Draft Drought Plan 2027-32
Main report

Publication date: May 2026

from Southern Water

Contents

List of Tables

List of Figures

Abbreviations

ADO	Average Deployable Output
ADPW	Average Day Peak Week
AFW	Affinity Water
NYAA	Normal Year Annual Average
BAU	Business-as-usual
CDW	Cholderton and District Water
CSMG	Common Standards Monitoring Guidance
dDP27	Draft Drought Plan 2027
Defra	Department for Environment and Rural Affairs
DI	Distribution Input
DO	Deployable Output
EA	Environment Agency
EAR	Environmental Assessment Report
EFI	Environmental Flow Indicator
EMP	Environmental Monitoring Plan
ESoR	Exceptional Shortage of Rainfall
HoF	Hands-off flow
HAZ	Hampshire Andover
HKZ	Hampshire Kingsclere
HRA	Habitats Regulations Assessment
HRZ	Hampshire Rural
HSE	Hampshire Southampton East
HSW	Hampshire Southampton West
HWZ	Hampshire Winchester
INNS	Invasive Non-Native Species
IOW	Isle of Wight
IROPI	Imperative Reason of Overriding Public Interest
KME	Kent Medway East
KMW	Kent Medway West
KTZ	Kent Thanet
LoS	Level of Service
Ml/d	Megalitres per day (one megalitre is one million litres)
MRF	Minimum Residual Flow
NE	Natural England
NEUB	Non-Essential Use Ban

OBH	Observation Borehole
Ofwat	Water Services Regulation Authority
PCC	Per Capita Consumption
PET	Potential Evapotranspiration
PRT	Portsmouth Water
SBZ	Sussex Brighton
SEA	Strategic Environmental Assessment
SES	SES Water
SEW	South East Water
SGI	Standardised Groundwater Index
SHZ	Sussex Hastings
SNZ	Sussex North
SPA	Special Protection Area
SPEI	Standard Precipitation and Evapotranspiration Index
SPI	Standard Precipitation Index
SSSI	Site of Special Scientific Interest
SWS	Southern Water
SWW	South West Water
SWZ	Sussex Worthing
TUB	Temporary Use Ban
TWUL	Thames Water
WFD	Water Framework Directive
WINEP	Water Industry National Environment Programme
WRMP	Water Resources Management Plan
WRSE	Water Resources South East
WRZ	Water Resource Zone
WSW	Water Supply Works
WSX	Wessex Water

List of annexes

Annex 1: Pre-consultation
Annex 2: Drought actions
Annex 3: Our case for IROPI under the Habitat's Directive
Annex 4: Drought triggers and indicators
Annex 4: Appendix B Groundwater Triggers
Annex 4: Appendix C Surface Water Triggers Phase 1 Report
Annex 5: Lessons Learned 2025 Drought
Annex 6: Customer communications and engagement
Annex 7: Environmental Monitoring Plan (EMP)
Annex 8: Habitats Regulations Assessment (HRA)
Annex 9: Strategic Environmental Assessment (SEA)
Annex 10: Water Framework Directive (WFD) assessment
Annex 11: WRSE Statement of Intent

Executive Summary

IMPORTANT NOTE:

This document is in draft form only. As indicated at the start of each report section, the content remains subject to further analysis, regulatory input and evidence and may be amended prior to finalisation of the Drought Plan. Southern Water does not invite reliance on this document in its current form.

Key parts of our Drought Plan 2027 are still under development, therefore this Executive Summary provides an overview of how we will consult and a timeline outlining progress on the plan and work still to be completed.

We have published our working draft Drought Plan for the period 2027–2032 following completion of the relevant review process before publication. We'd now like to hear your feedback in our public consultation.

Drought plans are updated every five years to help prepare for dry weather. Our regulator, Defra, asked us to publish our most recent drought plan in August 2025. Because of this, we've had less time to prepare for the next one, so we're still in the early stages of developing our Drought Plan 2027.

We are therefore carrying out a high-level public consultation at this stage. This is because key parts of our Drought Plan are still being developed, including environmental assessments of drought options, drought triggers, and technical discussions with regulators on the use of drought options and actions. These will all affect how we complete the plan and supporting consultation documents.

These documents are not yet ready to be included in this consultation.

We will carry out a second, more in-depth consultation early next year, once the key areas have been finalised and the supporting documents are ready.

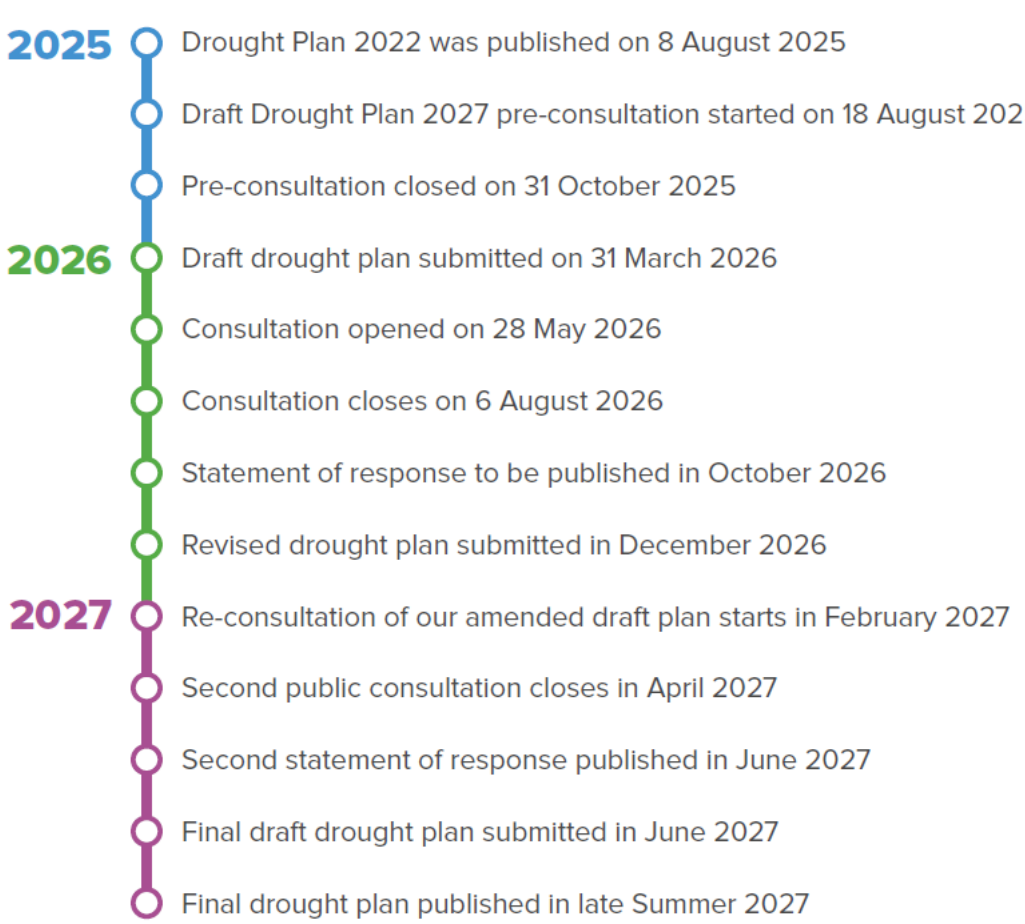
Our non-technical summary, available on our website, sets out how we would deal with a drought in Sussex, Kent, Hampshire and the Isle of Wight. It outlines the steps we may take to maintain the supply of drinking water to our customers during a drought while minimising the impact on our rivers and the environment.

