

# WRMP24 Best Value Plan



AWS-River Lark meeting | 9<sup>th</sup> September 2022

**Please treat this information as confidential.**



# Agenda

Today we will cover;

- Our draft WRMP24
- Overview of environmental destination and WRMP24
- PR24 WINEP

love every drop  
anglianwater



# Water Resource Planning

The National Framework group implemented regional planning groups. These assess the future water requirements of their region and develop a Regional Plan. The groups cover the environment, public water supply and non-public water supply.

- Water companies have a statutory obligation to prepare and maintain a Water Resources Management Plan (WRMP).
- Companies must set out how they will ensure they have sufficient water resources to meet the current and future demands of their customers, over a minimum 25-year period.
- Published on a five-yearly basis, it must provide a 'Best Value Plan'.



The Regulators' Alliance for Progressing Infrastructure Development has been formed to help accelerate the development of new water infrastructure and design future regulatory frameworks. The joint team is made up of the three water regulators Ofwat, Environment Agency and Drinking Water Inspectorate.

# Current plans in delivery



## Demand Management Strategy

### Water Efficiency

Working with customers to achieve 130l/head/d by 2025



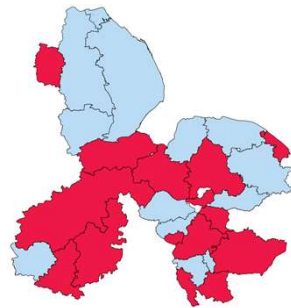
### Smart Metering

1.1 million smart meters to be fitted by 2025

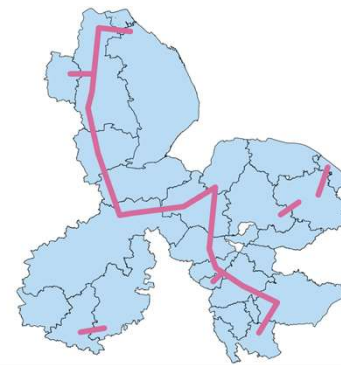


## Tackling Leakage

Reducing leakage by 22% by 2025



## Supply-Side Strategy



### Interconnectors

550km of transfers to move resource from areas of surplus to those in deficit.



## Environmental improvements

### Action on abstraction

85 million litres per day reduction in abstraction licences by 2025. This will be enabled by hundreds of kilometres of strategic pipelines, as well as restoration of rivers and chalk streams.



## Water Industry National Environment Programme

Largest WINEP programme in England and Wales, 2020-2025. Screening and eel pass improvements across 200km of river habitat. Physical habitat restoration across 120km of river habitat.



# Challenges for WRMP24



## The amount of water available for use

### Legal requirements:

- Abstraction licences reduced on our groundwater sources to ensure no deterioration under the Water Framework Directive;
- Ensure flows support 'Good' status in the support of objectives in River Basin Management Plans.

### Environmental Destination:

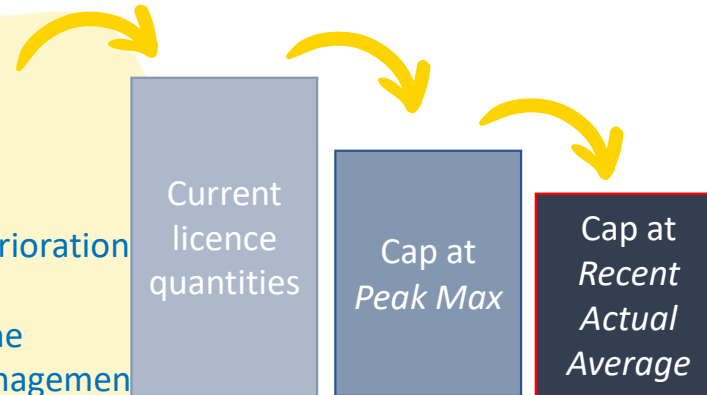
- Further restoration and improvement of the environment above and beyond legal requirements.

### Drought resilience

- Moving from 1 in 200-year to 1 in 500-year resilience;
- Less reliance on drought permits.

### Climate change

- Moving from historic to future climate change.



## The amount of water needed

### Population growth:

- Potential for significant growth in OxCam Arc and other hotspots
- 890,000 additional population expected over next 25 years

**Increase in non-household demand** e.g. South Humber Bank hydrogen

### Demand management

- Industry leading for leakage performance;
- Achieving lower levels of leakage is very expensive, circa £2.6 billion to achieve a 40% leakage reduction.

### Supply-side management

- Limited existing resource available due to licence caps;
- Considering resources which may not be as acceptable to customers, such as desalination and water reuse.

