Securing a resilient future for water in the South East

Our final draft Water Resources Management Plan 2025–2075

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Introduction

Welcome to our final draft plan for how we will continue to provide high-quality, reliable water supplies, protect the environment and sustain our growing economy for our 2.6 million customers.

We all appreciate the essential nature of water for our health and wellbeing and its role in everything we do day-to-day. For this reason, a reliable supply of clean, wholesome water is our customers' number one priority and ours.

The South East is officially designated as 'water stressed' by the Environment Agency, which means a high proportion of rain in our region is needed for public supplies and we are more likely to experience drought restrictions in dry weather.

Our challenge is to leave more water in the environment to protect some of our most sensitive habitats, while at the same time securing supplies for one of the fastest growing populations in the UK and preparing for the increased risk of drought due to climate change.

Significant action is needed now to invest in and create new robust, resilient and less weather-dependent water supplies, as well as finding new ways to use the supplies we have more wisely.

We will be harnessing the benefits of new technology, such as smart meters for our customers, which will help them and us better understand their water use and help find more leaks, so together we can reduce consumption. We are committed to reaching Government targets on reducing water use five years ahead of the national deadline.

We also need to invest significantly in large-scale infrastructure such as new reservoirs and transfer pipelines so we can capture and transfer more of the precious rain which falls in our region.

In addition, we plan to use cutting-edge technology to generate new sources of drinking water – using treated wastewater for reliable drinking water supplies (water recycling) and converting seawater into drinking water (desalination). Transfers of water from other new developments in the South East have a vital role to play and we are working closely with other regional water companies on our long-term plans.

We have a once in a generation opportunity to develop these more resilient water supplies for us and future generations. Currently around 70% of the water we supply comes from groundwater sources, with 23% from rivers and 7% from reservoirs. By 2050 water recycling and desalination could make up more than a third of our supplies, with transfers from neighbouring water companies making up nearly another third.

The development of these more resilient options means from 2040, we will no longer need to rely on applying for permits and orders to abstract more water in droughts, at a time when rivers and groundwater are already under pressure, unless faced with extreme dry conditions.

We have listened carefully to our customers' feedback and considered updated guidance from our regulators as we have developed this plan. This includes during two public consultations and a consultation on the regional plan by the Water Resources South East group, of which our plan is an integral part.

We are now looking forward to delivering our plan, in collaboration with our customers, communities and partners. Together we will secure resilient, sustainable supplies for the years ahead and take the vital steps required to protect our environment.

Lawrence Gosden
Chief Executive Officer

1. Our plan at a glance

Our final draft Water Resources Management Plan (WRMP) looks at our future water needs from 2025 to 2075.

At present we supply 565 million litres of drinking water per day to our customers across Kent, Sussex, Hampshire and the Isle of Wight.

By 2075, the gap between what we can supply and the demand for water could be up to 587 million litres per day. This is due to an increase in population and a reduction in what is available to us because of climate change and our steps to reduce abstraction from our current sources to protect the environment.

The options outlined in this plan will allow us to fill this gap and continue providing a reliable water supply to homes and businesses.

Our plan focuses on significantly reducing demand alongside delivering new, large-scale sustainable sources of water. We are also making our supplies more resilient, so we will be less likely to introduce emergency restrictions on water use in the future.

It is shaped by a best-value regional plan jointly developed with our five neighbouring water companies as part of Water Resources South East (WRSE). Find out more at **wrse.org.uk**. The other companies are Affinity Water, Portsmouth Water, SES Water, South East Water and Thames Water.

Our revised plan includes:

Reducing leakage by 53% by 2050
by embracing new technology and replacing old water mains.

Reducing average daily water use to 110 litres per person by 2045
(under dry year conditions and five years ahead of the Government target) through a combination of our own initiatives e.g. installation of smart meters, and savings from Government interventions e.g. water efficient labelling on goods and updating building regulations to drive more water efficient new builds.

A 9% reduction in non-household water use by 2038

Water recycling
– four schemes by 2035 to recycle highly-cleaned wastewater to support flows in rivers and refill reservoirs to boost supplies by up to 127 million litres per day, particularly in dry weather. Three more recycling schemes are included for later years.

Groundwater
Improving existing groundwater sources and developing new ones

Desalination
– four schemes after 2035 to provide drinking water from sea water in Sussex and Kent.

New reservoir
Building a new reservoir in Sussex

Storing water underground
from the River Test in Hampshire when flows are high to be used when flows in the river are lower.

More pipelines
to transfer water from new sources of water e.g. reservoirs, developed by neighbouring water companies including Portsmouth Water, Thames Water, South East Water and SES Water and more pipelines to transfer water around our own region.

Partnerships
with land users and environmental groups to improve the water sources we rely on, so they are resilient for the future.

Short-term resilience measures
to protect Hampshire's sensitive rivers during droughts until we complete our programme of new infrastructure development in 2034, the scale of which has not been seen since Victorian times.

Ending the use of drought permits and drought orders
to increase supply, in all but the most extreme droughts, after 2041, with some stopping earlier. For example, the Lower Itchen Drought Permit/Order after 2029–30.

What is a Water Resources Management Plan?

We supply reliable, high-quality drinking water to more than one million homes and businesses in Sussex, Kent, Hampshire and the Isle of Wight.

By law, we must plan to make sure there is always enough water available and we do this through our long-term WRMPs.

We work out how much water we will need in the future, considering:

- the growth in population over time
- climate change impacts on supply and demand
- the need to reduce the amount of water we take from rivers and groundwater to protect and enhance the environment and help it adapt to climate change.

Where we project a future shortfall in water, we identify options to secure supplies. This includes reducing demand as well as increasing supply.

We also work to improve the quality and health of the sources we take water from and if they can no longer be used for supply, we identify alternative sources. This helps protect and improve the environment, so we have sustainable water supplies in the future.

This document is a summary of our final draft WRMP for 2025–75. You can access the full documents on **our website**.

Our draft WRMP also fed into our 25-year Long-Term Delivery Strategy for our wider business and the first five years formed part of our draft 2025–30 Business Plan which outlines our investment and level of customer bills for the next five years.

Part of regional and national planning

For the first time, our plan is informed by a regional plan developed collaboratively through Water Resources South East (WRSE) to meet the water needs of the South East region as a whole.

Together we have planned to increase the region's resilience to droughts, support growth and improve the environment through a forward-looking programme of investment.