Whilst we consult on developing our plan, we are working with regulators to determine how we can continue using Drought Permits and Drought Orders in Hampshire until our major water supply schemes are ready in 2035.

We are continuing to work with the Environment Agency, Natural England and Defra to develop our future drought response to protect the regions Chalk rivers. The response we develop will ensure we further protect the Chalk rivers during periods of prolonged dry weather or drought.

We have provided a timeline which outlines when we expect to complete the draft drought plan documents and start a second consultation process early in 2027.

The work we are doing with regulators will have an impact on the development of a number of drought plan report sections and annexes. As a consequence, the timeline provided below may be subject to change.



Draft Drought Plan 2027 Progress

Numerous sections of the draft DP27 are either missing, incomplete or subject to further substantial amendment. We have provided a table at the start of each main report section and at the start of each annex, outlining progress, work requiring completion, external dependencies, critical path, timeline and further meetings and workshops.

Key reasons for sections that are incomplete, missing or require substantial amendments include:

- **Candover Drought Order Scheme:** Development is ongoing and dependent on EA input. The frequency of use and sequencing with other measures (e.g. Itchen drought order) and environmental impacts cannot yet be confirmed. This materially impacts upon the main report, Annex 2 (drought actions), Annex 3 (our case for IROPI), Annex 4 (drought triggers), Annexes 7, 8, 9 (Environmental Monitoring Plan, HRA and SEA).

- **Section 20 Agreement (Expiry 2030):** The existing agreement provides an interim abstraction regime in Hampshire pending delivery of HWTWRP in 2034. During the period of this draft DP27 (2027 – 2032) we expect to rely on drought options until 2034 — beyond the Section 20 expiry. Agreement is needed with the EA (and potentially Defra) on the use of drought options post-2030, the level of mitigation and compensation required, and agreement in principle on the IROPI legal test. This materially impacts upon the main report and several annexes including Annex 2 (drought actions), Annex 3 (our case for IROPI), Annex 4 (drought triggers), Annexes 7, 8, 9 (Environmental Monitoring Plan, HRA and SEA).

- **Environmental reports**: External consultants are preparing environmental assessments (including HRA, SEA, WFD and the Environmental Monitoring Plan). These are outstanding and affect multiple sections.

- **EA Lessons Learned from 2025 Drought:** Workshops and further EA actions remain outstanding. These will materially influence the main report and Annex 2.

- **Drought Trigger Work:** External consultants are developing our surface water triggers (expected end of April 2026). Our internal trigger development is also in early draft. Triggers are essential for explaining the sequencing of drought actions but will also materially influence the environmental reports / assessments and our communication.

- **Proposed Amendments to Itchen Abstraction Licences**: The EA has indicated a potential reduction to Hands-off Flow conditions from June 2026. This could require annual drought orders with TUBs/NEUBs. This could apply potentially during non-drought scenarios meaning there is no clear pathway to resolve any supply deficit as drought options will not be available to us. This has material impact on several sections of our plan, including the main report, Annex 2 (drought actions), Annex 4 (drought triggers) and others (including our communications plan).

1. Introduction

IMPORTANT NOTE:

The Introduction is incomplete and the table below describes progress, along with work still to be completed.

1 Introduction	Description
Section Completeness	100%
Work Completed	This section is completed as a first draft. *This section is in draft form only. As indicated below, the content remains subject to further analysis, regulatory input and evidence and may be amended prior to finalisation of the Drought Plan. Southern Water does not invite reliance on this section in its current form.*
Work Remaining	Section 1.8.9 Asset risk assessment needs to be updated with reference to our AMP8 asset management plan. Sections 1.8.8 and 1.9 may need to be updated based on comments from regulators regarding our fdWRMP24.
External Deliverables	**Consultancy support** N/A
	Regulatory support N/A
Dependencies	We are waiting for the Secretary of State to provide a formal response to final draft WRMP24, which was submitted for regulatory review on 30th May 2025.
Critical Path	N/A
Timeline	• This will be updated once comments from regulators have been received on final draft WRMP24.
Decision points, meetings and workshops	N/A

This Drought Plan is submitted as an interim version in order to meet the statutory submission requirements under S39B of the Water Industry Act 1991. The Plan is not final and remains subject to further development and amendment pending the resolution of outstanding regulatory inputs and evidence. This version should not be relied upon as the definitive drought management framework for regulatory, operational or decision-making purposes. A revised and final version will be submitted to the Defra as soon as reasonably practicable and no later than end of December 2026 (providing regulatory inputs and resolutions can be completed in time to enable publication in December 2026).

Southern Water's (SWS's) draft Drought Plan 2027 (dDP27) covers the period 2027-2032. This plan describes the steps we will take to maintain adequate supplies of water to our customers and to protect the environment in the event of a drought. It has been developed in compliance with Sections 39B and 39C of the Water Industry Act 1991, as amended by the Water Act 2003[1] and in accordance with the Drought Plan Regulations 2005[2,] and Drought Plan (England) Direction 2005 [3OBJ].

1.1. Purpose of a Drought Plan

A drought is a naturally occurring event and is typically characterised by a prolonged period of abnormally low rainfall, leading to a shortage of water which may affect people, agriculture, industry and the environment.

Droughts range in duration and intensity from a short event caused by a hot, dry summer to an event spanning several years where persistent low rainfall over a long time can lead to shortage of water. The spatial extent of droughts can also vary widely from being concentrated in parts of a county to a much wider region (e.g. South East England) to the entire country. Therefore, to manage droughts of differing severity, water companies plan to use a range of drought management interventions, which include demand restrictions, supply-side measures and operational management of their sources. Some demand and supply side measures require us to apply for drought permits/orders from the regulator, so we need to demonstrate an Exceptional Shortage of Rain (ESoR).

The Drought Plan is a tactical plan that sets out the operational steps a water company will take before, during and after a drought to maintain essential water supplies to customers. Drought actions are the temporary actions taken beyond business-as-usual (BAU) activities to either increase supply or reduce demand for water. A Drought Plan must also identify the triggers that act as decision points for implementing the drought actions. Drought actions and their triggers vary across each Water Resource Zone (WRZ)[4] and can depend on conditions in each drought event. Our drought triggers and related actions are set out in Section 4.

The structure of this plan follows the recommendations set out in the EA drought planning guideline (2025). It describes our drought measures in detail and includes the technical work we have undertaken to inform our plan. The technical reports covering specific sections of the plan are attached as annexes.

