



Water
Resources
West

Draft Regional Plan

At a glance

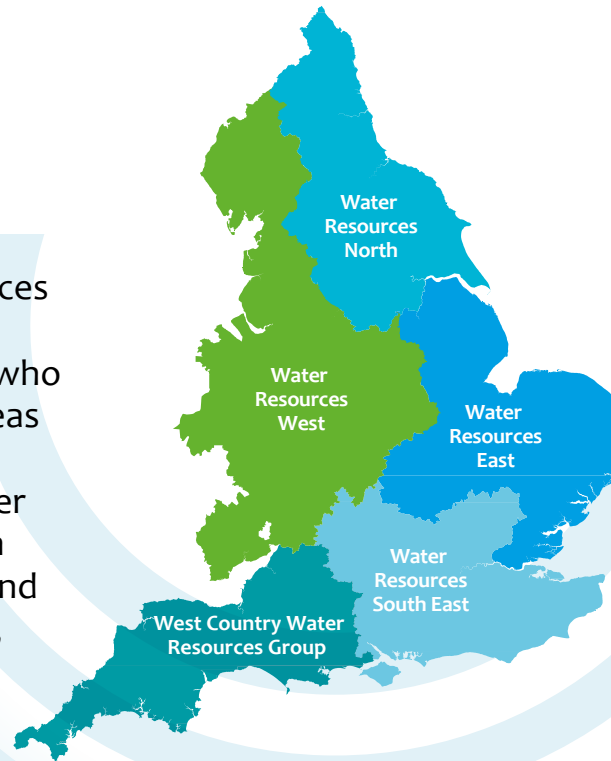
Tomorrow's water.
Today's challenge.



Who are we and what is our aim?



Water Resources West is a regional water resources group covering a large part of England and some parts of Wales. It includes five water companies who supply water to 18 million people – from rural areas to cities like Liverpool, Manchester, Birmingham and Cardiff. Our group includes five regional water companies (United Utilities, Welsh Water, Hafren Dyfrdwy, Severn Trent and South Staffs Water) and members from other sectors, such as navigation, power generation, agriculture and industry.



We all use water every day at home and at work: to wash, drink and make everyday products. Water also supports nature and it is essential in growing food and generating electricity.

The water we use comes from rivers, lakes, reservoirs and water found underground. These sources of water are topped up by rain. But water is not endless. Our climate is changing, bringing drier summers with less rain. This means that rivers will have less water flowing through them and reservoirs could empty faster. Population is also growing and this means we need more water to meet everyone's needs.

As a group, we want to make sure there will be plenty of water available for nature and people. This is why we all work together to find solutions to the problems we face. These solutions need to be flexible and sustainable, so they can work even if the future doesn't turn out exactly as we expect.

Our goal is to create a sustainable long-term plan for water resources. This plan will help future-proof our water supply, making sure we will have enough water in the future. Our plan will protect the natural environment while reflecting the needs of our region.

Water abstraction is the process of taking water from a natural source (i.e. rivers, lakes or water from under the ground) for various uses, from drinking to watering crops and industrial use

Quick facts about Water Resources West

We rely on several shared major rivers such as the Severn, Dee, Trent and Wye to supply



18 million people

and many businesses across a variety of industries



We rely on:

- 58 river abstractions**
- 216 groundwater abstractions**
- 281 reservoirs**

Clywedog and the Derwent Valley Reservoirs play an important role in providing public water supplies to the Midlands. Vyrnwy, the Pennine reservoirs and the large reservoirs in the Lake District supply the North West.



What is a regional water resources plan?

Our regional plan shows the actions we will take to balance our water supplies over the next 60 years (2025-2085). We know there will be less water available in the future, due to climate change. We have to make sure that there is enough water left in our rivers to keep them healthy. We must also reduce carbon emissions to slow down climate change. Our plan supports the water industry's goal to reach net zero carbon emissions by 2030.

