WATER RESOURCES NORTH

APPROACH TO REGIONAL PLAN 2029

WReN
Water Resources North

May 2026

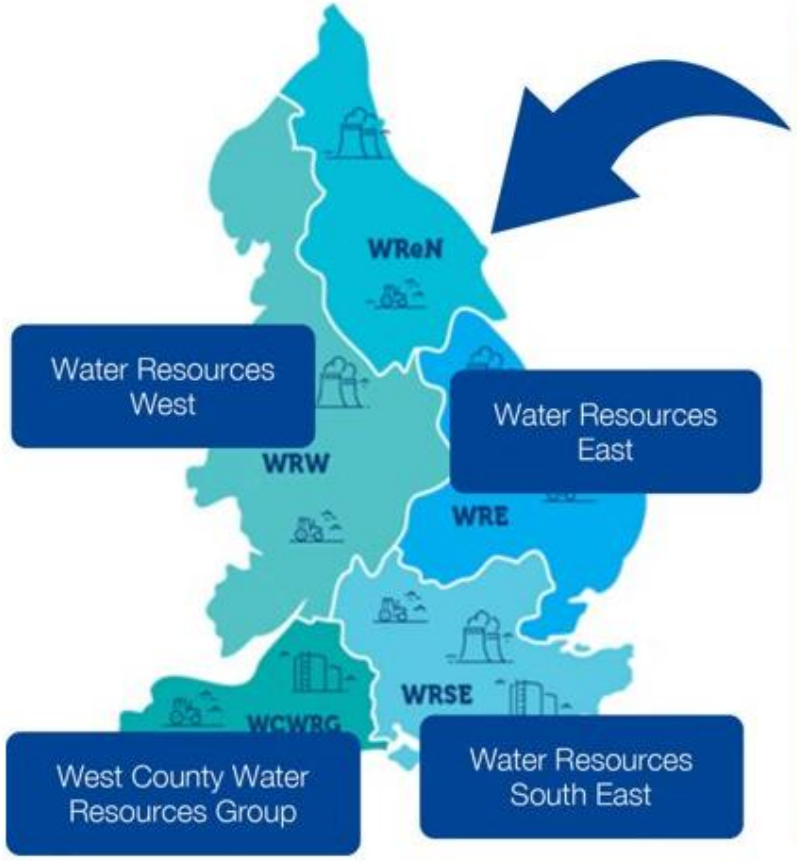
Approach to Regional Plan 2029

This document provides an accessible, high-level overview of Water Resources North's (WReN's) approach to the next phase of regional water resources planning. It sets out the key challenges facing our region, from the need to reduce abstraction to the growing impacts of climate change and explains how we intend to address them through the development of our Regional Plan 2029 (RP29). Our aim is to offer stakeholders, customers and anyone with an interest in the future of water resources a clear picture of the issues we face in the region and the steps we are taking to build a resilient, sustainable water future for the North.

Contents

Who are Water Resources North (WReN)?

- We are 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 enable 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 km^2, 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.



What is Regional Water Resource Planning?

The National Framework for Water Resources 2025 is being used to shape the second round of regional planning to bring about greater coordination of water resources planning between public water 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 being in deficit. It explores alternative scenarios to ensure the plan, and any proposed solutions, can adapt to change.

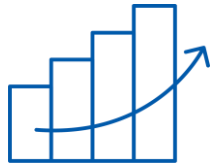
The plan is needed to ensure everyone in the region can continue to access enough water. Demand is increasing due to population increases and industrial growth, whilst supply is reducing as we take less water to protect the environment and account for the impacts of climate change.

The tiers of water resources planning in the UK:

Aims of the National Framework for Water Resources 2025

The four main aims of the framework, along with the implications for our planning work, are:

1

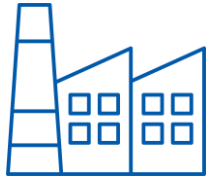


Long-term water resources planning to enable growth
We will:
- look ahead over the next 25 years and beyond to understand how much water our region will need. This will help us create a plan that is best-value for our region including our member water companies.
- develop a suitable mix of solutions to ensure we can continue supplying water for the region across a range of different futures.
- explore how we can support other sectors that rely on water

2

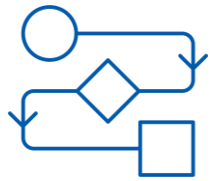
Planning to enable sustainable abstraction across catchments
We will:
- develop a plan for Environmental Destination, setting out what catchments need in the short and long term so they can remain healthy and resilient.
- complete the Strategic Environmental Assessment and Habitats Regulations Assessment to ensure our regional plan protects and supports the natural environment.
- consider and champion nature-based solutions wherever they can offer long-lasting benefits for people and the environment.
- encourage and promote existing market mechanisms so that third-party organisations can put forward their own ideas and options.

3



Strengthening multi-sector planning and resilience
We will:
- work across sectors to develop a joined-up plan that helps tackle the water resource pressures facing our region.
- engage with stakeholders to enable them to be active participants in developing the plan.
- look at the implications of government commitments related to water, and work with partners to identify opportunities for greater water efficiency and better demand management.

4



Supporting an integrated approach to water management
We will:
- work towards a more joined-up, catchment-wide approach to managing water, helping create healthier and more resilient rivers and landscapes.
- assess the impact of government commitments — including those related to net-zero, data and AI security — to understand what they mean for future water needs.
- look for options that deliver wider benefits, such as better flood and drought resilience, improved water quality, and stronger wastewater systems in line with Drainage and Wastewater Management Plans.

Ambitions of WReN

Our overall ambition to support the aims of the National Framework for Water Resources is to secure long term, resilient and sustainable water for the Water Resources North region – enabling growth and net zero – through cross sector collaboration, early risk visibility, and clear, accessible best value planning that delivers Environmental Destination outcomes and national water consumption targets. Our five ambition areas are as follows:

1. 

