WATER RESOURCES NORTH FINAL REGIONAL PLAN

Non-Technical Summary

WReN
Water Resources North

Contents

What is Regional Water Resource Planning?

The development of the Water Resources National Framework has introduced the first round of regional planning to bring about greater coordination of water resources planning between public water and supply and other sectors that abstract water.

A regional plan aims to create a single strategic approach for the region, taking a multi-sector approach to explore solutions. It also promotes inter-regional water transfers, which brings benefits on a regional and national scale.

Regional plans sit above the Water Resources Management Plans (WRMPs) of individual water companies, and the regional strategy is reflected in them.

The plan forecasts supply and demand in the region for the next 25 years and beyond to determine if there a risk of the supply-demand balance becoming in deficit. It explores alternative scenarios to ensure the plan, and any proposed solutions, can adapt to change.

The plan is needed to ensure everyone in the region can continue to access enough water. Demand is increasing due to population growth and climate change, whilst supply is reducing as we take less water to protect the environment. This means we need a plan to face these future challenges.

Links to other plans

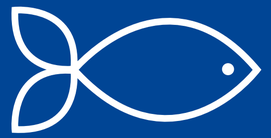
Regional water resources planning exists as part of an ecosystem of other plans, legislation and guidance, which work together to protect the environment whilst keeping taps running.

Water Resources Management Plans (WRMPs)

Water Industry Price Review process (PR24)

Drought Plans

UK Net Zero commitment



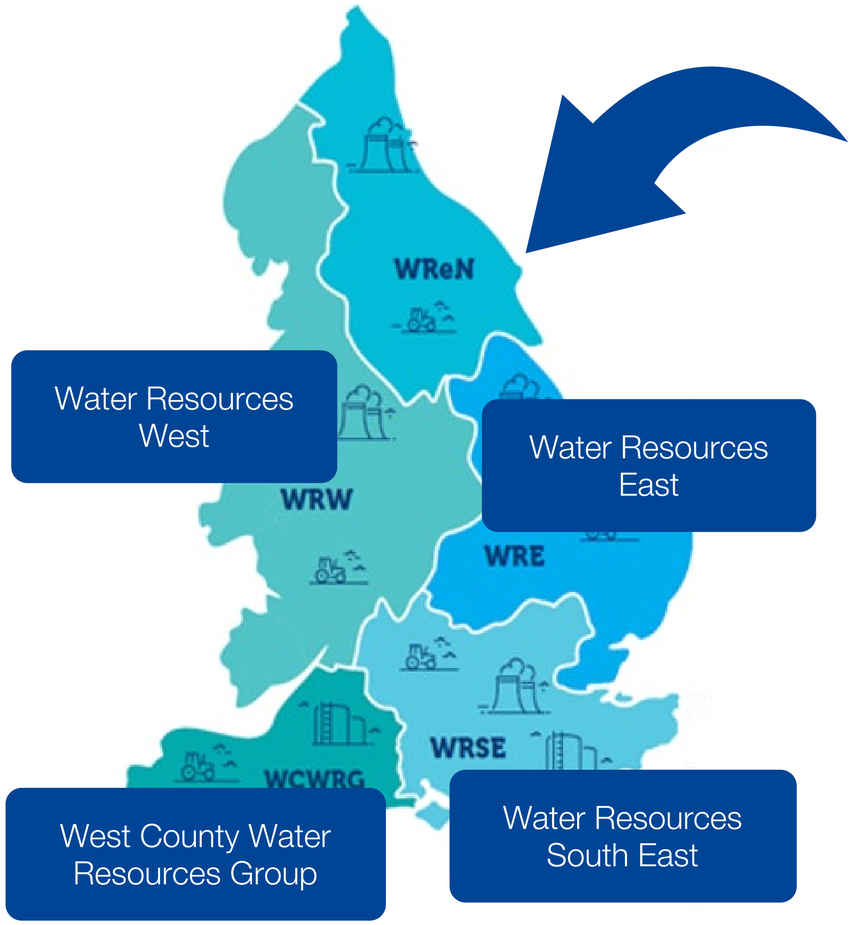
River Basin Management Plans (RBMPs)