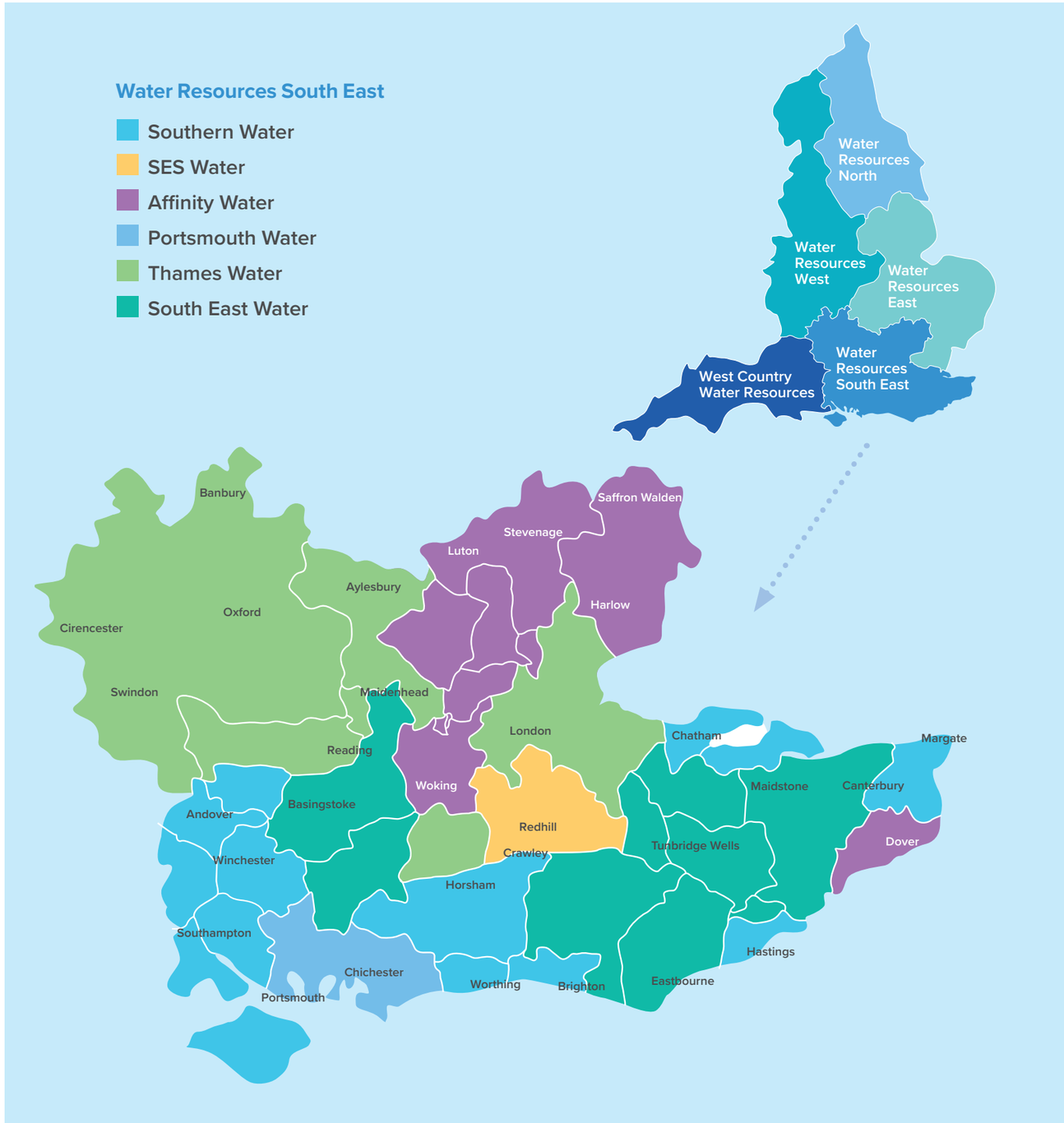
The regional plan has identified the options which will best meet the needs of the wider South East region rather than the customers of a particular water company and will deliver the most overall benefit to people and the environment.

This can result in different options being selected than if companies worked in isolation, with more sharing of resources between the companies through transfers and better aligned targets to reduce demand for water.

The regional plan considered more than 1,400 options, selecting those offering best value. This means the selection takes into account the wider benefits the options will deliver, as well as their cost.

The WRSE regional plan is one of five regional plans which set out the water needs for England as a whole, all based on the National Framework for Water Resources published by the Environment Agency in 2020.

WRSE consulted on its draft regional plan in 2022 and published a revised draft plan in 2023. It is due to publish the final plan in 2025.

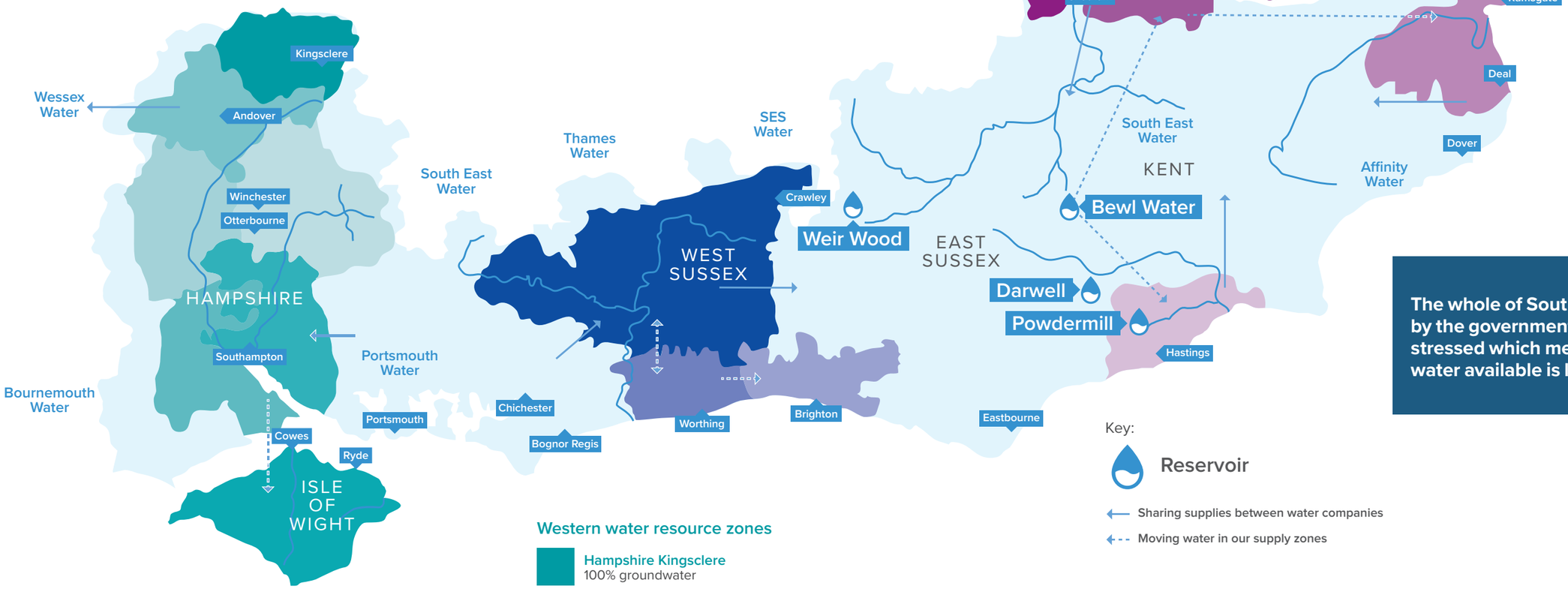


Where your water comes from today

We supply water to parts of Kent, Sussex, Hampshire and the Isle of Wight.

Where the water comes from, how it is supplied and how much is used varies across each county. We divide our supply area into 14 'water resource zones' which are shown on the map.

About 70% of the water we supply comes from groundwater. These water supplies are stored underground in rocks and soils called aquifers and we pump them up to the surface. The rest come from rivers and streams, some of which are supported by chalk-fed groundwater. In some areas, reservoirs store water that is typically pumped from nearby rivers when flows are high. Our natural water resources are split into catchment areas – we take water from eight catchments across the South East.



The whole of South East England is classed by the government as being seriously water stressed which means that the amount of water available is limited.

Key:

- Reservoir
- Sharing supplies between water companies
- Moving water in our supply zones

Western Area

Much of the water supplied in the Western Area comes from underground sources. In South Hampshire, the River Test and River Itchen provide the majority of supplies while on the Isle of Wight around a quarter comes from the River Yar.

Water is transferred from South Hampshire to the Isle of Wight to supplement its water supplies. Water can also be transferred from Portsmouth Water's area to South Hampshire.

91% of homes are metered

Average water use:
124 litres per person per day

Western water resource zones

- **Hampshire Kingsclere**
  100% groundwater
- **Hampshire Andover**
  100% groundwater
- **Hampshire Rural**
  100% groundwater
- **Hampshire Winchester**
  100% groundwater
- **Hampshire Southampton East**
  52% river, 48% groundwater
- **Hampshire Southampton West**
  100% river
- **Isle of Wight**
  47% groundwater, 23% river, 30% transfers

Central Area

Brighton, Worthing and surrounding areas rely predominately on the groundwater sources beneath the South Downs. Sussex North is supplied from a mix of water sources including the River Arun and the Western Rother, Weir Wood reservoir near East Grinstead and a transfer from Portsmouth Water. There are pipelines that allow water to be moved between our Sussex North and Worthing water resource zones in both directions, and from Worthing to Brighton.

84% of homes are metered

Average water use:
130 litres per person per day

Central water resource zones

- **Sussex North**
  35% groundwater, 51% river, 8% reservoir, 6% transfers
- **Sussex Worthing**
  98% groundwater, 2% transfers
- **Sussex Brighton**
  100% groundwater

Eastern Area

Our Kent supply areas take most of their water from groundwater. The rest comes from the River Medway, some of which is stored in Bewl Water reservoir before it is released back into the River Medway where it is abstracted. Hastings in East Sussex takes most of its water from Darwell reservoir which stores water from the River Rother and Powdermill reservoir which stores water from the River Brede. We can transfer water from Medway to Thanet and from Medway to Hastings.

