

Final Drought Plan 2025 – Non technical Summary

February 2026



A. Drought Plan Summary

i. The Drought Planning Process

At Welsh Water, our vision is “To earn the trust of customers, every day”. That vision aligns with our unique ownership structure: we have no shareholders and so can concentrate solely on delivering the best possible value for money to our customers. All the profits that we make are reinvested in the business to improve outcomes for our customers and the environment and the communities that we serve. We need to hold to this way of working every day, especially during stressful periods such as droughts which can be challenging for both ourselves and customers. We are trusted to plan for drought and trusted to deliver these plans when drought periods occur – we must continue to earn that trust every day. Our Water Resources Management Plan and our Drought Plan are at the centre of this strategy.

As demonstrated through history, our supply area is not immune from drought. In 1976, around a million people in south-east Wales were subject to rota-cuts in order to ration supplies. It is clear from our customer engagement that such measures are now generally considered unacceptable. We have experienced several dry periods more recently, notably the drought of 2022 when low rainfall and high customer demand for water led to low reservoir storages across most of south Wales and parts of northeast Wales. This triggered the implementation of our current Drought Plan and a Temporary Ban on Water Use came into effect in our Pembrokeshire WRZ from 19th August to the 25th October.

With such events in mind, Government has asked the water industry to better understand the likelihood and impact of such measures being needed again. Furthermore, Government has challenged the industry to increase levels of drought resilience.

In response, we have taken a new approach to our understanding of drought risk for this Plan, using advanced methods to test it against more severe droughts than observed in our historic records.

As a statutory requirement, we are required to maintain and publish a Drought Plan every 5 years. The planning process is prescribed through Welsh Government Guiding Principles and Natural Resources Wales (NRW) technical guidance. The main areas of change from our 2020 Drought Plan are:

- Incorporation of new approaches to hydrological and drought risk assessment in line with WRMP24. In particular, the use of updated hydrology and optimisation models within our drought risk assessment.
- Reflection on lessons identified from recent dry weather/drought experience in using recent data and in our approach to communications.
- Account for changes to the UKWIR Code of Practice (CoP) 2023 in relation to temporary demand restrictions.
- A requirement to engage with New Appointments and Variations (NAVs) as these organisations are now required to also develop Drought Plans.
- To streamline documents where possible with majority of the detailed technical requirements moved to the appendices

We last updated our Drought Plan in 2020 and we have first-hand experience of how well it performed during the 2022 drought. This updated Plan for 2025-30 is very much an evolution of our previous Plan. To aid the development of this Drought Plan, we ran a formal pre-consultation exercise with our stakeholders to help identify any key issues that we need to account for. Our pre-consultation engagement included over 1,000 recipients across a wide range of organisations such as local councils and councillors, Members of the Senedd, Members of Parliament, our Regulators, academic institutions and environmental organisations.

ii. Our Water Resources

Welsh Water supplies on average around 800 million litres of water every day. Most of our water is supplied from our impounding reservoirs but we also obtain significant volumes from our lowland river sources. Groundwater accounts for less than five percent of our supplies at a Company level, but at a local level may be the whole supply.

Although Wales has a relatively high rainfall compared to the rest of the UK, the overall regional picture masks important geographical differences within our supply area: for example, at up to 3,000mm rainfall per year in Snowdonia, this can be more than four times the levels recorded in the border areas and Herefordshire, where 700mm per year is typical.

The diversity of our water supply systems reflects these regional variations, which can range from discrete small-scale local supplies, through to large scale multi-source integrated networks that are more typical of many other water company areas.

The topography of Wales creates unique challenges in developing our drought plan. The landscape means that we have 23 discrete water resource zones (WRZs) with only limited opportunity to transfer water across zonal boundaries (Figure 1). This means that local drought measures may be needed within those zones even if the position within other parts of Wales is healthy.

The aquatic environment in Wales is of exceptionally high quality, with many sites of special scientific interest and a number of rivers designated at a European level as Special Areas of Conservation.

Any drought measures therefore must balance our twin responsibilities of protecting the environment and maintaining public water supply.