[1] https://www.legislation.gov.uk/ukpg a/2003/37/contents
[2] https://www.legislation.gov.uk/uksi/2005/1905/regulation/4
[3] Environment Agency, 2025. Water company drought plan guideline, 2025 - GOV.UK
[4] A water resource zone is the area where all customers have the same risk of loss of water supply.

We will publish a non-technical summary to accompany dDP27 when we are instructed by Defra to publish this draft plan for public consultation. The non-technical summary will provide a high-level summary of our plan and will focus on the restrictions that our customers might face on their water use as a drought develops and progresses.

1.2. Links with Other Plans

1.2.1. Water Resource Management Plan

Our final draft Water resource Management Plan 2024 (fdWRMP24) sets out the actions we will take to ensure a constant supply of high-quality drinking water to our customers for the period 2025 to 2075.

It describes our long-term plan to be resilient to droughts and the Drought Plan sets out the operational steps that we will take over the short term, if droughts occur, to maintain supplies to customers and protect the environment. In some situations, we might be able to bring forward new schemes that are being delivered to meet our long-term WRMP strategies in order to overcome short-term drought events.

We submitted our fdWRMP24 to Defra in May 2025 and are awaiting permission from the Secretary of State to publish our final WRMP24. As a consequence, our most recent published plan is WRMP19[5].

The options to manage drought described in this Drought Plan are included in fdWRMP24. We have started developing our WRMP 2029 (WRMP29). WRMP29 will align to our next Drought Plan which we expect to cover the period 2032 to 2037.

A key influence on our fdWRMP24 was our agreement with the EA under Section 20 of the Water Resources Act 1991 ('The Section 20 Agreement')[6] and licence changes that set new limits on the amount of water that we can abstract under our three existing licences in the River Itchen catchment (Lower Itchen surface water, Lower Itchen groundwater and Twyford groundwater) as well as River Test surface water abstraction and abstraction from the EA's Candover Augmentation Scheme boreholes. As a result of these licence changes, the amount of water we can take from these sources during a severe drought is significantly reduced. This has a significant impact on our ability to maintain supplies to customers as discussed later in this report and set out in Section 5.3.

The Section 20 Agreement also includes a substantial package of environmental monitoring, mitigation and potential Imperative Reason of Overriding Public Interest (IROPI) compensation measures. Our case for IROPI is presented in Annex 3.

[5] Water Resources Management Plan - Southern Water
[6] See Section 7.1.1 for details on the Section 20 Agreement.

1.2.2. Water Resources South East and the Regional Plan

Water Resources South East (WRSE) / Regional groups provide the framework for **coordinated drought planning across company boundaries**, ensuring that water companies share information on hydrological conditions, risks, and potential impacts at a regional scale. They help develop a **common regional understanding of drought severity**, support alignment of triggers and actions where appropriate, and identify cross-boundary issues that individual companies may not see in isolation.

During a drought, regional groups act as a **coordination and communication hub**, helping companies maintain consistent messaging, understand regional pressures, and escalate issues collectively to the EA or Defra. They do not replace company level decision making but strengthen it by ensuring that actions are regionally coherent and based on shared evidence.

Further detail of how WRSE plans to support water companies in the South East region, including SWS, during prolonged dry weather and dry events is summarised in the Statement of Intent provided in Annex 11.

A regional multi-sector resilience plan has been delivered by the WRSE group consisting of six water companies in the South East i.e. Affinity Water (AFW), Portsmouth Water (PRT), SES Water (SES), South East Water (SEW), SWS and Thames Water (TWUL) and includes the EA in the programme management board. The aim is to develop a resilient multi-sector water resources plan, in each planning cycle, that considers the whole of South East England as a single region, unconstrained by water company boundaries. Options to best meet the water requirements of the domestic and non-domestic consumers in the whole region were appraised as part of the WRMP24 development process. The current regional plan was published in June 2025 and can be found on the WRSE website[7].

All of the options considered in this Drought Plan for implementation during a drought have been included in the list of constrained options that has been provided to WRSE for development of the 'best value' plan for the region.

Due to local differences, the drought actions that water companies take and their timing may differ but there is recognition of the need by the water companies in the South East to discuss the development of their plans and to align the drought levels as closely as possible, especially the restrictions and exceptions that might need to be imposed in the event of a drought.

WRSE's vision and policy objectives:

> *The current regional plan for South East England looks ahead to 2075 and addresses the water resources planning challenges that we face. The plan seeks to:*
>
> - *Ensure there is enough water for a growing population and to support economic growth*
> - *Improve the environment by leaving more water in the region's rivers, streams and underground sources*
> - *Increase the region's resilience to severe drought and other extreme shocks and stresses*
> - *Address the impacts of climate change on demand for water and how much is available.*

[7] Library | WRSE - Water Resources South East

A new regional plan is being developed for publication in 2029. The WRMPs to be published by individual water companies in 2029 are expected to align with the regional plan.

1.2.3. Emergency Drought Plan

Our emergency plan would be activated in exceptional circumstances, such as a drought of such severity that we could not maintain a secure water supply to all our customers. A description of our emergency drought options is presented in Section 7.

1.2.4. Our Business Plan

Our 2025-2030 business plan[8] considers resilience of our water supply and wastewater operations. Drought options that have been identified to ensure drought resilience in our WRMP are included in our business plan. Any new water supply options or changes to levels of service/resilience are reviewed and agreed as part of the WRMP and our continuous options appraisal process. If changes are required, we would review and amend our drought plan accordingly.

1.3. Developing and consulting on our Drought Plan

The Drought Plan guideline requires us to undertake pre-consultation before developing the draft Drought Plan and then to undertake a public consultation on the draft plan.

Our pre-consultation for dDP27 did not start until August 2025 as we were still working on the final draft of Drought Plan 2022 (DP22) and were waiting for regulatory comments on the final draft. We sent the final draft of Drought Plan 2022 to the EA and Defra in January 2025, as the draft plan had required several revisions related to drought management options and triggers in our Western water supply area. We received permission from Defra to publish the final version of DP22 in July 2025 and had 30 days to make specific amendments to the plan before it was published on our public facing website on 8th August 2025. We did not start dDP27 in the intervening months as we were working on the final draft of WRMP24, which was submitted to regulators for review on 30th May 2025[9].

Our dDP27 development started on 18th August 2025 when we sent out our pre-consultation letter to key stakeholders. On receipt of our pre-consultation letter, the EA requested a one month extension due to workloads and staff availability. The deadline for the pre-consultation process was extended from 22nd September to 31st October 2025.

Full details of the pre-consultation and early meetings are workshops with stakeholders are provided in Annex 1.

[8] Business Plan 2025-30 - Southern Water

[9] We are still waiting for a response from the Secretary of State on the status of fdWRMP24. Water Resources Management Plan - Southern Water

1.4. Our supply sources

The South East is one of the driest regions in the UK and rainfall is integral to the maintenance of water supplies in the region. Annual rainfall averages 730 millimetres across our supply region. However, groundwater recharge primarily takes place during the winter rains. Rain infiltrates through the soil to recharge the natural storage in the underlying aquifer to support river baseflows for the following year. Rainfall experienced outside of winter is of less value to groundwater recharge as it is mostly lost to evaporation, plant transpiration or runs off directly into rivers from the land.

