

Water Resources Management Plan

November 2024

Non-technical
summary



Wessex Water
YTL GROUP



FOR YOU. FOR LIFE.

Water Resources Management Plan

non-technical summary

Contents

Introduction	2
Your water supply	3
What is a Water Resources Management Plan?	4
How we have developed the plan	5
Future needs	6
How we plan to manage supply and demand	7
Our preferred plan	8
Ways you can save water	9
How to stay up to date and get involved	9



Introduction

Safe and reliable water and wastewater services are essential for our day-to-day lives and wellbeing. There is a need to plan for the long-term, to adapt to a changing climate and reverse the degradation of the natural world, to protect the planet and the life it sustains.

To meet these challenges, we have developed an ambitious long-term plan to deliver great customer services and enhance the environment for nature and people.

To read more about our strategic direction, please visit:

[Strategic Direction Statement | Wessex Water](#)

Within the context of our long-term plan, we have a legal duty to produce a Water Resources Management Plan every five years to set out what we plan to do to ensure a secure supply of water for our customers and to protect and enhance the environment for at least the next 25 years.



Our ambition stretches beyond water, to performing a wider role in society as a company that: is trusted to take care of the natural world we all depend on; sets the benchmark on environmental performance; and plays our part in rising to pan-sector challenges of unprecedented scale and urgency – the climate and nature emergencies, the need for carbon neutrality, rising public expectations of the environment, higher living costs and long term resilience.

Your water supply

Wessex Water supplies 1.3 million customers in the south-west of England from a mixture of groundwater from aquifers (underground water-bearing rocks) and surface water reservoirs, where water from rivers can be stored for future use.

An average of 340 million litres of water is delivered each day, taken from around 80 sources.

The Wessex Water supply area takes water from two limestone aquifers known as the Chalk and the Great Oolite. In 2021, the region was classed as seriously water stressed by the Secretary of State and Environment Agency. The Chalk aquifer covers a wide area in the middle and south of our supply area which includes the towns of Dorchester, Poole, and Salisbury. The Great Oolite aquifer covers the north of our supply area including areas such as Bath and Chippenham. The surface reservoirs are in the west of the supply system and supply the areas near Yeovil, Taunton, Bridgwater, and Exmoor.

In 2018 Wessex Water completed a £230 million investment to develop a more integrated supply grid, which improved the pipe connections between sources and customers. This investment enabled us to reduce abstraction from the most environmentally sensitive sources and improve supply resilience for our customers.

