



WRE Joint Water Company Drought Planning Webinar

29th January 2025

Agenda

Welcome, Introductions & Purpose

Ben Fitzsimons
10:00-10:05

Drought & Drought Planning Overview

Ben Fitzsimons, Liz
Corbett & Dan Hauck
10:05-10:20

Affinity Water Focus Areas

Anneka Lannen
10:20-10:30

Anglian Water Focus Areas

Dan Hauck
10:30-10:40

Cambridge Water Focus Areas

Daniel Clark
10:40-10:50

Essex & Suffolk Water Focus Areas

Liz Corbett
10:50-11:00

The Role of Regional Groups

Ben Fitzsimons
11:00-11:10

Summary, Next Steps & Any Questions?

Victoria Thatcher & All
11:10-11:30

Drought Overview

- The different types of drought can be summarised as:
 - **Environmental Drought** (e.g. 2018) - Occurs when a shortage of rainfall is having a detrimental impact on the environment. These conditions often result in signs of stress for wildlife, fish and habitats.
 - **Agricultural Drought** (e.g. 2018) - Insufficient rainfall and moisture in soils to support crop production or farming practices such as irrigation. Often alongside an environmental drought but before public water supplies are impacted.
 - **Water Supply Drought** (e.g. 2010-12) - when a shortage of rainfall is causing water companies concern about supplies for their customers. This type of drought tends to take longer to develop than environmental or agricultural drought because water company supply systems are developed to cope with dry weather.
- Water companies are directly responsible for a water supply drought but also support the environment and agricultural users through droughts that impact them. A succession of dry winters in East Anglia increases the likelihood of a water supply drought.
- Differences between Water Supply Drought and Peak Demand:
 - **Water Supply Drought** - water storage levels (e.g. winter storage reservoirs) are running low and abstraction from the environment is limited.
 - **Peak Demand** - water storage levels are healthy, but the supply system doesn't have the capacity to process and output the water quick enough to customers.

