pool). They will be phased in as the drought develops.

Drought Order for Non-Essential Use – this will restrict certain non-household water uses such as cleaning windows of commercial buildings, cleaning boats, trains or other commercial vehicles, filling ponds and swimming pools, watering plants, cleaning business premises and industrial plant.

Emergency Drought Order – this includes phased reductions to water pressure, only supplying water at certain times of day known as 'rota cuts' or putting standpipes in public places for people to draw water from instead of it being supplied to their homes.



Maximising water supplies

Increasing how much we can pump from underground sources – we can lower our pumps deeper into the borehole and increase their size so more water can be abstracted; we can also buy licences from other abstractors who don't need the water.

Using water from other companies – we can receive water from our neighbour Thames Water to supplement our supplies.

Changing how we operate our sources – we can change the way we use our sources so that we rely more heavily on those that we can recharge by pumping water from other parts of the aquifer and preserving supplies in those that are most deficient.

Moving water around our region – we can transfer water from Bough Beech reservoir around our region to help supplement supplies from local sources.

Drought permits – we can apply to the Environment Agency for permission to abstract water from the River Eden outside our normal abstraction period to help us refill Bough Beech reservoir and increase how much water we can abstract from certain groundwater sources.



Climate change

Climate change will affect how much water is available in the future. We expect to see changes to rainfall patterns and the availability of water throughout the year, and a higher chance of prolonged periods of hot, dry weather. This means:

- Our underground sources that are reliant on rainfall may not fully recharge during the winter months so less water will be available in the spring and summer
- River flows could become lower, particularly during the summer, resulting in reductions to how much we can abstract from them to avoid damaging the environment
- Demand for water could rise when it is hot and sunny for long periods
- We need to protect our assets from a higher chance of flooding.

We need to plan ahead so that we make our water supplies more resilient to drought and changing weather patterns. We do this by developing a Water Resource Management Plan (WRMP).



To find out more about how we manage droughts you can read our Drought Plan at

www.seswater.co.uk

What we've done to make water supplies more resilient

Since 1990, we have invested millions of pounds to improve our water supply network.

The largest investment has been in reducing leaks from our 3,500 kilometres of water mains. The amount of water lost through leakage has reduced by a third.

We have also helped you cut how much water you use to 150 litres per person per day (on average). However, it is still amongst the highest water usage in the country, so we know there is more we can do to encourage more efficient use of water.

One way is by installing meters, so you only pay for the water you use and keep track of your consumption. More than half the households in our area already have a meter, as do most of the customers served by our neighbouring water companies. Water usage typically falls by around 15% following the switch to a meter.



The reduction in leakage and customer demand we have achieved to date means that the amount of water we are taking from the environment is similar to 25 years ago, despite a significant increase in population.

In 2019 we completed a £25 million redevelopment of our Woodmansterne Water Treatment Works to increase the amount of water it can treat (including softening) and supply to help meet local demand and make water supplies more resilient during dry weather.