Long-term water security: We will facilitate effective integrated, evidence-based planning to ensure water is available for communities, the environment, and industries under a range of various future scenarios.

2. 

Enable growth and net zero: We will champion collaboration that fosters growth to support the regional economy and accelerate the energy transition.

3. 

Environmental and climate resilience: We will work to ensure the WReN area becomes drought and climate resilient with nature-positive solutions that strengthen ecosystems and catchments.

4. 

Early risk visibility and adaptive planning: Our planning will account for uncertainties and risk through adaptive planning to ensure water availability under a range of possible futures.

5. 

Integrated planning and policy influencing: We will collaborate with government, regulators, other regional groups, and other strategic planners, including future regional system planners, to ensure water is integrated into future policy and strategy.

Links to Other Plans

Regional water resources planning exists as part of an ecosystem of other plans, legislation, and guidance. These work together to protect the environment and ensure water can be supplied. Below are some of the plans that we interact with.

Water Resources Management Plans (WRMPs)

Informs and provides foundation for RP

Water Industry Price Review process (PR24)

Sets funding landscape; enables or constrains RP options

Drought Plans

Aligns with RP statement of intent on drought

UK Net Zero commitment

Informs future sector demand planning (particularly for energy)

River Basin Management Plans (RBMPs)

Links to RP options and aligns with objectives for investment

Abstraction licensing strategies (CAMS)

Informs supply-demand balance for future sector planning

25-year Environment Plan

Aligns with environment ambitions, informs supply-demand balance for future sector planning

Other planning activities or groups to interface with (non-exhaustive):

- Canal & River Trust Water Resources Strategy
- Regional Energy Strategic Planning (RESP)
- Local Authority Development Planning / Water Cycle Studies
- Other Regional Group Plans
- Catchment partnerships (e.g. CaBA)
- Water Abstractor Groups

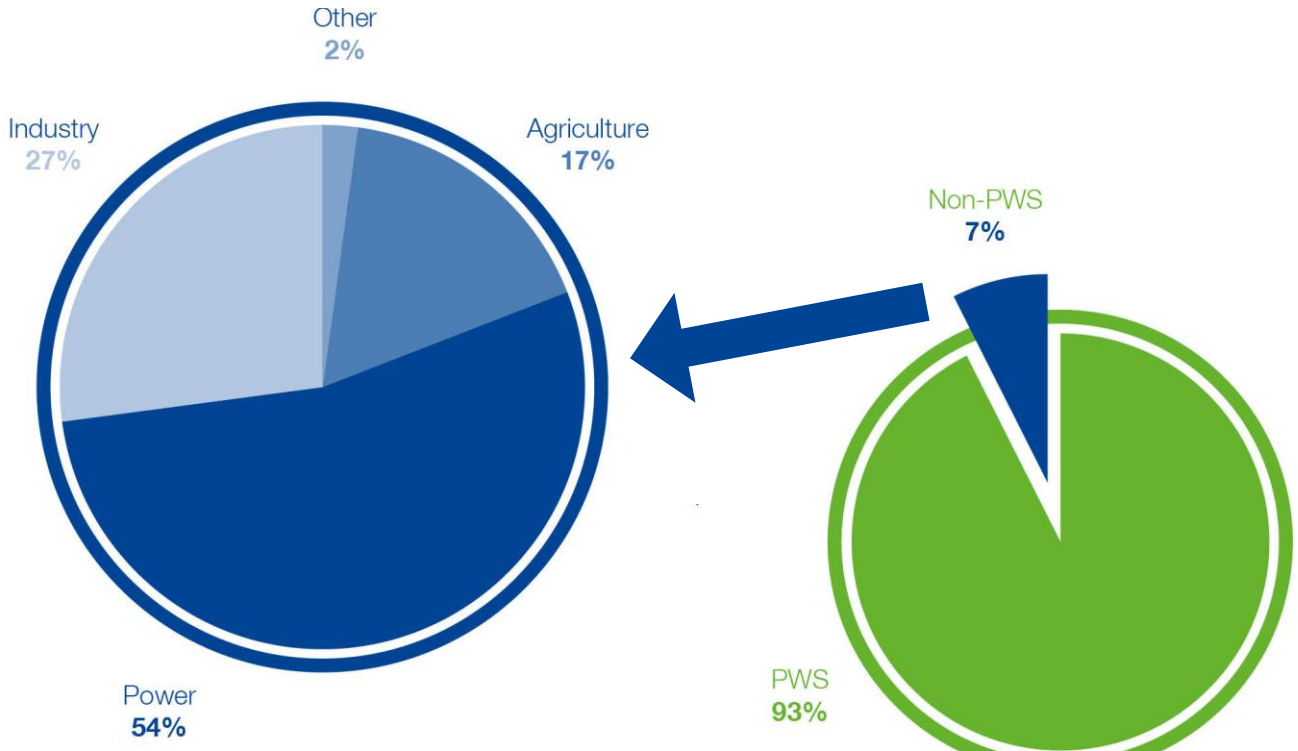
Sectors in WReN

Public water supply makes up around 76% of the abstraction in our region, but water is also abstracted for energy generation, navigation (canals), agriculture, and industry.

Regional plans consider the current and future water demand 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.