Water companies and others can take water from rivers, lakes and groundwaters, according to limits included in their abstraction licences. The Environment Agency or Natural Resources Wales grants abstraction licences and reviews them from time to time. This makes sure abstraction of water remains sustainable as time goes by. Abstractions that might cause damage to water bodies are reduced.

Climate change puts the sources we rely on under more pressure. So, we must reduce the amount of water we abstract to protect the ecosystems in rivers and lakes from the damaging effects of climate change. We also need to make sure we do not damage any sites with special environmental protection. Such sites are important as they sustain a wide range of rare wildlife and habitats.

We listened to feedback from stakeholders and regulators of the water sector. We used this to define our ambitions (what we want to do through this plan) and the outcomes of the plan (what the result will be). The diagram to the right explains this.

Net environmental gain means that after developments are built, the environment must be in a better state compared to how it was before the development started.

Environmental resilience refers to the capacity of the natural environment to respond to disturbance by resisting damage and recovering quickly.

Water Resources West ambitions and outcomes

Sustainable water supplies and wellbeing

- Deliver social and wellbeing benefit through improvements to the environment
- Strive to deliver against net zero carbon emissions target for England and Wales

Ambitious water demand management

- Reduce leakage by 50% (from actual 2017-2018 levels) by 2050
- Adopt a planning assumption of achieving an average water usage of 110 litres per person, per day, by 2050 (*Applicable to England only*)
- Adopt a planning assumption of reducing non-household demand

An enhanced water environment, with abundant native species and functioning habitats

- Deliver net environmental gain (England) / biodiversity and resilience of ecosystems duty (Wales)
- Deliver environmental resilience

Cost-effective plans

- Identify affordable solutions through innovation and cooperation with others

Resilience to extreme droughts in a changing climate

- Deliver resilience to extreme droughts, so that restrictions such as rota cuts and standpipes are needed no more than once every 500 years (0.2% annual probability of occurrence)

Support for economic growth across multiple sectors

- Provide practical support to non-public water supply sectors
- Identify joint solutions to provide mutual benefits

Our customer and stakeholders' views

To create our plan, we gathered views from over 60,000 customers and hundreds of stakeholders. We wanted to understand what is important to them and what they want to see in our plan. We also consulted with other sectors, to ensure their needs and views are represented in our plan.



Overall, 95 pieces of research were used to paint a regional picture of customer views. We checked for common themes and for areas where customers had different views.

We also engaged with a variety of stakeholders such as local authorities, regulators, representatives of other sectors, charities, businesses and other interest groups. We wanted to shape the draft plan using stakeholder input and customers' preferences.

Our plan provides a platform for other sectors (i.e. power, farming, etc.) to express the issues they will face in the future and the support they need to secure the water supplies they need to help their sectors thrive.



Affordability

- Customers are worried about the cost-of-living crisis
- Stakeholders also think affordability is important



Environmental destination

- Environmental concerns are important to customers
- Most stakeholders support more environmental protection



Demand management

Leakage

- Customers think leakage is wasteful
- Leakage management is preferred before water efficiency

Water efficiency

- Customers see the need for water efficiency. They want help to achieve savings
- Stakeholders support our target to reduce personal water consumption

Metering

- Customers prefer having water meters over other options



Hosepipe bans and drought risks

- Many customers are comfortable with the current levels of service
- Customers think water resources are plentiful and climate change is a long way away
- Stakeholders support improvements to drought resilience