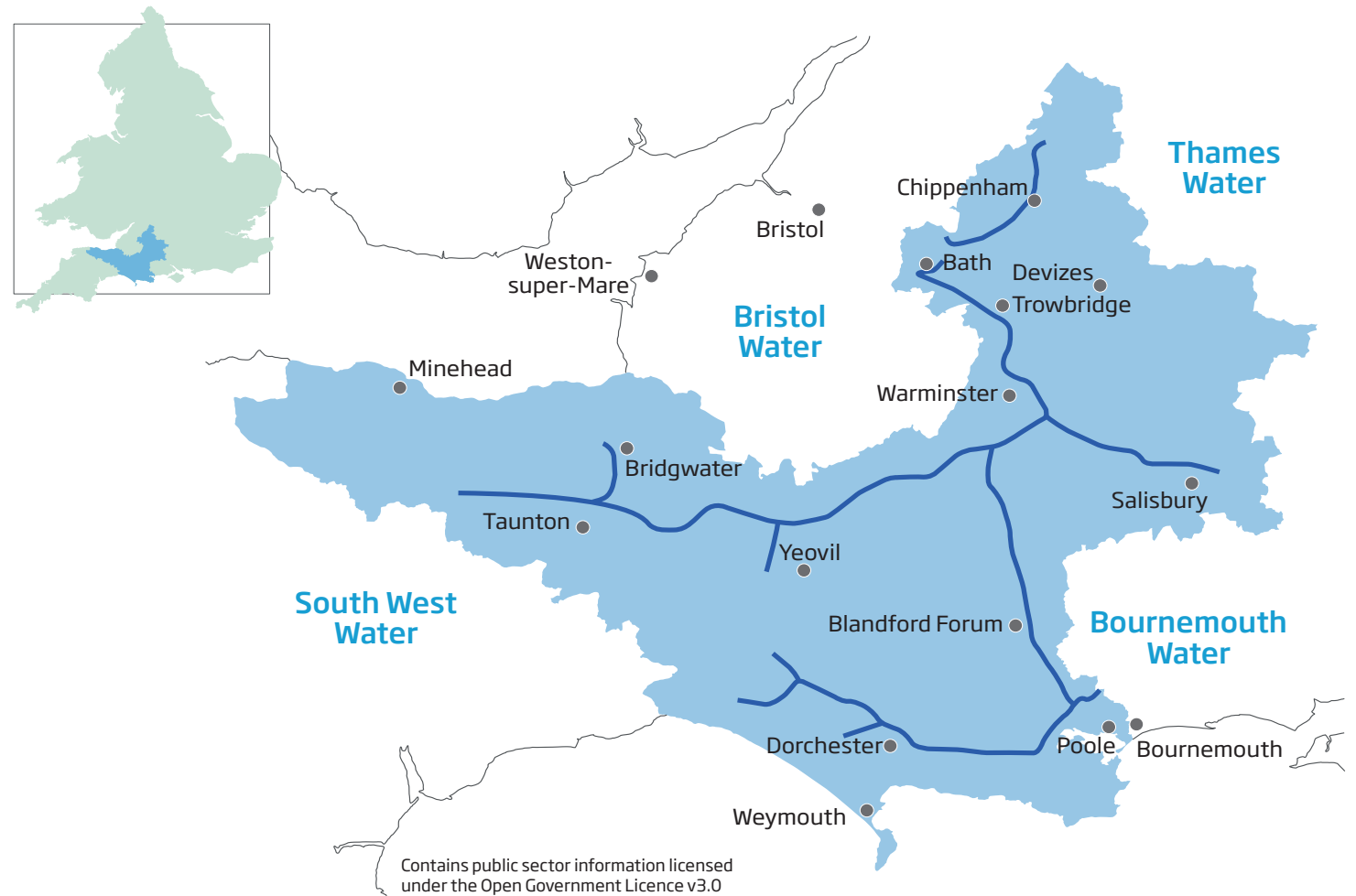


Figure 01 Wessex Water supply area with major population centres

What is a Water Resources Management Plan?

Each water company is required by law to develop and maintain a Water Resources Management Plan (WRMP). The plan is updated every five years and reviewed by our regulators, the Environment Agency, Ofwat, and Defra.

The plan shows how we will ensure a secure supply of water and protect the environment over at least a 25-year planning horizon.

Our last WRMP was published in 2019 and covers a 25-year planning period from 2020 to 2045. Our newest plan will cover a longer planning horizon from 2025 to 2080. This is a result of a number of step-changes in regulatory planning requirements since its publication.

We developed a new draft plan in 2022 and consulted on this plan with customers and stakeholders in early 2023. In summer 2023 we submitted a statement of response to Defra, which described how we accounted for each of the representations we received during the consultation. Defra wrote to us in December 2023 asking for further information to support the plan. Following revisions made to the plan in early 2024, we were given permission to publish this plan as a final plan.

The plan comprises a technical document containing details of the assessments, calculations and research that are the building blocks of the plan and this summary document which provides an overview of all the essential elements. The technical report can be found here: www.wessexwater.co.uk/environment/water-resources/management-plan

The WRMP focuses on the actions that can be taken across the planning period to ensure our forecasted supply of water will meet our forecasted demand.



*An average of
340 million litres of
water is delivered each
day, taken from around
80 sources.*

How we have developed the plan

We calculate whether our water supplies will be in surplus or deficit by comparing the forecasted amount of water available for use with the forecasted demand in each year of the planning period.

Forecasts were prepared using technical analysis methods and considered a range of factors, from population growth and customer water use behaviours to the impacts of climate change and efforts required to further protect and improve the environment.

As the demand on water supplies can significantly increase in years where rainfall is low, and temperatures are high, we need to plan for our water supplies be able to meet demand in these peak periods. To ensure any uncertainty in our forecasts has been accounted for, we also include an allowance called headroom. This is an additional amount of water available for use that acts as a safety buffer.

If the system is forecasted to be in surplus, then no further action is required.

Nonetheless we can choose to take forward new schemes to meet wider objectives related to government policy, customer preferences and/or environmental benefits. If the system is forecasted to be in deficit, then we must show how we plan to use new schemes to restore the balance between supply and demand. In both circumstances, new schemes are selected following rigorous screening and analysis using scenario models which inform us of the best suited options to solve specific issues.