Recent actual consumptive abstractions estimated for Public Water Supply (PWS) and Non-PWS in our region



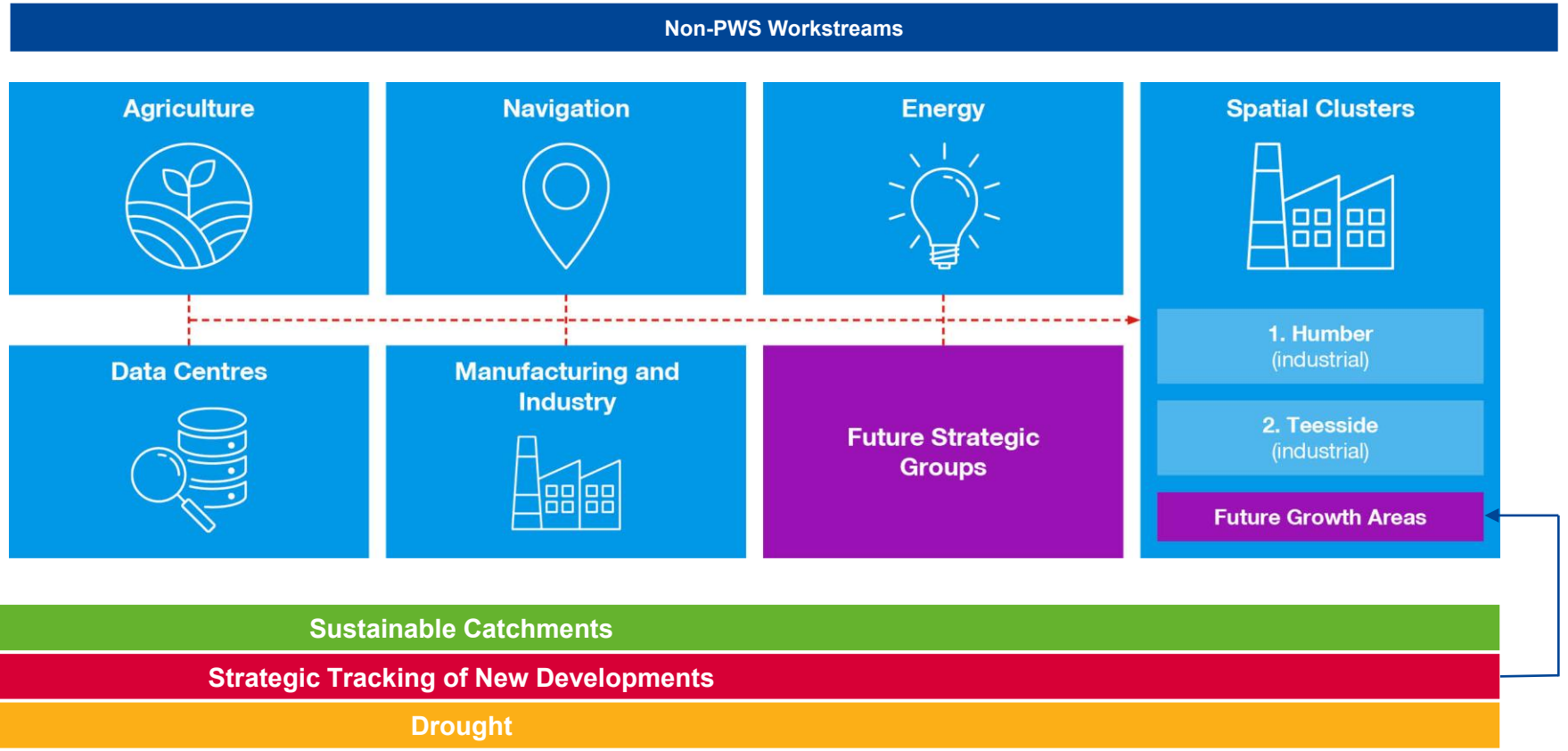
Navigation abstractions are included across the sectors as relevant to the purpose, however this excludes abstraction to support the purpose of navigation. The first Regional Plan reported 13% of WReN recent actual consumptive abstraction estimated for PWS and non PWS was abstracted for the purpose of navigation.

Source: National Framework for Water Resources 2

Workstreams in WReN

We have organised our workstreams to maintain a balanced approach, supporting both sector-focused activities and multi-sector planning (such as spatial growth clusters or examining Environmental Destination at the catchment scale). In line with the statutory WRMP process, there are also dedicated technical workstreams for public water supply to aid in plan development.

PWS Workstreams
Demand Forecasting
Supply Forecasting
Target Headroom
Strategic Options / Options Framework
Demand Options
Environment Assessment
Technical Alignment
Decision-Making and Modelling
Corporate Stakeholder and Comms
Customer Research



Cross-sector Challenges

Public Water Supply

Non-Public Water Supply

- Agriculture
- Navigation
- Energy
- Spatial Clusters
- Data Centres
- Manufacturing and Industry
- Future Strategic Groups

Sustainable Catchments and Environmental Destination (ED)

- Environmental Destination (ED) sets out the Environment Agency's long-term vision for ensuring water abstraction is environmentally sustainable
- It provides an initial, high-level view of where abstraction may need to change, which is then refined within each catchment to understand the scale of action needed to protect and restore local water environments
- Through our Sustainable Catchments workstream, we will help bring ED to life by working closely with abstractors in each catchment to explore the best options for protecting and improving the water environment.

The Environment Agency estimate abstractions in the WReN region will need to reduce by between **320 and 680 millions of litres of water per day** by 2050 depending on the planning scenario.

Strategic Tracking of New Developments

- We need to understand the potential for new developments at a strategic level where it is relevant to water resources as a region
- Local Authority plans identify potential growth, but it often depends on investment and there is therefore uncertainty on the timing and need for future water
- There is a high uncertainty on the timing and volume of water for new developments
- Coordination is needed to plan for new developments across sectors and review and allocate their water needs given:
  - requests for water can be ad hoc and not aligned to water resources planning cycles
  - development may have planning permission and there is no guarantee that it will be implemented and developed.

