



# Revised Draft Water Resources Management Plan **Non-technical summary**

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2025 - 2075



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## 1. Introduction

Our revised draft Water Resources Management Plan (rdWRMP) sets out how we'll continue to supply high-quality drinking water to our customers between 2025 and 2075, while protecting the environment and providing wider benefits to our customers and society.

The plan has been shaped by to our extensive public consultation which ran from November 2022 to February 2023, during which we received more than 128 responses from customers and stakeholders. It has also been updated to reflect new government policy and regulatory requirements.

Water is essential for a thriving environment and society, which is why we've set ourselves ambitious targets to make sure our abstractions are sustainable in the long-term and customers' water supplies are protected as the population grows and the climate changes.

Our plan has been informed by the regional plan of Water Resources South East (WRSE). WRSE is an alliance of six water companies in the South East, which is already classed as an area in serious water stress.

To secure resilient and sustainable water supplies for future generations, WRSE has produced a regional plan which includes the investment and activity required by each of its member water companies, allowing us to align our plans to maximise the amount of water available for use as drinking water while leaving more in the environment.

The activities listed in our rdWRMP are a crucial part of the regional solution to collectively provide an additional 2.7 billion litres of water per day by 2075.

Our plan is demand-led, focusing on reducing leaks – from both customer-owned pipes and our network – and helping customers to reduce their water use and losses from poor plumbing losses in their homes and businesses. By 2050 we'll reduce leakage by 62% from 2019/20 levels, going further than the government target, which is for a 50% reduction.

This will increase our resilience to severe droughts, reducing the risk of emergency restrictions such as standpipes being needed, and will also enable us to leave more water in the environment by reducing how much water we take from sensitive sources.

This document sets out:

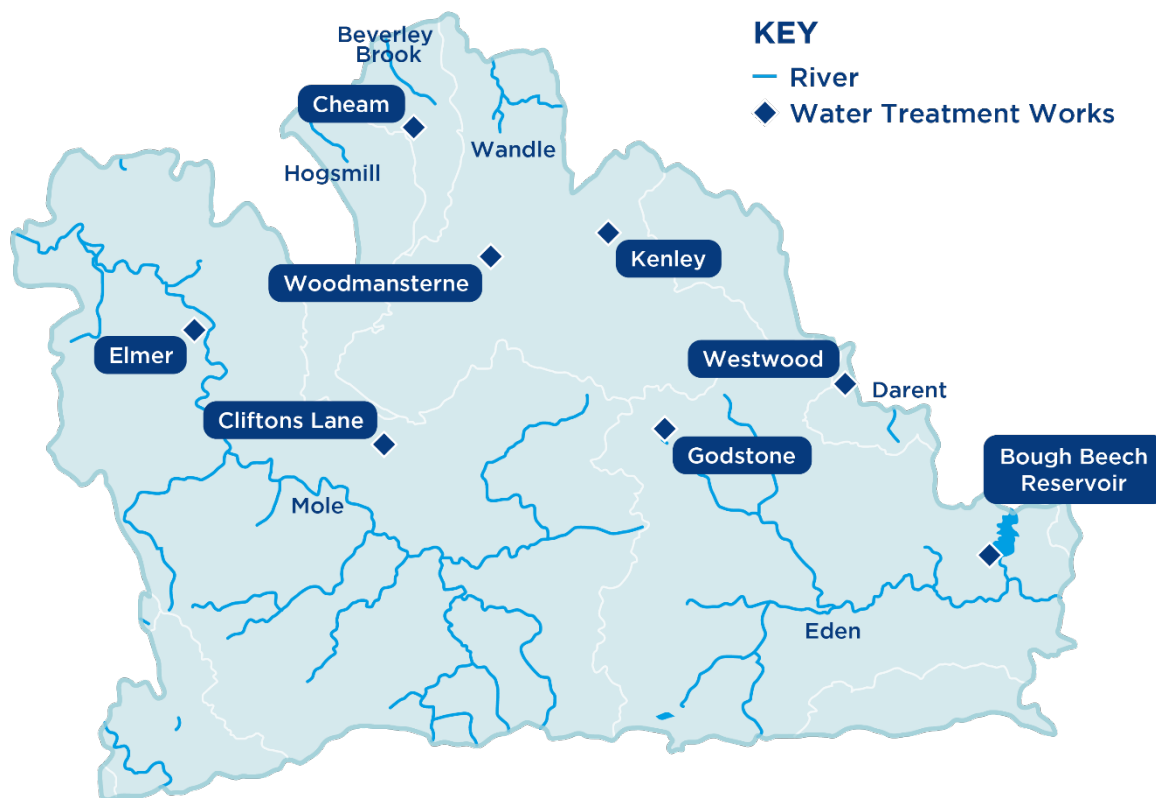
- the background and purpose of our Water Resources Management Plan (WRMP)
- our process so far to produce our revised draft plan
- the feedback we received during our consultation
- how we've responded to the feedback received from our customers and stakeholders
- the impact of new government and regulatory requirements on our plan
- our rdWRMP which has now been submitted to the Government for approval
- next steps ahead of this plan's implementation in 2025.