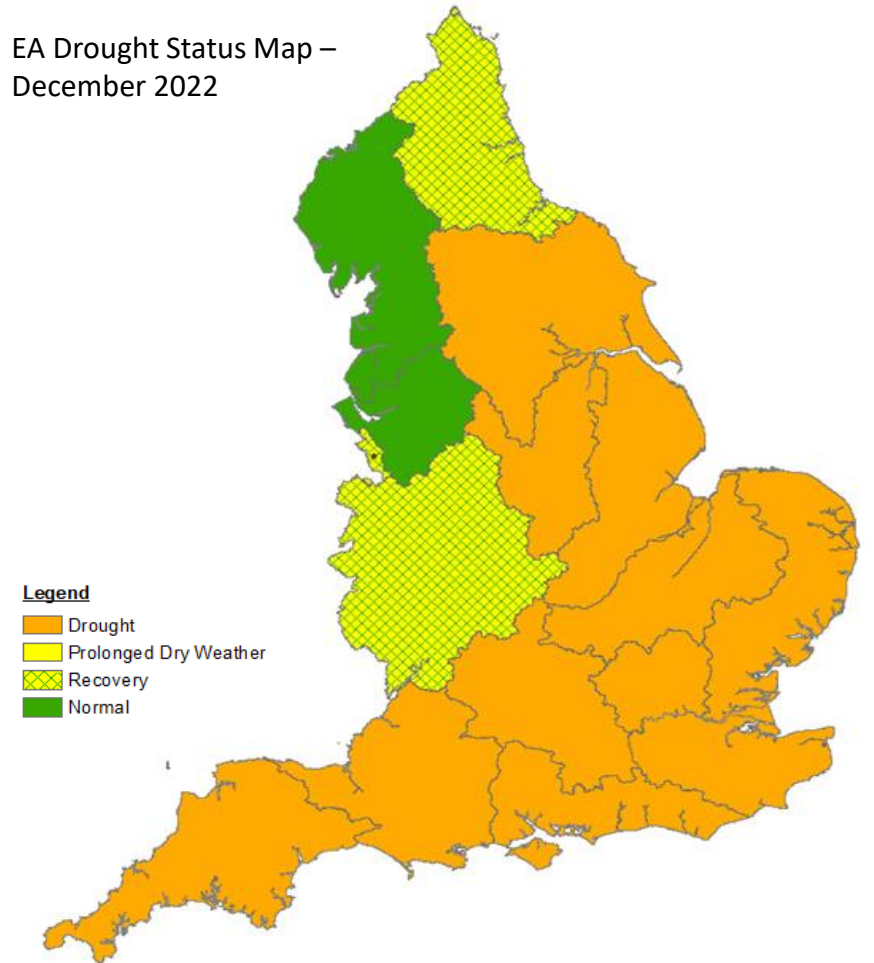
Previous Droughts

- The experiences of standpipes and rota cuts in the summer of 1976 had a significant impact on how water resources supply systems and drought resilience in England is managed.
- Our drought plans, and the actions we take, reflect many of the lessons and improvements learnt from past droughts*.

Reflections on the 2022-23 drought:

- Six consecutive months of below average rainfall was experienced across all regions from March to August. Hottest summer on record.
- Impacts of the drought on water companies and other water users depended heavily on past investment in resilient supplies (e.g. winter storage reservoirs)
- Key learning & recommendations driving Drought Plan updates

EA Drought Status Map –
December 2022



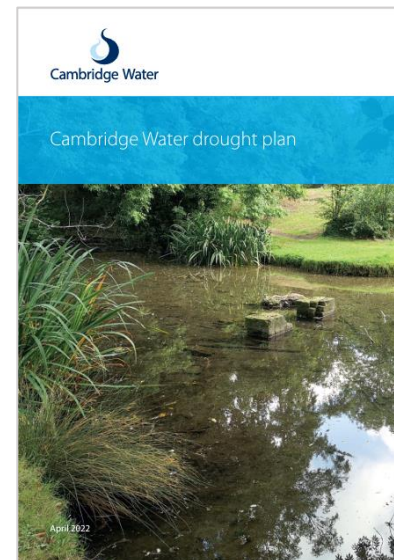
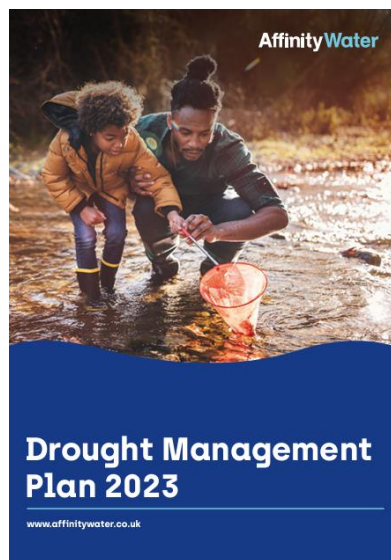
*Notable droughts: 1975-76, 1989-92, 1995-97, 2004-06, 2010-12, 2016-18. 2022-23. There were also widespread droughts in 1933-34, 1920-21 and through the 1880s.

What is a Drought Plan?

- Statutory requirement for all water companies & NAVs to produce a Drought Plan every 5 years
- The Drought Plan presents how we propose to manage water resources during a drought to maintain public water supplies and protect the environment
- Produced in alignment with the Defra Directions and EA Drought Plan guidelines.

East of England Context

- Drought planning and ensuring we are prepared for drought in the East of England is important considering the current and future pressures from climate change and growth
- The future climate projections in the Thriving East and Fens Climate Change Risk Assessment (CCRA) reports note that the region will be hotter than the national average, rainfall will be significantly below the national average, and droughts are predicted to persist for longer



Links to Regional Plan & WRMPs

WRE Regional Plan and Water Company WRMPs set out how we will manage water supplies across our region to meet current and future demand

- Long term (25 year) strategic plans for investment
- Ensure secure and resilient supplies of water to our customers in a 1 in 500-year drought by 2040
- Set out how we will adapt to current and future climate change impacts
- Plan for population growth
- Protect and enhance the environment
- Include planned demand management and new resources
- WRMP24s now or soon to be published