Investment in water resources options

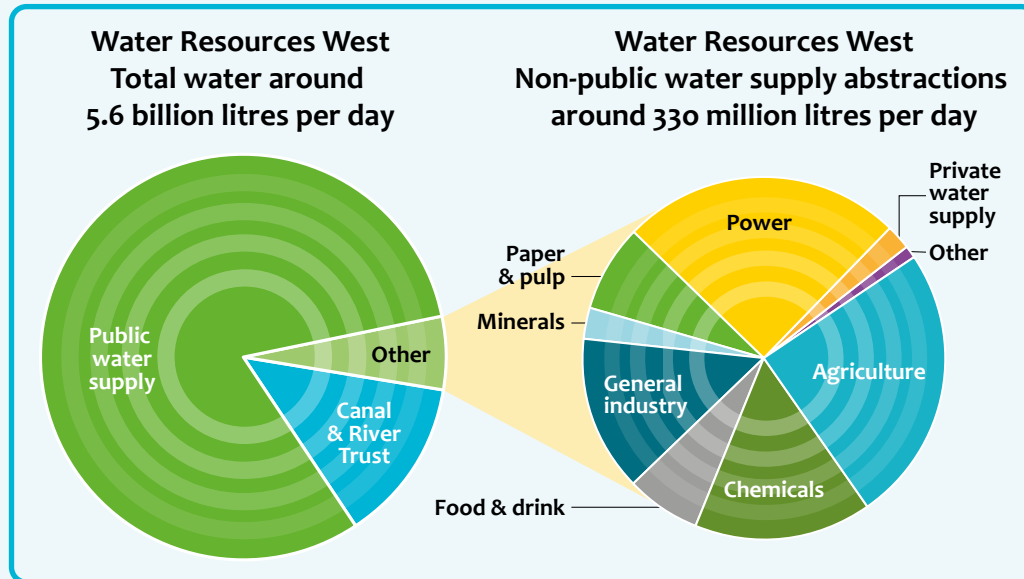
- Customers and stakeholders prefer reducing demand first
- Customers think water transfers are sensible
- Stakeholders like options that make the most of existing assets

Water needs

Our current water needs

People and businesses need water supplies around the clock to enable daily activities and the production of power, food and other goods. To cater for this, we currently need 5.6 billion litres of water each day. About 80% of this is needed to supply customers of the five water companies.

All other sectors, including industry, power generation, and farming, need around 330 million litres each day.



Most of the water needs for agriculture arise during the growing season, whereas other sectors such as power need water all year round

Our future water needs

By the end of 2050, we need to find another 1.1 billion litres each day to satisfy customers' needs. Industry, power generation, farming and other sectors will also need more water: about 100 million litres extra each day.

Just over half of the water we need by 2050 can be secured by reducing the amount of water we all use at home and that which is lost to leaks. By 2050, we have ambitious plans to reduce leakage from underground pipes by 50%, when compared to 2017 leakage levels. We will do this by investing heavily in preventing leaks, finding them and repairing them more quickly.

We also want to reduce consumption of water in households. Today the average person uses about 140 litres at home, each day. By 2050, we plan to reduce personal water consumption to 110 litres per day by implementing a range of water efficiency actions. Existing plans, including actions we take during droughts, help meet another large portion of this need. The rest will need to come from new water sources or water transfers. In total we need to find over 200 million litres each day from such solutions.

One million litres
is the volume of approximately
5 terraced houses or
half a football pitch filled to
the depth of one foot



One billion litres
is approximately the volume of
all the houses in a small town

The need to protect our water environment

Our water environment faces many issues, from pollution to over-abstraction and the destruction of habitats. This means that we are still very far from being able to restore over 75% of rivers and lakes to their natural state. Improving the water environment in our region is one of the largest areas of our work. We want to see our rivers and lakes thrive and we want to create natural spaces that people can enjoy.

Through our regional plan, we have a chance to solve some issues that centuries of intense human activity have created. To make sure we invest where solutions are most needed, we looked at the areas where there is most pressure on the water environment. We then focussed on talking to stakeholders in these areas. Local authorities, local regulatory teams, charities and local interest groups have great 'know-how' about issues affecting these areas and potential solutions. This helped us create a list of options designed to help the water environment.

We have identified 36 options we want to implement to improve the environment. Most of these options will support water resources by improving water quality and improving or creating new habitats. This is in addition to our actions to reduce the quantity of water we abstract from vulnerable rivers, lakes and groundwaters.

Some of these solutions may take a long time to be brought to life, but some could be done faster. This means that we have a long-term journey ahead of our environmental destination.