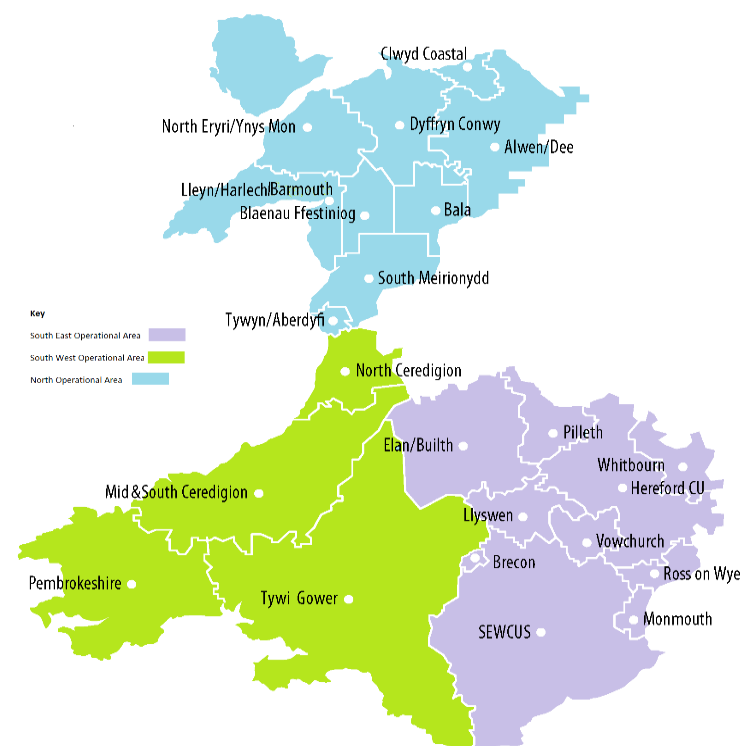


Figure 1 - Welsh Water's Water Resource Zones

These geographic and environmental constraints mean that, despite the relatively high rainfall in parts of Wales, drought can present a significant risk that we need to plan for.

iii. Drought Indicators

There are several indicators that inform us a drought is developing and a key element of this Plan is to identify those we will monitor and use to trigger drought actions. We principally use the following indicators across our supply area to identify the onset of drought conditions:

- Rainfall
- River flows
- Groundwater levels
- Reservoir storage
- Water demand

Our regional water resource position is monitored and reported on a weekly basis, providing information on reservoir storages across our operating area. We also track zonal and sub-zonal demand across our water supply network daily.

A comparison of these indicators under current conditions against historical norms provides a measure of the drought severity. Rainfall or river flows are indicators of an 'environmental drought' which although can be related to water availability may not directly align with a water supply drought. The key indicators for water supply are our water resource and demand status and we use these to identify increasing drought risk.

iv. Drought Risk and Drought Actions

Our Drought Plan describes how we will provide a secure supply of water to our customers, whilst minimising our impact on the environment. It is a short-term operational plan that sets out what actions we will take before, during and after a drought, including how