Environment Agency drought status and related drought action levels	WRMP	Drought plan		Emergency plan
Normal (green)	Includes demand and supply drought actions but not extreme actions	Triggers actions	Implements actions	
Prolonged dry weather (yellow) – drought level 1 actions				
Drought (amber) - drought level 2 & 3a actions				
Severe drought (red) – drought level 3b extreme actions				
Emergency drought actions – drought level 4 actions			Triggers actions	Implements actions

Drought Plans 2027

- Will align with WRMP24s
- Are tactical plans setting out actions to reduce demand or increase supplies in a drought with current resources and assets
- Identify, monitor, mitigate, and recover from the environmental impacts of drought actions

What is included in a Drought Plan?

- Introduction
- Drought Monitoring, Triggers, Levels & Forecasting
 - Environmental triggers
- Drought Actions
 - Demand Actions
 - Supply Actions
 - Restrictions
 - Drought permits and orders
 - Extreme drought actions
- Communication Plan
- Recovery & End of Drought
- Drought Management Structure
- Environment Assessments
- Customer & Stakeholder Summary

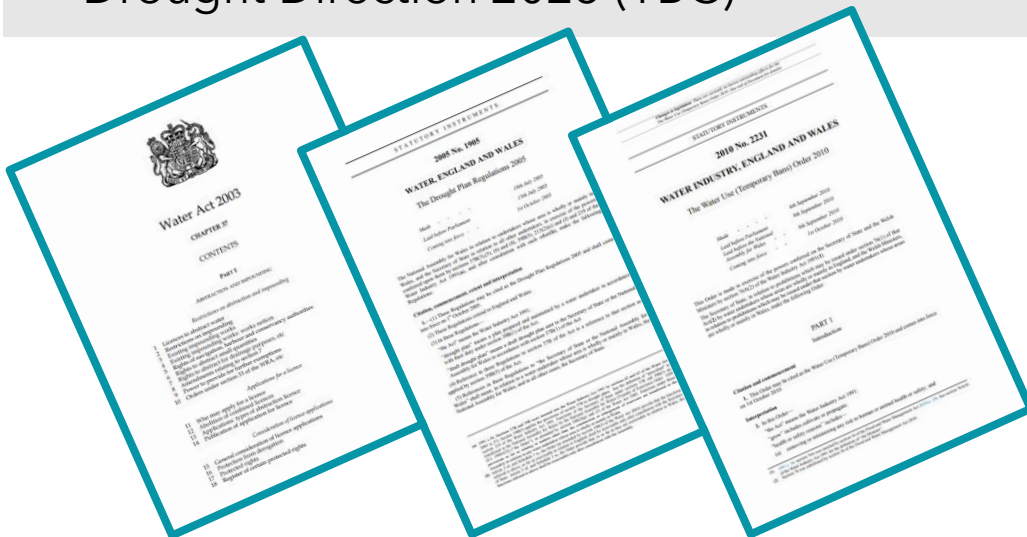
Drought status	Drought level	Demand actions	Supply actions
Normal (green)	Business as usual	Routine demand management actions	No additional actions – use of existing sources
Prolonged dry weather (yellow)	1	Voluntary reductions, communication campaigns, increased leakage control	Actions with minor environmental impact, optimising existing sources including transfers, reducing outage
Drought (amber)	2	Temporary use bans (TUBs), voluntary residential water use reductions	Optimising current licensed resources and networks, drought permits and orders with minor environmental impacts
	3a	Further voluntary residential water use reductions, removal of exceptions for TUBS, non-essential use ordinary drought orders	Drought permits and orders with moderate environmental impact
Severe drought (red)	3b	Extreme actions to delay emergency drought orders	Extreme actions including drought permits and ordinary drought orders with major environmental impact
Emergency drought	4	Emergency drought orders such as rota cuts and standpipes	Use of emergency reservoir storage

Drought Planning Legislation & Guidance

Legislation

Drought planning process and action implementation is governed by various legislation:

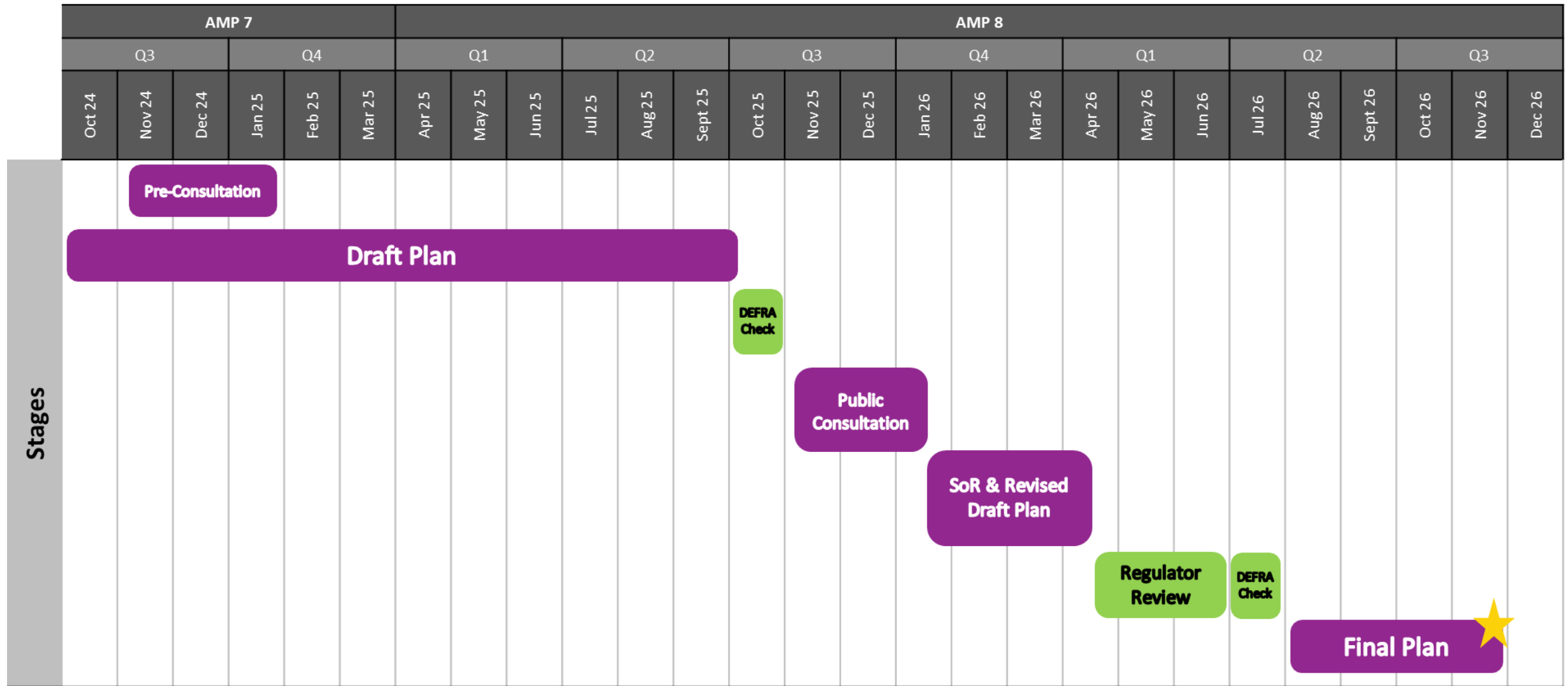
- Water Industry Act 1991 (Water Act 2003)
- Water Resources Act 1991
- Drought Plan Regulations 2005
- Water Use (Temporary Bans) Order 2010
- Drought Direction 2025 (TBC)



Guidance

- For each planning cycle the EA set out drought plan guidance The guidance explains:
 - the process a water company is expected to follow
 - what it should include in its drought plan
- Supplementary guidance on topics such as drought permits & environmental assessments is also created
- The EA have updated the guidance for DP27 to ensure that technical info is up to date and lessons learned have been incorporated
 - The DP27 guideline consultation is closed but the document is still available to view – [Proposed changes to the water company drought plan guidelines](#)

DP27 Creation Timeline



draft DP27 submission = 6 Oct 25 | Public Consultation = ~Nov 25 - Jan 26 | SoR & revised draft DP27 submission = ~10 April 26