Abstraction licensing strategies (CAMS)

25-year Environment Plan

Water Resources North (WReN)

- WReN is one of five regional groups which were established to put aside water company boundaries and think about the water needs of the region as a whole. They bring together water companies and other water using sectors to ensure a cross-sector and collaborative approach to the planning and management of water resources.
- The Water Resource North region covers an area of around 23,500 km², from the Peak District to the Scottish border.
- It is a highly diverse region, including significant population centres in Yorkshire, Teesside, Wearside and Tyneside, as well as widespread rural communities and significant expanses of environmentally important landscapes.
- Our major rivers include the Rivers Ouse, Tees, Wear and Tyne. The Ouse, with its tributaries, drains the vast majority of Yorkshire into the Humber.

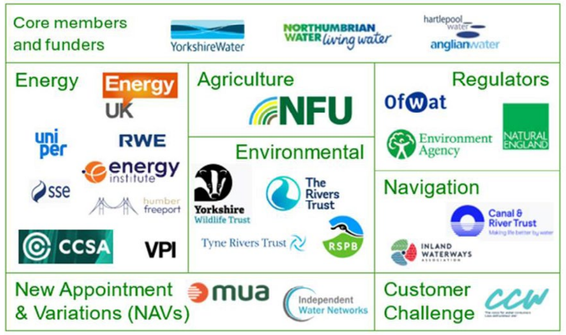


Water Resources North

Core members and funders

NORTHUMBRIAN WATER living water
YorkshireWater
hartlepool water
anglianwater

Stakeholders

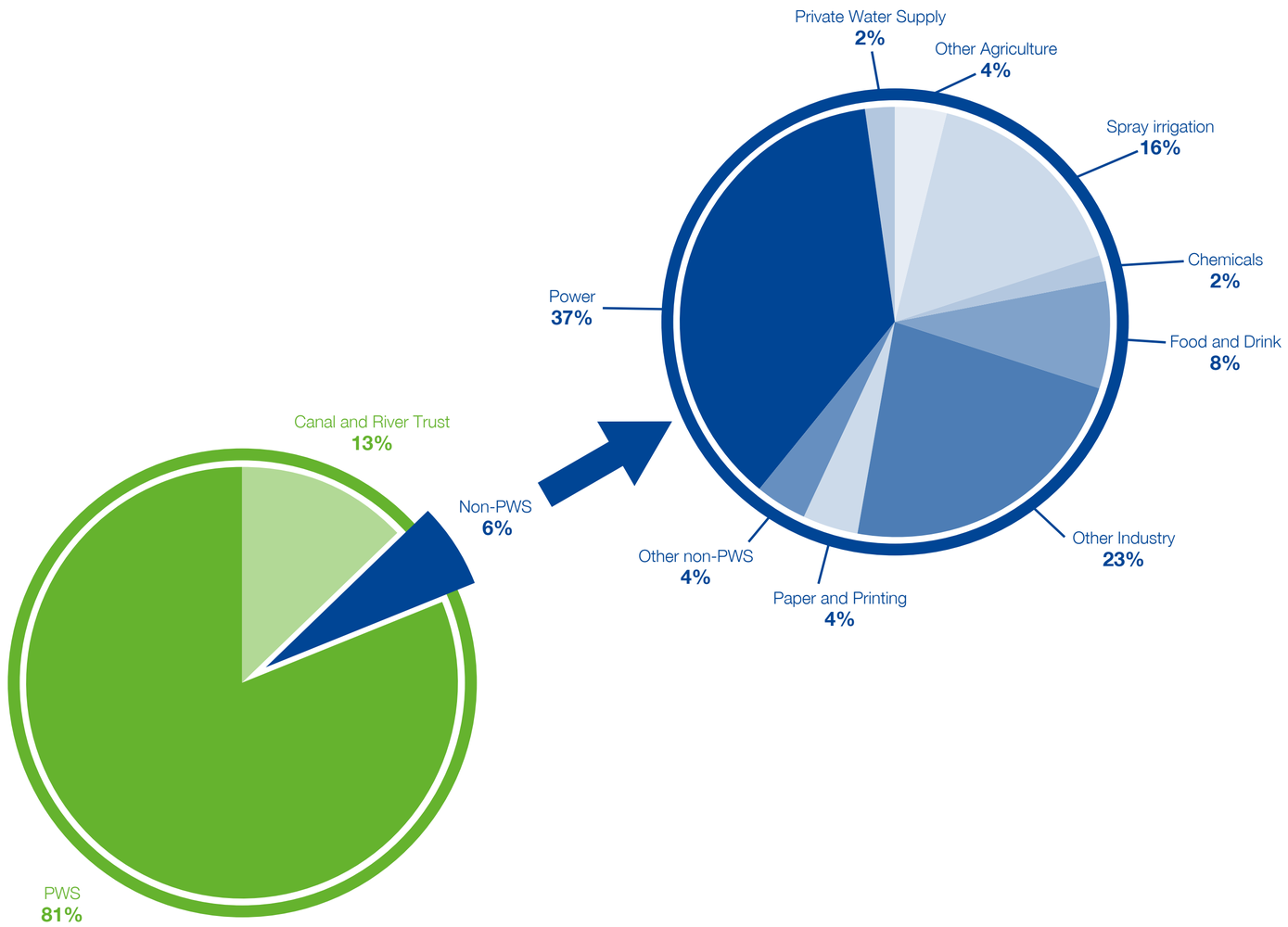


Sectors in WReN

Public water supply makes up around 81% of the abstraction in WReN's region, but water is also abstracted for energy generation, navigation (canals), agriculture, and industry

Regional plans consider the current and future demands from these sectors, but historically they have not been involved in the planning process.

As we look to the second regional planning round, other sectors are now becoming more involved in regional planning through new sub-sector groups, allowing us to better understand the risks and needs for other sectors, and consider the potential for joint solutions.



What does the future look like?

Our WReN Regional Plan forecasts supply and demand over a 60-year planning period from 2025 to 2085. The largest factors in those forecasts are explained below.