86% of homes are metered

Average water use:
127 litres per person per day

Eastern water resource zones

- **Kent Medway East**
  100% groundwater
- **Kent Medway West**
  56% river and reservoir 44% groundwater
- **Kent Thanet**
  79% groundwater, 21% transfers
- **Sussex Hastings**
  5% groundwater, 79% reservoir, 16% transfers

What we are planning for

Our final draft WRMP for 2025–75 is focused on securing and delivering resilient water supplies for the future.

Our area is officially designated as being water-stressed by the Environment Agency and water is becoming increasingly scarce.

This need to secure more water supplies for the future is driven by four main factors:

1. Protecting the environment
2. Increasing resilience to droughts
3. Countering the impacts of climate change
4. Supplying more people.

These factors mean we need to find 516 million litres of water each day by 2050, increasing to 587 million litres per day by 2075.

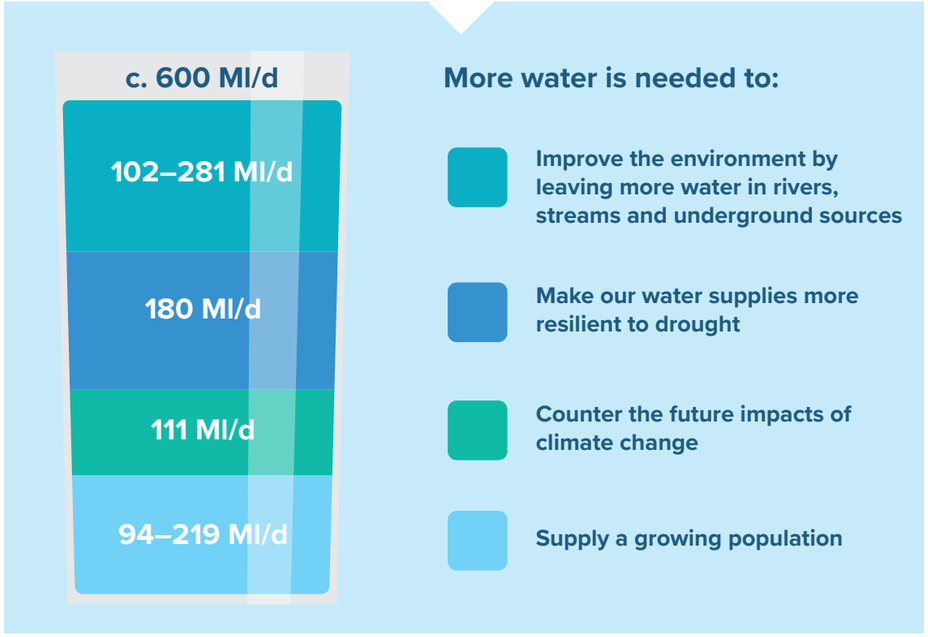
1. Protecting the environment

By far the biggest challenge we face is supplying water in a sustainable way, so more water is left in the environment. This is to improve the health of our rivers and streams and help them adapt as the climate changes.

To achieve this, we need to reduce how much water we abstract from some of our existing, more environmentally sensitive sources and develop new ones. We also need to save more water.

This is the most acute in Hampshire, where during droughts we need to find at least 166 million litres of alternative supplies which are not from a river or aquifer. And that figure is likely to rise in the future.

We're carrying out investigations on most of our groundwater sources, focusing on those which support chalk streams, to see if we need to further limit the water we abstract. We're also looking at sources where reductions and other catchment activities could deliver long-term environmental benefits.



*The illustration shows a range for environmental improvements and population growth – these will become more certain over time.

During the first 10 years of our plan, we are prioritising the catchments where changes and caps to our existing licences have already been confirmed. At the same time, we will continue our investigations into our other sources, through our Water Industry National Improvement Programme (WINEP), in collaboration with interested parties and the Environment Agency.

In the longer term, we will need to further reduce the water we take from our existing sources. This could range from between 102 million litres and 281 million litres each day by 2050 – replacing roughly half the water we supply with new sources.

However, the scale, timing and locations of these future reductions is still unclear so we have planned for a range of future scenarios. The reductions will become clearer as we progress our investigations and work with the Environment Agency.

The sources we are currently investigating include:

Hampshire and the Isle of Wight

- the River Itchen
- the Upper River Test
- the Isle of Wight rivers

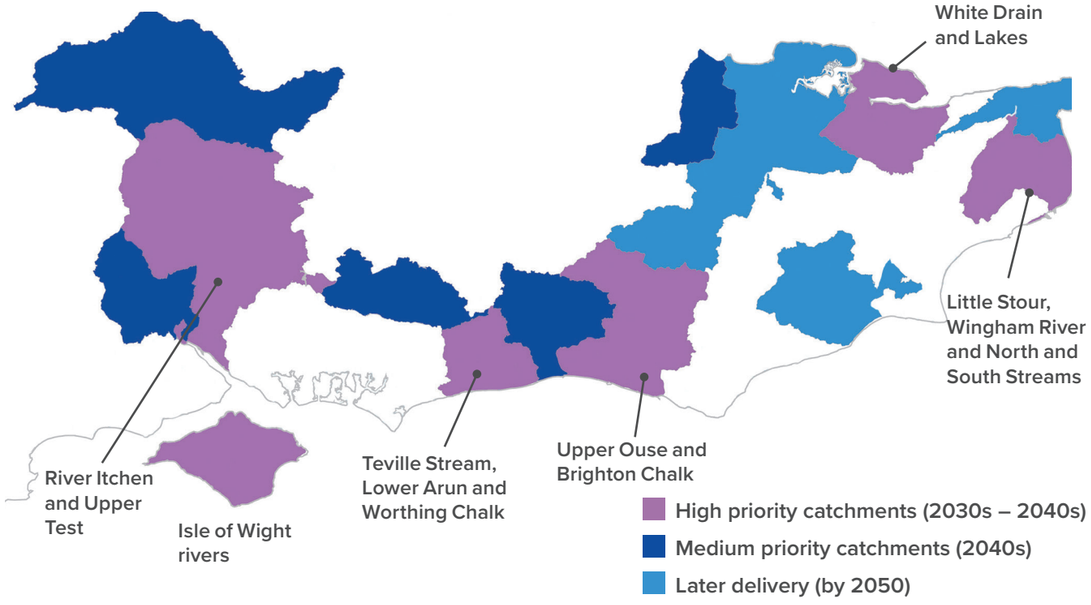
Sussex

- the Teville Stream and Worthing chalk sources
- the Lower Arun sources
- the Upper Ouse and Brighton chalk sources

Kent

- the Little Stour and Wingham River
- White Drain and Lakes
- North and South Streams.

This map shows where and when we may need to reduce our abstraction in the future.



2. Increased resilience to droughts

We are also planning to increase our resilience to droughts so we reduce the chance of having to implement emergency restrictions on water use, such as rota cuts and standpipes. This will also support the environment at a time when it's under pressure.

Droughts happen when there is prolonged, dry weather, which reduces river flows and water stored underground. According to the National Infrastructure Commission (now the National Infrastructure and Service Transformation Authority) there is a 25% chance of a serious drought occurring by 2050.

The Government has set a new planning requirement for water companies to make their supplies more resilient so emergency restrictions would only be needed in a 1-in-500-year drought (a drought likely to happen once every 500 years on average).

We already plan to this level, however, at present we rely on drought orders and drought permits to allow us to continue abstracting water during drought conditions.

Our Drought Plan

This water resources plan identifies what we need to do to secure water for the future and how often we plan to use drought measures. Our Drought Plan sets out what we will do if a drought happens. You can read our Drought Plan at: **southernwater.co.uk/about-us/our-plans/drought-plan/**.

Our aim is to reduce our reliance on these and stop using them by 2041, unless we experience a drought more severe than a 1-in-500-year event.

To do this, we need to find more than 180 million litres of alternative water each day during severe droughts.

The table below sets out how often we plan for drought measures and how this will change as we develop new, more sustainable sources of water.