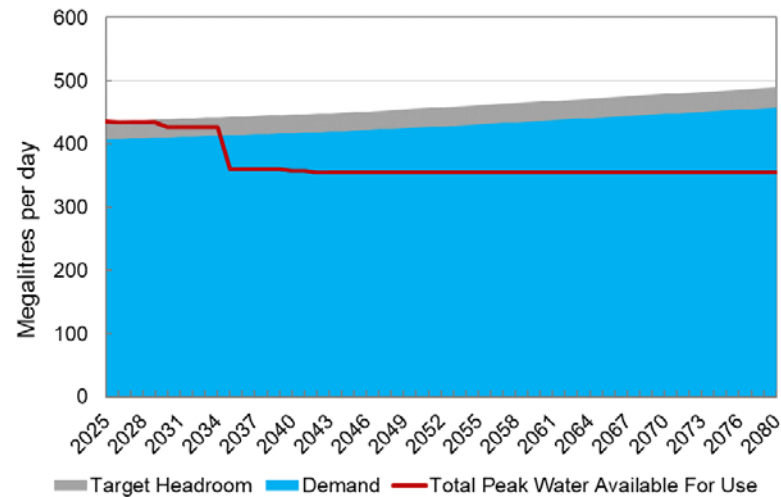
Our previous Water Resources Management Plan in 2019 forecasts a surplus in supplies over demand up to 2045. As identified in the plan, we are currently delivering a 15% leakage reduction, as well as additional household metering and water efficiency activities, which continue to contribute to securing water supplies.

For the development of WRMP24, there are a number of step-changes in regulatory planning requirements:

Requirement	Description
Drought resilience	We must improve resilience to even worst historic droughts, by moving from the current 1-in-200 drought events to 1-in-500 drought resilience by 2039-2050.
Licence reductions	We must reduce abstraction where necessary from environmentally sensitive sources, particularly in our Chalk catchments.
Decision-making	Regulators require us to move away from least-cost planning to best-value planning. This considers least-cost solutions alongside other outcomes, including carbon emissions, natural capital, biodiversity net gain, and inter-generational equity.
Overall demand	Support meeting the plan for water target to reduce the use of public water supply in England per head of population by 20% by 2038. This is part of the trajectory to achieve:
Leakage	We should contribute to meet the industry's commitment to reduce leakage by 50% by 2050.
Household demand	We should contribute to a national ambition on average per capita consumption of 110 litres/person/day by 2050.

Future needs

Our central baseline scenario looks at what would happen in the future if we did nothing apart from hold leakage steady at current levels, do no more meter installations, but account for uncertainties such as climate change. With no interventions then in a dry year with sustained peak demand (known as 'critical period'), we expect our supply demand balance to be approximately in balance in 2025, with a small deficit growing to 12 Megalitres per day by 2030. In 2035/36 there is a step increase in deficit as available water to abstract reduces to protect the environment. This pattern is outlined in the figure opposite:



The larger deficit of 82ML/d is mainly driven by the need to significantly reduce what we abstract from the environment, particularly in chalk and salmon rivers, in the short term from 2035. There is also a slight reduction in available supplies in 2040 due to the new requirement to plan for more extreme droughts. In the longer term, climate change impacts and a gradual increase in demand, because of ongoing population growth, increases the supply-demand balance deficit to approximately 100ML/d in 2050 and 135ML/d in 2080.

Alongside this Water Resources Management Plan, we also develop and maintain a Drought Plan. This plan sets out our operational response to periods of dry weather and, since it identifies water resource and demand management investments, it is closely aligned with our WRMP.

The Drought Plan focuses on the actions that can be taken in the short-term to deal with drought, if one were to occur in the coming few years. It acts as an operational manual to refer to on an ongoing basis leading into, during and after a drought has ended. Actions included in the drought plan to reduce demand and increase available supplies will meet the small short-term deficit in the supply-demand balance. Further information on this plan can be found here: [Drought plan | Wessex Water](#)

Our contributions towards reducing demand by 2050, mainly through metering and water efficiency combined with further leakage reduction, will help towards reducing our forecast deficit, but new supplies of water will also be required.



Our plan will have an impact on everyone in our supply region

How we plan to manage supply and demand

We have developed and screened a long list of options to both increase supply and to reduce demand. The screening process consisted of four key stages which moved from a high level of assessing criteria such as feasibility from a technical and environmental point of view, to carrying out in depth environmental and costing assessments. Options were identified at varying scales, from schemes that would assist localised areas of water stress, through to Strategic Resource Options in conjunction with our neighbouring companies within the West Country Water Resources Group. We have also liaised with other water companies at a national scale to recognise any opportunities which would be mutually beneficial to many regions.

As our plan will have an impact on everyone in our supply region, we have consulted with a wide range of stakeholders, our regulators and the public during the planning process.

We prepared a range of risk scenarios to use in a model to understand which of our options would be most suited to solve specific issues. Not only did this assist in the selection of the best-value new schemes, but also tested the robustness of our plan in extreme examples of drought, population growth, increased household demand and climate change impacts.