# Scale of the challenges in addressing climate change, population growth and environmental protection



## Future climate change

Total impact by 2050: 6 MI/d



## Environmental destination and sustainability reductions

Total impact by 2050: 369 MI/d



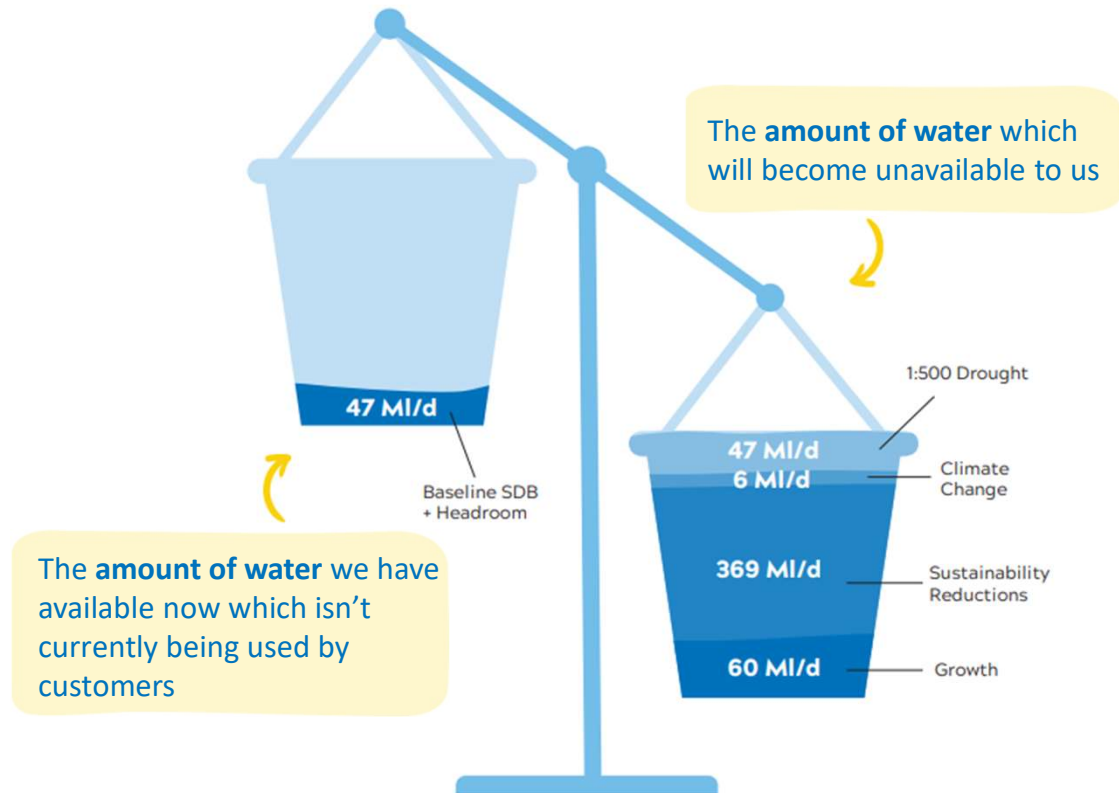
## Population growth

Total impact by 2050: 60 MI/d



## Increased drought resilience from 1 in 200 years to 1 in 500 years

Total impact by 2050: 47 MI/d

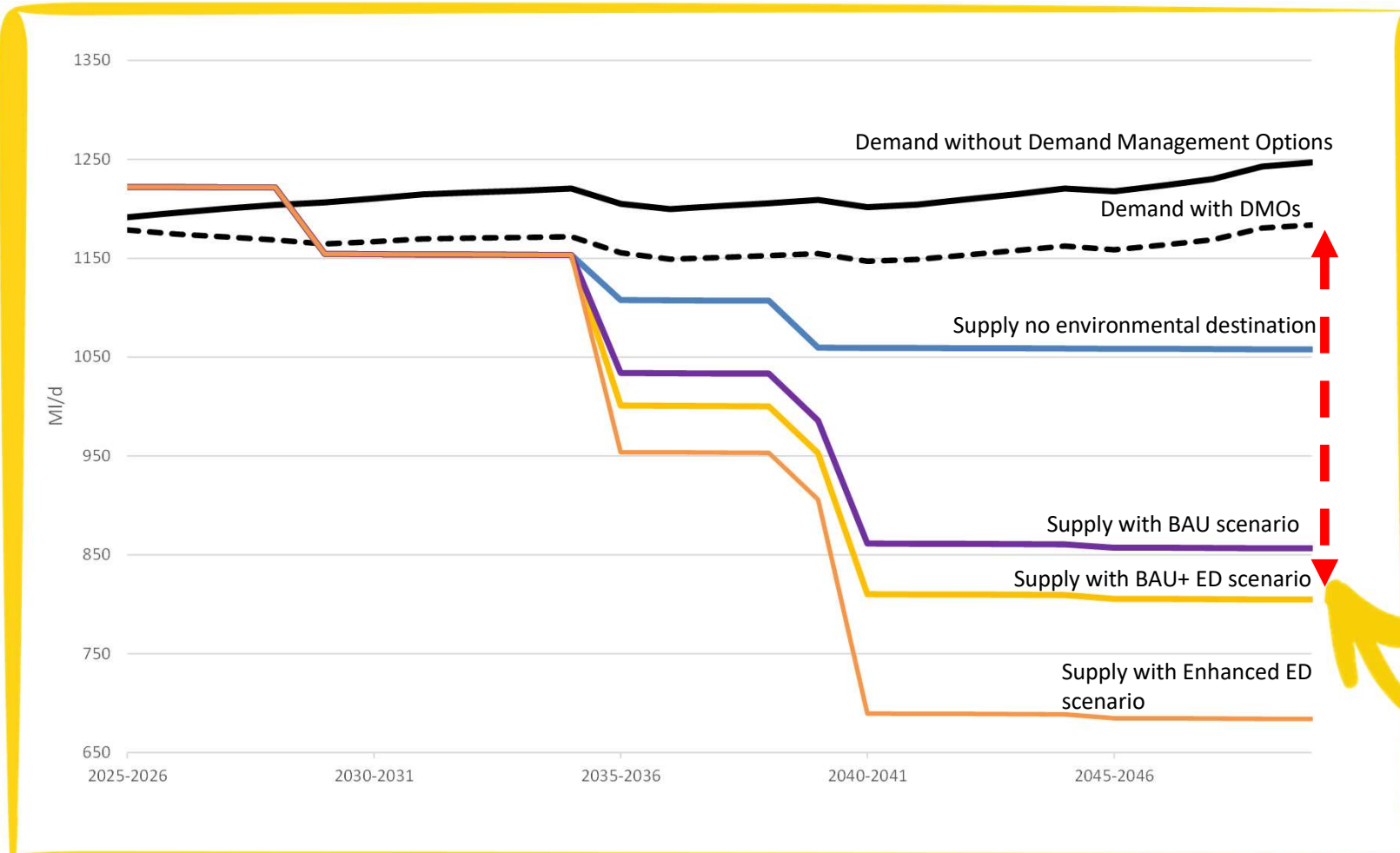


# Supply-Demand Balance (Baseline)



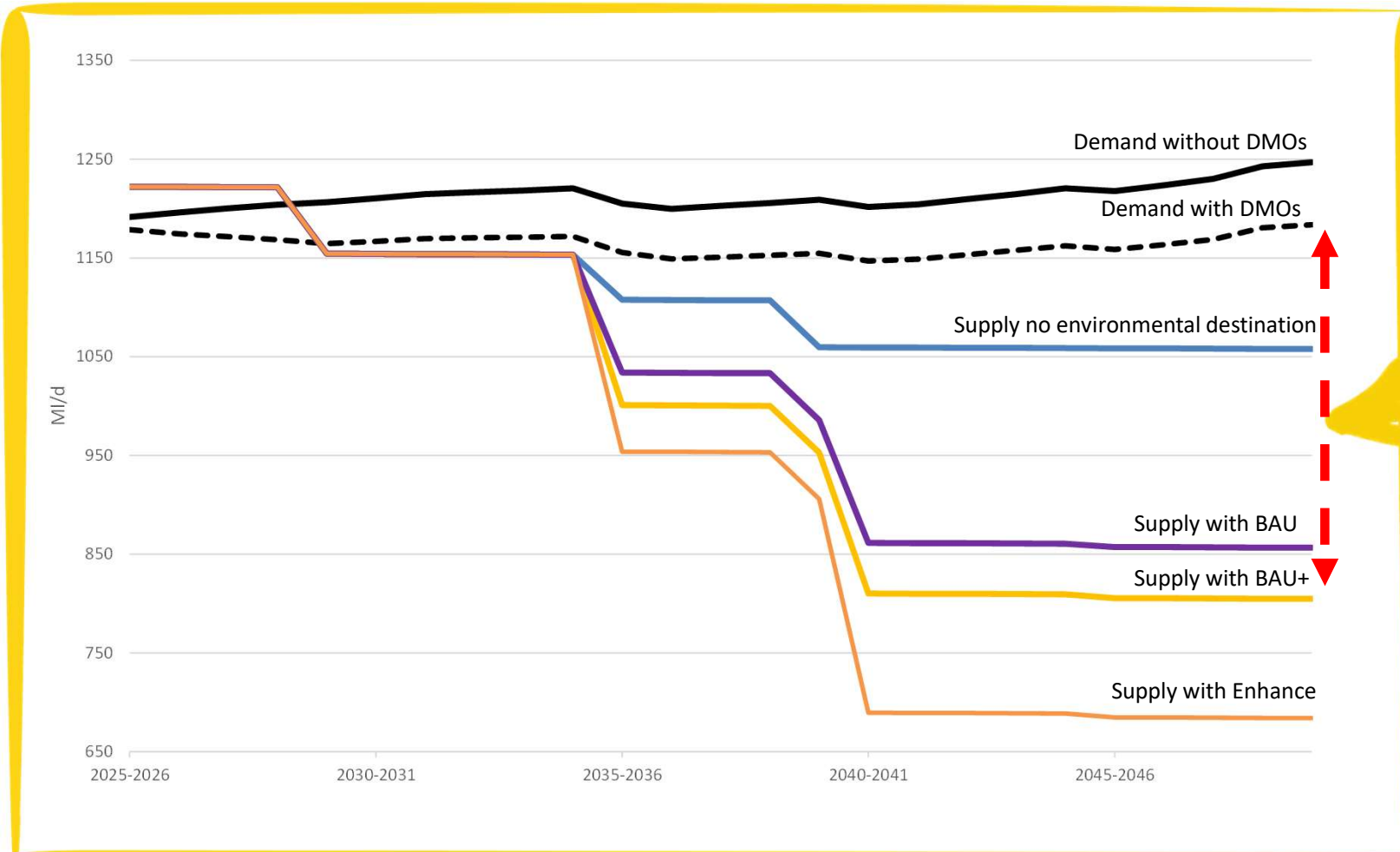
## What's environmental destination?

This is our aim to deliver long term sustainability and environmental resilience, beyond statutory licence capping.



Demand management alone will not keep our customers on a safe, resilient water supply.