New data on climate change is showing a much bigger reduction in future water resources

Climate change is increasing the frequency, duration and severity of droughts, and we can expect more dry weather events in the future, such as 2022 when a hosepipe ban was in place in Yorkshire Water. We estimate that by 2050, we'll need an extra 120 million litres per day to offset climate change impacts on our supplies.

Rivers and groundwater could become more sensitive to abstraction in the future

We want our water supply to be sustainable for the environment and our WReN Regional Plan includes a long term environmental destination in the Yorkshire Grid Zone. This has identified a potential need to reduce abstraction by 11 million litres per day from groundwater sources in North and South Yorkshire by 2035 and 104 million litres per day from the River Derwent in North Yorkshire by 2040.

Total daily demand for water is expected to growby 68 million litres per day due to population growth and new housing developments

Our demand forecast estimates an increase in population by 2050. We've seen demand increase during the Covid pandemic and a sustained impact from more home working. This has led to an increase in per capita use.

A loss of a raw water import currently providing around 50 million litres per day will end

A proportion of Yorkshire Water's raw water supply is provided by Severn Trent Water, which helps meet demand in South Yorkshire. The transfer will end in 2035 and a new source of supply to South Yorkshire must be provided to offset this loss.

When the above impacts are incorporated into our forecasts, along with changes due to improvements in drought resilience and planning allowances, the supply-demand balance indicates by 2050 we'll need an extra 350 million litres of water per day to meet public water supply needs and an additional 250 million litres of water per day to meet the needs of the non- public water supply users- largely driven by the energy sector.