In normal conditions, our water supplies come from three main sources: groundwater abstractions, river abstractions and reservoirs (Table 1-1).

Table 1-1: Types of water resources and their responses to droughts

Resource type	Water source	Water source type	Speed of response to rainfall events		Resilience level*
Groundwater	Underground water-bearing rocks (aquifers).	Chalk (83% of abstraction)	Generally slow. Due to the time it takes for rain to percolate through the ground, there is typically a lag between rain and an increase in groundwater levels. An exception to this occurs when cracks (fissures) in the chalk aquifer allow rain to refill local sources more quickly.		Can be resilient for up to two dry winters in a row.
		Greensand (17% of abstraction)			
Rivers	Rivers rely on a mixture of groundwater and rainwater running off the land.	Groundwater dominated	e.g. River Test	Rivers that are predominantly fed by groundwater tend to respond slower to rainfall but maintain higher flows for longer.	Dependent upon ratio of surface water to groundwater flow. Generally resilient to one dry winter. Recover quickly when drought ends.
		Mix of groundwater and surface water	e.g. River Rother		
		Surface water dominated	e.g. River Medway	These rivers tend to be flashy, responding quickly to rainfall but they also enter low flow situations more quickly. We release water from Bewl Water reservoir into the Medway in the summer to allow our abstraction to continue during periods of low flows.	
Reservoirs	Reservoirs are filled using pumped water from rivers and by impounding natural catchments	Bewl Water Darwell Weir Wood Powdermill	Reservoirs, which are refilled through pumping from rivers and from natural catchment inflows, will respond more quickly than groundwater. Weir Wood, which is only refilled from surface water inflows, is dependent upon saturation of the surrounding catchments.		Dependent upon reservoir size, Bewl Water reservoir is resilient for up to two dry winters.

*We define resilience in this context as the ability of a water source to cope with and/or recover from lack of rain continue providing supplies now, and in the future, without harming the environment.

1.4.1. Groundwater abstractions

Our water supplies are predominantly reliant on the transmission and storage of water in underground reservoirs (i.e. aquifers). Groundwater accounts for 70% of our total water supplies. This water predominantly comes from the Chalk aquifer that underlies much of the region. The aquifer extends throughout parts of Kent, Sussex, Hampshire and the Isle of Wight. In several of our WRZs, all the water comes from groundwater.

1.4.2. River abstractions

River abstractions account for 23% of our water supplies, most notably the Eastern Yar and Medina on the Isle of Wight; the Test and Itchen in Hampshire; the Western Rother and Arun in West Sussex; the Eastern Rother and Brede in East Sussex; and the Teise and Medway in Kent.

1.4.3. Reservoirs

Four surface water storage reservoirs provide the remaining 7% of water supplies. These are Bewl Water, Darwell, Powdermill and Weir Wood[10]. The total storage capacity of these four reservoirs is 42,390 million litres. South East Water is entitled to 25% of the yield from the River Medway Scheme, which incorporates the storage within Bewl Water reservoir.

1.5. Our water supply areas

We provide water to nearly 2.6 million domestic and non-domestic customers across an area of 4,450 square kilometres, extending from Kent in the east to the Isle of Wight in the west, through parts of Sussex and Hampshire. Our supply area is divided into 14 WRZs. These are amalgamated into three larger supply areas (Western, Central and Eastern) based on the degree of interconnectivity between the WRZs (Figure 1.1). For the purposes of drought planning, we treat our three water supply areas as our drought management areas.

We share boundaries with other water companies. These include Affinity Water (AFW), Cholderton and District Water (CDW), Portsmouth Water (PRT), SES Water (SES), South East Water (SEW), South West Water (SWW), Thames Water (TWUL) and Wessex Water (WSX). We have number of bulk supply agreements with our neighbouring water companies (Section 5.3).

1.5.1. Western area

Our Western area consists of parts of Hampshire and the whole of the Isle of Wight. It consists of seven WRZs, namely Hampshire Andover (HAZ), Hampshire Kingsclere (HKZ), Hampshire Winchester (HWZ), Hampshire Rural (HRZ), Hampshire Southampton East (HSE), Hampshire Southampton West (HSW) and the Isle of Wight (IOW). HAZ, HKZ, HRZ and HWZ are all supplied from groundwater only. HSW is supplied by surface water from the River Test and HSE and the IOW WRZs depend on a mixture of surface and groundwater.

1.5.2. Eastern area

Our Eastern area is composed of three non-contiguous areas spread across Kent, Medway and East Sussex. It has four WRZs, namely Kent Medway East (KME), Kent Medway West (KMW) and Kent Thanet

[10] We are currently upgrading the water treatment works at Weir Wood reservoir.

(KTZ) whereas Sussex Hastings (SHZ) is the WRZ located in East Sussex. The areas are supplied by a mixture of surface and groundwater with internal transfers from Bewl also supporting each of the WRZs.

1.5.3. Central area

Our Central area consists of parts of East and West Sussex and has three WRZs. These are Sussex North (SNZ), Sussex Worthing (SWZ) and Sussex Brighton (SBZ). The main influence on the timing and frequency of needing drought interventions in SNZ is the flow in the River Rother and the reductions in it during dry periods. The WRZs include a bi-directional inter-zonal transfer between SWZ and SNZ, as well as an inter-zonal transfer from SWZ to SBZ.

1.6. Distinguishing between normal operation and a drought

Under normal conditions, and when there is surplus water in the environment, we can operate more flexibly. For example, we could have a higher number of supply works or sources out of operation for planned maintenance (outage) without impacting our levels of service. The selection of water sources we use will also be optimised for expected demand and efficiency. However, it is vital that we enter a drought with water resources in a healthy position and we do not carry too high levels of risk. All of our water resources depend on rain for replenishment. The key difference between them is the time they take to respond to rain, or lack of it (Table 1.1).

As a drought develops, the way in which we operate can become constrained by the availability of water and the distribution of demand. For example, some sources may be unable to produce their normal volumes of water, the patterns of demand will also change in response to dry weather. These factors in combination reduce our ability to operate flexibly and efficiently and so as a drought develops, we need to take actions to secure supplies and reduce demand. These are summarised in Section 5 and described in Annex 2.

1.7. Drought Levels

Droughts vary in duration, intensity and geographical extent and the actions we take will be informed by each of these factors. The key stages in the development of a drought are as follows:

1. **Normal conditions:** This is the stage when we are experiencing normal weather conditions and groundwater levels and river flows are where we would expect them to be for the time of the year.
2. **Level 1 – Impending or developing drought:** This is the stage where we start moving from normal conditions towards a drought, but the drought is not yet fully established. Sometimes the dry weather conditions break at this point and we return to normal conditions. At other times the dry weather conditions continue to progress to the next stage. This stage typically has a return period of 1-in-5-years to 1-in-10 years.
3. **Level 2 - Drought:** This results from a continued period of dry weather beyond the impending drought stage. The weather pattern may change during a drought to bring more rain. When this occurs, we will continue to monitor the resource position, and the drought classification might change back to impending drought or normal depending on the circumstances. The typical return period for this level is 1-in-10 years to 1-in-20 years. If the weather continues to remain dry, we move to next drought stage.
4. **Level 3 - Severe drought:** The third stage of the drought is severe drought with a return period of 1-in-20 years to 1-in-500 years. This is the final stage of a drought and covers those rare but severe events that we have seen in the past and could experience in the future.