How often we plan for drought measures now and how this will change in the future

Area	2025–2030	2030–2040	Beyond 2040
Western Hampshire and the Isle of Wight	Less than 0.5% annual chance of using drought permits and orders (1:200 return period)	Less than 0.5% annual chance of using drought permits and orders (1:200 return period)	0.2% annual chance of using drought permits and orders (1:500 return period)
Central West Sussex and Brighton and Hove	Less than 1% annual chance of using drought permits and orders (1:100 up to 1:170 return period)	Less than 0.5% annual chance of using drought permits and orders (1:200 return period)	
Eastern East Sussex and Kent	Less than 0.5% annual chance of using drought permits and orders (1:200 return period)	Less than 0.5% annual chance of using drought permits and orders (1:200 return period)	

3. Climate change

Climate change is expected to reduce the amount of water we can supply from some of our water sources. People are also likely to want to use more as the weather becomes warmer and drier.

We expect droughts to become more frequent so we have considered a wide range in our plans, including those more severe than those we have experienced in the past. This has helped us identify the sources most likely to be affected so we can plan to replace the water we will lose because of climate change.

We have used the latest UK climate projections (UKCP18) produced by the Met Office to understand the impact of climate change on our existing sources.

We could lose, and need to replace, up to 111 million litres of water each day by 2075.

4. Population growth

The population we supply is projected to grow between 7% and 34% between 2025 and 2075.

Population growth estimates can vary depending on which projections you use. Our forecasts are based on a variety of projections, including local authority housing plans and data from the Office of National Statistics. Growth is also likely to vary across our region.

Demand for water could increase by between 94 million and 219 million litres each day by 2075 as we supply more people. If we become more efficient with water, this could reduce.

Adapting to an uncertain future

The amount of water we will need in the future depends on the actual population growth, climate change impacts and reductions in abstractions to improve the environment.

As we look 50 years ahead, these become more uncertain, so we have developed a plan which we can adapt to make sure all our actions provide best value, whatever the future brings.

We have planned for many alternative futures, based on a range of projections for low, medium and high population growth, climate change impacts and environmental improvements.

This makes sure the actions we take in the early years prepare us for all future pathways and we will review our projections every five years when we update this plan.

Your say on our plan

We engaged extensively with our customers, interested parties and regulators in the development of this final draft water resources plan, including holding two public consultations.

This plan has also been informed by the Water Resource South East regional plan, which was open for public consultation in 2022–23.

We have considered all the feedback and this final draft plan reflects the changes we have made in response.

The key stages of our engagement were:

1. Pre-plan engagement (2022)
2. Consultation on our draft WRMP and the WRSE regional plan (2022–23)
3. Consultation on our revised draft WRMP (2024)

1. Pre-plan engagement

We engaged with more than 3,000 customers and interested parties as we developed our first draft WRMP for consultation in 2022. At that time our customers told us they:

- support collaboration for regional long-term water resource planning
- understand the challenges of population growth and climate change
- expect us to protect the environment and welcome reductions in abstraction
- expect us to further reduce leakage and promote water efficiency before developing new supplies
- have concerns about relying on the success of water-saving options
- welcome the balance of different water supply options
- welcome aquifer storage and recovery as an innovative option with positive environmental impact
- feel water recycling is an important because it's sustainable, but need assurance on water quality
- are positive about reservoirs due to the environment, health and community benefits
- have concerns about desalination and water transfers from other regions
- support catchment management; even though it produces small volumes of water.

2. Consultation on our draft plan

We developed our draft WRMP based on this feedback and consulted on it in 2022–23. At the same time a consultation was held on the regional plan, which had informed the development of our plan.

We promoted the consultations through multiple channels and received nearly 600 responses to our plan and WRSE received 901 responses on the regional plan. The main themes of feedback included:

- Strong support for reducing leakage and promoting water use
- Questioning the need for the number of large-scale projects such as water recycling, large transfers or desalination, rather than more smaller schemes
- Concerns about the effect on the environment and water quality of the Hampshire Water Transfer and Water Recycling Project.

You can read more detail about the feedback we received and our response in our **revised draft summary WRMP** and **Statement of Response**; and to **WRSE's consultation in its Consultation Response**.

3. Revised plan consultation

We updated our draft plan and carried out a second public consultation on our revised draft plan in 2024.

This was because we made significant changes to the plan – including revising the dates for some water recycling schemes and a reservoir, so the water would be available later. We also included an option to tanker in water from Norway as an emergency in droughts.

To gather feedback, we held webinars and eight regional roadshows, so people could talk to us directly, as well as promoting the consultation through media and social channels and engaging directly with interested parties and our employees. We also held customer focus groups to gather insight from a wide range of the people we supply.

We received 1,176 responses, which again showed strong support for reducing leakage and promoting water efficiency. Key responses on our supply options included:

Sea tankering

We received many responses on sea tankering which expressed concern. This included concern about the risk of introducing invasive non-native species (Gyrodactylus salaris) and a freshwater parasite which could affect salmon in the Itchen, Test and Meon rivers. Concerns were also expressed about the cost, high carbon footprint and water security risks.

As a result of this feedback and our further studies, we have removed sea tankering from our final draft plan. However, we will carry out more studies to see if it would be an option with water from elsewhere in the UK.

Water recycling

Most of the water recycling responses related to water recycling to Havant Thicket Reservoir in Hampshire. They included concerns about the environmental impact, release to sea and the energy use. We are continuing to engage on this nationally significant project and answer questions as we progress through the planning process. **You can keep up-to-date here.**

South East Strategic Reservoir Option

We also received concerns about the environment impact of this regional reservoir which we are developing in partnership with Thames Water, as well as the pipeline needed to transfer the water from Oxfordshire to Hampshire. Engagement continues on this project and **you can read more here**.

Both the recycling and reservoir options remain in our plan as we need to identify large-scale solutions to enable the long-term protection of the rivers Test and Itchen in Hampshire. Public engagement for both these projects will continue as they progress. Please use the links above for updates.

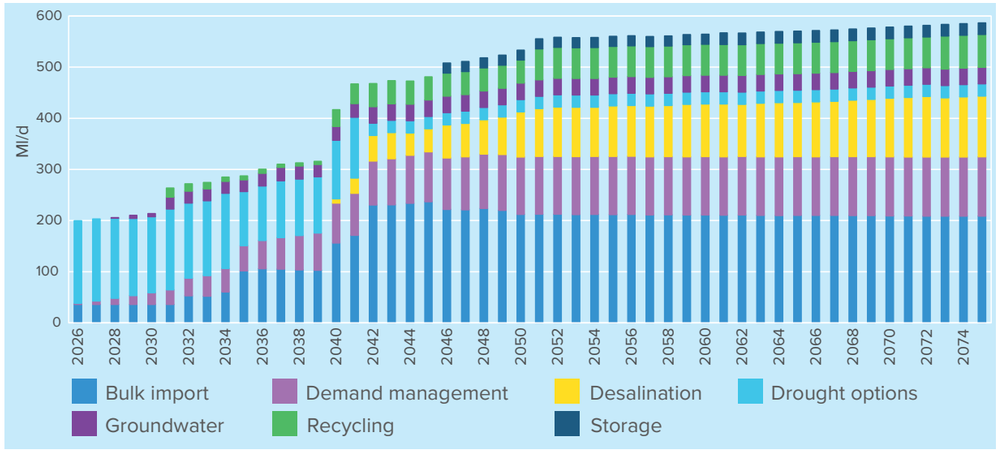
You can read more detail about the feedback we received during our second consultation and our response in our **Statement of Response (2025)**.

2. Our Plan for 2025–2075

Overview of our strategy

Our final strategy to secure your water for the next 50 years includes a mix of options to reduce demand and increase supplies. This allows us to make the best use of the resources we already have while also making sure there are sustainable sources ready in time to meet increased need in the future.

The graph below shows the mix of options and when we plan to use them. Schemes such as recycling and desalination are used more after 2041 when we stop using drought orders and permits, except in extreme droughts.



The first 10 years:

During the first 10 years of our plan, between 2025 and 2035, we will start to see the benefits of reduced leakage and water saving and new sources will come into operation. These include:

- demand management including reducing leakage, installing smart meters and helping people and businesses to use less water
- groundwater schemes in Sussex and Hampshire to release more water
- water recycling schemes in Kent, Sussex, Hampshire and on the Isle of Wight, as well as an industrial water recycling scheme in Kent
- imports of more water into Hampshire and Sussex from other water companies
- catchment management schemes to help improve the quality and resilience of our water sources
- applying for drought orders and permits to continue abstracting water during a drought while we develop new supplies.