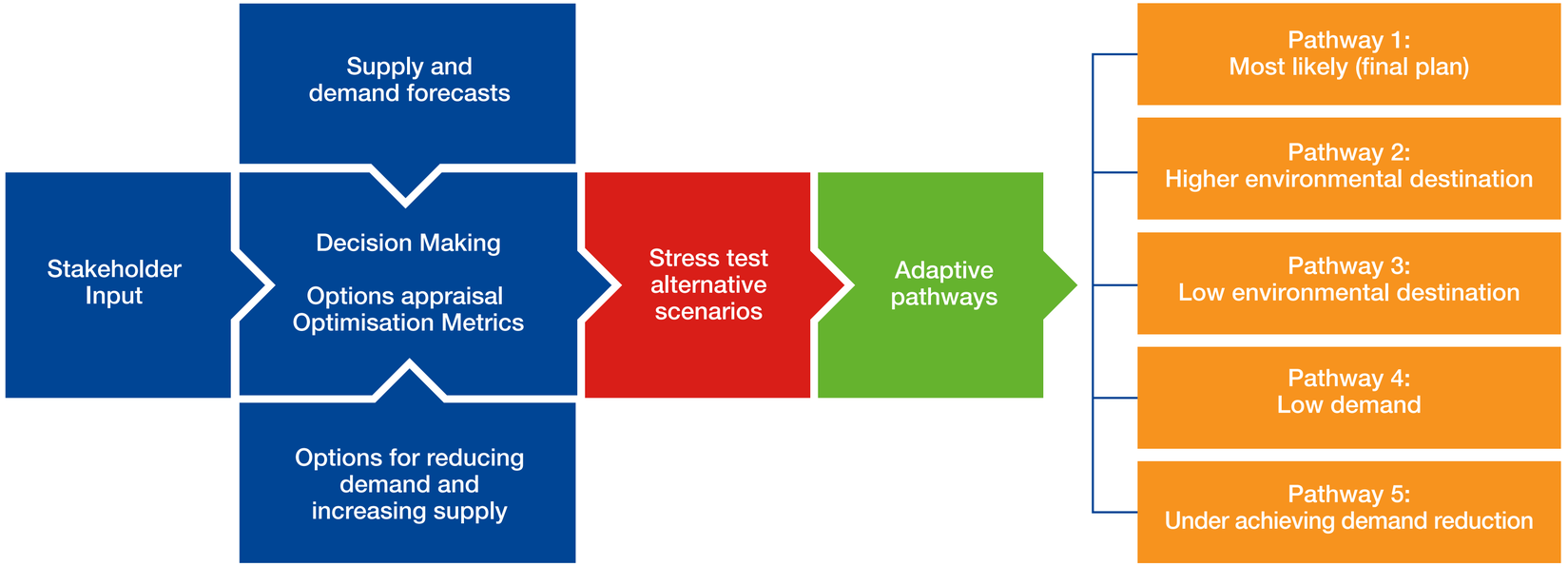
Building our plan

The plan is developed through a collaborative approach including regulators, other sectors and wider stakeholders.

Supply and demand in the region is forecast, which then allows options to be developed to meet the deficit identified. The YW Grid zone is the driving zone with deficit.

There are a number of stages the plan goes through to reach the final version, shaped by consultation and feedback.

From this a best value plan is produced that takes into account many factors to provide the best combination of options.



Good to know

When we develop our best value plan, we use metrics to represent a range of factors that are important to wider society and the environment.

We cannot maximise benefits across all metrics as this would result in an unaffordable plan, so our aim is to balance the impacts on the metrics to provide best value.