Drought

- Facilitation of collaboration between multiple sector groups, regulators and wider stakeholders to enhance preparedness for periods of prolonged dry weather and drought events
- Attaining collective understanding and decision making based on common datasets
- Evaluating the effectiveness of drought response measures
- Resource availability across sectors to cope with the additional work associated with drought
- Aligning communications and messaging across sectors.

Public Water Supply

Where we are as a region and ongoing challenges

Public Water Supply (PWS) Headline Info

In 2024-25, our region had 39 million litres of water per day more than it needed (i.e. a surplus) compared with a Regional Plan 1 forecast surplus of 47 million litres per day.

We are seeing increased pressures on demand, particularly from higher-than-expected per capita consumption and leakage. As a result, our region's **available water has reduced by 7.4 millions of litres per day** compared to our forecast.

Demand for water, including leakage and water use in households remain higher than forecast. Companies have begun their demand reduction programmes this year (2025-26) as part of the new business planning period (AMP8). This includes mains replacement, smart metering, and water use audits for households and non-households. These initiatives are designed to reduce demand and support customers on the most efficient ways to manage their water use.

This high-water demand was caused by extreme winter leakage - this happens when pipes expand and contract during rapid temperature changes- alongside increased water use during periods of hot, dry weather.

The Future Challenges for Public Water Supply

Without any further action we predict we will need an extra **357 million litres of water per day** for public water supplies in our region by 2050. To prepare for this, the public water supply companies in WReN are aiming to:

Support water company customers in using water more efficiently - reducing the amount each person uses by 20% by 2038.

Cut leakage in half by 2050, helping to save water that would otherwise be lost.

Increase drought resilience, so that emergency drought measures are only needed once every 500 years.

Support Government growth plans in areas such as housing, energy, industry, and AI.

Improve the environment, by reducing the amount of water taken from rivers, groundwater and other natural sources when it is not sustainable.

Sustainable Catchments

Strategic Tracking of New Developments

Drought

Supporting Non-Public Water Supply

Our Role and Scope

Regional water resources groups have been established to help contribute to tackling the national water resources challenge, but we know we can only succeed by working closely with others. This page explains what we will do to support multi-sector water planning, and where our role is more limited due to funding and sectoral constraints.

What we aim to do:

Understand future demand across other sectors wherever information is available, especially where this affects public water supply planning and the options we consider.

Promote and raise awareness of water resource pressures and availability constraints that may affect other sectors.

Help support and advise other sectors as they plan for their water needs — for example, by helping them understand Environmental Destination, licence caps, potential solutions, and opportunities for collaborative licence pathways.

Support and facilitate cross-sector conversations at a catchment level so that issues, opportunities, and potential solutions can be explored together. This includes considering how water resource plans interact with other planning activities, such as development of Local Resource Options.

Where our scope is limited:

We can provide **strategic support**, but individual sectors remain responsible for developing their own detailed water resource plans.

We can **promote collaboration** across sectors and can support with top-down planning, but we cannot produce bottom-up plans at individual sector level.

We could **help explore solutions** for non-public water supply sectors, but this would be dependant on available funding.

Non-Public Water Supply: Sectoral Challenges

Agriculture and Grower Groups	Navigation	Energy
• Accommodating the potential for over 50% increase in water consumption by 2050 for the sector (as indicated by the National Framework data) • Consideration of over 1300 abstraction licenses for a broad range of agricultural uses spread across the region • Understanding licence reduction risks from Restoring Sustainable Astraction / excess headroom, catchment permit reviews and Environmental Destination • Obtaining sustained funding and resources to undertake regional planning activities • Maintaining engagement across priority sectors such as glasshouse horticulture, field vegetables, potato production & dairy • Retaining awareness & affirming the need for Water Abstractor Groups & local resource options through changing weather patterns all year round • Improving data and methodologies and aligning legislation • Developing a long-term vision for effective water use in agriculture.	• The abstraction licence transition process (abstractions in the sector were historically exempt from licensing) and sustainability reductions pose availability risks • The 2025 drought highlighted potential risks and pressures to the navigation system (e.g. canal use closures) • Whilst Canal & River Trust (CRT) produce a water resource strategy, there are funding limitations constraining this being the equivalent of a water company WRMP • Canals represent potential opportunities for transfer schemes as options in WRMPs, but there are funding constraints to exploring such solutions (exempt from direct RAPID funding)	• Rapidly changing sector, with new technologies (including Carbon Capture). Water is essential to support net-zero transition, with electrification driving increased demands for power. • Long-term projections for the sector are subject to significant uncertainty as to how the UK will decarbonise. • For existing consumptive abstraction, the National Framework data shows the potential for over 20% growth in power abstraction by 2050. However, this excludes new abstraction to support the net zero transition. • Our first Regional Plan presented scenarios drawing on work by Energy UK's Joint Environment Programme (JEP) in 2021, showing a potential five-fold increase in water demand by the sector by 2050. • Power stations need to be able to operate 24/7, requiring certainty of water availability over the asset lifetime. Future reductions to abstraction pose an investment risk • Planning is distributed across many entities and organisations given sectoral structure, and subject to market mechanisms / choices • Competition law prevents collaboration / visibility of future water needs.