# Supply-Demand Balance (Baseline)



Demand management alone will not keep our customers on a safe, resilient water supply.



# The WRMP24 trade-offs

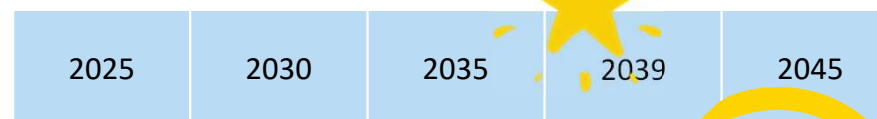
The WRMP24 has a number of **complex decisions** surrounding **licence capping**, when we achieve **1 in 500-year drought resilience**, **environmental enhancement** and its **timing** and the type of **supply-side options** selected.

**Licence capping** (different scenarios for the time periods when our time limited and other licences will be capped at average)



- Licence capping to average use will reduce the amount of water we have available;
- The sooner these average licence caps are implemented, the quicker we will need new supply-side options;
- Given availability of options, this will push us to options such as desalination, and delay the ultimate selection of reservoirs;
- Licence capping is going through an OPI process at present;
- The implementation of caps will ultimately be determined by the Secretary of State for Defra.

**Drought resilience timing** (when do we achieve 1 in 500-year drought resilience)



## Sooner

- Achieve increased resilience sooner;
- Less reliance on drought permits;
- Utilise new supply side options such as desalination or reuse.

## Later

- Higher risk of emergency measures;
- Utilise drought permits until reservoirs able to be built;
- Provides adaptability.

# WRMP24 trade-offs



**Environmental destination** (the amount of environmental enhancement)



**Environmental ambition** (the timing of the environmental destination)

None	BAU	BAU+	Enhance
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2025	2030	2035	2039	2045
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- Increased environmental protection and enhancement;
- Costs increase the higher the level of environmental gain;
- As environmental destination increases, higher numbers of supply-side options needed.

- Environmental improvement delivered later;
- Delivering environmental destination earlier than 2035 would require supply-side options such as desalination or water reuse.

## Reservoirs

- 13 to 18 years to plan, build and fill;
- Can provide environmental and societal benefit;
- High cost to build but low running costs;
- Popular with customers.

## Reuse

- 7 to 10 years to become operational;
- Utilises existing water recycling effluent;
- High cost to build and run (treated twice and high energy consumption);
- Popular with customers.

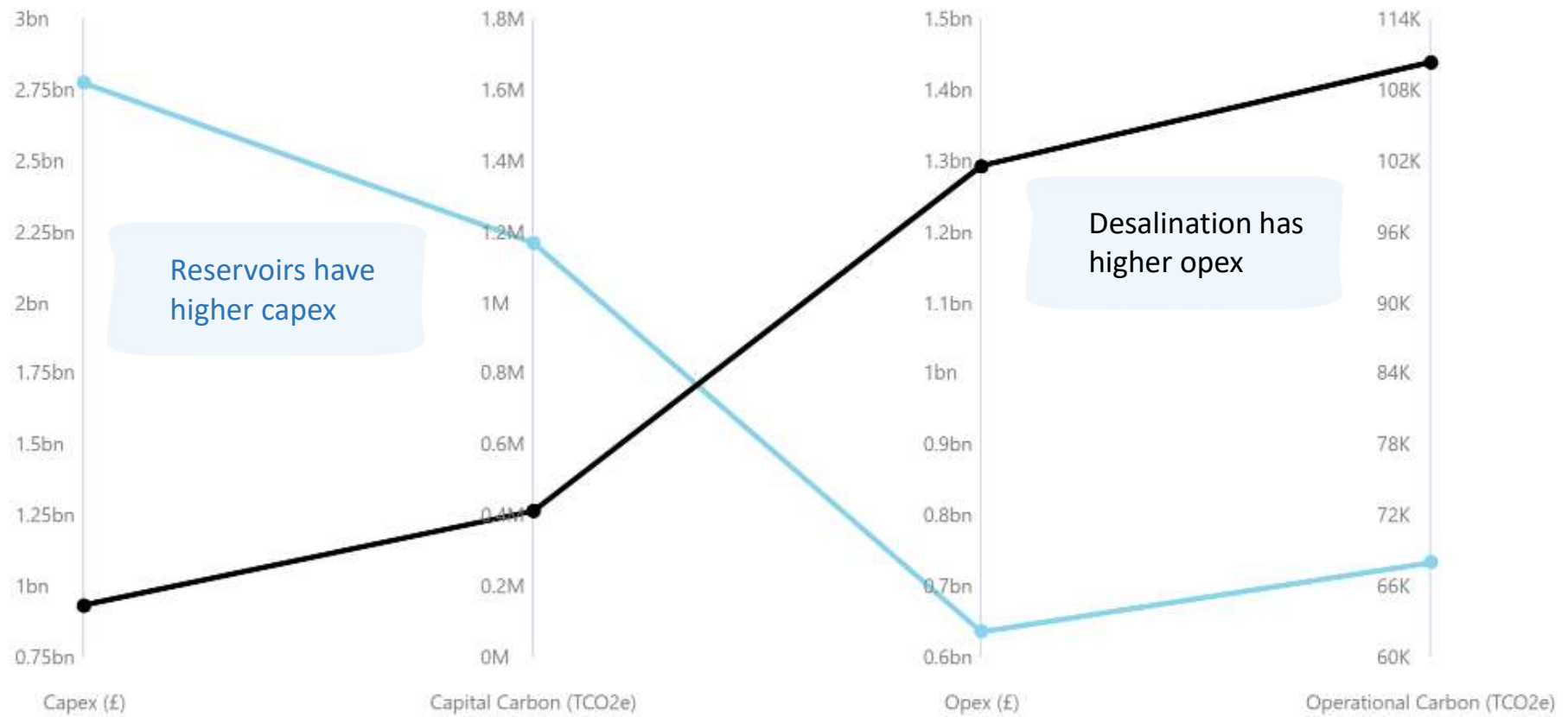
## Desalination

- 7 to 10 years to become operational;
- Reliable source of water, especially during drought;
- High cost to build and run (high energy consumption);
- Unpopular with customers.

# Cost and Carbon trade-off

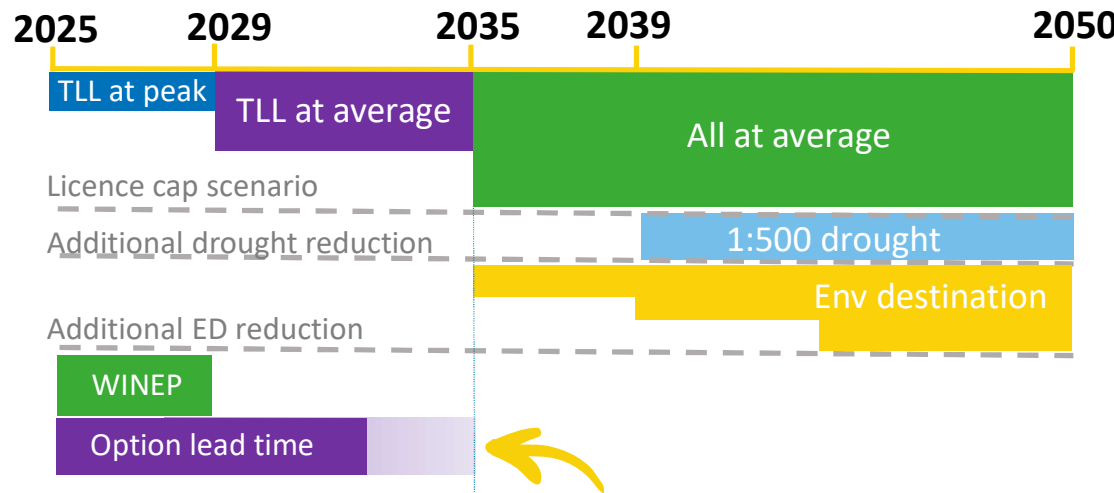
Example from our previous round of EBSD modelling.