5. **Level 4 - Emergency drought:** This is the most severe stage of drought that would require us to take emergency actions in order to manage supply and demand of water. The return period for this is greater than 1-in-500 years.

We have set out a series of drought triggers (Section 4) that we monitor to identify the development of a drought and inform the timing of the additional actions we need to take to ensure supplies are maintained.

Figure 1-1: SWS supply area showing the three main supply areas and the WRZs

Western area WRZs

- **Hampshire Kingsclere** — 100% groundwater
- **Hampshire Andover** — 100% groundwater
- **Isle of Wight** — 47% groundwater, 23% river, 30% transfers
- **Hampshire Rural** — 100% groundwater
- **Hampshire Winchester** — 100% groundwater
- **HampshireSouthampton East** — 52% river, 48% groundwater
- **Hampshire Southampton West** — 100% river

Central area WRZs

- **North Sussex** — 35% groundwater, 51% river, 8% reservoir, 6% transfers
- **Sussex Worthing** — 98% groundwater, 2% transfers
- **Sussex Brighton** — 100% groundwater

Eastern area WRZs

- **Kent Medway East** — 100% groundwater
- **Kent Medway West** — 56% river and reservoir 44% groundwater
- **Kent Thanet** — 77% groundwater, 2% river, 21% transfers
- **Sussex Hastings** — 5% groundwater, 79% reservoir, 16% transfers

1.8. Operation in normal times

The actions we take under normal water resource conditions determine our preparedness for managing a drought when it happens.

Table 1-2 lists the actions taken by various teams within SWS during normal conditions to ensure that we are in the best possible position should drought conditions start to develop.

Table 1-2: Actions to be taken by various SWS teams under normal conditions

Drought Status		Actions	Water Operations	Environment & Corporate Affairs	Risk & Compliance	Asset Strategy & Planning	Executive Leadership Team
Normal	1	Drought monitoring reports	•		•	•	
	2	Environmental baseline monitoring		•			
	3	Reservoir refill	•				
	4	Distribution Input monitoring	•		•	•	
	5	Production planning	•				
	6	Managing outage	•		•		
	7	Sustainable abstraction policy	•		•	•	
	8	Leakage reduction	•			•	
	9	Asset risk assessment	•		•		
	10	Meet water efficiency targets	•	•	•	•	
	11	Communication & engagement		•	•	•	•

1.8.1. Drought monitoring reports

Monitoring data from boreholes, gauging stations and reservoirs is collected to populate our ‘drought dashboard’ which is used to decide the drought stage by comparison against our drought triggers (see Section 4).

1.8.2. Environmental Baseline Data and Monitoring

Baseline data and monitoring are required to provide the context for assessing the potential environmental impacts of the relevant drought plan measures over and above the effects of environmental drought. A review of existing baseline data and information relating to Southern Water’s drought plan measures is

underway in preparation of the Southern Water draft Drought Plan, Environmental Assessment Reports (EARs), Habitats Regulations Assessment (HRA) and Water Framework Directive (WFD) assessments. The adequacy of the data and information will be reviewed and consideration given as to whether there is a need for further baseline data acquisition and/or monitoring to reduce uncertainty regarding the presence, distribution, composition and/or quality of the physical environment and relevant environmental features (including heritage, recreation, navigation and landscape), which will inform future updates to the environmental assessments once acquired.

Further detail is provided in Annex 7 Environmental Monitoring Plan.

1.8.3. Reservoir refill

All our reservoirs, except Weir Wood, rely on water abstracted from rivers to refill them. We have abstraction licences to pump water from the rivers to fill these reservoirs. These licences have Minimum Residual Flow (MRF)[11] conditions, which means we cannot abstract water from the rivers when flows drop below a certain level. Flows are usually higher in the winter; therefore, this is the optimum time to refill our reservoirs.

We have generated 'refill curves' for each of the reservoirs to indicate the expected water level during different times of the year. If the water in the reservoir drops below the level on the curve, we should start pumping water from the river to bring the levels back up.

Bewl Water and Darwell reservoirs are also linked by a pipeline, which allows us to transfer water from Bewl Water to help refill Darwell. To support this operation, we have also generated refill curves to show when the Bewl to Darwell Transfer Pipeline should be used.

Pumping requires a lot of energy and can be expensive, so we only carry it out when required. However, it is essential that when we enter the end of the winter recharge season (typically Oct-April), we have maximised the amount of water we can abstract from the rivers to refill the reservoirs.

1.8.4. Distribution Input monitoring

The Water Production Team is responsible for updating Distribution Input (DI)[12] spreadsheets each week with the daily figures for abstraction and output. These are then used to generate a DI figure for each of our WRZs, and for SWS as a whole, which is circulated to relevant teams on a weekly basis.

The DI figure is used as a proxy to show demand for water from our customers. It is another important measure of the state of our water resources. For example, rising demand for water coupled with reducing resources could threaten our ability to meet demand.

[11] MRF is a pre-defined minimum rate of water flow that must be left in a water course to support abstraction.
[12] Distribution Input (DI) is the total volume of treated water that we put into supply.

1.8.5. Production planning

The role of the Water Production Team is to ensure that our water sources are managed in such a way that both protects them and ensures we can supply customers.

The team is also responsible for monitoring and enforcing:

- output from works.
- performance against outage; and
- performance against our sustainable abstraction policies.

To ensure we are in a good position ahead of a drought, the team also needs to carefully manage our conjunctive sources. These are sources which provide water from two or more places, such as at Pulborough Water Supply Works (WSW) in Sussex, where we can abstract water from groundwater, two rivers and also import water from PRT via a bulk supply.

Usually, we manage abstractions such that rivers are used in the winter when flows are higher and groundwater in the summer when river flows are lower.

1.8.6. Managing outage

Outage refers to events when we are not able to supply the planned Deployable Output (DO)[13] from a source. This may be full outage, when a site is out of action, or partial outage, when a site produces less than its DO. Outage events are different from those where a site shuts down for a period of time as a result of reduced demand, as evidenced by higher levels at the water service reservoir associated with that WSW.

Outage is planned for in our Water Resources Management Plan (WRMP) and is monitored to assess how closely we are operating to our planned levels.

1.8.7. Sustainable abstraction policy

Our sustainable abstraction policy seeks to ensure that sources are not operated above their DO, unless a waiver has been signed to allow this. The Water Resources Policy & Regulation Team is responsible for making assessments for waivers and signing them off. When issued, waivers are temporary and need to be renewed if required.

The Water Production Team is responsible for monitoring abstraction and ensuring sources are operated sustainably in accordance with our policy.