To address our deficit, we have considered 75 feasible options, made up of both demand side options and supply side options. Given the scale of need, water re-use schemes and new reservoirs are among the supply options that have been considered to protect environmentally sensitive chalk river catchments and provide resilience to extreme droughts under climate change. On the demand side, options include various types of metering schemes, further leakage reduction, water efficiency and rainwater harvesting.



Our preferred plan

We have developed a number of scenarios around least cost and policy expectation pathways, and some alternative adaptive pathways at different points in the planning period. These plans have been tested under different future growth and demand scenarios to address the future predicted supply deficits. Optimum combinations of supply and demand options to meet forecasted deficits have been selected for each plan using a bespoke decision-making tool.

Our preferred plan provides best value to our customers and ensures continued protection and enhancement of the environment. Although our forecasts do not predict a step change in the supply-demand balance deficit until 2035 under our central planning scenario, in order to ensure supply resilience in 2035 and beyond it is necessary to begin implementing enhanced demand reduction strategies and supply scheme investigations starting in 2025. This will improve our supply resilience in droughts, reducing the risk of supply interruptions or restrictions imposed on customers, and will help to ensure river flows and the wider environment are protected, most notably in the Hampshire Avon catchment.

Key features of our selected plan are:

- We are committing to continuing to protect chalk streams, as part of the Environment Agency's Environmental Destination programmes, by substantially reducing further our abstraction licences over the next 30 years. Licence losses are expected to be implemented primarily in 2035. We will continue to assess the impact of our groundwater abstractions on river/stream flows and the potential for local solutions under our next Water Industry National Environment Programme (WINEP) starting in 2025.
- Reducing demand in the short-term will put us on a trajectory to not only reduce abstraction from sensitive environments, but our plan will also meet the government's long-term targets to reduce overall demand per capita by 20% by 2038, reduce leakage by 50% by 2050, and reduce household demand to 110 litres per person per day by 2050.

To achieve these abstraction reductions to protect the environment, and continue to provide a drought resilient service to customers, we will:

- Roll out smart meters to 95% of customers in our region by 2035, initially focusing in the Hampshire Avon catchment where the greatest environmental benefits will be delivered. For the majority of customers, smart metering will be an upgrade of their existing basic meter. Customers that are currently unmeasured will have a smart meter installed followed by tailored and timely engagement to encourage them to make the switch to metered bills.
- Enhance our household and non-household water efficiency programmes underpinned by data and insight delivered by the smart metering rollout. Building on the successes of our current programmes, we will engage with over 12,000 households and over 160 non-households a year from 2025-30. Our plans for engagement with non-households includes collaboration with retailers.
- Promote the anticipated government water efficient labelling of appliances.
- Continue to reduce leakage levels from 2025 to meet the regulatory target of 50% reduction by 2050.
- Develop in 2025 a stream support option for two upper stour headwater catchments.
- By 2025, take forward several supply side schemes through design and development to be ready for potential delivery to meet licence reductions in 2035, depending on the outcome of future need and the needs of other users in the Hampshire Avon catchment.
- Given the scale of deficit in the long term, continue to investigate new regional strategic resource options such as effluent re-use and/or a new reservoir in the Mendips, with South West Water as our main partner on the West Country Resources Group.



We developed four different plan scenarios around least cost and policy expectation pathways

Ways you can save water

In the garden:

- Sprinklers and hosepipes can use 520 litres in an hour, which is more than an average family of four would use in a day - use a watering can rather than a hosepipe to direct water to plant roots and mulch your soil to retain moisture in pots and borders.
- Cut your grass on a higher setting to give it more resilience to dry weather and let your lawn go brown, it'll soon recover when the rain showers return.
- Reuse water from paddling pools, cooking or when your kitchen tap is running to hot to water plants.

Within your home:

- Fix any leaking toilets and taps. A leaking toilet can be hard to notice but over 200 litres of water a day can be lost dribbling into the pan
- A ten-minute shower can use 120 litres of water, reduce it down to 4 minutes to save 72 litres each time and reduce your energy bill too
- A washing machine uses around 50 litres per wash, only put it on when you have a full load and consider reducing the loads you do each week

For more information and ways you can get involved with water saving at home please visit: [Water saving tips | Wessex Water](#)

How to stay up to date and get involved

You can monitor our current water resources and drought situation here: [Water resources | Wessex Water](#)

Follow us on social media to stay up to date with our campaigns and other activities across our region... and for more information delivered straight to your inbox sign up to our community newsletter here: www.wessexwater.co.uk/community/sign-up





Wessex Water
YTL GROUP

FOR YOU. FOR LIFE.