Water Company Common Focus Areas

- Reflecting changes set out in **Environment Agency Drought Plan Guidance**
- Implementing **lessons learned from 2022** and incorporating the latest **Drought Code of Practice**
- Review and update **drought triggers and levels** as necessary
- Further develop **environmental drought triggers and measures**
- Updating **communications** and **demand management actions**
- Developing a **Best Practice Guide** around drought communications with **NHH users, retailers and NAVs**, in collaboration with the Retail Wholesaler Group
- Working on an **UKWIR Feasibility Study** to evaluate information required to assess the costs and benefits of **non-essential use bans**.
- Assessing potential **new drought permit options, extreme actions and emergency options**
- Improve **drought permit readiness**
- Continue to **improve alignment and share best practice** between neighbouring water companies, other water users and interested parties
- **Regional Groups statements of intent**

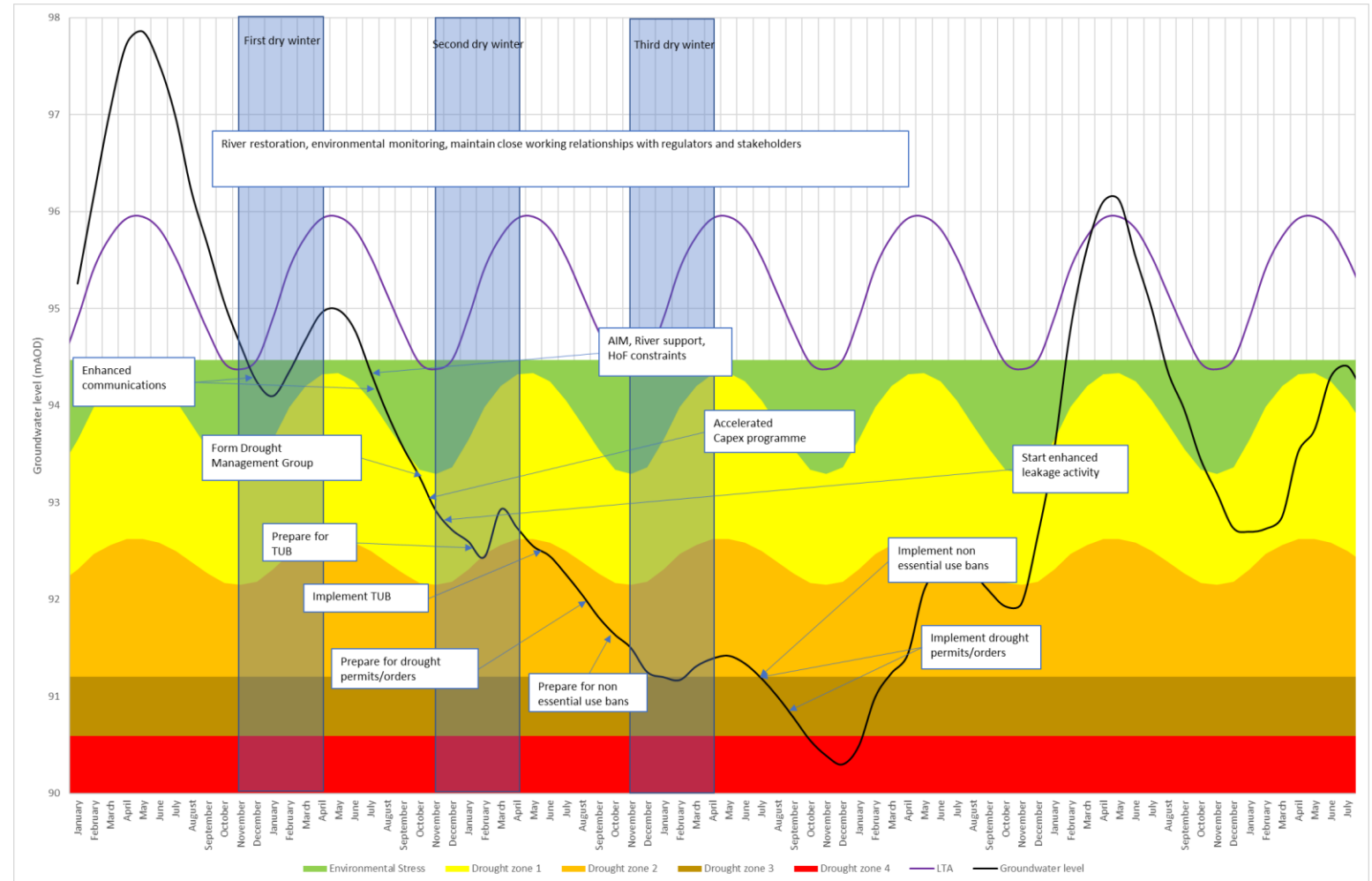
Affinity Water Context

- Largest water-only supply company with approximately 3.9 million customers
- Split into 3 distinct company areas, subdivided into 8 water resource zones, each named after a local river
- Only Brett region sits within WRE area (the other two regions are within WRSE group area)
- Supply area designated as under serious water stress
- 65% groundwater and 35% surface water supply
- AMP8 will see an increase in surface water reliance and reduction in groundwater supply for Brett region – alleviating pressures on local environment



Affinity Water Focus Area

- Include a new drought trigger for Brett region based on increased reliance on surface water (Ardleigh)
- Update drought triggers for drought permits - new Level of Service aligning with WRMP24
- Assess potential drought permit options - new option likely to be required for Brett region
- Full environmental assessments including HRA and SEA



Anglian Water Context

- **Largest** water and wastewater company in England and Wales by geographic area
- Supplying more than **7 million** domestic and non-domestic customers
- **Driest** region in the UK (under 630mm annual rainfall - $\frac{2}{3}$ of the average rainfall) and designated as an area of water stress
- 50% surface water and 50% groundwater
- 8 reservoirs, 7 direct intakes and over 200 groundwater sources