- PWS drought resilience
- PCC reduction
- Customer preferred option type
- Option deliverability
- Biodiversity
- Flood risk management
- Human and social well-being
- Resilience
- Natural capital
- Multi-abstractor benefit
- Financial cost
- Leakage reduction
- Carbon

Customer and Stakeholder Views

We engaged with customers and stakeholders in 2021 and through water company water resources plans. From this we identified their key priorities for our plan:

Customers Priorities

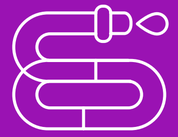
Higher	Medium	Lower
Affordability	Environmental Improvement	Improvement in Levels of Service
Supply/Drought Resilience	Demand Reduction	
Leakage Reduction & Smart Metering		

Customers had a preference for leakage reduction and water efficiency options over options that increased ground/ surface water abstractions and were more interested in outcomes over specific options

Stakeholder Priorities

Inter- and intra- regional collaboration

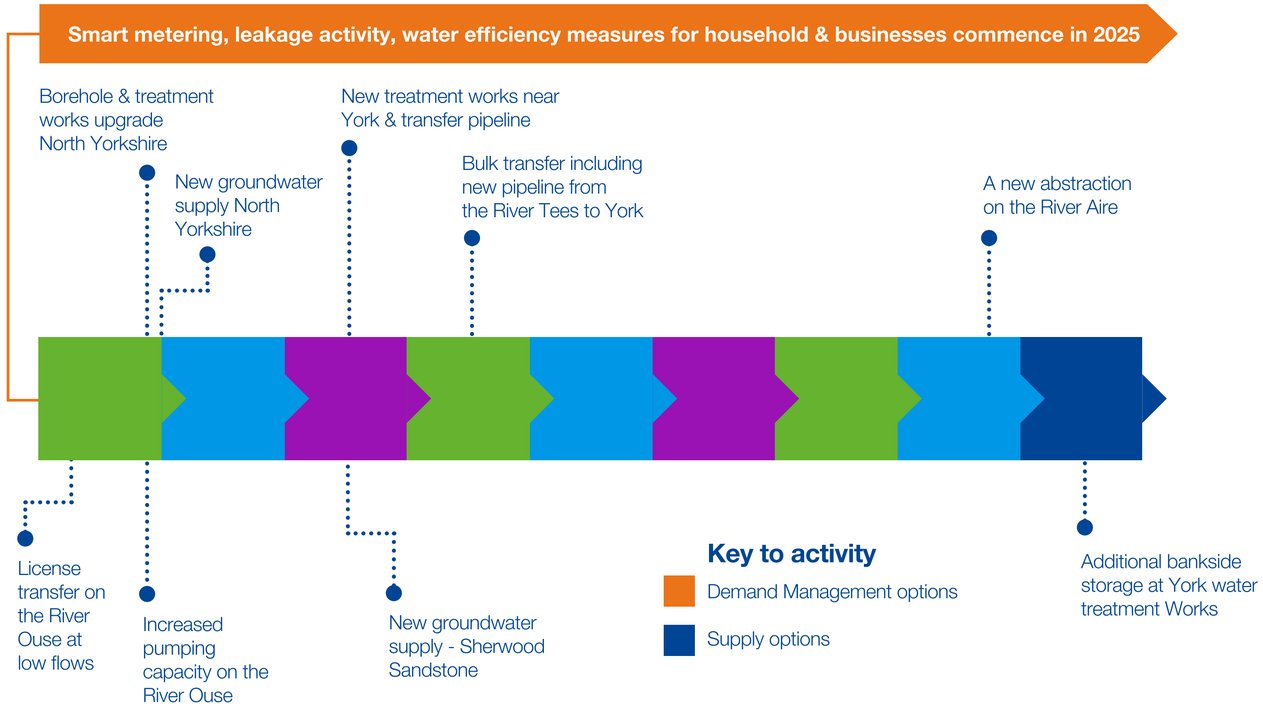
Environmental Destination

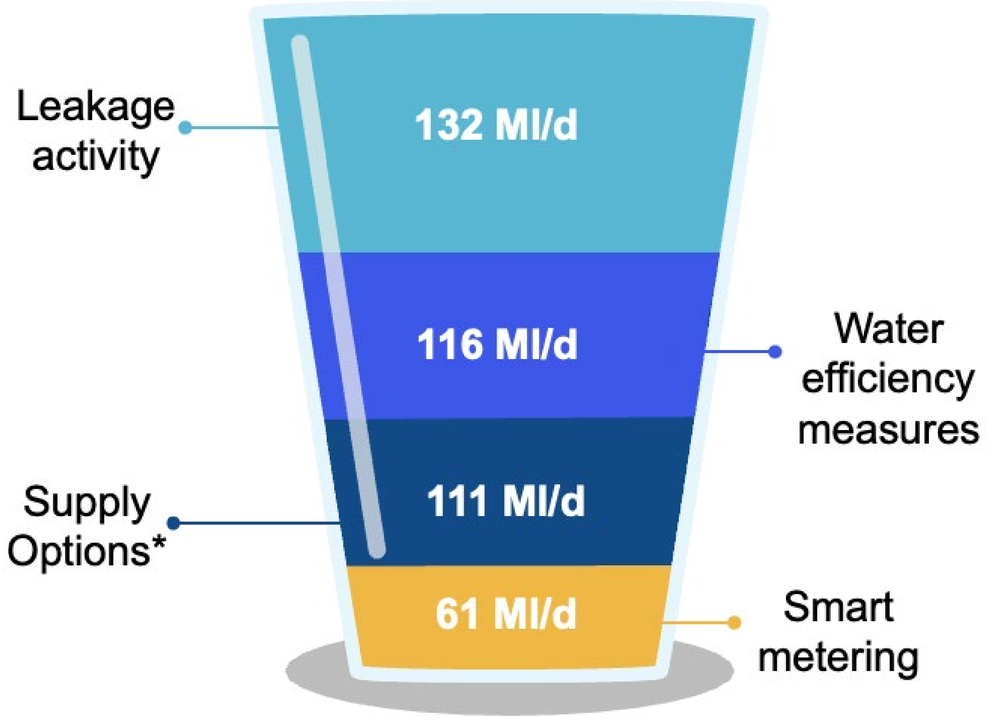


Loss of the Severn Trent Transfer

The Regional Plan

Yorkshire Water, Hartlepool Water, and Northumbrian Water are putting forward measures to reduce water demand in line with national expectations. These include reducing the amount of water lost through leakage by 50%, reducing the average amount of water used per person to 110 litres a day, and cutting non-household water use by 15%. Given its smaller size and customer base, Hartlepool Water is aiming for a 30% leakage reduction. Yorkshire Water will need to both reduce demand and develop new water sources to ensure a secure supply and meet regulatory targets. Together, the actions planned across the region will result in a surplus of water.





Non- Public Water Supply

Work is ongoing to further engage other non- PWS sectors to understand their water needs and highlight opportunities for a more integrated water management. Some activities that have started include:

Kick-starting sector sub-groups within WReN in readiness for the 2nd round of regional planning.

Funding projects to look at future water needs in specific sectors (e.g. agriculture and energy)

Work with stakeholders in energy and industrial clusters to support critical economic growth in these locations