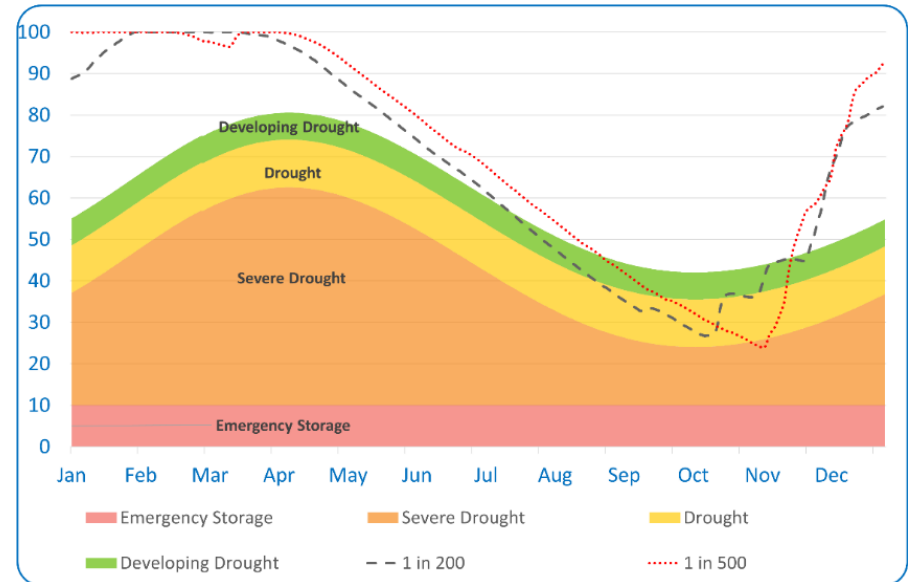


Figure 2 - Example WRZ Drought Action Zone Plot

we will assess any environmental impacts of our actions and what we will do to monitor, prevent and/or mitigate these.

Of importance to our customers is the impact that a drought might have on them and in particular their expectation of how often and where we might restrict water use.

We have powers to impose hose pipe bans, now referred to as 'Temporary Use Bans (TUBs) or we can apply for Ordinary Drought Orders, to restrict non-domestic supplies, called 'Non-essential Use Bans'. Of greatest importance is our overall resilience to Drought which we define as how often we might need to ration water through the use of standpipes, rota cuts or reduce water system pressure below our usual standards. These measures can be requested by Emergency Drought Order.

We have engaged with our customers to understand their expectations on how resilient they feel our supply systems should be and how often it is acceptable to impose such restrictions. The result is that on average, we will not implement TUBs more than once in every 20 years, use of NEUBs no more than once in every 40 years and to use Emergency Drought Orders no more frequently than once in every 200 years, with this level of service planned to increase over time to once in every 500 years.

Many of our WRZs rely on reservoirs to store rainfall that falls during the wetter periods of the year for use during drier periods, usually late spring to early autumn. Therefore, under 'normal' rainfall and customer demands, reservoir levels are expected to fall and rise over the annual cycle. Water supply systems that have large reservoir catchments in comparison to demand, will be very resilient, and the reservoirs will not draw down to low levels even during the most severe drought periods. The reservoirs in less resilient systems will fall to far lower levels more often.

For each system, we can plot the reservoir storage normally expected during the year, so that if we encounter drought, we can see that reservoir levels are drawing down unexpectedly early or to lower values than normal (See Figure 2).

Reservoir levels can therefore be used as both an indicator of drought and to initiate drought actions that will reduce customer demand and so increase drought resilience.

We develop drought control curves, with 5 drought action zones (DAZs) indicating drought stages, with stage 6 being return to normal operation. Drought zones are aligned with drought guidance and ensure that the drought actions we take are proportionate to the level of drought risk. The drought stages we define for this Plan are:

- Stage 1 – Normal Operation
- Stage 2 - Developing drought
- Stage 3 - Drought
- Stage 4 - Severe drought
- Stage 5 – Emergency Measures
- Stage 6 – End of Drought

Effective drought planning and management relies on having a good understanding of the likely drought risk. For this Plan we have developed new rainfall runoff models and have used data from 2022 to improve model calibration. This data has then been used to develop a c20,000 year stochastic inflow dataset, for over 60 of our key reservoir and river sources. We need this long data set to evaluate drought risk, in the derivation of new drought action zones, and in our updated environmental assessments. We have developed new state of the art water supply system models (PYWR) and optimised our control philosophy using a Genetic Algorithm approach. These models have been used to assess which zones are at risk from severe drought through a revised drought vulnerability assessment.

We have concluded 11 of our 23 are at drought risk and where drought actions are likely needed to be put in place to help mitigate risk to customer supplies and the environment.

In zones which are not at drought risk, we will encourage water efficiency, and deliver our leakage and water management strategies, but we do not expect to need drought actions to preserve water resources.