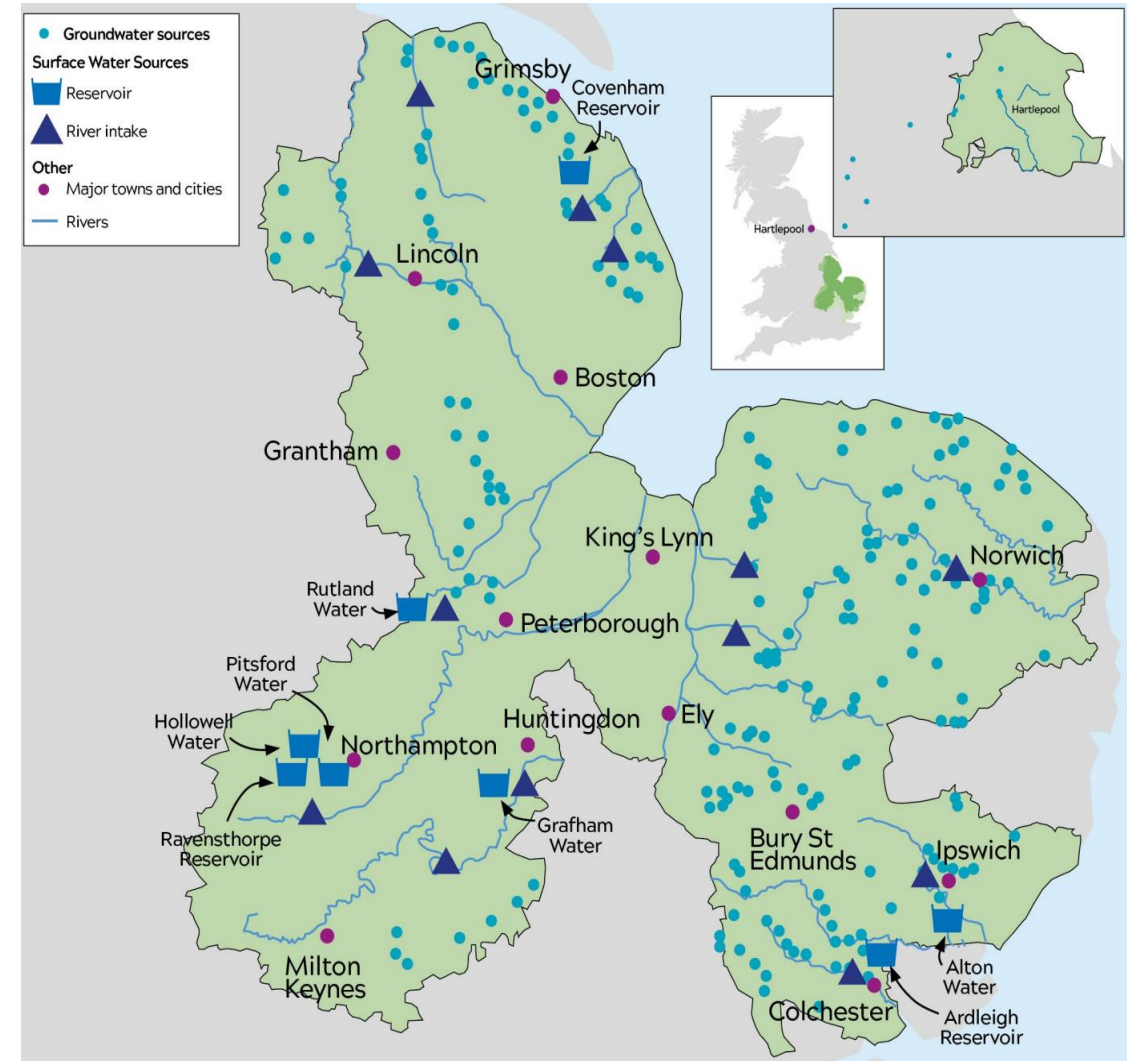
Our Purpose

To bring environmental and social prosperity to the region we serve through our commitment to

love every drop.

love every drop
anglianwater

WRE
WATER RESOURCES EAST



Anglian Water Focus Areas

We were pleased with how our DP22 performed during 2022-23 but there is always room for growth and improvement.
We are looking to create DP27 with consideration for any lessons learned and feedback received.

- Update Water Resource Zones
- Integrate new ways of operating the supply system – production planning
- Review and update drought vulnerable groundwater site list and associated triggers
- Continue to focus on improving our collaboration with other sectors and NHH users
- Amend TUBs consultation and representation time
- Updating drought permit modelling, environmental monitoring and mitigation plans
- Include new water resources team and drought response team framework
- Exploring and incorporating global research and innovative demand measures such as seasonal tariffs



SOUTHERN NEVADA
WATER AUTHORITY



global omnium

Cambridge Water Context

- Serves **350,000** customers, 140,000 homes and 9,000 businesses.
- Supplies **85** million litres of water a day on average from 100% groundwater sources in the chalk aquifer
- Expecting significant **growth** in domestic and non-household demands over next decades
- Classified as an area of **water stress** and water scarcity
- Groundwater can be resilient to droughts for supply, but often environmental impacts can be seen early in a drought at sensitive sites
- Over **260km** of chalk streams/chalk fed waterbodies in the catchment that we operate
- Over **100 SSSIs/LNRs** in our area of supply/catchment, ~20% are wetlands/dependant on groundwater