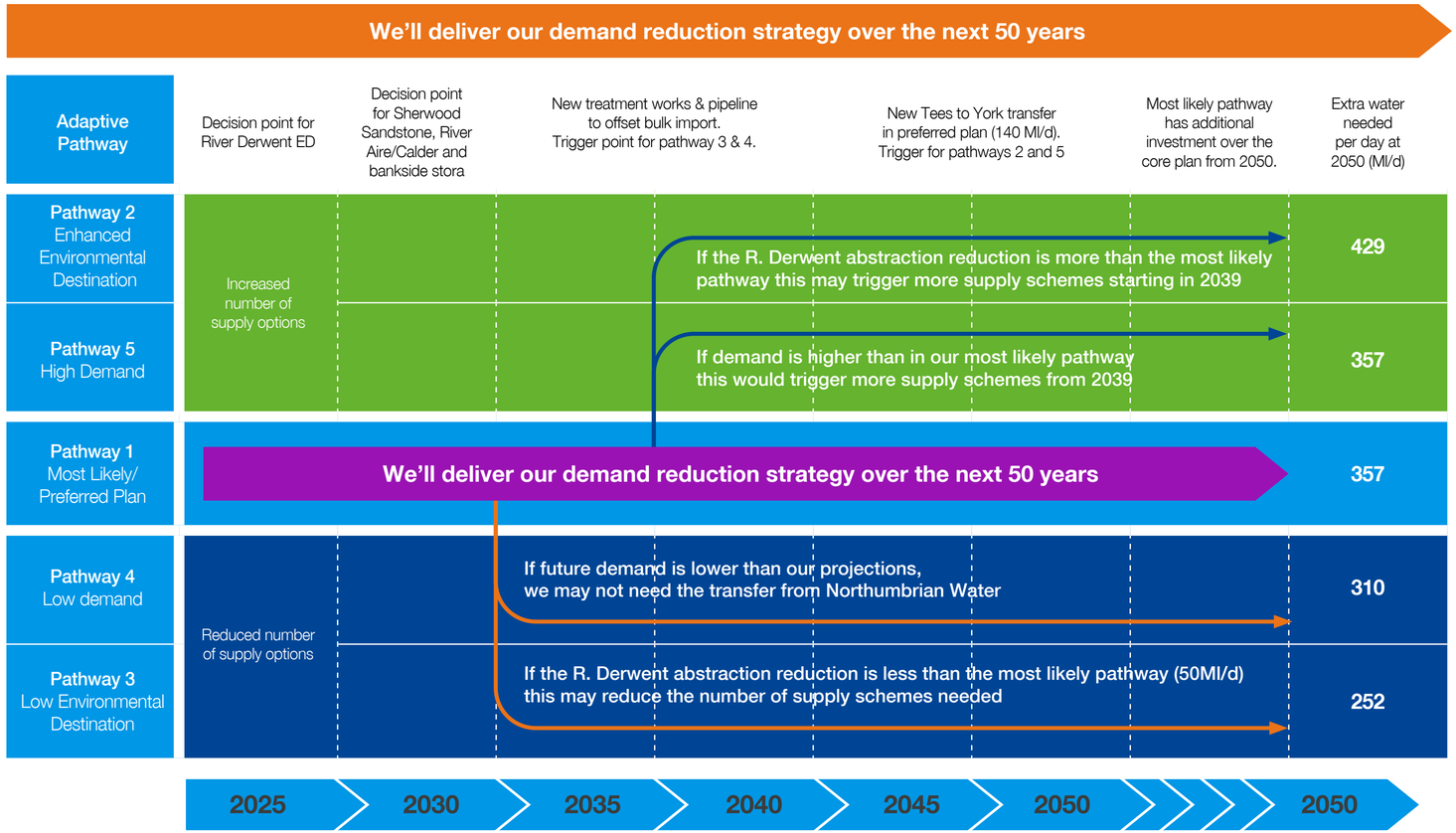
Adapting Our Plan

We found that NWL and HPL water resource zones will have a supply surplus under all scenarios, so these areas do not need an adaptive plan. However, in the Yorkshire Water Grid zone the varying degree to which abstraction licences are reduced through Environmental Destination and the loss of a transfer from Severn Trent Water mean that we must ensure an adaptive plan is in place to accommodate the different potential outcomes.