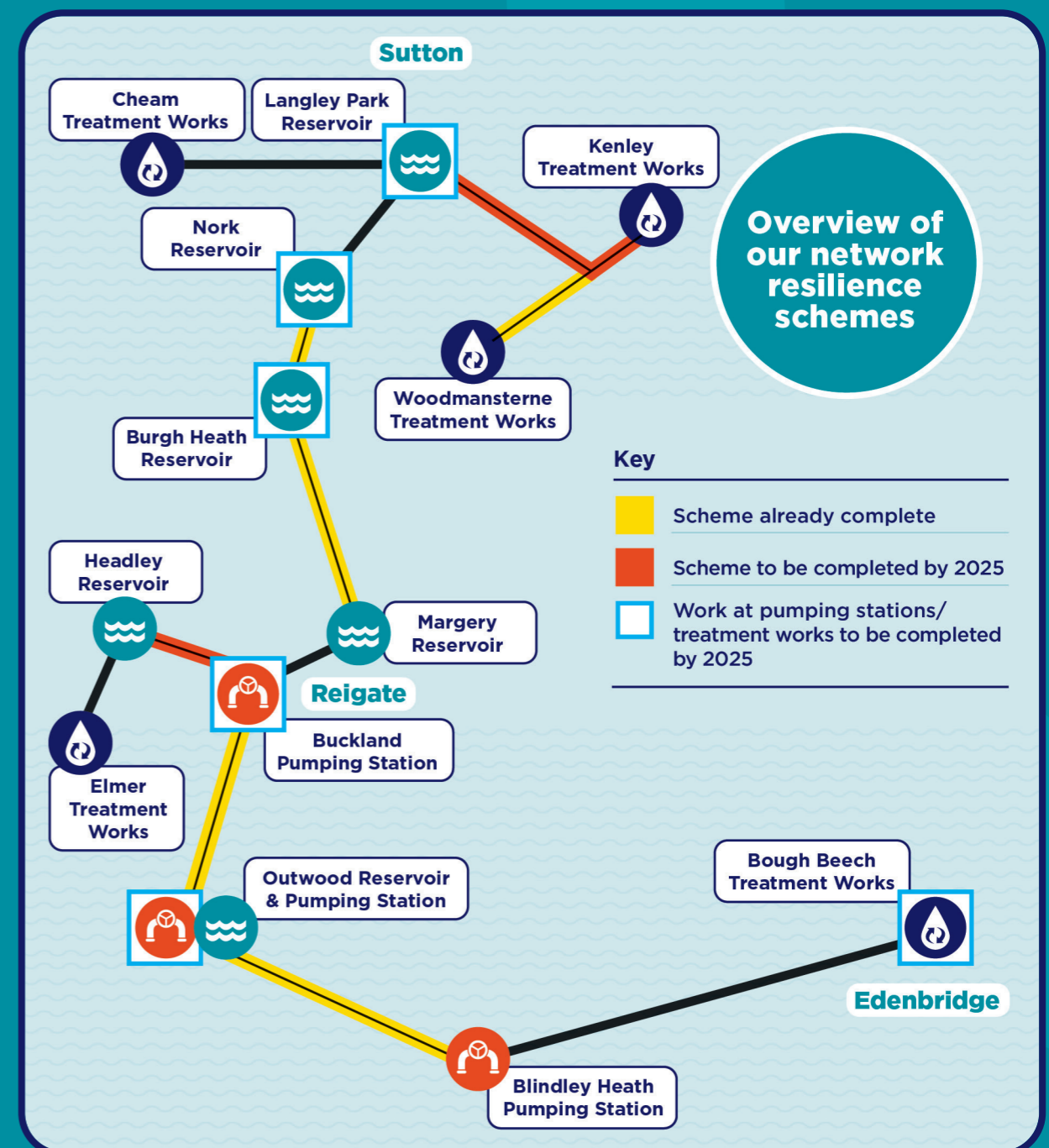
We are also working with local farmers to reduce the amount of pesticides that enter our water sources. This helps to improve the quality of the water we abstract and makes sure it remains available for your supplies.



How we have joined up our network



Since 2010, we've been improving the connectivity of our network so that we can move water from Bough Beech reservoir in the south of our supply area to the north, which previously could only be supplied by local groundwater sources. The work has included the development of a new water grid so we can now supply more customers with water from more than one treatment works. This means we are much more resilient to issues like drought and outages and by 2025 every customer will be able to receive their water from more than one place if needed.



Our plan for the future

Our current Water Resources Management Plan covers the period from 2020 to 2080.

We have calculated how much water will be available compared to the demand we expect to see. We add a little extra on top of our expected demand to allow for some forecasting uncertainty, should anything significant change over the coming years. This has given us our supply-demand balance across the 60-year period.

This shows that if we do nothing, demand for water will exceed supplies in around 2046.

We believe it's important that we act in the early years of the plan to reduce demand further and put us in a stronger position for the future – something that our customers and stakeholders strongly support.

That's why we have included ambitious targets for leakage and household water use reduction in our current plan. If we achieve them, we will continue to have a surplus of water throughout the planning period to 2080 so we don't need to develop any new resources to supply our customers.