[13] DO can be defined as the reliable output of an active source or group of sources or of a bulk supply in view of the constraints imposed by one or more of the following: environment, licence, pumping capacity, hydrology, hydrogeology, transfer capacity, treatment capacity, water quality and levels of service.

1.8.8. Leakage reduction

Our leakage target is set by our regulator Ofwat. Our target over AMP8 (the 8th Asset Management Period which is 2025-30) is to reduce leakage to 66.21Ml/d by 2030. Our long-term goal is to reduce leakage by 50% by 2050 compared to our reported leakage in 2018.

Reductions in leakage are driven though more regular inspections and maintenance of our distribution network. As a drought progresses, we would expect to invest in increasing the frequency and scale of this work to further drive down leakage. We are also investing in new technology to help us reduce leakage.

By reducing leakage, we would reduce the volume of water we need to abstract from the environment. When we are imposing restrictions on our customers to reduce the amount of water they use, it is important that we demonstrate that we are undertaking actions ourselves.

Members of the team also provide verifications of our abstraction and DI meters, as well as optimisation and pressure management of the water network.

1.8.9. Asset risk assessment

Asset risk assessment plays an important role in ensuring that assets and sources are adequately prepared should a drought develop. Critical sources have been identified in each WRZ which, if lost, would have a significant impact on our ability to supply water to meet customer demand.

By identifying these risks and targeting investment to remove or reduce them, sources and WRZs should become more resilient and resistant to droughts. These risk assessments are undertaken as part of work by the Water Risk & Resilience Team to define ageing assets and resilience strategies for water assets in the short, medium and long term.

1.8.10. Meet water efficiency targets

Promoting water efficiency is a key part of our strategy to secure resources for the future as it encourages our customers to think about the way in which they use water. We have one of the most ambitious water efficiency plans in the UK water industry whereby we are planning to reduce per capita consumption (PCC) of our domestic customer to 100 litres/person/day by 2040. Our reported PCC in 2025 was 126 litres/person/day.

By reducing the amount of water that customers use, we will need to abstract less from the environment. This will result in more water being available during droughts in areas where water is abstracted from storage sources, such as reservoirs, and from some groundwater sites.

1.8.11. Communication and engagement

Communication and engagement with customers, stakeholders and our communities about water use, water supply, rainfall and water levels are critical to developing a better understanding before a drought develops. The Communication Team is responsible for developing and providing information to support delivery of the Water Efficiency Plan and general information on our water supply. This information includes:

- Regular updates on rainfall, levels of water sources and leakage.
- Information on the current drought status, the Drought Plan and restrictions.

- Water efficiency advice and access to discounted products.
- Information on the water cycle and the supply process.
- Key stage education programmes for primary and secondary schools.
- Information on leakage and development of new water resources; and
- Promotion of campaigns with Waterwise, Water UK and Water Resources South East (WRSE).

A range of tools are used to communicate this information, including:

- Website.
- Social media (Facebook and Twitter).
- Video.
- News releases.
- Stakeholder newsletters.
- Campaigns in the community.
- Partnerships with councils and community organisations.
- Waterwise talks for schools and community groups; and
- SWS News and the intranet for staff.

1.8.12. Drought exercises

During normal periods we will undertake drought exercises to test our drought response. This could take the form of internal drought workshops or wider workshops with neighbouring water companies and stakeholders such as the Environment Agency.

1.9. Our Levels of Service

The nature and frequency of measures that we will introduce to reduce demand and increase supply in the event of a drought is governed by our target Levels of Service (LoS). Our most recent target LoS are published in fdWRMP24. Two target LoS are relevant in this regard (Table 1-3):

- Customer target LoS relate to the frequency and nature of restrictions on water use, such as Temporary Use Ban (TUB) or Non-Essential Use Ban (NEUB), that customers may experience.
- Environmental target LoS relate to the frequency of drought permits/orders allowing modified abstraction regimes at some of our sources.

Table 1-3: Our target LoS

	Annual probability	Return period	Probability of at least 1 occurrence between 2025 and 2075
Customer target levels of service			
Advertising to restrict water use	20%	1-in-5 year	100%
Temporary Use Ban on different categories of water use	10%	1-in-10 year[a]	99%
Drought Order (Non-Essential Use Ban)	5%	1-in-20 year[b]	92%
Environmental target levels of service			
Application for Drought Permits and Orders to increase supplies through relaxation of abstraction licence conditions, increase in licensed quantities or other measures [c]	5%	1-in-20 year[c]	92%

[a] Frequency of first implementation but would be introduced in a phased manner.
[b] The 1-in-500-year target is to be achieved by 2040-41. Our target level of service is less than this in some WRZs prior to 2040-41.
[c] For HSE we expect the short-term level of service for these drought permits and orders (up to 2030) could be less than our target.

1.10. Drought Management and Communications

1.10.1. Drought Management

Due to the sensitivity of our water supply catchments to drought, we need to actively monitor our rivers, reservoirs and groundwater sources. We updated our drought management structure in April 2025 in response to the emerging period of prolonged dry weather, which resulted in a drought in Hampshire.

Our drought management hierarchy comprises:

- **Southern Water Board**. Responsible for final sign-off of drought management decisions.
- **Executive Committee**. Makes day to-day decisions for recommendation to the Board. Our Managing Director for Water has delegated powers from the Board to expedite some drought management activities and decisions.
- **Drought Steering Group**. Comprises a group of experts within the business who meet monthly with the Managing Director for Water to provide updates on our water supply position and drought preparedness. They meet weekly during periods of prolonged dry weather to manage a drought.
- **Drought Working Group**. Comprises a larger group of technical experts from within the business including those who attend the (DSG). They meet weekly to review the company water supply position and manage drought preparedness activities over the winter. The working group deliver drought plan supply and demand actions and environmental mitigation and compensation during a period of prolonged dry weather.

A detailed description of our drought management structure and activities is provided in Annex 6.

1.10.2. Communications

We have developed a Drought Communications Plan to make sure we can communicate effectively with customers, stakeholders, regulators and other partners and critical organisations during all stages of a drought.

This plan has been updated since we published our DP22. This update has particularly taken note of:

- a further shift in a digital-first approach and hybrid working.
- insight gathered from customers – including young people, vulnerable customers, businesses and a broad range of bill payers from the Temporary Use Bans in 2022 and 2025.
- insight from customers across the wider South East through engagement with the Water Resources South East (WRSE) group, National Drought Group Communications sub-group; and
- insight from regulator and CCW reviews on engagement.

A detailed description of our drought communications plan is provided in Annex 6.

1.11. Wider impacts of drought

One of the ways that we work with our neighbouring companies is that we participate in the regular WRSE 'dry weather' meetings which focus on the risk of any potential future water shortages. In these meetings all water companies share information about their available water resources, weather forecasts, and any communication needed with customers about any emerging drought risk. These meetings are held all year round and stepped up in frequency when a risk of water shortages across the South East starts to emerge. The meetings facilitate collaboration between water companies and actions to ensure an effective regional response to a developing drought. By working together and following a joined-up approach to communication, we aim to reduce confusion so our customers clearly understand the pressure on water supplies and the environment during water shortages, what we are doing, how they can use water wisely, and what water restrictions may need to be, or are being, imposed.