WRE | Least Cost Plan



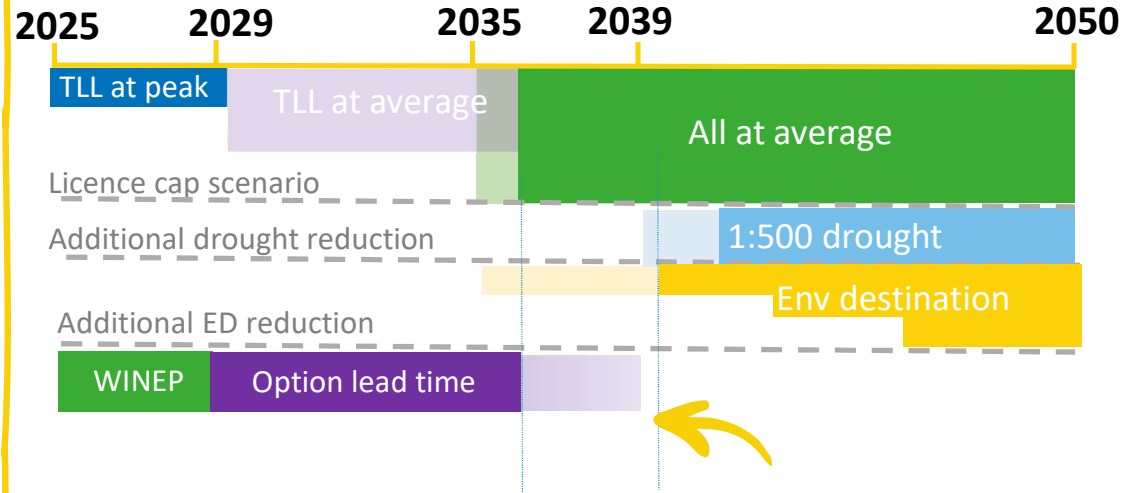
# No Regret Investment

## Profiling Supply Forecast Reductions



Not adequate time for WINEP to inform strategy due to option lead times

Delivering options to meet 'most likely' scenario



Delay some impacts to allow WINEP to inform strategy. May still be local opportunities to deliver impacts earlier. Also may mean decision on desalination can be made at WRMP29.

Developing a scenario to maximise no-regret investment

# Achieving a Best Value Plan

## What is a Best Value Plan?



This was introduced for this latest WRMP, with the aim of a regional plan and a WRMP being to present a best value plan, both in the short term and the long term.

A WRMP must ensure a secure supply of wholesome drinking water for customers and protect and enhance the environment.

A best value plan is one that considers factors alongside economic cost and seeks to achieve an outcome that increases the overall benefit to customers, the wider environment and overall society



# How will we tackle demand management in WRMP24?

**Public Interest Commitment** is a voluntary target to “triple the rate of sector-wide leakage reduction by 2030”.



The **National Infrastructure Committee** have called for a 50% leakage reduction by 2050.



## Leakage

We will **continue to build on our frontier demand management position by reducing leakage** by a further 10 MI/d by 2030. We will meet the 2030 Public Interest Commitment by 2025 and the 2050 National Infrastructure Committee’s level by 2030.



## Smart metering

Complete roll out of smart meters by the end of 2030, building on our current strategy.



**2025-2030  
saving  
41 MI/d**

## Saving water

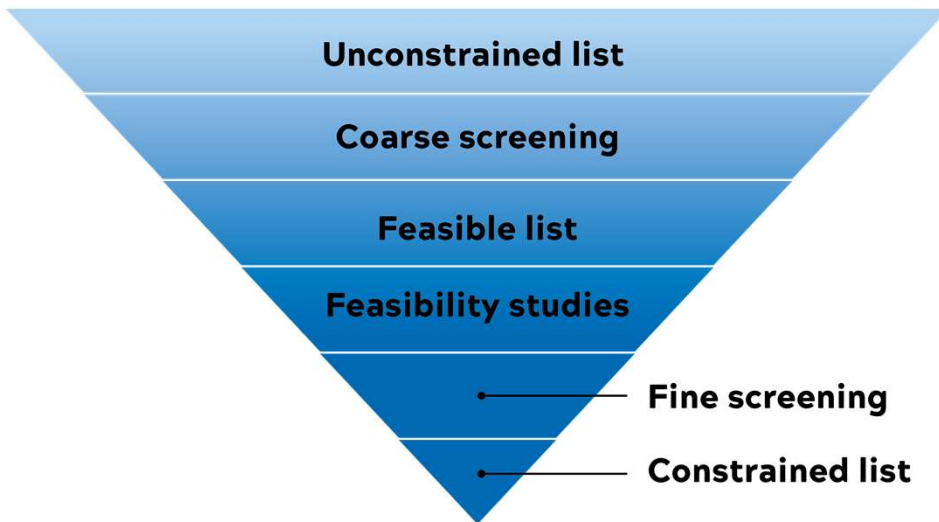
We will provide a high level of customer support based primarily on behaviour change and the identification of customer supply-side leakage. This will achieve a Per Capita Consumption of 120 litres per head per day by 2030 and reach the National Framework target of 110 litres per head per day by 2050.



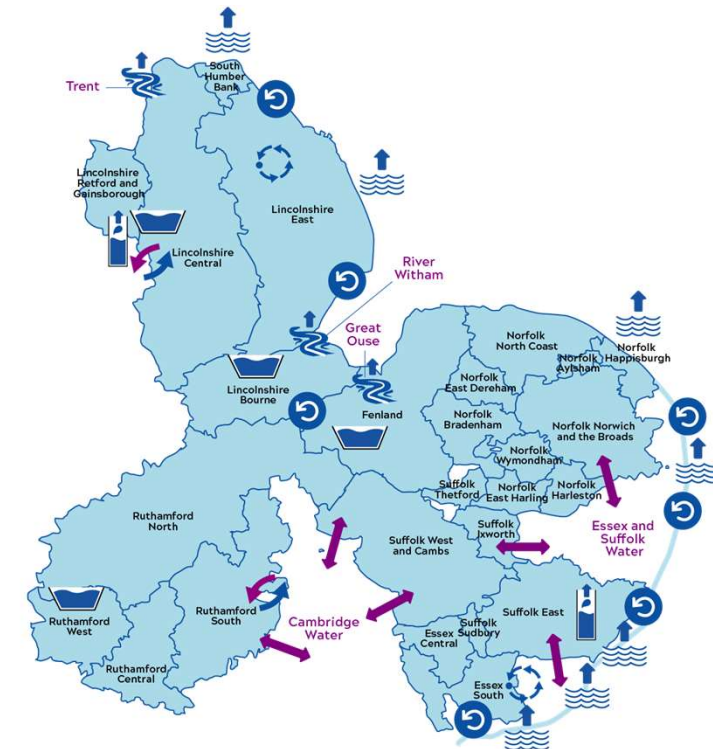
## Compulsory metering

We believe that all customers should pay for what they use. Therefore, from 2025 all customers who have a meter now or in the future will pay on this basis. We will support eligible customers with our range of tariffs.

# WRMP24 supply-side options



Water re-use	Raw water storage reservoir
Brackish desalination	Seawater desalination
Aquifer storage and recovery	Water resource sharing
Conjunctive use	Supernatant return



# Strategic regional options



Plans progressing for new multi-sector South Lincolnshire and Fens reservoir systems to address long-term water supply challenges



Each of the two new reservoirs may be the size of Grafham Water

Planning permission AMP8 (2025-2030)  
Projected completion mid-2030s



Water resilience	Flood protection	Biodiversity net gain	Public amenity	Multi- beneficiary

Gateway funding secured through RAPID (Regulators' Alliance for the Progression of Infrastructure Delivery)



Two new reservoir systems: South Lincolnshire Reservoir and Fens Reservoir to deliver up to 250 million litres a day and will serve the needs of homes, businesses and agriculture.