Data Centres	Manufacturing and Industry	Future Strategic Groups	Industrial Spatial Clusters
Sustainable Catchments			
Strategic Tracking of New Developments			
Drought			

Non-Public Water Supply: Sectoral Challenges

Data Centres	Manufacturing and Industry	Future Strategic Groups	Industrial Spatial Clusters
• High / peak cooling demands that may require large volumes and can be clustered in already water-stressed areas • Cooling technology choice drives water use (air versus water); siting often precedes checking that there is water availability • Sector is driven by competition and investment with no centralised planning influence as to where data centres should be sited • Sector demand datasets are currently incomplete and evolving. There is a need for early engagement and credible demand forecasts.	• Expected additional demand of 59.94 millions of litres of water per day from 2030-2055; 27% of non-PWS • Diverse processes with different water quality needs creates quality-matching and reuse challenges • Reliability and security of supply are key; licence changes for sustainability can be a material risk without alternatives • Challenge is identifying strategically relevant users within region beyond the known Industrial clusters • Carbon Capture technologies may need water to support industry.	• There is a challenge to identify needs and growth across all sectors across our region, hence our strategic tracking activity across all types to complement our sector specific groups • It is currently impractical to set up specific groups across all these other sectors due to their diverse water needs and resources • Many sectors have no coordinated planning at a sector level. Also, comparative to other sectors, the current growth projections are small (likely better handled at an organisational or local level) • We will keep under review if the level of growth in other sectors is such that this warrants additional specific workstreams or groups in future planning cycles.	• Clusters span multiple sector needs • Subject to funding or investment decisions – rapidly evolving picture • Significant potential step changes in water use, but uncertainty in the pace, scale and type of future water needs • Difficult to determine extent of PWS supplies that will be required • Humber particularly subject to environmental constraints to further abstraction.

Agriculture and Grower Groups	Navigation	Energy

Sustainable Catchments

Strategic Tracking of New Developments

Drought

Cross-sector Approach

Sustainable Catchments

We will incorporate Environmental Destination (ED) into the Region Plan through the following principles:

1. Use ED as a starting point for planning

Water abstraction and environmental needs data will be used as a baseline to understand the current pressures and then refined using local evidence and catchment information..

2. Ensure environmental protection drives our decisions

Through regional plans, we will:

- identify how to address environmentally unsustainable abstraction.
- protect ecological needs by taking a catchment-based approach.
- reflect legal obligations and government environmental commitments.

3. Incorporate abstraction reductions within supply and demand assessments

Changes to abstraction will play a major role in future water challenges. Regional planning helps us assess the supply and demand options needed to balance reduced water availability.

4. Prioritise solutions that support environmentally sustainable abstraction

Where abstraction is not sustainable, we will work with abstractors to develop solutions that have clear, positive environmental outcomes.

5. Align ED with multi-sector planning

We will make sure that ED reductions still allow essential services across all sectors to continue. This will involve close collaboration with stakeholders within each catchment.

6. Enable new infrastructure and demand management to reflect environmental limits

To balance demand reduction with future infrastructure investment, we will:

- Work with local authorities to guide growth to places where water is sustainably available.
- Promote nature-based and catchment solutions where they bring environmental benefit.
- Collaborate with abstractor groups and catchment partnerships to deliver change on the ground.

7. Treat ED as a long-term adaptive requirement

As climate change and environmental pressures evolve, the scale and nature of ED may change too. Our regional plans will remain flexible so we can adapt to new information and future challenges.

Our Approach

Phase 1a: Develop and agree methodology

Our methodology will be developed and trialled in two catchments. The methodology will likely include a high-level overview of catchments using open-source data sets and national framework data to conduct a deep-dive into the drivers of ED in a catchment. We will then map risks and opportunities with stakeholders to identify solutions.

Phase 1b: Trial the approach

The above methodology will be applied to the *Till* and *Aire & Calder* Catchments. These were identified through the consideration of criteria, such as:

- presence of multiple sectors
- existing investigations in the catchment
- known water resources challenges and the potential for nature-based solutions.

This will be followed by a methodology refinement phase.

Phase 2: Roll out to the remaining 12 catchments

We will ***incorporate learning*** from the trial phase prior to rolling out the process to the remaining 12 catchments.

Strategic Tracking of New Developments

Drought

Cross-sector Approach

We will incorporate new development and drought into the regional plan through the following principles:

Sustainable Catchments

Strategic Tracking of New Developments

- Identify and engage with existing company development teams to leverage their tracking of new growth and planned developments
- Spread awareness of regional planning across these teams so they understand our purpose and workstream activities
- We will make use existing networks within our member organisations to strategically track the status of new developments with Local Authorities and other relevant organisations
- Hold quarterly cross-company development engagement meetings to share updates and align activity
- Identify relevant regional forums and determine how we can participate. For example, there are groups where councils and government bodies discuss future development plans including potential needs and issues
- Define criteria for strategic developments, including thresholds for new clusters or dedicated workstreams (when a development is strategically appropriate for our region)
- Increase our visibility by promoting our role, ambitions, and collaborative benefits across all organisations.

Drought

- Continue to facilitate multi-sector collaboration through WReN's multi-sector Drought Group.
- Adapt aims & operations of the Group according to drought stage to enable appropriate focus & optimisation of available resources
- Promote development of sector drought plans with monitoring plans & early warning indicators before a drought (preparedness phase)
- Identify areas of water availability and stress across the region during drought (response phase)
- Facilitate discussion to identify opportunities for water rights trading and sharing between abstractors to manage drought response
- After drought (recovery phase), incorporate drought learning into medium and long-term water resource planning including evaluating the effectiveness of drought response measures
- Work with other regional groups to share best practice & lessons learnt
- Align communications and supporting messaging.

Approach to Public Water Supply Planning

Overall Approach

Our region's public water supply workstreams will develop a shared regional methodology to guide how we plan for the future.

This methodology will show how our approach aligns with the expectations set out in the National Framework and the Water Resources Planning Guidelines.

Where water companies need to take different approaches, we will explain why. Wherever it makes sense, companies will use consistent processes, assumptions and data so that planning across the region remains joined-up and transparent.

As the methodology develops, we will share it with regulators at key stages to seek their feedback and endorsement.