This process is implemented through the Dry Weather Monitoring Group (DWMG) for which terms of reference have been agreed. The purpose of the DWMG is the provision of a regular update and information sharing forum when companies are operating in Business As Usual (BAU) mode but when near term risks can be observed, and a heightened level of preparedness is desirable. It will draw information from national, regional and local perspective and in turn provide updates which will help inform regional and national awareness and early preparedness.

As we enter a drought, such as in 2025, we participate in the National Drought Group, Platinum Incident Management and the National Incident Management groups. These groups provide a joined up approach to tackling drought and enable strong communication between water companies and regulators. Further to this we seek to build upon our knowledge sharing forums and set up regional centres of excellence to pool resources and expertise between companies and to support collaboration, which is vitally important during a drought.

As part of regional collaboration with WRSE, we now have several joint datasets (for example coherent climate data) and tools (for example a regional simulation model and a dynamic demand forecasting model) which allow us to undertake forecasting in drought events on a regional scale. Close collaboration afforded by being part of WRSE has delivered a coordinated policy on implementing restrictions.

Other Sectors

Through the WRSE regional planning process we've worked with the main water-using sectors in the region to understand their future water needs and how resilient their existing water supplies are to droughts. The Environment Agency's National Framework set the requirement for regional groups to consider the needs of other sectors in their regional plans and it provided an initial assessment of other sectors' demand for water.

Where we have specific bulk supply agreements with commercial customers and New Appointments and Variations (NAV's), drought obligations are set out through the mechanisms within those bulk supply agreements. These agreements are discussed further in Section 5 for each supply area.

For our supply region agriculture represents the largest drought vulnerable external sector particularly activities such as trickle irrigation which is used by many horticultural businesses and is prominent in the region.

WRSE have identified that nearly 100 million litres of additional water could be needed by other sectors every day by 2060, primarily by the power and paper industries, and some horticultural users for trickle irrigation. Through WRSE engagement so far with these sectors they have indicated that they can meet most

of this increased need using their existing licences, by becoming more efficient and by increasing on-site storage. However, the paper and energy sectors have requested that 30 million litres is included in the regional plan and delivered through options that could benefit other sectors.

We will continue to work with the other sectors through the regional planning process to incorporate their future needs into the regional plan and our WRMP.

1.12. Lessons Learned – Hampshire Drought 2025

Lessons learned from managing the Hampshire drought in 2025 are presented in Annex 5. Key findings from the Planning Inspectors review of our Hampshire Drought Order application in 2025 highlighted a number of areas where we need to improve. Recommendations and actions are summarised in Table 1-4 below.

Table 1-4: Planning Inspector Recommendations

Planning Inspectors Recommendation		Southern Water Action
1	Be “application ready” for drought order submission.	HRAs and EARs are being updated in 2026 for review by the EA and NE. A timetable for completion of HRAs and EARs has been circulated to the EA and NE. It is recognised that due to the sensitivity of the Hampshire chalk rivers and the amount of monitoring data that needs to be assessed, the River Test and River Itchen HRA’s and EARs will take more time to update. We have discussed completion of all HRAs and EARs with the EA and NE during a 2025 drought lessons learned workshop held on 18th March 2026. Mitigation and compensation needs to be agreed with EA and NE and linked to the Section 20 Agreement, HRA/EAR assessments and in-year drought order applications.
2	Strengthen Extreme Shortage of Rain (ESoR) case	ESoR is unlikely to be appropriate for River Itchen if the HoF is amended as proposed by the EA, as the 90-day trigger will be crossed annually. We will agree an approach for ESoR for the River Itchen with the EA and Defra as part of the River Itchen licence renewal process and development of an updated S20 Agreement.
3	Demonstrate full compliance with drought plan sequence	Make drought actions clearer in the sequence in DP27 so that everyone can see compliance.
4	Improve notification, consultation and procedural robustness	Needs to be agreed with EA whilst developing DP27. Triggers did not allow sufficient time for everyone to review and respond due to speed of river flow decline during dry weather in 2025.
5	Update and modernise EARs	See recommendation 1 above.
6	Take catchment scale approach to HRAs	This needs to be agreed with EA and NE as the Section 20 Agreement has a mitigation and compensation programme.
7	Secure, scale up and accelerate compensation measures	Some compensation measures cannot be accelerated as they have a separate legal process and timeline e.g. land purchase. See recommendation 6 to agree measures and delivery timeline.

Planning Inspectors Recommendation		Southern Water Action
8	Link mitigation to drought order impacts	Should be covered in a revised compensation and mitigation agreement / revision to the Section 20 Agreement. Need to agree and record future mitigation and compensation. Will deliver recommendation 1, 2, 3, 5, 6 and 7.
9	Reposition NEUBs as a protective, not optional measure	The economic case and water saving benefits for NEUBS in the UK is not clear. We will work with regulators to determine how NEUBS are positioned within DP27.

We are also completing 2025 drought lessons learned workshops with the EA and NE which will be completed at the end of May 2026. The outcomes of the workshops will also be used to inform further development of Drought Plan 2027.

2. Drought Hazard Profile In Our Supply Areas

IMPORTANT NOTE:

Section 2 is incomplete and the table below describes progress, along with work still to be completed.

Drought Hazard Profile	Description
Section Completeness	30%
Work Completed	Supply area vulnerability assessment
Work Remaining	• Data acquisition (observed, DP27 and fdWRMP24), processing and data analysis. • All analysis will be completed by October 2026.
External Deliverables	**Consultancy support** None
	Regulatory support None
Dependencies	• Depends on the completion of modelling by Atkins • Approval of fdWRMP24
Critical Path	None
Timeline	• Analysis will be completed by end of October 2026.
Decision points, meetings and workshops	None

2.1. Supply area vulnerability

We conducted a drought vulnerability assessment following the methods set out in the UKWIR Drought Vulnerability Framework[14]. The full assessment is presented in Annex 4 and a summary is provided here.

We initially carried out a high-level screening against a defined set of criteria to identify the WRZs that required detailed assessment. The results show there are five WRZs that could be screened out from detailed assessment; four of these are in the Western area (HAZ, HKZ, HWZ, HRZ) and one in the Eastern area (KME).