Leakage

What we'll do over the next five years:

Reduce leakage by at least 15% – a seven-fold increase on reductions in the last five years.

How we'll do it:

By replacing more of our older water mains more efficiently and using ground-breaking technology to find and fix leaks more quickly on our pipework.

By 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.

Long-term target:

Reduce leakage by 56% to around 7% of water put into supply by 2045.

Household consumption

What we'll do over the next five years:

Reduce household water use by at least 7.4% to 138 litres per day.

How we'll do it:

By metering at least 90% of homes to help you understand your water usage, take control of your bills and reduce demand. It will also help us find leaks on the pipes that serve your home. We will introduce a range of support options, so water remains affordable for all.

By installing smart meters in at least 10% of homes by 2025. This builds on our current smart meter pilot project and will provide near real-time consumption data to help cut usage further. They also help to pinpoint where leaks are and identify other forms of water wastage such as dripping taps and leaky loos.

By providing water efficiency advice to customers through a programme of household visits to help those using the most water and people with financial difficulties. We will provide practical advice and fit water efficient devices in homes where we can. We'll also extend our environmental education programme and carry out campaigns across our area.

Long-term target:

Reduce household consumption to 118 litres per person per day by 2045.



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, so we help non-household customers cut their water use.



Collaborating to deliver resilient water resources for the future

Analysis by the Environment Agency shows that if no action is taken between 2025 and 2050, in excess of 3 billion additional litres of water will be needed each day for public water supplies in England, with around half of this required in the South East.

The combined pressure of climate change, population growth and the need to protect the environment means that more water will be required in the future if we are to continue to meet demand. We also need to make our supplies more resilient to severe droughts as they are expected to become more common in the future.

The Environment Agency has developed a National Framework for Water Resources which sets out some changes to the way we plan. This includes:

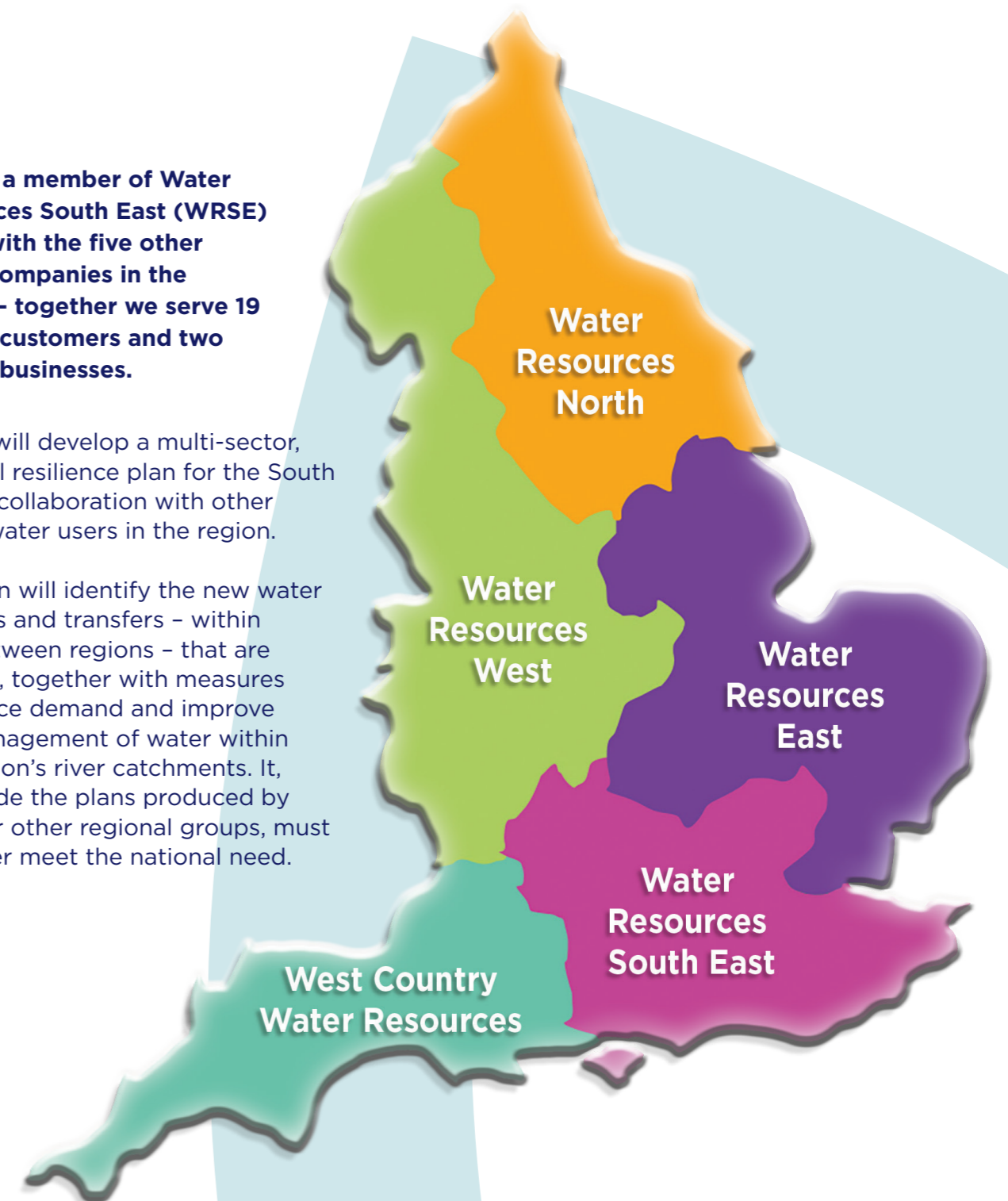
- Developing regional plans which set aside water company boundaries and identify the strategic solutions that are needed to improve the resilience of the whole region
- Considering the needs of other water users such as agriculture, power suppliers and industry within the regional plan and including options that could benefit other sectors
- Increasing the resilience to drought by reducing the need for rota cuts and standpipes to no more than once every 500 years on average
- Understanding the needs of the environment and addressing them in a collaborative way to deliver long-term improvements.