Forecasting Demand

To plan for the future, each water company will develop demand forecasts covering at least the next 25 years. These forecasts will look at how much water households and businesses may need under a range of different future scenarios.

What goes into our demand forecasts
We use a wide range of information to understand future demand, including:
- Population and housing growth
- Smart meter data
- Climate and drought impacts
- Economic trends alongside new and emerging sector needs, such as AI and energy

Different scenarios we consider
To make sure our plans are robust, we test demand under a variety of conditions, such as:
- Low, medium and high demand futures
- The impact of increased metering
- Water efficiency labelling
- Normal and dry-year conditions, including peak periods
- Uptake of New Appointments and Variations (NAVs)

Demand Policies
These forecasts also factor in:
- Metering strategies
- Water efficiency programmes
- Leakage reduction plans

Models
Each company develops its own models for both household and non-household demand.

Outputs
Baseline demand forecasts and demand options reconciled at a regional level.

Demand Reduction Targets

WReN's Regional Plan 2029 will aim to meet the below statutory demand targets:

- 50% reduction in Leakage by 2050
- 110 l/h/d per capita consumption by 2050
- 20% reduction in Distribution Input per Capita by 2038
- 9% business use reduction by 2038

Forecasting Supply

To understand how much water will be available in the future, we build supply forecasts using methods developed in the previous planning cycle. These forecasts draw on detailed water resource models used by each water company, combined with long-term hydrological data, to assess how much water we can reliably supply under a range of future conditions.

What goes into our supply forecasts
We use a range of technical inputs to help understand future water availability, including:
- Long-term flow records and simulated inflow data
- Rainfall-runoff models
- Hydrological datasets that show how water moves through the environment

Considering climate change
We model future supplies under climate change scenarios that include:
- 2°C of warming by 2050
- 4°C of warming by 2100

This helps us understand how hotter, drier summers and more intense weather patterns could affect water availability.

Maintaining high levels of service
The specific parameters for water supply service levels are currently under review by the water companies, but we will continue to plan for a system resilient enough that emergency drought measures are only needed once every 500 years.

How we model supply
We use industry-standard specialist water resource models, such as:
- PyWR
- Aquator XV

These models help us simulate how our water systems perform

Outputs
The final outputs will include baseline supply forecasts produced by each company, brought together to create a consistent view of future water availability across the WReN region.

Sustainable Catchments

Strategic Tracking of New Developments

Drought

Regional Approach

Options Development

Public Water Supply

Options development follows the following stages:

1. **First-stage screening** - High-level feasibility checks are carried out to form an unconstrained list from generic option types
2. **Second-stage screening** - Further assessment removes less viable options, producing a constrained list.
3. **Detailed assessment** – These constrained options are designed and costed to a suitable stage to be utilised with the best-value planning process.

Options may progress into the regional plan where they provide wider benefit or affect other companies' water resource zones. These include but are not limited to:

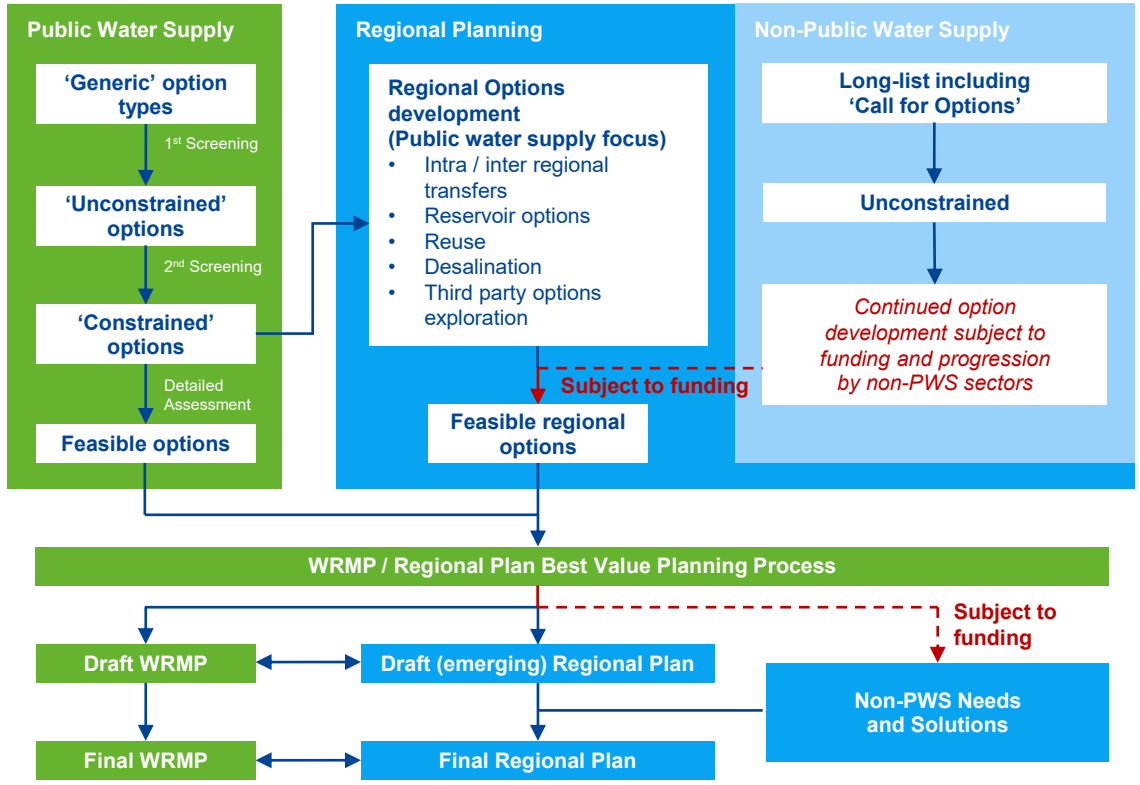
- New or expanded reservoirs
- Desalination
- Water recycling
- Water transfers
- Third-party options

Non-Public Water Supply

Opportunities for non-public water supply may be identified through:

- The public water supply options identification process
- Multi-sector workshops
- Funded activities as part of workstreams
- Conversations between WReN/ water companies and stakeholders

Where opportunities are identified, they will be shared with stakeholders. Further development will require a third party to receive or provide water, along with appropriate funding to progress the option.