For full details of our revised plan, please visit <https://seswater.co.uk/about-us/publications/our-water-resources-management-plan>



## 2. About SES Water

*Figure 1. SES Water supply area.*



At SES Water, our purpose is to harness the potential of water to enhance nature and improve lives by placing customers and the environment at the heart of decision-making.

We supply 160 million litres of clean water every day to more than 750,000 people in parts of Surrey, Kent, West Sussex and south London. .

Our supply area covers 322 square miles, from Morden in the north to Gatwick Airport in the south and from Cobham in the west to Edenbridge in the east.

We operate across six river catchments - the Hogsmill, the Wandle, the Darent, the Eden, the Mole and Beverley Brook.

85 per cent of the water we supply comes from underground chalk and greensand sources. Some of these sources support flows in the Hogsmill, Wandle and Darent rivers – all of which are chalk (or chalk fed) streams.

The remaining 15 per cent is abstracted from the River Eden in Kent and stored in our only raw water reservoir at Bough Beech near Edenbridge.

This reservoir supplies customers in the east and south of our area and water can also be transferred to northern areas when needed.

We maintain more than 2,000 miles of water mains and have eight treatment works, 23 pumping stations and 31 operational service reservoirs and water towers.



### 3. Our Water Resources Management Plan

Every five years, water companies are required to set out how they will safeguard their customers’ water supplies for the next 50 years, while protecting the environment and providing wider societal benefits, in what is known as a Water Resources Management Plan (WRMP).

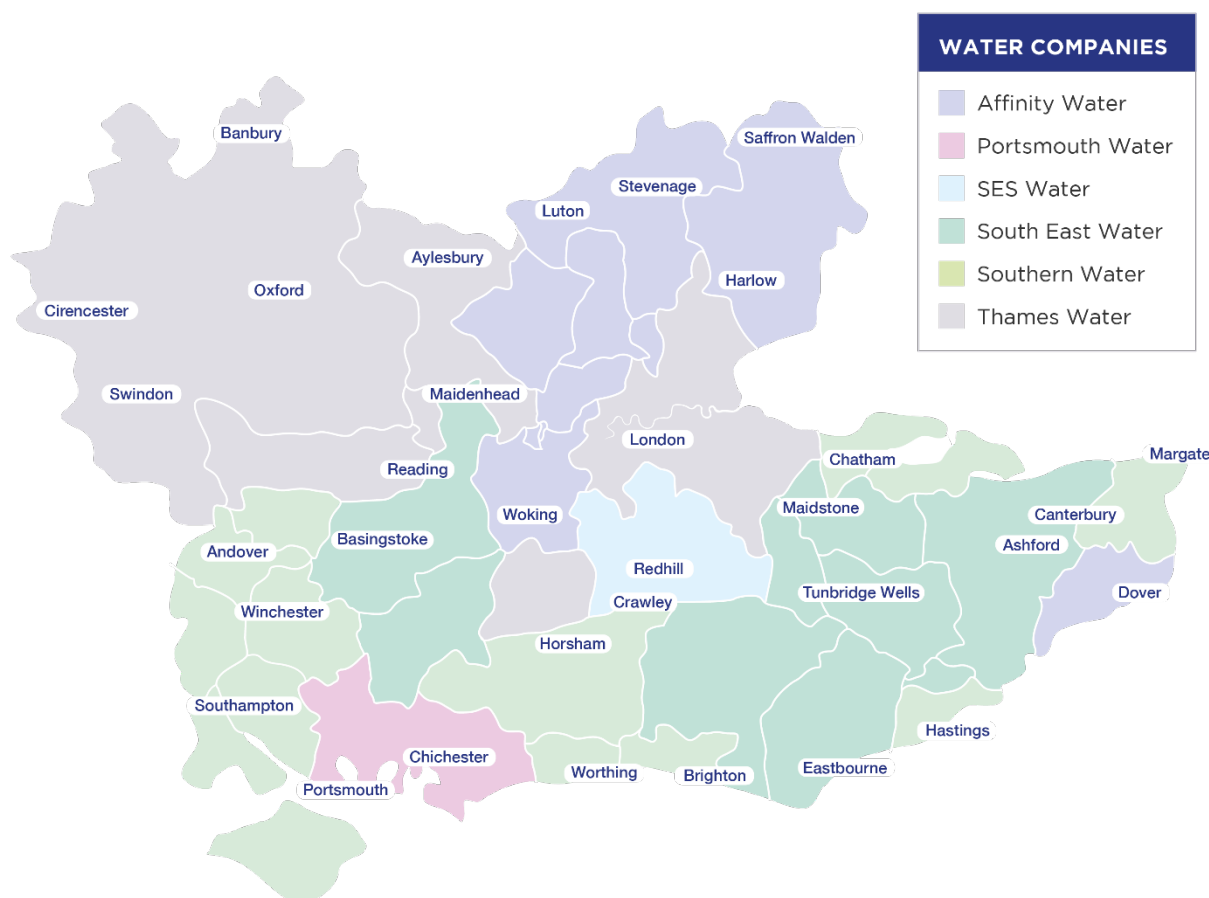
In November 2022, we launched a 14-week statutory consultation on our draft Water Resources Management Plan (dWRMP), which spans the period from 2025 to 2075.