  For droughts of up to 1-in-500 year severity, we will stop taking water from:

  – the lower River Itchen (Hampshire) after 2030

  – the River Test after 2034

  – the Candover scheme (Hampshire) after 2034

The next 40 years:

From 2035 onwards, we will see desalination schemes providing supplies and receive much more water from neighbouring water companies as larger schemes such as reservoirs are built. The plan includes:

- demand management to further reduce leakage and water use in homes and businesses
- a managed aquifer recharge scheme in Hampshire
- groundwater options to release more water on the Isle of Wight
- a large import of water from Thames Water from 2040 following the development of the South East Strategic Reservoir Option (SESRO) and the construction of a new pipeline from Oxfordshire to Hampshire
- a new reservoir in West Sussex
- desalination schemes in Sussex and Kent
- a stop to the use of all drought permits and orders to increase supply in all but the most extreme droughts (more than a 1-in-500-year severity) after 2041.

Read pages 18 to 23 for more detail on our strategy to supply your water for the next 50 years and pages 24 to 29 to see the solutions in your area on maps.

Strategic Resource Options

Some of the large supply schemes in our plan are classed as Strategic Resource Options (SROs) and these are passing through a process led by a group called RAPID, as well as through our water resource planning process.

RAPID, the Regulators' Alliance for Progressing Infrastructure Development, is made up of water industry regulators and supports selected options to be planned and developed more quickly to make sure supplies are available in time for when they are needed.

We are working with RAPID on two of the schemes in our final plan:

1. The Hampshire Water Transfer and Water Recycling Project, which will provide up to 90 million litres per day from 2034
2. The Thames to Southern Transfer Project, which will provide up to 120 million litres per day from 2040.

Both schemes would provide additional supplies into Hampshire, where we need to make significant reductions to the water we currently take from sensitive chalk rivers, the Itchen and Test, particularly during droughts.

Making the most of existing supplies

Reducing leaks and changing how society values and uses water is critical to help improve the environment and make our water supplies more resilient, particularly as the climate changes and the population grows.

Saving water and reducing waste will secure up to 31% of the water we need by 2040. This includes the temporary restrictions we would introduce in a drought. The proportion we secure through managing demand for water and reducing leakage falls after 2040 as we develop new sources and stop using drought orders and permits, except for in extreme drought.

Reducing leakage

Reducing leakage is a priority for us. We will reduce leakage by 53% by 2050.

How we will do it:

- improve monitoring by installing more sensors in our network and bringing leakage data together in a digitalised system to detect and prioritise repairs
- improve how we manage pressure in our network
- deliver a significant programme of water main replacement targeting those most prone to frequent bursts and leaks
- roll out smart meters to our customers to alert us to leaks in homes and businesses which we will help to get fixed
- make use of emerging technology such as remote sensors, thermal imagery, satellites and drones to detect leaks
- progress the development of innovative, fibre optic technology to provide more data about leakage across our network.

Water efficiency

Helping customers use less water is essential to securing a resilient water future. Our plan includes a target to reduce average daily household use to 110 litres per person per day by 2045 under dry-year conditions – five years earlier than the 2050 target set by the Government. That's the same as 100 litres in normal-year conditions.

How we will do it:

- upgrade customers' meters to smart ones by 2030 which will send near real-time data on water use. We will install them in our most water stressed areas first, Hampshire and north Sussex.
- use this information to proactively engage with our customers to help save water through home visits, advice and water-saving devices
- run campaigns to encourage water efficiency – including with schools
- introduce innovative tariffs to incentivise water efficiency and work with local communities to encourage area savings
- trial innovative solutions to reduce water use in homes and gardens
- work with Government, policy makers and others to promote the adoption of more water efficient policies and standards.

We have also committed to working with retailers to help non-household customers such as businesses, schools and local authorities reduce their water use. Our target is a 9% reduction by 2038.

Leakage and household consumption reduction targets

	Leakage (million litres per day)	Per capita consumption (PCC) under 'dry year' conditions (litres per person per day)
2030	66	132
2035	63	124
2040	57	116
2045	52	110
2050	48	106

The role of Government in reducing demand for water

Achieving our target to reduce water use relies on the Government introducing measures to support water savings.

These include:

- introducing mandatory labelling on products which use water from 2025 to help customers choose more water-efficient products
- Introducing minimum standards for devices which use water by 2030
- Amending the building regulations for new homes and retrofits to deliver more water efficient housing by 2035.

We have included the reductions we expect to see from Government-led actions in this plan and they deliver most of the savings in household demand by 2050.

If these do not deliver the savings we need, we may need to develop new water sources sooner.

Temporary water restrictions

Our plan includes the use of temporary restrictions to reduce customer water use during droughts. These restrictions typically reduce demand by 6% across our supply area.

The measures include:

- Temporary Use Bans (TUBs) which restrict certain household activities such as using a hosepipe or sprinkler to wash your car or water your garden
- Non-Essential Use Bans (NEUBs) which reduce water use by businesses by restricting activities such as watering plants and cleaning windows.

During the early years of the plan, as we construct the new sources of water we need and make progress reducing leaks and customer consumption, we may introduce these restrictions more frequently. They would be needed if we experience prolonged dry weather to help us protect the environment and manage our water supplies.

Once these schemes are delivered, our water supply system will be more resilient and we are less likely to need restrictions, although they will continue to be part of our plan to manage droughts, in line with our Drought Plan.

While the frequency at which we may restrict customer use of water varies initially across our region we have a single strategy. This company wide strategy is that we will use all feasible measures to reduce demand before implementing supply-side drought permits or orders. The frequency we expect to introduce customer restrictions on water use is shown in the following tables.

Target levels of service

	Annual Chance	Return Period	Chance of at least one occurrence between 2025 and 2075
Customer target levels of service			
Advertising to restrict water use	20%	1-in-5 year	100%
Temporary Use Ban on different categories of water use	10%	1-in-10 year[a]	99%
Drought Order (Non-Essential Use Ban)	5%	1-in-20 year	92%
Environmental target levels of service			
Application for Drought Permits and Orders to increase supplies through relaxation of abstraction licence conditions, increase in licensed quantities or other measures	5%	1-in-20 year[b]	92%

[a] Frequency of first implementation but would be introduced in a phased manner.
[b] For HSE we expect the short-term level of service for these drought permits and orders (up to 2030) could be less than our target.

Forecast reduced level of service in Hampshire

Level of service	Company Target level of service	Reduced level of service for Hampshire based on flow modelling for the River Test and Itchen	Defining Trigger set out in Drought Plan
Advertising to restrict water use	1-in-5 years	1-in-2 years	60-day River Test Drought Permit Trigger
Temporary Use Ban on different categories of water use	1-in-10 years	1-in-5 years	35-day River Test Drought Permit Trigger
Drought Order (Non-Essential Use Ban)	1-in-20 years	1-in-20 years	Candover Drought Order Trigger

New sources of water

We need to develop new water sources to provide the significant amounts of sustainable supplies we need in the future.

These are typically needed where we need to reduce how much water we take from rivers, streams and groundwater sources, and where reducing demand will not make up the shortfall.

The main schemes for each region are set out in this section with a view of all schemes on the maps on pages 24 to 29.

West Sussex and Brighton and Hove

We need to develop significant new sources of water in our central supply area, which covers East and West Sussex, but not the Hastings area. These include:

- groundwater options to provide more water in Petersfield (1.6 million litres per day), Petworth (4 million litres per day) and West Chiltington (3.1 million litres per day) from 2031.
- a water recycling scheme near Littlehampton, to transfer water to the Pulborough area by 2031 to provide up to 15 million litres per day
- water transfers from our neighbouring water companies SES Water and South East Water that together could provide up to 20 million litres per day
- a new reservoir, near Henfield, to store water from the River Adur to supply up to 19.5 million litres per day to parts of Sussex
- a desalination plant near the tidal River Arun to provide up to 40 million litres per day, which may be needed in the longer term if more significant reductions to how much water we can abstract from the environment are needed.

Kent and East Sussex

The first option we need to develop in Kent is a water recycling scheme on the River Medway to provide up to 14 million litres per day by 2031.

In the short term, we are also planning to work with a large industrial water user in Kent so we can use their existing groundwater source to supply our customers. We would provide them with recycled wastewater for their business use. This will provide up to 7.5 million litres per day for our customers.