# WRMP24 Best Value Plan

## Implement **demand management options**:

- Smart metering
- Compulsory metering
- Water efficiency
- Further leakage reduction

**Fens Reservoir** into supply to offset licence caps in the east of our region.

Take an **adaptive approach** to further supply-side options. This will be determined by environmental destination WINEP investigations in AMP8.

2025 - 2029

2030 - 2034

2035 - 2039

2040- 2044

2045-2050



Conduct **targeted WINEP investigations in AMP8** to determine environmental destination scenario.

Interim supply option in the **Suffolk/Essex area** to meet demand prior to reservoirs coming online.

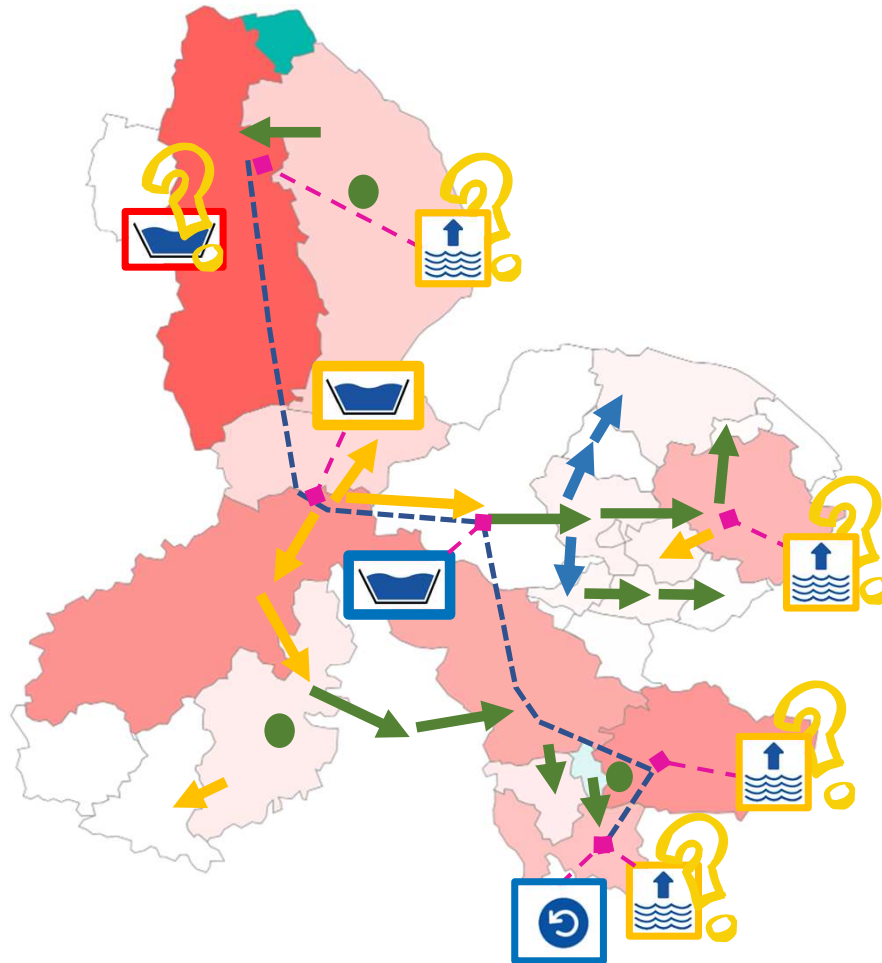
**South Lincolnshire Reservoir** into supply.

## Our strategy is:

- We will plan for **two reservoirs**.
- Delay sustainability reductions in **certain areas**.
- **Further environmental improvement** to start in priority feasible locations in 2035.
- **Increased drought resilience** to be achieved by early 2040s.
- **Any surplus water** created by the two reservoirs to be utilised to bring forward further environmental improvement



# Our Best Value Plan



Water re-use	Desalination
Raw water storage reservoir	Other new resource option
New interconnectors	Our WRMP19 interconnectors
Transfers associated with resource options	
AMP scheme must be delivered by the end of	
AMP8: 2025-2029	
AMP9: 2030-2034	
AMP10: 2035-2039	
AMP11: 2040-2044	
AMP12: 2045-2050	

# Taking environmental action



We have a long track record on protecting and enhancing our environment and our commitment continues, guided by our 25-year Strategic Direction Statement and delivered through five-year business plans



NORFOLK WATER  
STRATEGY PROGRAMME

## Natural Capital plan

We, along with WRE, aim to develop a shared vision for the restoration of nature across the East of England. The plan identifies priority areas for different types of natural capital actions across the region.

## The Norfolk Water Strategy

Using nature-based solutions, we are working with partners to solve water scarcity issues at county scale.

Key questions include:

- Which of Norfolk's water assets need to be protected, restored and enhanced to deliver "ecosystem services" and enhance Norfolk's water security?
- Which nature-based solutions can be deployed to deliver such benefits?
- Where investing in nature-based solutions at county scale can help deliver substantial benefits, with demand management and grey infrastructure?

## Water for Tomorrow

A partnership supporting the development and implementation of new and innovative operational management tools and processes that will enable more responsive short-term water resource management, and better long-term planning and investment, at the local scale.