The consultation closed on 20 February 2023, and we’ve now published our revised draft plan, which considers the feedback received from customers and stakeholders as well as changes required to meet new requirements set by government and regulators.

Our plan has been shaped by WRSE’s regional plan<sup>1</sup> for South East England.

This has been produced in conjunction with the five other water companies in the region: Affinity Water, Portsmouth Water, South East Water, Southern Water and Thames Water.

**Figure 2. WRSE member companies.**



<sup>1</sup> <https://www.wrse.org.uk/our-response>



This joined-up approach makes sure all the water companies are working in an integrated way and are making the best use of the water we have across the entire region.

It has identified several strategic water resource schemes that will provide water to customers across the region through an enhanced transfer network, making the South East’s water supplies more resilient for the years to come.

Our plan is based on a best value approach, which considers not only the amount of water which each option could provide and the financial cost but also environmental costs and benefits, and wider societal benefits too.

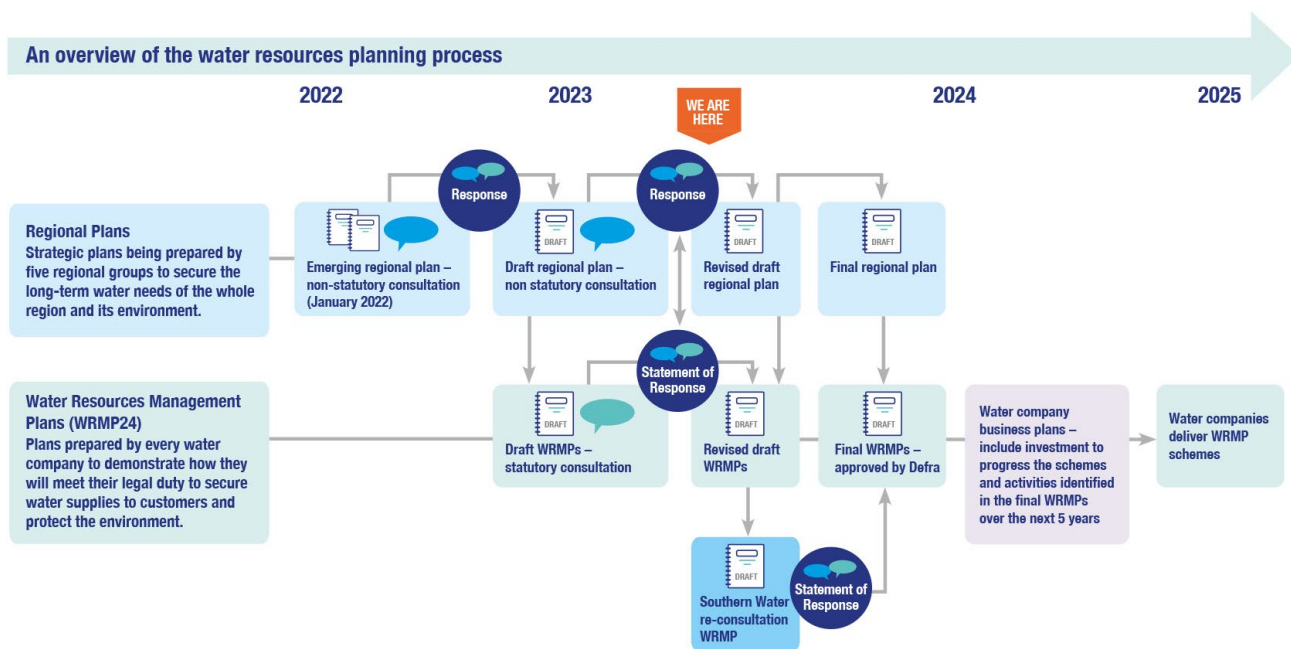
It plans for a range of future scenarios, so we can adapt to different levels of climate change, population growth and water use.