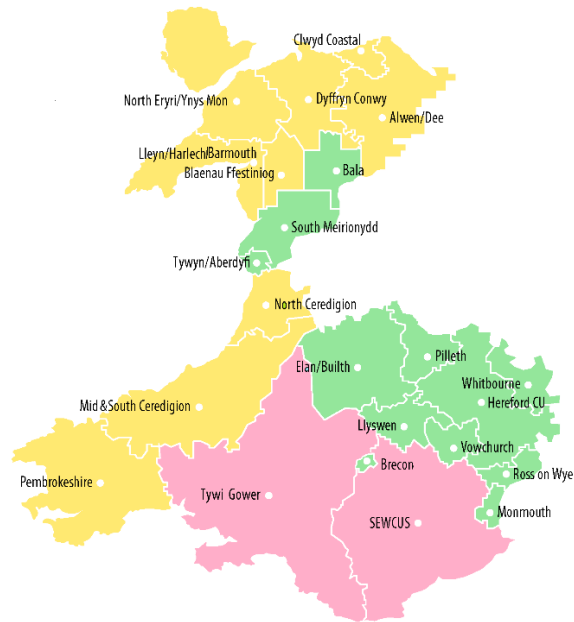


Figure 3 - WRZs coloured according to drought risk status (green = low risk, amber = potential risk, red = high risk)

v. Managing Drought

Welsh Water’s approach to managing drought is the same to managing all incidents, which is to try and safeguard our customers’ supplies whilst ensuring that our actions have minimal, if any, effects upon the environment.

We firstly take actions that are within our control and therefore immediately available to us, such as reconfiguring our supply networks to ensure our water resources are balanced effectively, whilst on the demand side we would look to increase our leakage

detection and repair activity. We also escalate customer communications to ask for our customers’ support in using water wisely or to inform them of water use restrictions.

The benefit of demand management is greatest during the hottest, driest months when outdoor water use is greatest. We will not normally escalate demand management messaging before April when temperatures are lower.

Within this Plan the actions we have defined are proportionate to the level of drought risk that our customers face. Our approach ensures that we only seek additional water from the environment, via the use of Drought Permits/Drought Orders, once operational actions and appropriate customer demand messaging/restrictions are in place.

Our experiences during recent hot, dry summers such as 2022 have given us confidence in our ability to manage these operations while minimising any disruption caused.

We undertook a customer post incident review exercise immediately following the Drought in 2022, which provided insight into areas for improvement in both our operational response and our existing Drought Plan. A key conclusion was that the WaterUK Code of Practice (CoP) for Water Companies on Water Use Restrictions proved successful in managing our response and implementation of the first temporary use ban for over 30 years.

The CoP provides support to water companies on how restrictions such as TUBs and Non-essential use bans (NEUBs) should be deployed to help manage demand during times of drought. It aims to provide a practical framework and body of information for water companies to inform the creation and revision of our Drought Plan on the management of water use restrictions.

The CoP is a non-statutory and non-binding document although most companies in England and Wales have voluntarily ‘signed up’ to its

use during a drought. The CoP sets good practice Principles, Actions and Exceptions for water companies in England and Wales to follow when they are evaluating whether and how water use restrictions will be in times of drought. The CoP principles are:

- To ensure a consistent and transparent approach
- To ensure that water use restrictions are proportionate
- To communicate clearly with customers and the wider public/users
- To consider representations in a fair way

We have also taken on board the recommended actions within the updated 2023 CoP, for Companies, Regulators and government to work together, to promote understanding and good practice, to coordinate communications, to adopt a common phased approach to drought actions and customer exemptions/exceptions from these. We can confirm that we will follow the CoP when implementing customer side restrictions.

The sequence of actions that we will take in the 11 zones at most risk during a drought are detailed in Table 1. The overall likelihood of

needing to resort to emergency drought restrictions, stage 5, provided in Table 2.

Through our modelling work, we have a far better understanding of drought risk, with the majority of zones meeting the new 1 in 200 year drought resilience target. For the SEWCUS and Tywi Gower zones, although we meet the previous target, that measures would not be needed with a repeat of the ‘Worst Historic’ drought, our resilience is optimised but we will not meet the new higher target until our planned network improvements are delivered over the next few years.

It is important to note that, at this point, we would also have an additional 30 days of water storage for those zones supported by reservoirs. For zones that have low drought risk, we actively monitor levels of demand and any asset outages to ensure that the water supply position remains secure.

We have retained the command structure that we use in managing incidents in Welsh Water and used effectively in managing the 2022 drought. This includes the setting up of escalating command centres as drought risk increases.