Water Resources West vision for the environmental destination:

“Our vision is for an enhanced water environment, with abundant native species and functioning habitats, supporting wellbeing and the regional economy. To deliver this vision, Water Resources West will champion the necessary actions for our water resources and facilitate multi sector working to achieve them. Our plan describes actions by our members, stakeholders and regulators to deliver net gain, deliver environmental resilience and avoid deterioration.”

Other water-using sectors

Bringing the water environment back to health needs consistent actions from all who abstract water. Only by working together can we prevent more deterioration and secure the water resources we need for the future.

Water companies are not the only ones who abstract water from the environment. Farmers need water for livestock and growing crops. The power sector needs water to generate electricity and many other industries (e.g. making paper or ceramics) rely on this precious resource. None of these sectors has ever worked with water companies to plan future water supplies before. Regional planning is changing that and brings all of them together to find solutions for the future.

Water companies have access to abstract water from many rivers, lakes and groundwaters over large areas. On the other hand, other sectors rely on a single source of water to support a whole farm, factory or power station. All sectors need to take less water from the environment, to help us reach our environmental destination.

Members' voice, National Farmers Union

“Farmers and growers as food producers are an essential user of water and need an integrated water management strategy that gives them a fair share of regional water resources and access to secure supplies of water for the irrigation of crops and livestock watering, on a long-term basis. This is critical to support their economic growth and investment, and recognition as food producers who are making significant contributions to food security and keeping the nation fed.”



Water is abstracted from the environment for many different reasons and by many different companies.



Livestock

Canals

Crops

Power

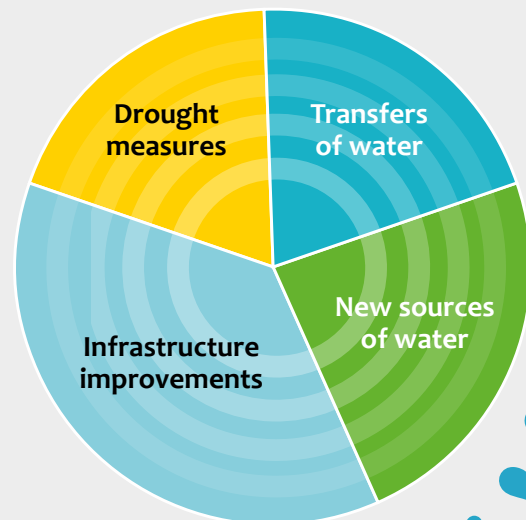
Industry

The options we explored

We have worked to identify many options for using less water or sourcing more water in the future. We assessed the benefits of these options, as well any potential draw-backs. When choosing which options to include in our plan we took into account these findings as well as the preferences of our stakeholders and customers.

We looked at 300 options that could help us:

- Take more water from rivers, lakes or groundwaters
- Make the best use of our existing systems
- Transfer water from areas with more water available to areas with less water



Options to improve the environment are discussed on page 6 and not shown here.

We also explored many options to help us reduce demand for water to 110 litres per person per day and reduce leakage by 50%:

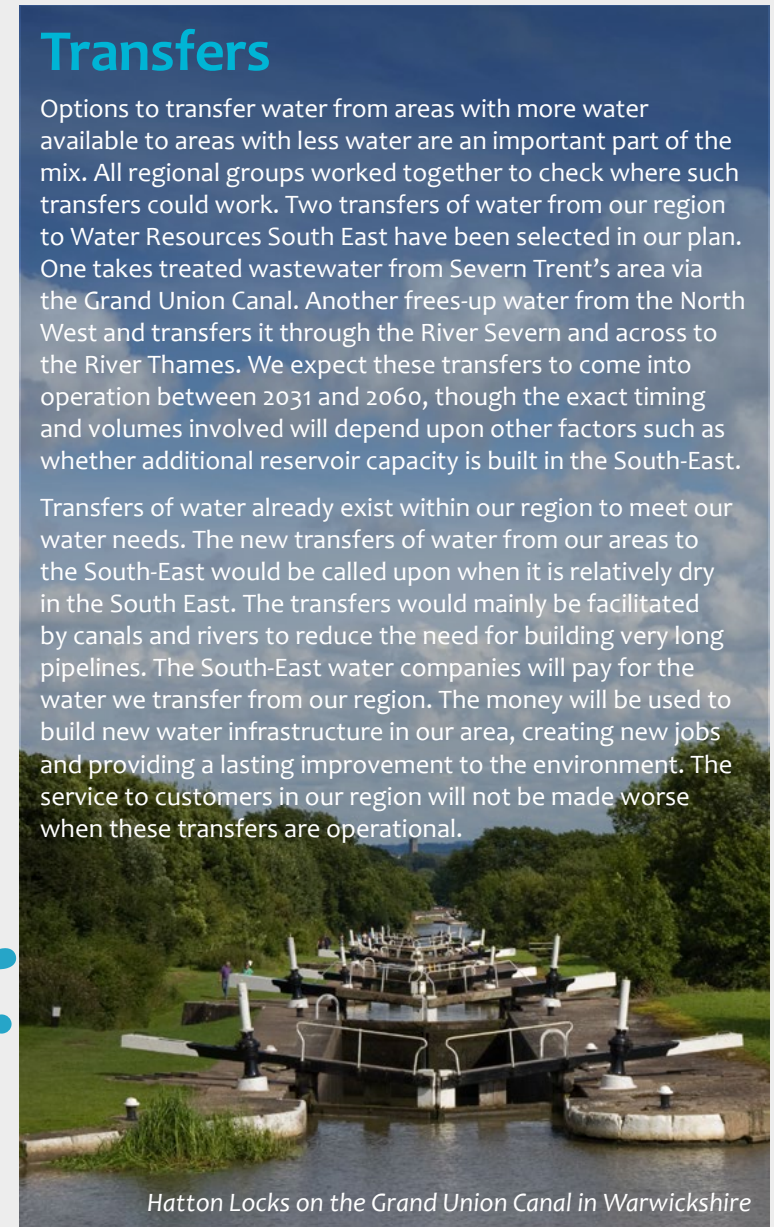
- Visiting homes and other buildings to check for ways to save water and reduce bills
- Installing smart meters to help customers use less water
- Finding more leaks, sending more crews out to repair them more quickly
- Managing pressure within the system in real time, to prevent pipes bursting
- Replacing water pipes that are old or damaged to prevent leaks
- Fitting water efficiency devices in households
- Encourage people to save more water by raising awareness
- Providing customers with water butts to collect rainwater for outdoor use

We also rely on the introduction of 'water labelling' by the UK Government to help customers decrease their water use. Under this scheme, household items such as dishwashers, washing machines, taps etc would have a label that would indicate the level of water consumption in litres. Just like the energy labels on appliances, an appliance with a water label indicating 'A' would be more efficient than one labelled as 'G'. The water efficiency label will help customers buy products that use less water.

Transfers

Options to transfer water from areas with more water available to areas with less water are an important part of the mix. All regional groups worked together to check where such transfers could work. Two transfers of water from our region to Water Resources South East have been selected in our plan. One takes treated wastewater from Severn Trent's area via the Grand Union Canal. Another frees-up water from the North West and transfers it through the River Severn and across to the River Thames. We expect these transfers to come into operation between 2031 and 2060, though the exact timing and volumes involved will depend upon other factors such as whether additional reservoir capacity is built in the South-East.

Transfers of water already exist within our region to meet our water needs. The new transfers of water from our areas to the South-East would be called upon when it is relatively dry in the South East. The transfers would mainly be facilitated by canals and rivers to reduce the need for building very long pipelines. The South-East water companies will pay for the water we transfer from our region. The money will be used to build new water infrastructure in our area, creating new jobs and providing a lasting improvement to the environment. The service to customers in our region will not be made worse when these transfers are operational.