It also plans to leave more water in our rivers and streams by reducing abstraction from existing sources that require greater protection from the long-term impacts of climate change and where it will not be sustainable to continue to take water at the rate we do today.

This makes sure we will continue to provide wholesome drinking water to our current and future customers, enhance our environment and increase our resilience to severe droughts.

The diagram below illustrates the multi-stage planning process which we are going through to produce our plan, alongside WRSE, as they produce the regional plan for the South East.

**Figure 3. An overview of the water resources planning process**





### 3.1. Our adaptive plan

In planning our future water resources, we use what is known as adaptive planning to allow us to manage uncertainty around climate change, water use and population growth.

This approach allows us to look at several different scenarios and plan how much water we would need for each, while reviewing and updating the scenarios at key milestones to make sure they reflect the latest information we have.

As one of the six water companies in the WRSE group, we are planning for nine pathways set out by WRSE so our plans continue to align with the regional plan.

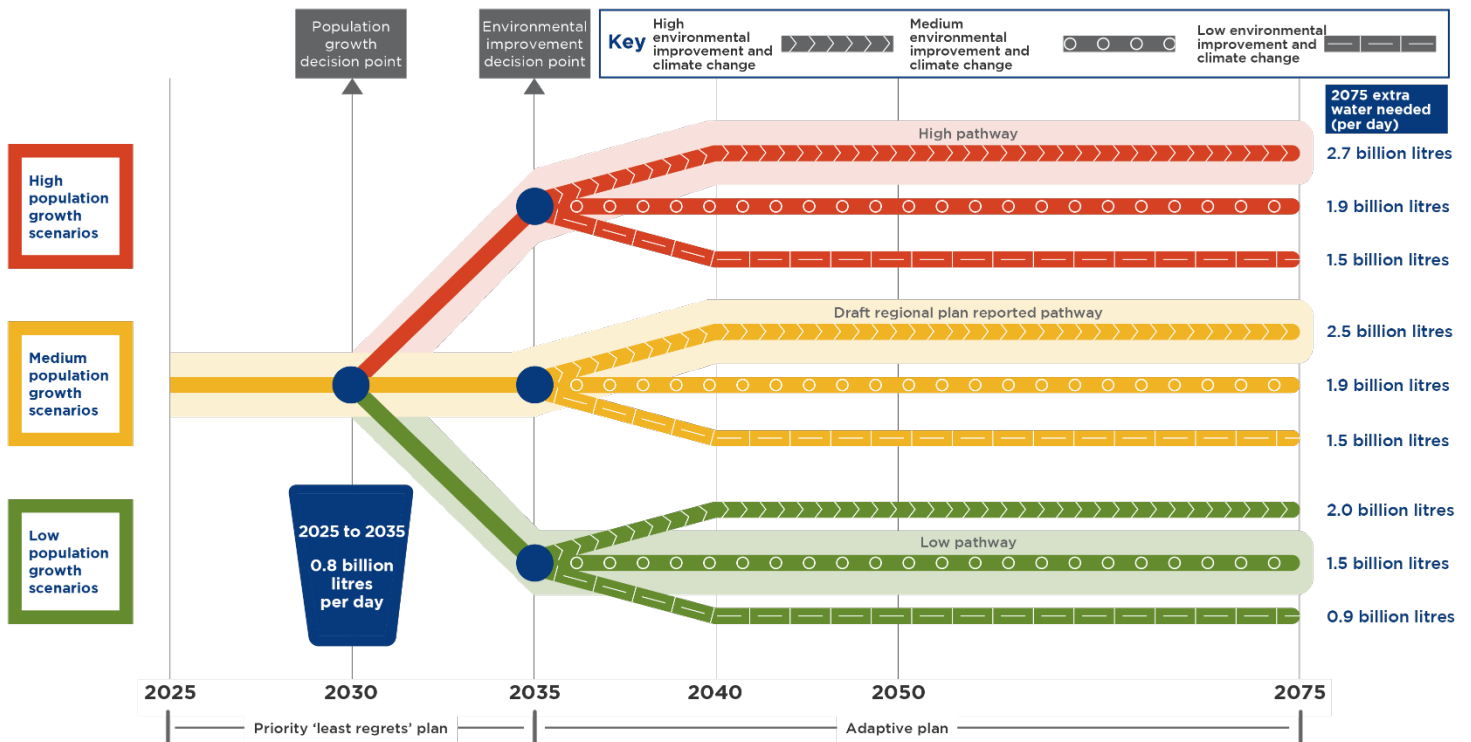
This allows us to be ready to respond earlier to changes driven by the three key uncertainties around what will happen with population growth, climate change and reductions in the amount of water we can take from the environment.