Drought Action Zone	Supply Side Actions	Demand Side Actions	Communications Key Messages
Stage 1 Normal	Weekly monitoring of rainfall, reservoir and river levels. Optimise sources	Daily and weekly monitoring of demand levels including leakage and review of supply/demand situation.	Use the water that you need but please don't waste it.
Stage 2 Developing Drought	Convene 'Gold incident' command centre. Implementation of dry weather operations to optimise water supply.	Continuous monitoring of demand levels including leakage and review of supply/demand situation. Targeted leakage management. Water Efficiency Device Offerings Preplanning for the implementation of Temporary Use Bans.	Weather has been drier than normal therefore reservoir levels aren't where we would expect them to be for time of year. Introducing temporary use restrictions is a last resort. We would like to avoid this so are asking customers to work with us to help conserve water resources.

Drought Action Zone	Supply Side Actions	Demand Side Actions	Communications Key Messages
Stage 3 Drought	Continue to optimise current dry weather operational activities to preserve resource. Preparation of supply side applications for drought permits/orders Commence baseline environmental monitoring	Continuation of preceding actions. Effectiveness of demand side measures estimated. Implement Temporary Use Bans Preplanning for the implementation of Ordinary Drought Orders (Non-Essential Use Bans).	Temporary use restrictions are in place. We thank customers for observing these and protect water supplies. We may have to introduce a non-essential use ban as a last resort to help conserve water supplies.
Stage 4 Severe Drought	Continuation of preceding actions. Implement supply side options.	Continuation of preceding actions. Implement Non-Essential Use Bans Preplanning for the implementation of Emergency Drought Order.	Temporary and non-essential use restrictions are in place. We thank customers for observing these and protect water supplies. We may have to introduce emergency measures as a last resort to help conserve water supplies.
Stage 5 Emergency Measures	Continuation of preceding actions	Emergency measure activities will be fully coordinated with external party activities through the Drought Liaison Group and Local Resilience Forum's as needed.	Despite ours and our customer's best efforts, water resources have continued to fall. They have now reached levels where it is impossible to maintain a regular supply to customers therefore emergency measures need to be implemented This will include the use of standpipes and timed cuts to water supplies or pressure management This is a last resort however is essential to ensure there is enough water to protect public health We are ensuring that provisions are being made for people registered with additional needs.
Stage 6 End of Drought	Careful removal of the supply side actions that are in place.	Careful removal of the enhanced demand management measures that are in place.	By working together during exceptionally challenging weather conditions, able to announce that the area is now out of drought conditions. Therefore able to lift temporary restrictions which have been put in place. Are grateful to customers for their cooperation during the drought and appreciate the inconvenience that they have faced. Although area is out of drought, remind everyone of the need to always use water wisely to ensure supplies have time to fully recover.

Table 1 – Sequence of Drought Actions

Water Resource Zone	'Drought' Action Zone	'Severe Drought' Action Zone	'Emergency Storage'
North Eryri Ynys Mon	1 in 61	1 in 156	>1 in 2,500
Clwyd Coastal	1 in 21	1 in 109	1 in 229
Alwen Dee	1 in 34	1 in 166	1 in 624
Blaenau Ffestiniog	1 in 1,248	>1 in 2,500	>1 in 2,500
Lleyn-Harlech-Barmouth	1 in 66	1 in 312	1 in 2,500
Dyffryn Conwy	1 in 104	1 in 499	>1 in 2,500
SEWCUS	1 in 20	1 in 40	1 in 130
Tywi CUS	1 in 20	1 in 45	1 in 131
Mid & South Ceredigion	1 in 20	1 in 416	1 in 2,500
North Ceredigion	1 in 83	1 in 499	1 in 2,500
Pembrokeshire	1 in 23	1 in 156	1 in 273

Table 2 - Summary of our current level of drought resilience

vi. Communicating with our Customers

We have developed a Drought Communications Plan (DCP) to ensure the effective flow of information to customers and stakeholders during the various stages of a drought. The strategy is designed to ramp up our messaging in response to the escalating situation with the aim to trigger behavioural changes from customers to help conserve water supplies. Our experience from previous droughts, and other types of incidents, has helped to shape our thinking around the importance of bringing all parties on the journey with us, so that we are trusted to do what is needed to secure water supplies and that our customers support our actions. This directly aligns to our company vision “To earn the trust of our customers every day”.