Sustainable Catchments

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Regional Approach

Decision Making, Modelling and Metrics

Decision making forms a critical component of developing a best-value plan. This slide details our approach in developing its suite of tools and models to create a best-value plan for both the public and non-public water supply sectors.

Regional Simulation Modelling

- Companies will use their own enhanced water resources models in a coordinated manner to assess the impacts of transfers and strategic options.

Metrics

- We will establish a consistent suite of regional objectives and metrics that align with our ambitions. These will help use compare programmes including assessment of non-monetary benefits.
- These will be developed with experts and tested with our key stakeholders and PWS customers to understand priority.

Regional Decision-Making Modelling

- Companies will run their own decision-making tool to assess options using an economic of balancing supply and demand (EBSD) approach.
- Yorkshire Water's decision-making tool will allow the appraisal of transfer options and multi-zonal optimisation- making it suitable for regional planning
- Companies will follow a coordinated approach to assumptions, scenarios, and metrics to ensure consistency across WRMP's and the Regional Plan.

Non-Public Water Supply

- Benefits of non-PWS options will be represented at a programme level through relevant metrics.
- We envisage non-PWS options will be developed at a much more local scale, for example, through local resource options or the Sustainable Catchments workstreams.
- As these options progress into the plan, their inclusion in the regional decision-making process will be refined.

Sustainable Catchments

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Regional Approach

Managing Uncertainty

Uncertainty is inherent in any long-term strategic plan. We plan to manage this uncertainty in a transparent and structured way to ensure our plan is resilient to a wide range of possible futures.

This large-scale uncertainty planning will inform the future adaptive planning pathways. In our approach we will:

- Build resilience through appropriate scenario testing using common reference scenarios and targeted stress tests on the largest risks as part of our best-value planning process
- Test uncertainties with the largest drivers within our region (e.g. non-potable supply needs, different growth futures, and varying demand reduction pathways)
- Manage uncertainty in the short term by conducting a headroom assessment on public-water supply plans. This will consider different smaller components of uncertainty and take a probabilistic approach to include an appropriate headroom to account for this uncertainty.

Accounting for the Views of our Customers and Stakeholders

We will develop the Regional Plan using the insight and preferences of our customers and stakeholders across the region. We will:

Test the overall ambition:

We will understand support for its long-term ambitions with customers and stakeholders through targeted research.

Explore 'best-value' expectations:

Detailed research into what customers believe a best-value plan should deliver, covering water supply, metrics, environmental goals, water trading, affordability/willingness to pay, non-PWS options, and alignment with DWMPs.

Carry out a deep-dive into WRMP options and plans:

Each company will test its own WRMP options with its customers; findings will feed back into the Regional Plan.

PR29 business planning specific research:

Further customer research conducted by each company to support PR29 business plans, ensuring alignment between company plans and the overall regional plan.

Environmental Assessment

Environmental assessments will be coordinated across the Regional and Water Company plans to ensure consistent option and programme assessments.

Joint Strategic Environmental Assessment (SEA) Scoping

- A joint SEA framework will be used across multiple regions to ensure consistency between assessment approaches, allowing assessments to be comparable.

As part of our assessments, we will:

- Carry out full assessments for PWS plans and options (to ensure compliance with the National Framework)
- Carry out proportionate, high-level screening for non-PWS options, with detailed assessment where justified
- Assess the combined (*in-combination*) and cumulative impacts and trans-boundary effects across schemes and regions
- Incorporate findings from Water Industry National Environment Programme (WINEP) investigations into plans, updating constraints and identifying where mitigation or alternative solutions are needed.

Sustainable Catchments

Strategic Tracking of New Developments

Drought

Non-PWS: Sector Approach

Agriculture and Grower Groups	Navigation	Energy
• Continue monthly agriculture sector meetings as a platform to discuss issues / progress • Prioritise actions & recommendations from previous EA funded projects to enable a targeted best value approach with the available resources • Springboard from communications and engagement material undertaken from previous funded work - maintain targeted communications for priority segments at a frequency appropriate with the available resources • Understand environmental destination impacts at a catchment level via our Sustainable Catchments workstream; raise awareness with all sectors • Support in raising awareness of local resource options and Water Abstractor Groups opportunities • Develop the mechanism for agriculture inputs into the regional planning process • Continue to support in creating visibility of need for further funding and mechanism for funding.	• Monthly navigation sector meetings as platform to discuss issues / review progress • Review and discuss the Canal & River Trust's (CRT) own water resource strategy and system needs/pressure points, where there may be opportunities for joint solutions and/or multiple benefits • Joint workshops with water companies (and other sectors as required) to explore water transfer opportunities • Navigation sector participation in sustainable catchments and strategic options workstreams, as appropriate • Keep informed other interested parties from the sector, in particular Association of Inland Navigation Authorities (AINA) and Inland Waterways Association (IWA) • Support potential further funding needs / applications to explore solutions.	• Continue to raise the profile of water as a constraint to energy development with regulators and government bodies in relevant forums • Continue horizon scanning and to enhance cross-sector awareness/engagement through monthly strategic energy group (including sector umbrella groups, regulators & the National Energy System Operator - NESO) • Utilise available future updated energy scenarios from appropriate energy stakeholders to inform understanding of future regional growth. In particular, Energy UK's Joint Environment Programme (JEP) is currently revising regional scenarios to inform our regional plan • Work with NESO to understand, influence and define appropriate interactions between strategic and regional energy plans, and the regional plan / WRMPs • Understand environmental destination data impacts at a catchment level via our Sustainable Catchments workstream; raise abstractor awareness • Explore specific spatial developments (see below).