Our plan is based on the 'reported pathway' that aligns with the guidelines provided by regulators, but the adaptive approach enables us to move to an alternative pathway if needed.

The investment needed in the first 10 years of the plan is required under all future scenarios.

Figure 4 below shows the different pathways set out by Water Resources South East to account for different levels of population growth, climate change and environmental improvements.

Figure 4. Water Resources South East's adaptive planning process.





## 4. Preparing our plan

To provide a constant supply of water to our customers, while also protecting the environment, we have considered the following factors in our rdWRMP include:

- climate change - this is expected to bring more frequent extremes of dry weather, and heavy rainfall - both of which can reduce the amount of water available to us to collect, treat and supply
- population growth - the amount of people living in our supply area is expected to increase by around 17% by 2075 and the number of homes we will need to supply is projected to grow by up to 36% during this time
- energy - water treatment and distribution is an energy intensive process; while 100% of our energy comes from renewable resources, we need to plan how much energy we will need in future for each of the options in our plan
- protecting the environment - the amount of water we take from the environment is closely regulated by the Environment Agency so we may need to reduce the amount of water we take by up to 30 million litres per day in future to protect the environment, and we'll work closely with environmental regulators to help us do this.

It's due to these many challenges that we, like all water companies, plan far ahead into the future to make sure we can continue to provide a resilient and sustainable service.

### 4.1. Producing our revised WRMP

To produce our rdWRMP, we've worked with regulators, customers, stakeholders and other industry experts to understand their priorities, analyse the data available to us, produce a draft plan and then revise this following a public consultation.

A public consultation on our dWRMP took place for 14 weeks between 14 November 2022 and 20 February 2023.

We publicised the consultation via press releases to regional and trade media outlets, social media posts and direct emails to stakeholders, as well as a webinar with two neighbouring water companies and a short video outlining our plan.

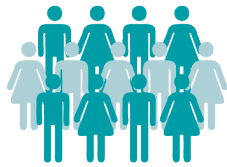
Figure 5 overleaf summarises the response to our public consultation.





Figure 5. Our public consultation.

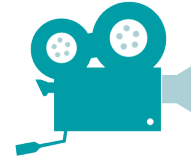
### About our consultation



We received **128** reponses



We received **94** questions via our online survey



Our film was watched **186** times



**220** document downloads



**130** people joined our joint webinar with South East Water and Southern Water



Our consultation webpage was visited **647** times

### Who responded



**3** Local government organisations



**5** Businesses or trade associations



**2** Community and campaign groups



**4** Environmental organisations



**1** Governing bodies/regulators



**1** Charity

As part of our Statement of Response, published in August 2023, we responded to all the feedback received during the consultation.

Many of these comments can be summarised into the following key themes:

- managing water demand: including metering, non-household and household water use, drought and leakage
- securing future water supplies: including our environmental improvement plans, water production, bulk supplies, sustainable abstraction and climate change impacts



- writing our plan: including our options appraisal, adaptive planning approach, supply-demand balance and costs and benefits
- climate and environment: including environmental impacts, natural capital, nature-based solutions, biodiversity net gain and environmental assessment methods
- engaging with customers and stakeholders: including ideas to enhance engagement, partnership working and bill impacts.