## River restoration

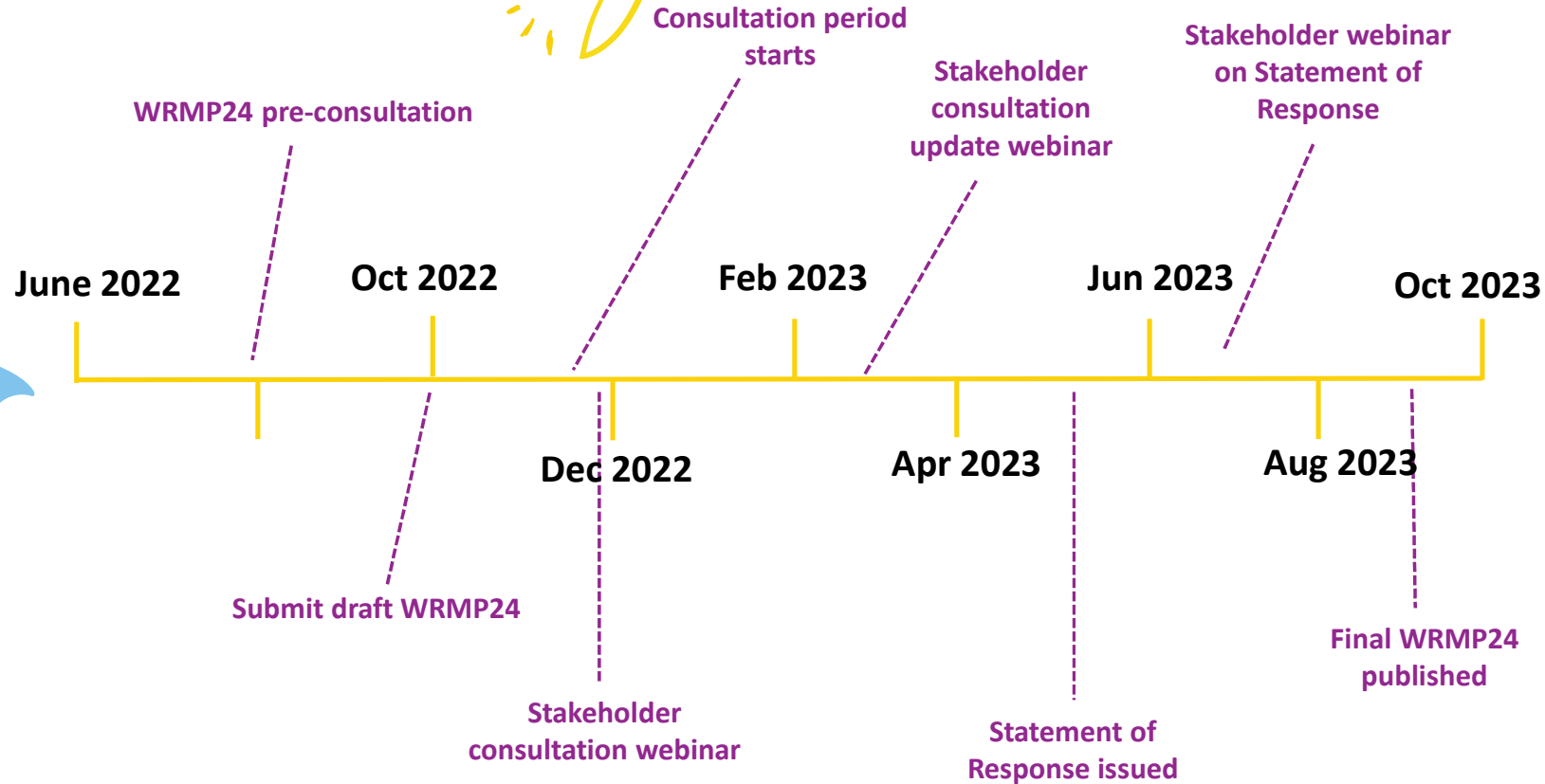


We are delivering a programme of river restoration schemes at selected areas across the East of England. Sixteen different schemes will be designed to restore unique river habitats, improving ecology and biodiversity.

## Chalk streams and rivers

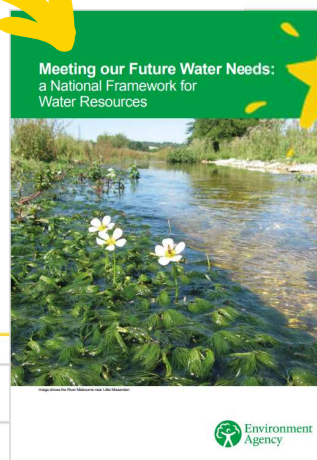
Addressing unsustainable groundwater abstraction is a critical element to the protection of chalk streams. A particular area of focus is the River Lark, in Suffolk. We have agreed with the Environment Agency that by March 2025 the 'Hands Off Flow' level will be tightened. This means we will act sooner to protect flows in the river.

# WRMP24 programme

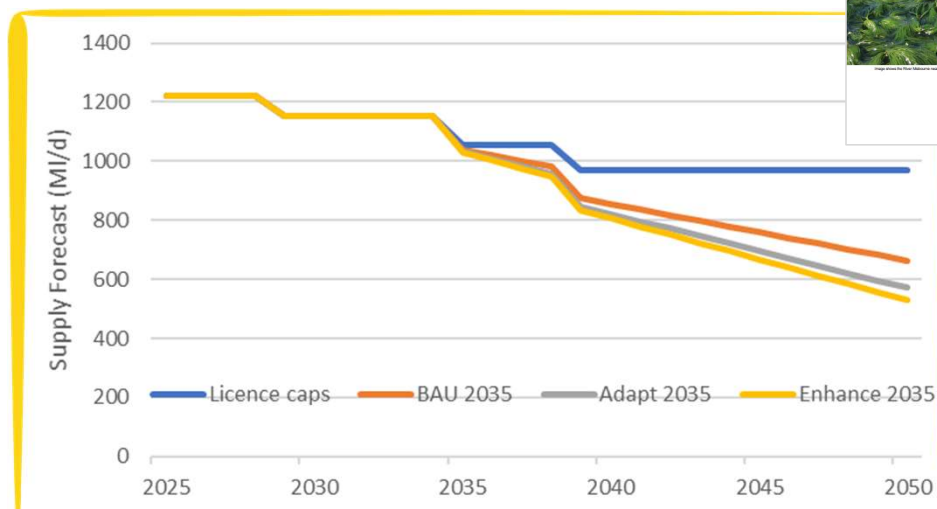


# Environmental Destination

WINEP (Water Industry National Environmental Programme) has typically investigated and implemented environmental improvement schemes, operating on an AMP-by-AMP basis.



The National Framework has introduced a step change: a long-term (25 year) approach to sustainable abstraction. Aims to achieve desired flows in the River Basin Management Plans, further ensure environmental resilience to climate change and encourage collaboration between sectors/abstractors.



The choice of environmental destination scenario will ultimately depend on AMP8 investigations to determine the costs and benefits of reducing abstraction.



We have developed scenarios to help us understand:

- The required **environmental flows** to support a healthy ecology;
- The necessary **licence changes** to achieve sustainable abstraction over the **long-term**;
- Potentially inform future **WINEP programmes** of work;
- The need for **infrastructure** to **solve deficits** in the region.

**Slide 21**

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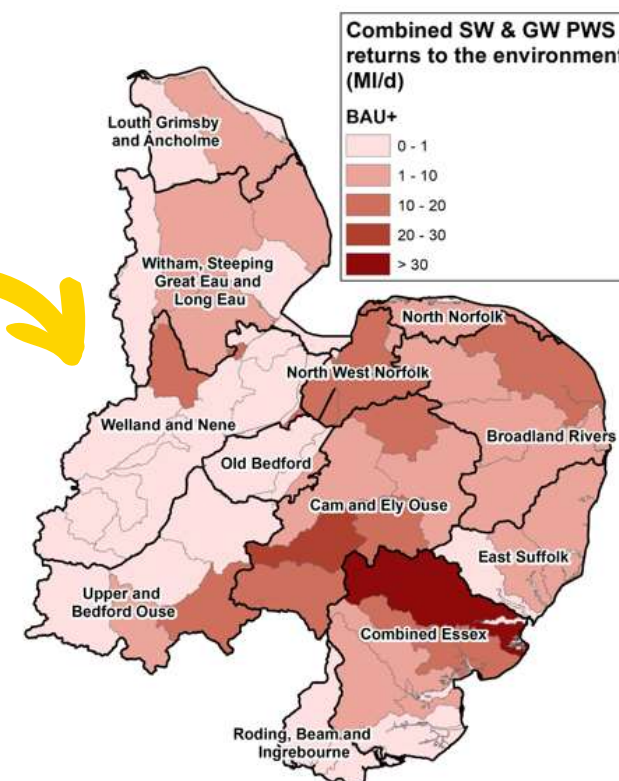
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# Environmental Destination-scenarios

Scenario	Name
<ul style="list-style-type: none"> <li>Achieving flows to support 'Good' under Water Framework Directive</li> <li>Excluding uneconomic waterbodies (RBMPs)</li> </ul>	BAU
<ul style="list-style-type: none"> <li>Achieving flows to support 'Good' under Water Framework Directive</li> <li>Excluding uneconomic waterbodies (RBMPs)</li> <li>Ensuring more protections for European Protected Sites (new framework for protected sites)</li> </ul>	BAU+
<ul style="list-style-type: none"> <li>Achieving flows to support 'Good' under Water Framework Directive</li> <li>Including uneconomic waterbodies (RBMPs)</li> <li>Ensuring more protections for European Protected Sites (new framework for protected sites)</li> <li>Extra protections for chalk streams, sensitive headwaters and SSSIs.</li> </ul>	Enhanced