Data Centres	Manufacturing and Industry	Future Strategic Groups	Industrial Spatial Clusters
Sustainable Catchments			
Strategic Tracking of New Developments			
Drought			

Non-PWS: Sector Approach

Data Centres	Manufacturing and Industry	Future Strategic Groups	Industrial Spatial Clusters
• Set up sector engagement sessions as a platform to discuss issues and learn from each other • Promote recycled water service models (e.g. onsite reuse), with quality-appropriate supplies and resilience plans for heat/drought • Develop a Data Centre siting note mapping water constraints/opportunities to guide investors to least-impact locations • Develop a clear statement of the position within our region to reflect the different zones • Identify potential participants and feasibility of a specific Sector group vs a workstream without meeting. It is uncertain who would sit in this at present • Raising the profile of water availability and providing a route for a pre-application conversation and the availability of water • Opportunity to design-in recycled water and co-locate with reuse assets to maximise water efficiency.	Given the scale and diversity of this sector area we do not envisage a specific sector group but the workstream will draw upon intel from the Strategic Tracking of new developments and identify where sector growth may be of material scale for the regional plan that may warrant new spatial cluster workstream areas.	At this time, whilst we will track the potential for future water needs and solutions across sectors supported by the strategic tracking of new developments, we would only envisage further strategic groups where there is a strong signal of strategic regional growth for a specific sector relevant regional water planning. We will only consider a new group if there is a step-change across the region. We will endeavour to track and monitor developments/groups of developments that are specifically located and do not span the region.	• Specific WReN reps to engage with key existing stakeholders / cluster groups • Participate with cluster working groups relevant to water, where appropriate • Conduct high-level assessment of impacts across a range of demands, especially where these impact PWS – assess indicative options needs and 'tipping points' • Support applications for further funding to assess solutions/options in more detail.

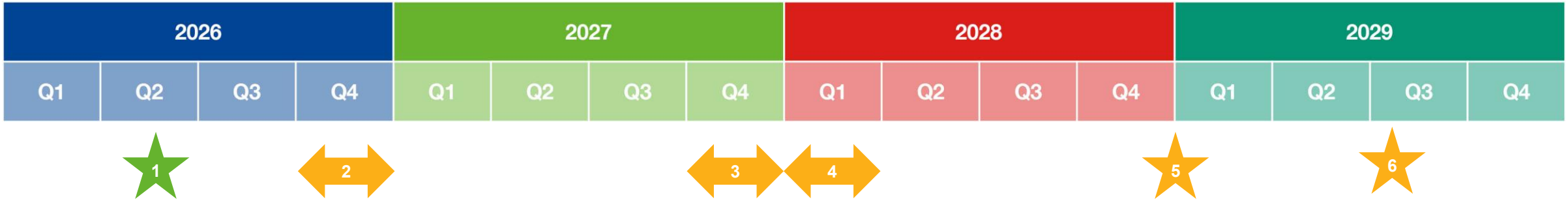
Agriculture and Grower Groups	Navigation	Energy

Sustainable Catchments

Strategic Tracking of New Developments

Drought

Timeline to Develop RP2



1 WReN Approach to Regional Plan 2029

Setting out our approach to developing a multi-sector Regional Plan 2029.

2 National Reconciliation 1

First round of the national reconciliation process to align strategic transfer options identified for consideration in the plans and other interdependencies between the five regional water resources groups.

3 National Reconciliation 2

Second iteration of the national reconciliation process to align strategic transfer options selections in the plans and other interdependencies between the five regional water resources groups.

4 WReN Emerging Regional Plan

Production of an emerging regional plan in alignment with the draft Water Resources Management Plans 2029 and reconciliation 2.

5 Non-Public Water Supply Needs and Solutions

Establishment of the non-public water supply needs and solutions for the WReN Regional Plan 2029.

6 WReN Final Regional Plan 2029

Publication of the WReN Final Regional Plan 2029.

Q1 - Quarter 1 = January to March
Q2 - Quarter 2 = April to June
Q3 - Quarter 3 = July to September
Q4 - Quarter 4 = October to December

Next Steps

Development of Regional Planning Approach	• *We will* continue to develop our methodologies, tools, and systems for creating the regional plan • *We will* do this in conjunction with the guidance within the National Framework and Water Resources Planning Guidelines.
Regional Reconciliation	• *We will* work with the regulators and other regions to plan towards the first round of the national regional reconciliation later in the year; this process will involve reconciling transfer schemes nationally to ensure a nationally consistent set of strategic options, common scenarios to test, and one single version of the truth.
Sustainable Catchments	• *We will* establish our approach to ED and solutions development including nature-based, through cross sector collaboration based on local and regional data to tackle our future water challenges • *We will* collaboratively develop and refine our approach by testing on two pilot catchments prior to wider roll-out to all catchments in region.
Non-Public Water Supply	• *We will* develop and mobilise additional sector groups and workstreams including those relating to AI, data centres and strategic tracking of new developments (following energy, agriculture and navigation) • This year, we will prioritise further definition of our approach alongside activities required to establish new workstreams / groups.
Future Readiness	• *We will* work with Defra and other regulators to be ready to adapt to the future policy landscape of the water industry in light of ongoing water industry reform.

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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