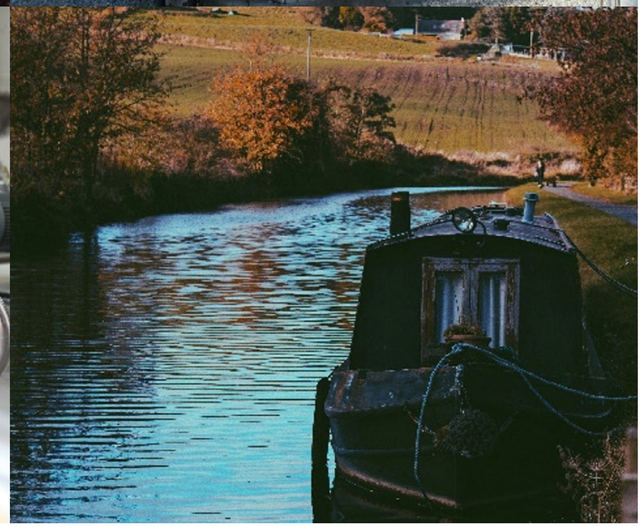
We've identified five pathways for our WReN Regional Plan; driven primarily by the Yorkshire Water Water Resources Management Plan 2024. The alternative pathways represent uncertainties which could mean we need to alter the solution for closing the deficit.

The pathways are linked to decision points that make sure we take action when an alternative pathway is triggered.

We'll monitor our supply-demand changes over time and collate the data we need before the decision points



Next Steps



New sub-sector groups for non-public water supply

Subsector groups for Agriculture, Navigation, Energy, and Industry have been set up which aim to better integrate these groups into future regional planning. These groups are integral to understanding future sector water demands for the next round of regional planning.

Annual review

We commit to review progress against the plan annually following publication of this plan.

Updated strategic view and forward planning

In summer 2025 we will have an updated view on the needs of future regional plans for the second round of regional planning, from the EA's 2nd National Framework refresh. As well as this, an options review will be carried out by the water companies to assess options that could be considered in this next round of planning.

Sustainability reduction investigations

The preferred plan assumes the likely reduction in abstraction volumes from certain water sources. We'll begin investigations to consider the potential environmental benefits from any reduction, the scale of any abstraction reduction, and the impact on our available supplies.

Drought planning

We will produce and publish a WReN Statement of Intent in relation to drought management. We will also stand up a regional drought group as required to help coordinate relevant communications, facilitate cross party discussions, and explore collaborative opportunities during periods of dry weather.

Resourcing

We will look to recruit an independent chair for WReN. This appointment will allow us to produce improved multi-sector collaborative plans and ensure representation of the different sectors within the planning process.

Glossary

Abstraction	The process of removing water from aquifers, rivers and lakes for use in domestic and industrial applications
Best Value	The process of water resources planning to provide reliable and sustainable supplies at the most optimum configuration in relation to the various metrics used to measure the total value of a package whilst still protecting the environment.
Biodiversity (net gain)	The quantification of biodiversity losses and the identification of what is needed to deliver net gains to biodiversity
Demand	The amount of water exiting water treatment works, this includes water losses on the network due to leakage
Drought Resilience	Usually given as a level of service, drought resilience represents the ability of a system to withstand specific dry weather events that occur periodically. An example would be a water company might have a drought resilience such that it is expecting to implement level 2 drought options for a drought that is expected to occur once every 15 years. This company would be said to provide a 1 in 15-year level of service for level 2 drought options.
Drought	A drought is defined by the EA as a period of low rainfall which creates a shortage of water for people, the environment, agriculture, or industry
Environmental Destination	Environmental Destination refers to a long-term, holistic vision for the environment, particularly regarding water abstraction and its impact on water bodies.
Groundwater	Water held in saturated pores in underground materials such as gravel and sand
Natural Capital	Resources of the planet that provide goods, flows, and ecological services to support life
Per Capita Consumption	The average amount of water used by one person per day.
Supply	The total water available for use within a system
Supply-Demand Balance	The difference between water that is available and the total demand on a system
Treatment Works	Facilities designed to treat raw water and make it safe for public consumption
Water Resource Zones	A subdivision of a supply area of a water company whereby all customers within the area can share all water resources and experience the same level of supply resilience.
Water Resources Management Plans	The statutory 25-year plan that all water companies in England and Wales are required to publish every 5 years. The plan must detail how a company is planning to meet forecast demand as well as regulatory targets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