**Slide 22**

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# PR24 WINEP

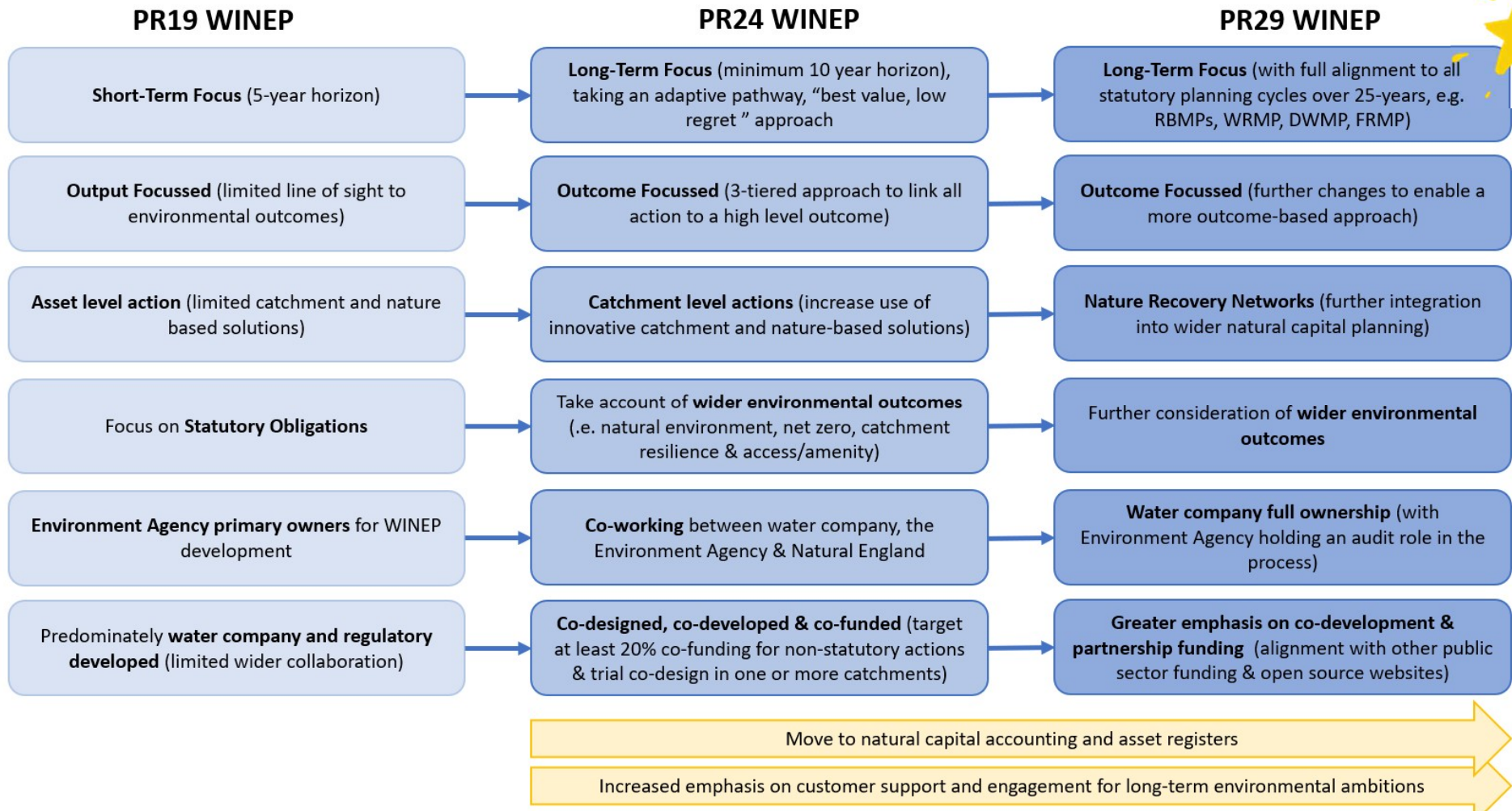


Anglian Water / Ofwat / EA Engagement Meeting

15<sup>th</sup> September 2022



# PR24 marks a step towards long-term change



# Least Cost vs. Best Value Planning

Our PR24 WINEP must demonstrate the difference between “Least Cost” and “Best Value” planning, building on the approach taken in strategic water resources planning.

*“Best Value” is a plan that considers factors alongside economic cost and seeks to achieve an outcome that increased the overall benefit to customers, the wider environment and overall society.*

Water companies are expected to take account of how their proposed options within WINEP contribute to the four WINEP wider environmental outcomes. These have been set by the Environment Agency and have defined industry metrics as outlined below;

## Natural Environment

- Biodiversity
- Water Purification by Habitats
- Water Quality
- Water Supply
- Food – Shellfish
- Air Quality – Pollution Removal

## Net Zero

- Climate Regulation

## Catchment Resilience

- Hazard Regulation – Flood
- Water Purification (Filtration by Habitats)
- Water Quality
- Water Supply
- Climate Regulation

## Access, Amenity & Engagement

- Recreation
- Recreation – Angling
- Volunteering
- Education

# Trade offs & Choices

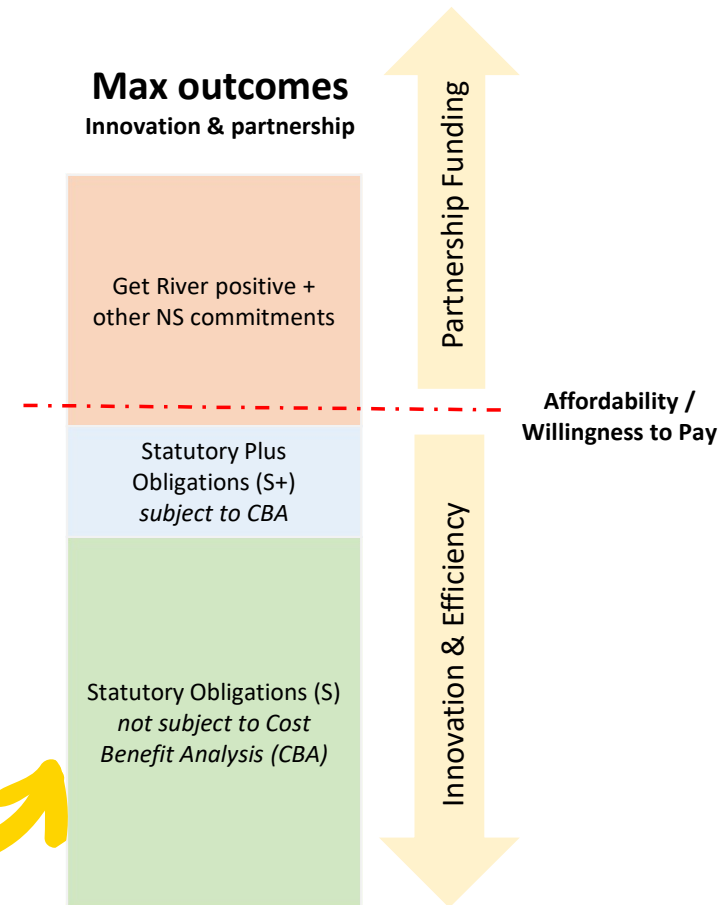
We know that our statutory (S & S+) WINEP programme will not deliver our environmental ambition for the East of England or meet the expectations of our key stakeholders – this will need additional funding.

- The affordability cap creates a trade-off between the cost of the statutory programme and non-statutory ambition
- It could also mean that a “Best Value” statutory programme:
  - Risks crowding out investment in non-statutory programme
  - Creates an implicit trade-off between water quality protection and wider environmental benefits of a best value plan.
- Innovation, efficiency and partnerships will be key to creating opportunities for non-statutory action
- Clear evidence in customer support and external assurance (e.g. eNGOS) will be required in relation to the non-statutory programme



**Key building blocks of PR24 WINEP programme** – ability to shift the expenditure ceiling by embracing partnership funding opportunities & embedding innovation within the programme

Question: Is WINEP the right place for all our non-statutory ambition to sit?



# One Example of Our Ambition: Get River Positive

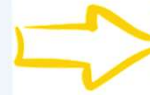
Driven by our purpose, and the shared expectations of our customers that rivers should be beautiful places, rich in nature, Anglian Water joined forces with Severn Trent in March 2022 to launch Get River Positive, pledging to Get River Positive by 2030. This means we will strive to do no harm to UK rivers and do everything we can to ensure they can thrive. There are five core commitments, each one a clear and actionable response to calls for a revival of rivers in England.