## 4.2. Customer feedback on the draft regional plan

WRSE carried out research with 1,700 household and business customers, which compared the draft regional plan to some alternative plans and also to get their feedback on potential future bill impacts to fund the regional plan.

Before any bill impact was considered, customers preferred a balanced regional plan which featured a mix of strategic resource schemes and demand management, such as addressing leakage and supporting customers to reduce their water use. Customers valued the extra resilience delivered by the draft regional plan.

Customers recognise the importance of demand management measures and see them as an integral part of the plan but not at any cost. Value for money is important and they expect their bills to contribute to increasing resilience.

Unsurprisingly, customers were sensitive to future bill impacts. When bills were lower customers preferred the least cost plan but as bills increased, their preference switched to the best value plan.

The regional best value plan, which WRSE has progressed with, offers the best capital, environmental and societal value while meeting the water supply deficit and government targets. It is this plan which our rdWRMP aligns with.

Our own research has shown our customers expect us to go further to reduce leakage than the 50% reduction by 2050. Our customers also recognise their role in reducing demand for water and our consultation feedback outlined support for a faster rollout of smart metering. However, our research indicates not all our customers are supportive of paying more for us to roll out smart meters more quickly.

Customers have also expressed a desire for us to do more to enhance the environment, in particular our local rivers and chalk streams.

## 5. Alignment with new government and regulatory requirements

The Government's Environmental Improvement Plan (EIP), published in January 2023, set out additional requirements and targets for water companies for household water use (also known as per capita consumption), non-household water use and leakage.



## 5.1. Household water use

The EIP includes a target of 110 litres per person, per day, by 2050, with several interim targets for water companies to meet at key milestone.

We have updated our rdWRMP accordingly, reducing our per capita consumption target from 115 to 110 litres per person, per day, during a 'dry' year rather than the 'normal' rainfall year scenario we had originally forecast for.

This change represents a much more challenging target than our draft plan, particularly as the socio-economic make up and climate of the south east region mean consumers tend to use more water currently than other regions.

Reaching our target will partly be met by investment in smart meters and supporting customers to reduce their water use, but crucially, it requires government intervention in setting new water-efficient policies such as water labelling, minimum standards for all water using products and water efficient new homes.

The revised target means these policies now need to be introduced sooner, or else we risk a deficit in regional supplies developing and increasing the risk of restrictions during drought.

If these policies are not introduced, additional water supply schemes will be required.

## 5.2. Leakage

While the Government's target of reducing water company leakage by 50% by 2050 remains, the EIP introduced interim targets which mean we will ramp up our efforts to tackle even the smallest leaks.

Research with our customers showed they want us to reduce leakage faster than we had indicated in our draft plan, so our revised draft plan sets out to exceed the overall target by achieving a 50% reduction in leakage by 2041 and a 62% reduction by 2050.

## 5.3. Non-household water use

Similarly to the introduction of interim leakage targets, the EIP introduced interim targets for business customers' water use, which we will meet in our revised draft plan.

## 6. Our revised draft Water Resources Management Plan (rdWRMP)

Our rdWRMP incorporates the key feedback received from customers and stakeholders during our public consultation, meets the requirements of the Government's EIP and aligns with the regional plan prepared by WRSE.



It focuses on reducing leakage and helping our customers to reduce their water use - helping them save money and allowing us to protect the environment, including the many rare chalk streams which are the source of around 85% of our drinking water.

By 2050, we anticipate that we will reduce average household consumption by over 40 litres of water per person, per day, by helping customers to reduce their water use and through the introduction of new government policy, set out in section 6.5.

## 6.1. Reducing leakage

We've consistently been one of the industry's leading performers for leakage and have stayed at or below the maximum allowed level of leakage every year since the target was first set more than 20 years ago, which is industry leading. That said, we know customers think leakage is unacceptable and we need to do more.

In 2022 we became the first UK water company to roll out smart technology across our entire pipe network.

This is enabling us to monitor what's happening with our water much more closely and helping us identify leaks and burst water mains quickly so repairs can be completed rapidly, reducing the amount of water lost through a typical leak by between 30 and 40 per cent.