We are a member of Water Resources South East (WRSE) along with the five other water companies in the region – together we serve 19 million customers and two million businesses.

WRSE will develop a multi-sector, regional resilience plan for the South East in collaboration with other major water users in the region.

The plan will identify the new water supplies and transfers – within and between regions – that are needed, together with measures to reduce demand and improve the management of water within the region's river catchments. It, alongside the plans produced by the four other regional groups, must together meet the national need.



We will work closely with the Environment Agency, Natural England, Ofwat, the Drinking Water Inspectorate, environmental groups, local authorities and a range of other stakeholders so that we consider the long-term needs of the environment, society and the economy.



The regional plan will be used to inform our next draft Water Resources Management Plan which we will publish for consultation in 2022.

Listening to your priorities

We provide an essential service and one that touches all parts of society. That's why we work with our customers and stakeholders so that we understand what matters most to you and our plans reflect your priorities.



Environmental Scrutiny Panel

This includes representatives from a range of local and national environmental organisations to help us make sure our day-to-day operations and future investment deliver long-term improvements to the environment. It focuses on our activity to address climate change, lower our carbon emissions, reduce abstraction from sensitive sources and improve how we manage water within our catchments so that we are playing our part in delivering long-term environmental enhancements.

Customer Scrutiny Panel

This group focuses on how we are addressing the needs of all our customers and involving them as we develop our future plans. Its remit includes how we communicate with customers about our service, our work to reduce demand, financial support schemes and tariffs and how we do more to help those with additional needs.

Voice of the customer programme

We have an ongoing programme that uses a range of research techniques such as surveys, focus groups and an online community to help us listen to and understand the priorities of our customers. This insight is used to help us improve our service and how we run our business.

Find out more

Visit our website seswater.co.uk

Follow us on Twitter [@SESWater](https://twitter.com/SESWater)

Join our Talk on Water
online customer community
seswater.co.uk/talkonwater