Other options we may need to progress in the longer term will depend on the future scenario we face. This could include:

- desalination on the Isle of Sheppey, in East Thanet and the Thames Estuary, with a combined capacity of up to 80 million litres per day by 2050 increasing to 120 million litres per day by 2075 if needed
- a recycling scheme in Tonbridge to provide up to 5.7 million litres per day.

Hampshire and the Isle of Wight

We need to develop significant new sources of water, particularly to protect the internationally-rare chalk streams, the River Itchen and River Test during droughts.

Havant Thicket Reservoir

We are developing Havant Thicket Reservoir in Havant in partnership with Portsmouth Water. Its delivery will allow the transfer of 21 million litres of water per day to us by 2031.

Hampshire Water Transfer and Water Recycling Project

This project involves the construction of a new 40km pipeline from Havant Thicket Reservoir to our supply works in Hampshire. A new water recycling plant at Havant would produce highly-treated, recycled water from our wastewater treatment works to supplement supplies in the reservoir and provide up to 90 million litres per day to Hampshire. Our target delivery date is 2034. Find out more on our **Water for Life Hampshire** pages on our website.

Groundwater

We are introducing a new groundwater scheme in King's Somborne and bringing forward delivery of another in Romsey. Together these will provide seven million litres each day in Hampshire from 2031 and reduce reliance on water from the River Test during droughts.

Drought measures

Until the water recycling project is delivered in 2034, we need to find ways to secure supplies during droughts in Hampshire. We will need to continue applying for drought permits and orders on the River Test and Candover until then. However, we will continue to explore ways to reduce this need.

We will increase our leakage and work with customers even more to lower their water use during droughts.

We had considered tankering water supplies from Norway in an emergency drought but following further investigations and feedback we have removed this from our plan. We will explore options to possibly tanker water from the UK in the future.

Our action plan to manage droughts in Hampshire will be constantly reviewed and adapted depending on the nature and severity of the drought. We will work closely with the Environment Agency to make sure we take the best course of action and continue to further explore options to reduce reliance on permits and orders in Hampshire.

We will stop using the Lower Itchen drought permits and orders after 2030.

Aquifer Recharge

We plan to introduce an aquifer recharge scheme from the River Test from 2036, providing up to 5.5 million litres of water each day. This involves abstracting water from the river in winter when flows are high and pumping it underground to supplement the natural water supply within the aquifer.

Thames to Southern Transfer Project

We also plan to develop a Strategic Resource Option, with Thames Water, to lay a pipeline to transfer up to 120 million litres per day into Hampshire from Oxfordshire by 2040.

This would rely on Thames Water developing a significant new water source – a proposed new reservoir in Abingdon – the South East Strategic Reservoir Option (SESRO). Find out more **here.**

Isle of Wight

We also need to develop new sources to support the Isle of Wight and increase its resilience. These include a water recycling scheme at Sandown to provide up to 8.5 million litres of water per day from 2031 and developing two groundwater sources to secure more water.

Growing our network

An important part of our future plan is having a robust network of pipelines to move water to where it's needed most across the South East.

Working with other water companies, we will build new pipelines to expand our network and the resilience of our own supplies.

This includes:

- **increasing the connectivity of our water supply works in Hampshire** – this will also support the transfer of 21 million litres per day from Portsmouth Water when Havant Thicket Reservoir is complete in 2031
- a 40km pipeline to transfer up to 90 million litres of water per day directly from Havant Thicket Reservoir to our water supply works as part of the **Hampshire Water Transfer and Water Recycling Project** from 2034
- a pipeline to transfer up to 50 million litres of water per day from Havant Thicket Reservoir to our Pulborough water supply works in Sussex by 2040
- a pipeline to transfer up to 120 million litres per day from Thames Water into Hampshire from 2040 – **Thames to Southern Transfer**.

We already share millions of litres of water per day with our neighbouring companies, and these transfers are a crucial part of our collective resilience. We will continue to build on our existing connections and develop new ones where needed in Sussex and Kent.

Sustainable supplies

Catchment and nature-based solutions

Working with nature by using catchment and nature-based schemes will protect and improve the environment we rely on, helping secure sustainable supplies. It also delivers wider benefits such as increasing biodiversity and lowering carbon emissions.

Our ambition is to go beyond protecting the environment. We want to improve it so it can better adapt to the challenges ahead. This is supported by our customers who value the environment more than ever before.

Our 'Catchment First' programme is maximising opportunities to work collaboratively with partners to deliver long-term environmental improvements. We will use traditional engineering schemes where we need to achieve compliance quickly but whenever we can, we will reduce our reliance on them by increasing our use of catchment solutions.

The natural environment and the historic environment are integral to each other so we will also make sure our solutions consider heritage impacts.

Achieving sustainable abstractions

We will continue investigating the impact our abstractions have on the environment. Where we can, we will deliver schemes that improve the water bodies we rely upon, so we don't need to make such significant reductions to our abstractions. The amount of water we do abstract will be sustainable for the future.

Reducing nitrate levels in groundwater

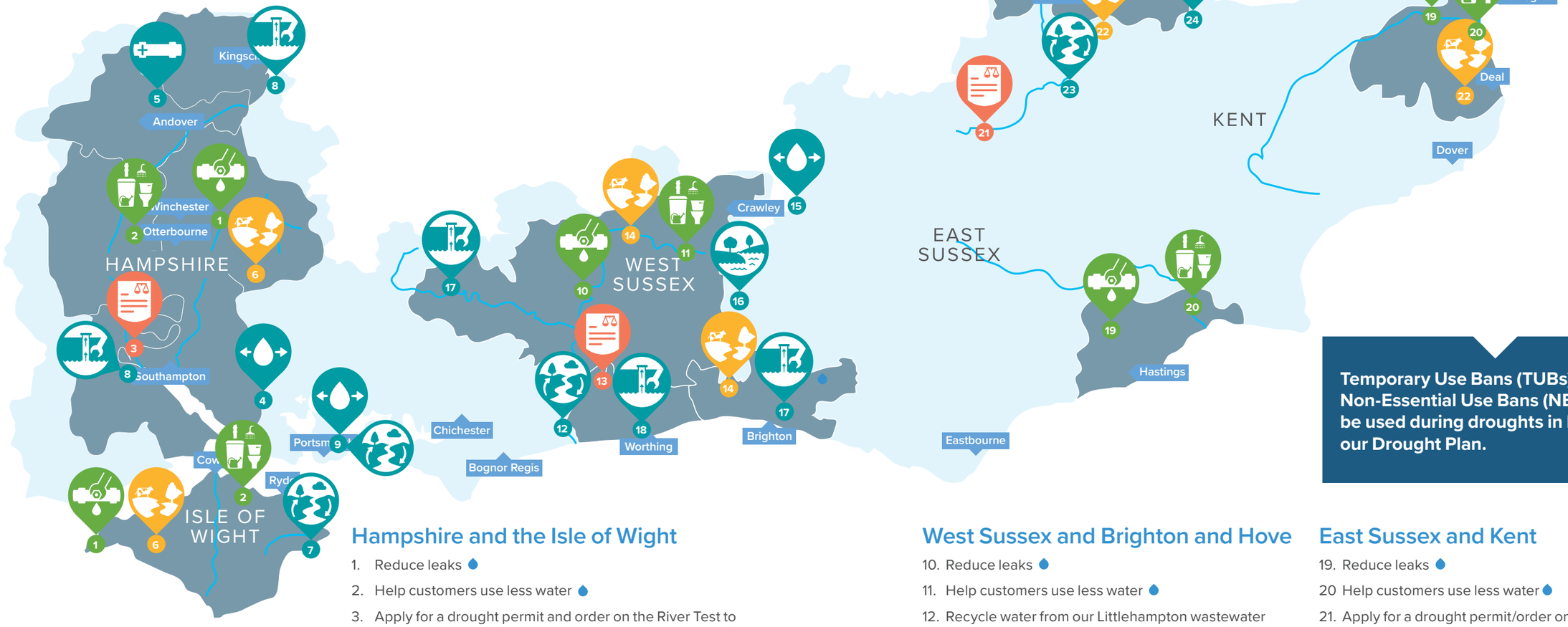
Nitrate pollution will impact both the quality and quantity of our groundwater sources. By working with farmers and other land users we will take action to protect 42 of our groundwater sources and make them more resilient.