From 2025 this work will continue, and benefit from further enhancements that are made to our smart network, including the use of Artificial Intelligence (AI) to help us find and fix more leaks than ever before.

We'll use our smart network alongside advanced pressure management techniques that reduce how much water is lost without impacting customers.

Fitting smart meters at all homes and businesses will play a vitally important role in detecting leaks on customers pipes, which currently make up a third of total leakage. We'll help our customers fix these leaks, reducing water wastage.

We're also using new technology to analyse the condition and performance of our pipes and will increase this over the next five years so we can more accurately predict which pipes we need to replace before they burst or leak. Working with our supply chain, we'll find innovative solutions to find new ways of tackling leaks and increasing the resilience of our network.

From 2030 and beyond, we will continue our targeted programme of replacing old or worn water mains, alongside investing in technology to better control the water pressure within our mains, reducing the likelihood of burst pipes and responding more quickly to any outages.

By 2041 we will halve our leakage, then reduce it further by a total of 62 per cent by 2050 (from 2019/20 levels) so less than 8 per cent of the water we produce is lost through leaks.

This goes above and beyond the Government target to halve leakage by 2050.



## 6.2. Household water use

Over the course of this plan, we anticipate we'll need to supply an additional 2,500 properties per year.

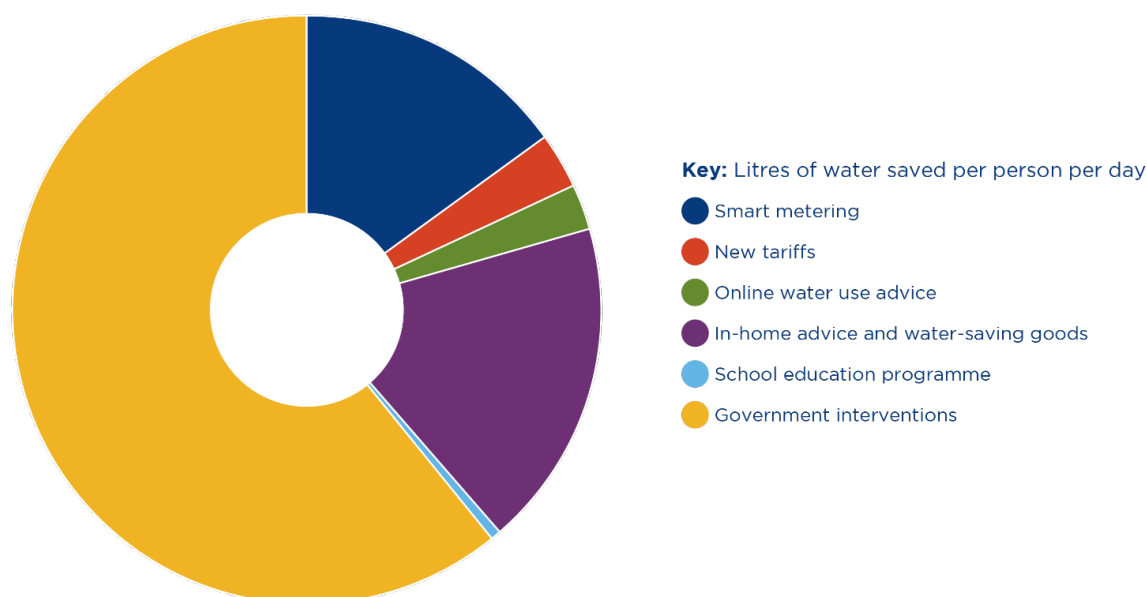
Currently, our 750,000 customers each use around 150 litres of water per person, per day, and we will need to reduce this to meet the EIP target so that by 2050, our customers use 110 litres per person per day.

We will also need to meet three interim targets along the way, so household customers' average daily use is:

- 136 litres by March 2027
- 128 litres by March 2032
- 119 litres by March 2038.

We will use a range of interventions to reduce consumption. The chart below shows how much each demand management initiative will contribute to this total, over the next 50 years.

**Figure 6. Water demand reductions by 2050**



## 6.3. Smart water meters

During the first seven years of the plan, we'll roll out smart water meters to all our household customers to provide them with more data on their water use and allow them to identify leaks within their pipework.

This will be supported by new digital technology to enable customers to understand and monitor their water use more closely.



We'll use the smart meter data to provide customers with tailored support and advice to help them reduce their water use and identify any plumbing problems which contribute to this.