Hatton Locks on the Grand Union Canal in Warwickshire

Our draft best value plan

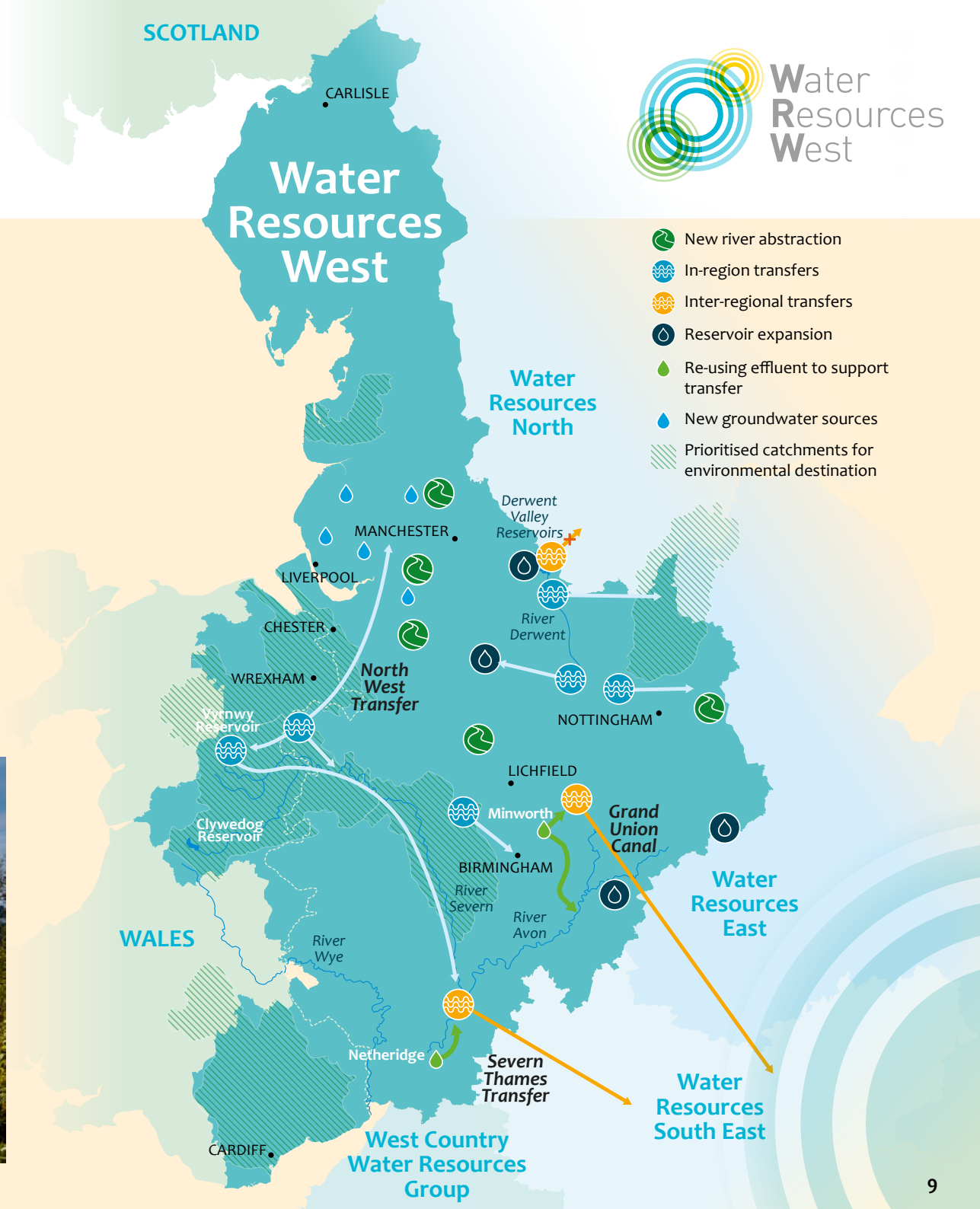
We have developed a plan that meets the needs of our region and supports others.