Improving the resilience of our rivers and streams

Where we abstract from rivers and streams, we will work with partners to understand what could impact the quality of our raw water sources. We will take action to mitigate these while delivering wider environment benefits such as increasing natural capital and reducing flooding.

Water strategy for 2025–35

This map shows how we could provide resilient and sustainable water supplies between 2025 and 2035.



Temporary Use Bans (TUBs) and Non-Essential Use Bans (NEUBS) to be used during droughts in line with our Drought Plan.

Key

- Less than five million litres of water each day.
- Between five and 50 million litres of water each day.
- More than 50 million litres of water each day.

- Reduce demand for water
- Drought action
- New sources of water and transfers
- Catchment or nature-based scheme

Hampshire and the Isle of Wight

1. Reduce leaks
2. Help customers use less water
3. Apply for a drought permit and order on the River Test to continue abstracting water during dry weather in droughts until 2033–34 and after that only in droughts more severe than 1-in-200 year likelihood; apply for a drought order on the Lower Itchen until 2029–30 and a drought order at Candover until 2033–34
4. Receive up to 21 million litres of water from Portsmouth Water following the construction of Havant Thicket Reservoir
5. Build new pipelines so we can move water around our Hampshire area
6. Catchment schemes to address nitrates and pesticides and improve the resilience of our water sources
7. Recycle water from our Sandown site
8. Develop groundwater sources near Newbury, Romsey and King's Somborne
9. Recycle water at Portsmouth Harbour wastewater treatment works and store it in Havant Thicket Reservoir before transferring up to 90 million litres through a new pipeline to our Itchen water supply works for treatment, including upgrading the works

West Sussex and Brighton and Hove

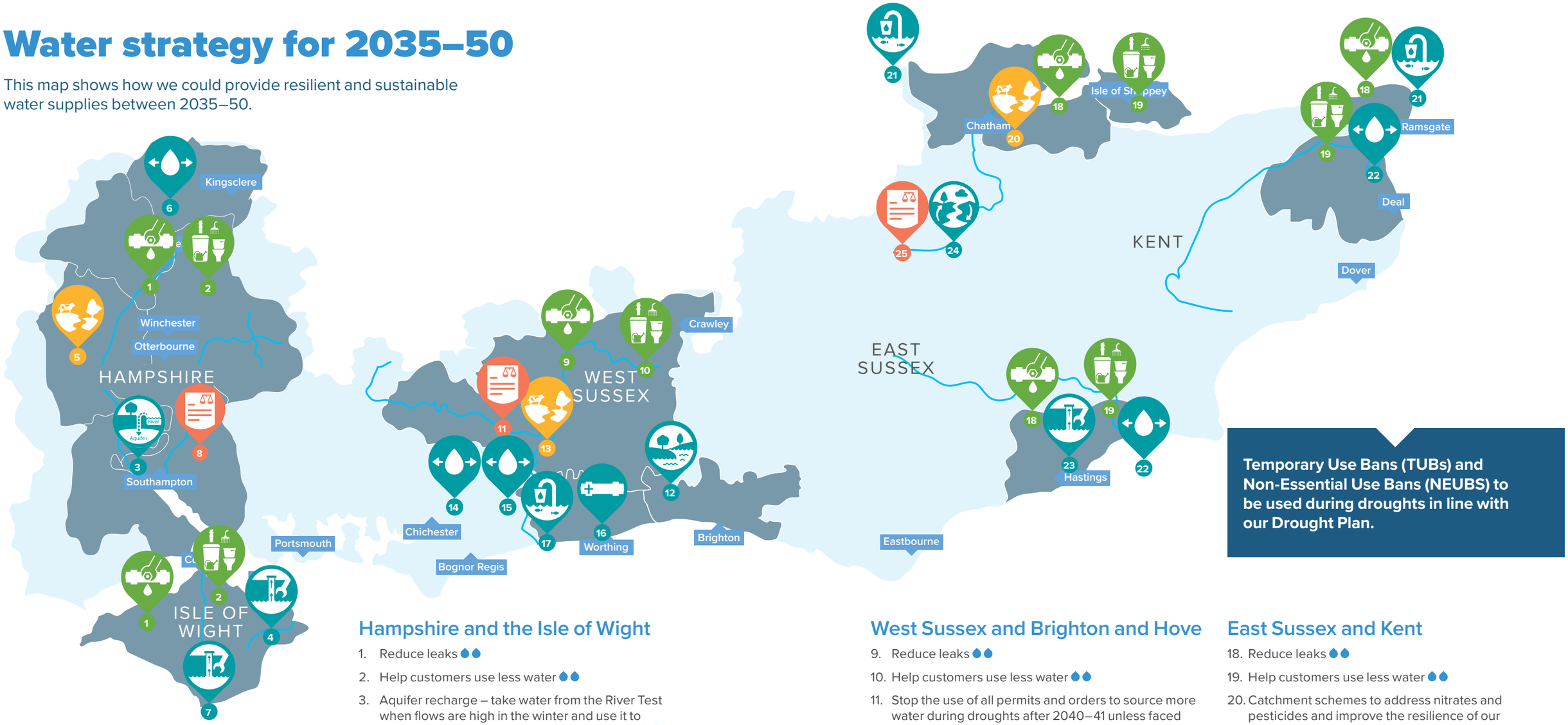
10. Reduce leaks
11. Help customers use less water
12. Recycle water from our Littlehampton wastewater treatment works and transfer it via the River Rother to our water supply works near Pulborough
13. Apply for a drought permit or order on the River Rother to continue abstracting water during dry weather until 2029–30 and after that only in droughts more severe than 1-in-200 year likelihood
14. Catchment schemes to address nitrates and pesticides and improve the resilience of our water sources
15. Import up to 4 million litres per day from SES Water to north Sussex –
16. Deliver upgrades to Weir Wood Water Supply Works
17. Groundwater improvement schemes in West Sussex and a groundwater scheme in Brighton to provide more water
18. Develop a groundwater source near Petworth

East Sussex and Kent

19. Reduce leaks
20 Help customers use less water
21. Apply for a drought permit/order on the River Medway to continue abstracting water during dry weather
22. Catchment schemes to address nitrates and pesticides and improve the resilience of our water sources
23. Recycle water from a water recycling plant near Aylesford and release it into the River Medway from where it will be abstracted and treated at a water supply works
24. Work with a large industrial water user to provide them with recycled wastewater and enable us to use their existing groundwater sources
25. Make improvements to an existing groundwater source near Gravesend

Water strategy for 2035–50

This map shows how we could provide resilient and sustainable water supplies between 2035–50.



Temporary Use Bans (TUBs) and Non-Essential Use Bans (NEUBS) to be used during droughts in line with our Drought Plan.

Key

- Less than five million litres of water each day.
- Between five and 50 million litres of water each day.
- More than 50 million litres of water each day.
- Reduce demand for water
- Drought action
- New sources of water and transfers
- Catchment or nature-based scheme

Hampshire and the Isle of Wight

1. Reduce leaks
2. Help customers use less water
3. Aquifer recharge – take water from the River Test when flows are high in the winter and use it to supplement our underground water supplies
4. Make improvements to an existing groundwater source on the Isle of Wight
5. Catchment schemes to address nitrates and pesticides and improve the resilience of our water sources
6. Receive up to 120 million litres a day from Thames Water
7. Develop our groundwater source at Newchurch
8. Stop the use of all supply-side drought permits and orders after 2040–41 unless faced with a drought of more than a 1-in-500 year severity