Home visits will also be provided to higher users and those that may have financial difficulties and additional needs, to help those who need it most.

In addition, it will allow us to trial different tariffs to incentivise them to reduce their water consumption at peak times and allow us to further tailor our water efficiency advice and messaging based on our customers' real-time water use.

Education will remain a key part of our plan as we continue to provide water efficiency advice via household visits, school talks and our Flow Zone education centre at Bough Beech Reservoir, as well as free water-saving devices and tailored online advice through the Get Water Fit platform.

## 6.4. Non-household water use

Across our supply area, we serve around 14,000 non-household customers, with water use which varies greatly between different business types, although the number of business customers we serve, or the amount of water they each use, is not predicted to increase during the lifetime of this plan.

In addition to the existing target of reducing non-household water demand by 15% by 2050, our plan has been revised to make sure we can meet the new interim target of a 9% reduction by 2038.

We will provide all businesses with smart meters and work with water retailers, who bill businesses for their water use on our behalf, to continue to deliver targeted water efficiency advice, and to trial and ultimately introduce tailored or bespoke tariffs for different business types and levels of water use.

A bespoke project with Gatwick Airport, our biggest water user, is in the early stages but we are looking to work together to find innovative ways to help them monitor and maintain their water supplies, such as using our smart network technology and investigating rainwater harvesting and other techniques to reduce their water use, including the way they can use water runoff from their runway.

## 6.5. Working with Government

Our revised draft plan relies on the Government supporting water companies to reduce water demand in the long term, to enable us to meet the targets within the EIP and safeguard future water resources.

While the detail of potential government-led interventions is currently unconfirmed, WRSE has considered a range of different scenarios that may be implemented. This includes water labelling across all water using products, minimum standards for water use products and new building regulations for new homes and retrofits.

Each of these would have a varying impact on reducing household water use.



## 6.6. Transfers to neighbouring water companies

The WRSE regional plan has identified four new transfers to our neighbouring water companies, which are an important part of the regional solution.

From 2026 we will provide four million litres of water per day to Southern Water, increasing the current support we provide to them. This transfer is expected to cease in 2031, but we may need to provide a separate transfer of 10 million litres of water per day from 2034.

Transfers to South East Water are expected to be required from 2039 and 2049, to provide 15 million litres per day.

## 6.7. Maintaining water supplies during drought

The leakage and water use reductions identified in this plan will help us to maintain water supplies during drought and reduce the chance of customers' water supplies being severely restricted. By 2040, our water supplies will be more resilient to severe drought and other external events.

Our revised draft plan reduces the risk of emergency water use restrictions such as standpipes from being needed once in every 200 years to once in every 500 years on average, by 2040, in-line with government policy.

Our revised draft plan includes the use of temporary use bans and non-essential use bans to help reduce consumption during periods of drought, when typically, we see an increase in customer water use. We have reduced our reliance of drought permits that enable us to take more water from the environment outside our licence conditions and would only expect to use these in the event of a severe drought.

## 6.8. Protecting and enhancing our environment

Around 85% of the water we supply comes from groundwater, some of which supports rare chalk streams.

We know that in the future, taking water at our current rate may not be sustainable so over the next five years we will carry out investigations as part of the Water Industry National Environment Programme to identify where we may need to leave more water in the environment. The results of this will be used to inform the next regional plan and our WRMP.

We're also planning to progress a scheme to improve the management of water across the River Eden catchment. The River Eden is a critical source of water for us as it is used to refill Bough Beech Reservoir but the river is increasingly flashy - causing local flooding issues, affecting the water quality and our sustainable abstraction of water.

Working in partnership with our stakeholders in the catchment, including regulators, the agricultural sector and industry partners, we hope to make the local environment more resilient – 'slowing the flow' of water and working to improve its quality at source.



## 6.9. New supplies

In the future we may need to develop new supplies of water, which could include increasing abstraction from a groundwater source at Outwood Lane near Chipstead.

We may also need to increase the capacity of our Bough Beech Reservoir; but this is dependent on whether demand for water reduces in line with our expectations and if population grows at a faster rate than we are anticipating.

## 7. Next steps

This plan has been submitted to the Government for their approval, along with our Statement of Response to the feedback we received during the public consultation.

You can keep up to date with our progress in producing our WRMP, and read each document when it is published, via our website - <https://seswater.co.uk/about-us/publications/our-water-resources-management-plan>