## Our five Get River Positive commitments

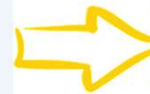
- Ensure storm overflows and sewage treatment works do not harm rivers.
- Create more opportunities for everyone to enjoy our region's rivers.
- Support others to improve and care for rivers.
- Enhance our rivers and create new habitats so wildlife can thrive.
- Be open and transparent about our performance and our plans.



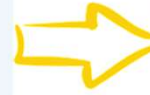
Eliminating Reasons for Not Achieving Good (RNAGs) relating to our operations



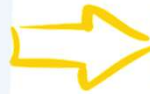
90% customers within one hour of a bathing water and ensure more opportunities for recreational activities and events



Better support for land managers across the agricultural sector & use convening powers to change legislation to drive our ambition



Establishing new habitats and re-introduction of key species



Ensuring data transparency

# Partnership Opportunities

We are planning to complete a wider horizon scan of all the partnership opportunities available for our WINEP programme



## Public / Grant Funding

**Environmental Land Management Schemes (ELMS)**  
i.e. replacement of common agricultural policy (CAP)

**Nature for Climate Fund**  
e.g. peat and woodland recovery

**Flood & Coastal Erosion Investment Plan / Natural Flood Management Fund / Regional Flood & Coastal Committee**

**Strategic & Local Partnerships**  
e.g. National Trust, WWF, Rivers Trust

**Local Nature Recovery Networks**

**Government Departments**  
e.g. Dept for Education and Ministry for Justice on flood work

**Local Authority Funding**

And many more...

## Private / Market Based Funding

**Private Foundations & Trusts**  
e.g. Esmée Fairbairn Foundation, National Lottery Fund, John Ellerman Foundation, Finance Earth, Green Funders Network

**Water Funds**  
e.g. Norfolk Water Fund

**Ofwat Innovation Fund**

**Sustainable Finance**

**Habitat Banks**  
e.g. Biodiversity Net Gain (Environment Bank)

**Carbon Credits**  
e.g. Woodland Guarantee & Peatland Code

**Nutrient Markets / Trading Markets**

**Private Industries, Developers & Landowners Partnerships**

**Crowd or Matched Funding**

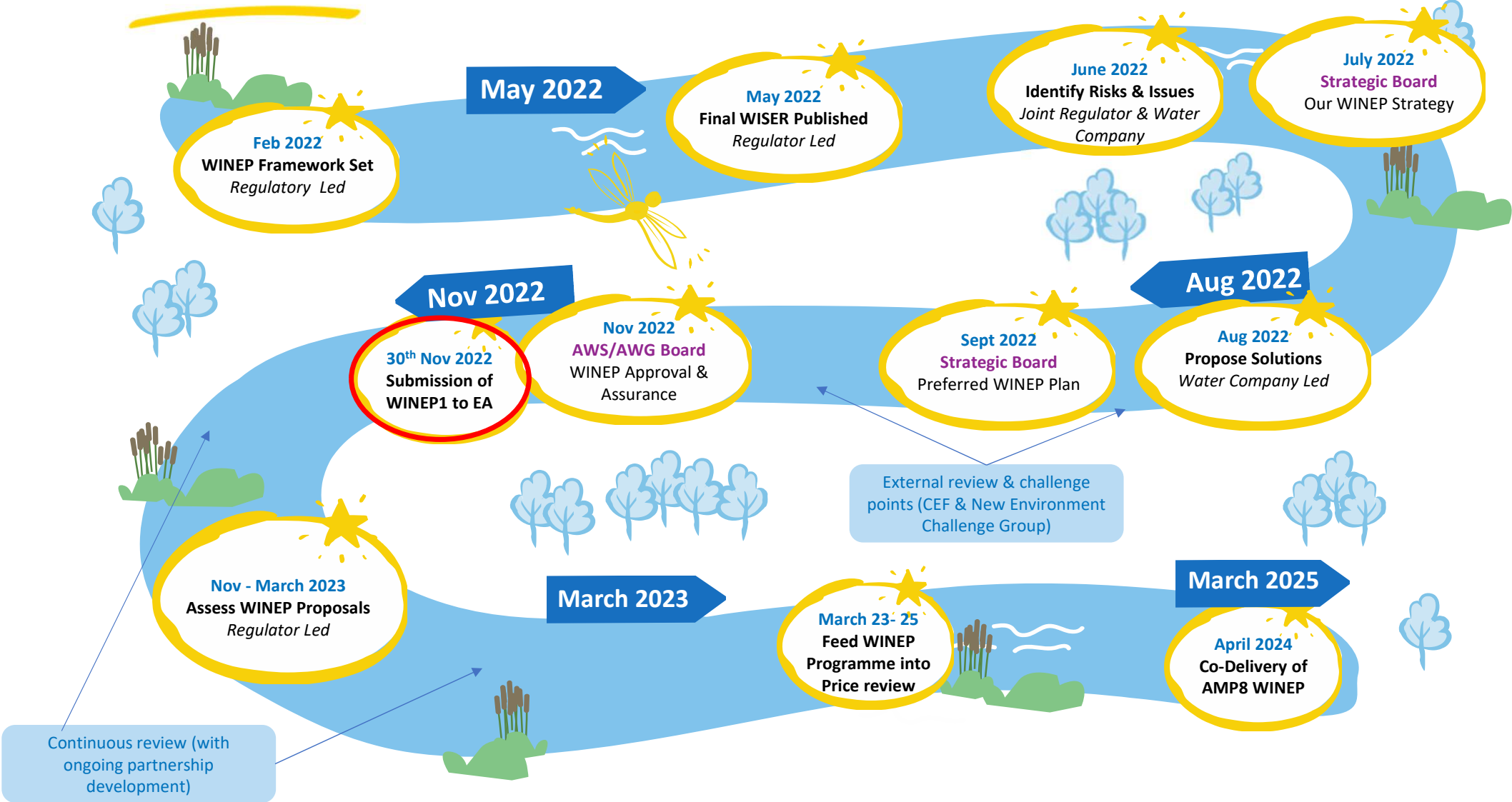
**Joint Water Company Funding**

And many more...

**BUT – Few potential partners can commit to funding so far into the future while WINEP policy states any shortfalls must be met by companies**



# WINEP forward look



# Six Strategic Areas of Focus For Water

## Eels & Fish

**Eels**  
**SAFFA**  
**WFD Phys Hab & Fish Passage**

Action to support the conservation of key fish and eel species, with a focus on habitat availability, passage and intakes.

AW have had constructive conversations with the EA and believe we understand what is expected for PR24.

## Invasive Species

**INNS**

Delivery of biosecurity options identified through AMP7 risk assessments & investigations.

AW have routinely engaged the EA through the AMP7 INNS investigations and have a clear sense of expectation around Raw Water Transfers, Recreational Activities and investigation of Novel Techniques.

## Protected Sites

**SSSI**  
**European Sites (HD)**

Action to maintain/restore European sites to favourable conservation status where there is a proven impact from AW.

We have been given a list of priority water dependent habitats by Natural England, but there is insufficient evidence to enable WINEP action. It is more likely that this list will be used to prioritise action under other WINEP drivers (e.g. licence change)

## Water Resources

**GW Pressure**  
**WR HMWB**  
**WR Hydro Regime**

Action to address the impacts of abstraction on waterbody status and achieve WFD objectives.

**Environmental Destination**

Investigate how to meet environmental requirements beyond current WFD objectives.

## Biodiversity

**NERC**

Actions to improve the status of habitats and species (especially those of principal importance)

**25-year Environment Plan**

An opportunity to deliver local bespoke action but requires customer support – targets linked to biodiversity improvement (thriving plants and wildlife)

## Catchment Management

**Drinking Water Protected Areas**

Action to prevent deterioration in water quality to avoid an increase in the level of water purification or improve water quality so the level of purification treatment can be reduced over time.



**Any questions**