West Sussex and Brighton and Hove

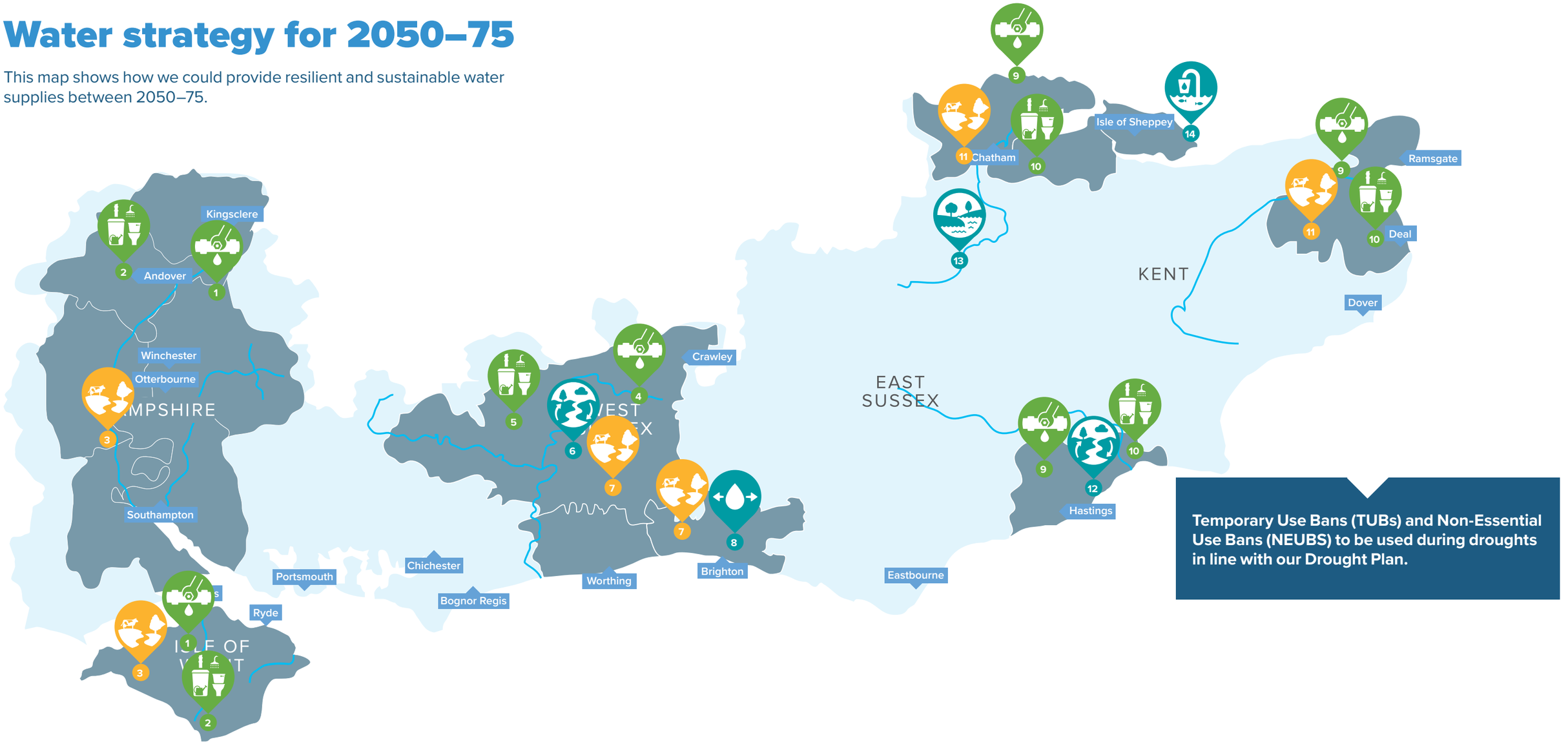
9. Reduce leaks
10. Help customers use less water
11. Stop the use of all permits and orders to source more water during droughts after 2040–41 unless faced with a drought of more than 1-in-500 year severity
12. Build a new reservoir in Sussex to store water from the River Adur
13. Catchment schemes to address nitrates and pesticides and improve the resilience of our water sources
14. Import water from Havant Thicket Reservoir in Hampshire to Pulborough
15. Import water from South East Water to Pulborough
16. Build pipelines to extend our grid to transfer water between Pulborough and Worthing and between Worthing and Brighton
17. Build a desalination plant on the tidal River Arun

East Sussex and Kent

18. Reduce leaks
19. Help customers use less water
20. Catchment schemes to address nitrates and pesticides and improve the resilience of our water sources
21. Desalination plants on the Thames Estuary, Isle of Sheppey and in East Thanet.
22. Import water from South East Water to Canterbury and Rye
23. Improve a groundwater source near Rye to provide more water
24. Recycle water from Tonbridge and store it in Bewl Water before treating it at a nearby water supply works
25. Stop the use of permits and orders to source more water during droughts after 2040–41 unless faced with a drought of more than 1-in-500 year severity

Water strategy for 2050–75

This map shows how we could provide resilient and sustainable water supplies between 2050–75.



Temporary Use Bans (TUBs) and Non-Essential Use Bans (NEUBS) to be used during droughts in line with our Drought Plan.

Key

- Less than five million litres of water each day.
- Between five and 50 million litres of water each day.
- More than 50 million litres of water each day.

- Reduce demand for water
- Drought action
- New sources of water and transfers
- Catchment or nature-based scheme

Hampshire and the Isle of Wight

1. Reduce leaks
2. Help customers to maintain a sustainable level of water use
3. Ongoing work to use catchment management and nature-based solutions to improve the environment

West Sussex and Brighton and Hove

4. Reduce leaks
5. Help customers to maintain a sustainable level of water use
6. Recycle water near Horsham and transfer it through a new pipeline to an existing reservoir near Pulborough before it is treated and supplied to customers
7. Ongoing work to use catchment management and nature-based solutions to improve the environment
8. Import water from South East Water to Brighton

East Sussex and Kent

9. Reduce leaks
10. Help customers to maintain a sustainable level of water use
11. Ongoing work to use catchment management and nature based solutions to improve the environment
12. Recycle water near Hastings and store it in Darwell reservoir before treating it at a nearby water supply works
13. Increase the size of Bewl Water reservoir
14. Increase the volume of water from desalination on the Isle of Sheppey.

Carbon footprint and costs of a reliable water supply

Carbon and net zero

We recognise the water sector is a significant contributor to the UK's greenhouse gas emissions and we have an important role to play in achieving net zero targets.

We are committed to aligning our plans with the Government's 2050 net zero target, including an interim target of a 35% reduction in Scope 1 and Scope 2 emissions by 2030 (based on a baseline year of 2022–23). Scope 1 emissions are direct emissions from the sources we own or control and Scope 2 emissions are indirect emissions from the purchase and use of electricity, steam, heating and cooling.

When developing this plan, we considered the carbon impact of all the options.

Our plan includes options which drive down greenhouse gas emissions from our operations by reducing leakage and demand so we need to source, treat and pump less water.

The options with the highest carbon impact include the Hampshire Water Transfer and Water Recycling Project and the transfer from Thames Water. However, when assessed against alternatives, these compared favourably on carbon.

To mitigate the operational greenhouse gas emissions associated with the energy use of these and other options, we are embracing innovation and technology to become more efficient. We're also generating more renewable energy from solar and combined heat and power plants (CHP) on our sites.

Where we cannot reduce or remove the emissions for options in our plan, we will carry out nature-based solutions, such as planting trees and restoring wetlands and peatlands on our land. We are engaging with the regional wildlife trusts to find opportunities for carbon removal and storage for carbon insets, as well as creating wider environmental benefits.

We calculate this 50-year plan will create 918,932 tonnes of capital emissions and 2,852,473 operational emissions (based on an average of potential future scenarios).

Cost of our plan

This plan outlines the significant investment we need to make to secure reliable, high-quality water for homes and businesses for the future. This investment will also improve our environment, as well as increase our resilience to drought and the impacts of climate change.

Our plan has been developed as part of the wider South East regional plan through Water Resources South East, which is a best value plan. This is because it doesn't just consider the lowest cost options. It also considers which options offer increased resilience and wider benefits for our customers, the environment and wider society.

At the same time, it's important bills remain affordable for all our customers, so we have taken every opportunity to keep bills low. To maintain fairness, we will spread the cost of the new resources between our current customers and future customers, who will benefit for many years to come.

We engaged with many customers and interested parties on our best value plan to find the right balance between reducing demand and leakage, securing new, reliable supplies and affordability.

As a result, customer bills are set to increase by £53 each year on average between 2025 and 2030. The increases will be lower in the first few years and higher towards 2030.

Between 2030 and 2035, the average annual increase is projected to be £135. Between 2035 and 2040, it is projected to be £181.

WATER for LIFE®

You can read all our water resource planning documents at **southernwater.co.uk/about-us/our-plans/water-resources-management-plan** click the link or scan the code to view:

from Southern Water®

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