Customer engagement and cooperation is essential to help protect water resources. To achieve this, we need to generate understanding of the situation and actions we require them to take. The information we provide needs to be timely and accurate and reach all customers affected, particularly as the heightened media interest can generate misinformation which could lead to undue concern.

Our communications strategy is flexible with the level of activity and tone of messaging adapted to increase reach and response by using appropriate communication techniques, channels and messaging. Multiple communication channels can be used to ensure that we reach targeted audiences, and we make our messaging fully bilingual to cater for our customers’ language of choice. Our objectives are to:

- Nurture a culture of water efficiency and promote water efficiency messages during normal weather conditions
- Encourage behavioural changes from customers to help conserve water supplies and minimise risk of restrictions
- Inform customers and stakeholders of the impacts on their supplies, together with how they may need to adjust their behaviour as a result

- Inform customers and stakeholders about the actions we are taking to maintain supplies i.e. increased leakage detection
- Work in partnership with key partner organisations like Welsh Government, Natural Resources Wales, CCWater, Waterwise, MOSL, etc to inform on progress and help share our messages to key audiences

vii. Supply options and environmental monitoring

The demand management activities including customer messaging is a key activity in managing our response to drought. However, it is important that we have looked at all options we might draw on during a drought to manage water supply risk, especially as we encounter the most severe droughts where we might have to restrict our customer’s use of water.

We have identified a number of options that could increase our available water resource but would require us to operate outside of our standard abstraction licence conditions. These are generally where we would reduce the amount of water that we discharge from our reservoirs for the benefit of downstream water courses (River Compensation) or to take more water from river water sources than would normally be allowed. To be granted the ability to operate in this way, we have to apply to NRW/EA and/or the Welsh Government/ Defra for either a drought permit or drought order as appropriate.

To ensure sufficient environmental protections are in place, the process by which we obtain this additional water is tightly controlled by legislation and enforced by our environmental Regulators. Using the drought indicators, we first confirm that our need for extra water is due to the effects of drought and an exceptional shortage of rain. We will then submit either a Drought Permit application to NRW or the EA or a Drought Order application for the more ecologically sensitive sites, to Welsh Government or Defra.

In our previous Plan, the majority of our supply side options were to reduce the compensation flow required from our impounding

reservoirs by around 50% to preserve reservoir storage for water supply. However, the environmental assessments for some of these options concluded that this could have a 'major' impact on downstream habitat and/or species. For this Plan we have refined these Drought Permit/Order options such that they will pose less environmental concern, and so are more likely to be granted when needed. This will provide us with more certainty when responding to drought conditions.

To reduce the environmental concerns reported in the existing assessments and to ensure that the impact does not require the use of long-term Compensatory Measures, we have identified schemes with:

- Lower reduction (e.g. in compensation flow) compared to the current assumptions but for a longer duration
- Similar reduction to current assumptions but, for a shorter period
- Exclude especially sensitive environmental periods

For WRZs where we have identified no drought risk, we have not included any supply side options and we have removed options to re-instate disused sources where experience shows that timescales are too short to bring these back into supply. We have identified 20 schemes across our highest risk zones that mitigate drought risk.

For each of these schemes, we have produced an Environmental Assessment Report (EAR) in line with the NRW's Drought Planning Guidelines (DPG). Each report informs the choices on when and how we might use the option and contains a monitoring and mitigation plan so that they are 'application ready'.

The EAR forms the basis of the required environmental assessment, subject to update at the time of an application to reflect any material new data, and in respect of the drought conditions being encountered.

We have also considered the combined environmental effects of supply side drought options, and where relevant, any combined effects of actions with those of neighbouring water companies and

other abstractors', including other plans and projects. The SEA and HRA for a drought plan should inform these combined assessments.

The key features that will be considered within the environmental assessment are:

- Designated biodiversity sites
- Local wildlife sites
- Status of designated waterbodies which contain the impacted reaches under the Water Framework Directive (WFD)
- Sensitive ecological features as advised by NRW/EA and Natural England
- Invasive non-native species (INNS)
- Wider features considered in determining the impact on other abstractors, landscape, navigation, recreation and heritage