Cambridge Water

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- The screenshot displays the WRF tool interface for the Granta catchment. The top left shows a map of the catchment area. The top right contains a table of meteorological data for the period from June 2023 to October 2028. The bottom left shows a plot of Flow triggers (m³/s) over time, with a legend indicating Baseflow, 30-day trigger, and Q95. The bottom right shows a plot of Groundwater level (m AOD) over time, with a legend indicating Naturalised GWL and various return period triggers (1 in 5 year, 1 in 10 year, 1 in 20 year, 1 in 40 year, 1 in 200 year).
- Basin:** Cam - Ely Ouse
Catchment/Easchule: Rhee at Bunt 100
Scenario: Observed; Simulation
Units: m³/s
- Monthly plot options:** 500 1month, 500 12month, 500 24month
File download options: Flow
- Meteorological, minimum flow and drought triggers**
- | | 2024-07 | 2024-08 | 2024-09 | 2024-10 | 2024-11 | 2024-12 |
|-----------------------------|---------|---------|---------|---------|---------|---------|
| Rainfall (mm) | 73.84 | 18.27 | 123.32 | 52.32 | 46.76 | |
| Total flow (Observed) m³/s | 0.75 | 0.58 | 0.57 | 1.57 | 1.84 | 1.95 |
| Baseflow (Observed) m³/s | 0.75 | 0.58 | 0.57 | 1.57 | 1.83 | 1.45 |
| Total flow (Simulated) m³/s | 0.69 | 0.58 | 0.45 | 0.97 | 0.71 | 1.63 |
| Baseflow (Simulated) m³/s | 0.69 | 0.58 | 0.45 | 0.86 | 0.71 | 1.59 |
- Flow triggers - Granta at Stapleford**
- Groundwater level (naturalised) vs triggers - Stapleford**

Essex Supply Area

- ## Norfolk & Suffolk Supply Area

- ## We were resilient in the 2022 drought, but there are challenges ahead...

- [illegible]

Essex & Suffolk Water Focus Area



Key updates in our Drought Plan 2027

- Align Levels of Service with WRMP24
- Suffolk Level 1 and 2 Levels of Services slightly lower in Suffolk than Essex due to more challenging water scarcity situation

Restriction	Suffolk WRZ Planned frequency of restrictions		
	Drought Plan 2022	WRMP24	Drought Plan 2027
Level 1: Appeal for restraint	1 in 10 years	1 in 5 years	1 in 5 years
Level 2: Temporary Use Ban	1 in 20 years	1 in 10 years	1 in 10 years

- Review and validate current drought actions
- Investigate potential new drought actions
- Environmental assessment of actions

The Role of Regional Groups

- The Environment Agency's drought plan guidance suggests that regional groups will develop a **"Statement of Intent"** around our role supporting drought planning and response.
- The Environment Agency is updating its expectations of regional groups as part of the updated National Framework for Water Resources. - Due to be released later this year.
- We will work with our neighbouring regions to join our approaches up where possible, especially where communications are involved.
- [The WRE Drought group](#) formed in response to the 2022 drought seeking to facilitate the sharing of information and find opportunities to manage water across sectors and protect the environment during periods of dry weather.
 - The group adds to and complements other forums including Defra's National Drought Group, and Water Resources South East's Dry Weather Group.
 - It acts as a catalyst to identify and champion opportunities for improved water resources allocation and management across sectors to avoid drought conditions having an impact on key sectors and the environment.
- We will look to clarify and develop this role as part of the updated national expectations of regional groups and revised Drought Plans.

Summary and next steps

Get to know our current Drought Plans:

- [Affinity Water Drought Plan 2023](#)
- [Anglian Water Drought Plan 2022](#)
- [Cambridge Water Drought Plan 2022](#)
- [Essex & Suffolk Water Drought Plan 2022](#)

Review the EA's National Drought Framework:

- [Drought: how it is managed in England](#)

The framework consultation is closed but the report is still available.

Drought Plan 2027 Process

DP27 Pre-consultation – Most water company pre-consultation periods have closed however, if you have any feedback, please still share this with us so that it can be considered.

DP27 Development – All companies currently creating draft Drought Plans (6 October 2025 deadline). Further technical discussions can be arranged to discuss areas in more detail.

DP27 Public Consultation – A further public consultation will be held once the draft DP27s are published (Winter 2025/26).

On-going drought protection

- Continually focus on mitigating drought conditions as part of business as usual, through water efficiency messaging and campaigns, leakage management and system optimisation.
- Water efficiency isn't just for droughts – we promote customers to use their water wisely to support the environment.
- You can find ideas and tips for being more water efficient by reviewing your water company's website.



Panel Q&A

- Please use the Teams Q&A function to ask questions and 'like' others

Thank you - and looking forward to working with you all in 2025

Connect with WRE



www.wre.org.uk



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[Water Resources East](https://www.linkedin.com/company/water-resources-east/)

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Essex & Suffolk -

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