By 2050, this plan includes:

- Action to **reduce daily water demand by over 900 million litres across the whole region**. This includes the government introducing water labelling to save 280 million litres per day.
- Severn Trent **delivering a large number of supply options to offset abstraction reduction** for environmental improvement.
- United Utilities **developing new water resources in the North West** to support water transfers. They also provide benefit to customers in the North West, by reducing the frequency of temporary use bans (hosepipe bans).
- Welsh Water **upgrading the network in South-East Wales** and recovering losses from a water treatment works.
- A range of options to take water resources towards our environmental destination. This includes **improving water quality and improving habitats**.



River Severn



Regional plan advantages and disadvantages

Any given development has advantages and drawbacks and it is important to ensure that on balance, the advantages are greater. We evaluated the schemes that form part of our best value plan by asking the following questions:

- how much will the plan cost?
- how much carbon will the plan produce?
- how will the plan affect human and social wellbeing, environmental resilience, public water supply resilience, or flood risk?
- will the plan have any benefits for the environment and other abstractors?

Our analysis revealed that the largest advantages brought by the plan arise from providing public water supplies that are resilient to drought, and from reducing abstraction to improve the water environment. Another large advantage is a boost to the economy in our region resulting from water transfers to the South-East. These will bring in work for existing local businesses and create new job opportunities for people.

The largest disadvantages of our plan arise due to the costs to reduce leakage and personal water consumption, building new supplies and improving water supply infrastructure. These actions also generate carbon emissions, this being another important disadvantage. Our customers want a reduction in carbon emissions, reflecting the growing public awareness regarding climate change. We have recognised this and encouraged the selection of options that result in lower carbon emissions into our plan. Water companies will offset emissions, for example by generating green energy and reducing carbon emissions from their wastewater treatment plants. The whole water sector in England has made a commitment to achieve net zero carbon emissions by 2030. In Wales, Hafren Dyfrdwy plans to achieve net zero by 2030 while Welsh Water will reach carbon neutrality by 2040.

It is important that the regional plan we produce is “best value” for the communities we serve. This means that the plan should be cost-effective and have other benefits.



Overall, the advantages of our regional plan are larger than its disadvantages. Indicatively, the net benefit is greater than £2 billion.

Responding to our consultation

We would like to know what you think about our draft plan so that we can improve it before it becomes the final plan.

This brochure is a summary of our draft plan, designed to present high level information only.

To read the plan please visit:
www.waterresourceswest.co.uk/publications

Please feel free to write to us about anything you have read in this brochure or in our main draft plan and other documents.

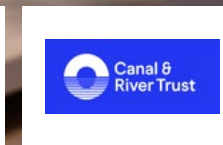
To the right you will find a set of questions designed to guide you in providing us feedback on our plan. To answer these, you will need to read the full plan document.

Please send your feedback to:
waterresourceswest@outlook.com by 22 February 2023.

Here are some questions about the plan that you may wish to consider:

- **Are you satisfied with our demand management approach?** (See Section 7.1 in the full plan)
- **Do you think the supply options included in our preferred plan are good value, given that many of them target improvements to existing assets?** (See Section 7.1 in the full plan)
- **Are you satisfied with the range of catchment options we included as part of our environmental destination?** (See Section 7.2 in the full plan)
- **Are you satisfied that the strategic choices we have made in developing this plan were robustly informed by stakeholder and customer feedback?** (See Section 6 in the full plan)
- **What is your view on the pace of the delivery of our drought resilience and environmental improvements?**
- **Do you think the transfers we selected in our plan have been sufficiently explained with regards to their risks and benefits?** (See Section 7.3 in the full plan)
- **Do you have any views on how our plan can further develop to meet the needs of other abstracting sectors?**
- **Do you have any other comments on ways to improve our plan?**

With thanks from the abstractors represented in Water Resources West:



For more information please visit our website:
www.waterresourceswest.co.uk

Or to get involved with the conversation visit our ideastream:
ideastream.waterresourceswest.co.uk

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