For the WRZs that were identified as 'drought vulnerable' from the high-level screening, we have derived 'drought response surfaces' which relate duration and severity of rainfall deficit to the likelihood of supply failures. An example drought response surface is shown in Figure 3-1

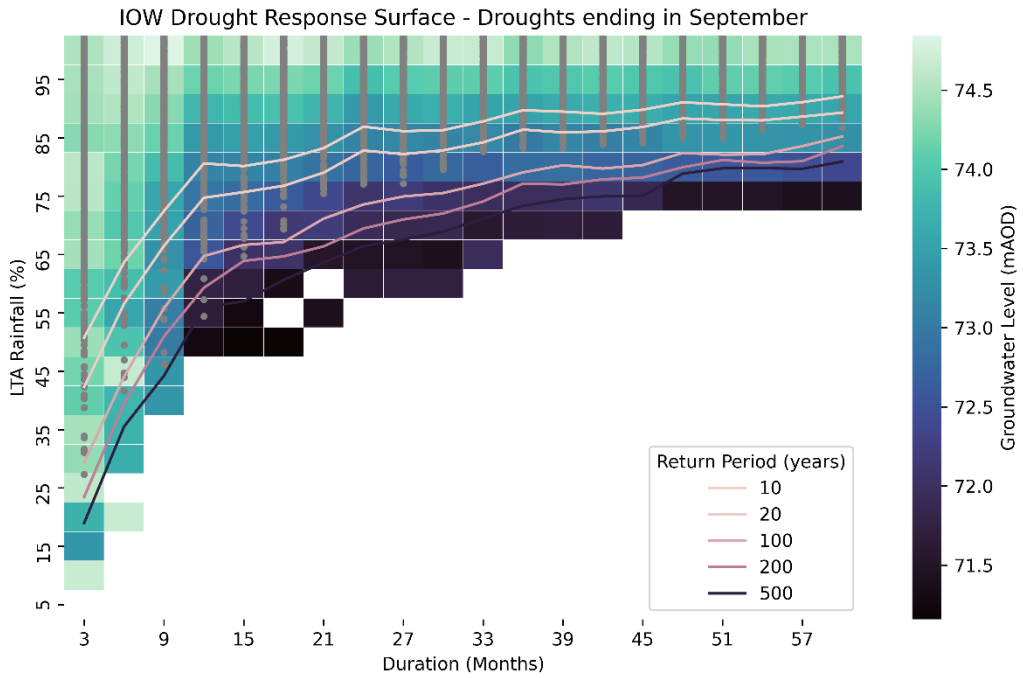


Figure 3-1: Example Drought Response Surface

A drought response surface plots the duration of a rainfall deficit along the x-axis and the magnitude of the rainfall deficit, as a percentage of long-term average rainfall on the y-axis. The colour shading indicates the average duration of supply system failure for a given rainfall deficit and duration. The grey dots in Figure 3-1 indicate the distribution of historical rainfall and the coloured lines indicate the probability of a given event. Each drought response surface is unique to each WRZ. We can use these plots to identify the critical drought type that poses the greatest risk to each WRZ.

[14] Counsell, C., Hunt, D., and Ledbetter, R., 2017. Drought Vulnerability Framework, UK Water Industry Research Limited, London.

The WRZs that predominantly rely on abstraction from rivers (HSE, HSW and SNZ) are the most drought vulnerable. This vulnerability arises from a combination of existing or marginal supply-demand deficits and DO which is dominated by river flows above minimum or hands-off flow (HoF)[15] licence conditions.

Our assessment found that Central and Western areas show very similar critical droughts. This largely reflects the characteristics of the Chalk aquifer which dominates SBZ and SWZ WRZs and provides groundwater baseflow support to the rivers Test and Itchen in Hampshire. Southern Hampshire and the Sussex Chalk are most sensitive to 12-21 months events ending in October with the most critical event around 15 months in duration. These represent single dry winter events but with multiple dry summers and autumns. Dry autumns are particularly critical reflecting that delayed onset of recharge and groundwater recovery following a dry summer extends groundwater and flow recessions below normal levels. SNZ WRZ shows a similar critical drought response to the adjacent chalk dominated WRZs but the supply mix differs, mostly comprising Lower Greensand groundwater and baseflow to the Western Rother's

Our Eastern area WRZs tend to be more sensitive to longer duration droughts than in the Central and Western areas and to an extent this reflects the storage buffering of the large reservoir systems which provide a degree of resilience to short duration drought events.

2.2. Observed Meteorological Drought Characteristics in our Supply Areas

This section will be updated upon completion of the data analysis.

2.3. Observed Drought Propagation Dynamics in Our Supply Areas

This section will be updated upon completion of the data analysis

[15] HoF is the flow below which abstractions have to stop.

2.4. Combined Drought and Heatwave Dynamics in Our Supply Areas

This section will be updated upon completion of the data analysis

3. Monitoring and forecasting a drought

Monitoring and forecasting a drought	Description
Section Completeness	100%
Work Completed	This first draft is complete. However, as a business, SWS is undertaking a review of its modelling capabilities with a view to improving the tools and systems used for modelling. The outcome of that review, and any actions arising from it, may warrant an update to this section for the final draft.
Work Remaining	None
External Deliverables	**Consultancy support** None
	Regulatory support None
Dependencies	NA
Critical Path	NA
Timeline	We will finish our review in September 2026 and will make necessary amendments to either a revised draft for public consultation (if time permits), or in the final version of the plan for publication in 2027.
Decision points, meetings and workshops	NA

Drought is a slow-onset hazard whose development is gradual and often described as a “creeping” process. As a result, the ability to detect and anticipate the occurrence and severity of a drought event is essential for effective preparedness; therefore, robust drought monitoring and forecasting systems are required. Robust drought monitoring and forecasting systems are essential for proactive drought risk management. These systems provide the evidence base required for informed operational decisions, optimisation of water resource assets, and compliance with statutory and regulatory drought planning requirements. The Environment Agency’s Water Company Drought Plan Guideline 2025 emphasises the need for robust monitoring of hydrometeorological indicators such as rainfall, river flows, groundwater levels, and reservoir storage as well as scenario based forecasting to test and validate drought triggers and management actions.

This section outlines the drought monitoring and forecasting systems currently used by SWS to support drought preparedness and response, along with the planned improvements to be implemented over the duration of this drought plan.

3.1. Drought monitoring

Our drought monitoring reflects the diversity and vulnerability of water resources across our supply area. Droughts, as slow creeping phenomena are detected and monitored using drought indices, often standardized indices. These drought indices are computed using primary hydro-meteorological variables such as rainfall, evapotranspiration and river flows/levels Our monitoring approach is designed to systematically acquire and analyse hydro-meteorological datasets to quantify precipitation deficits, seasonal hydrological variability, and the prevailing status of key water resource components, including reservoir storage trajectories, river flows, and groundwater level regimes. The hydro-meteorological variables that we monitor include:

- Rainfall.
- Potential evapotranspiration (PET).
- Groundwater levels.
- River flows.
- Reservoir storage; and
- Soil moisture deficits.

Table 3-1 summarises the datasets and their sources which we use for drought monitoring.

Table 3-1: Observation Datasets and Sources

Observation	Temporal Resolution	Sources
Rainfall	Daily, Monthly	EA
Potential evapotranspiration (PET)	Monthly	EA
Groundwater levels	Monthly	EA
River flows	Monthly	EA
Reservoir storage	Daily, Weekly, Monthly	SWS
Soil moisture deficits		EA

Drought is characterised by an absence or reduction in a hydro-meteorological variable that poses a threat to water supply. For example, the absence or reduction of rainfall results in a meteorological drought. To monitor meteorological droughts, we have chosen to monitor rainfall deficits through Standard Precipitation

Indices (SPI)[16] which allows for easy site to site comparison across our supply area and has a long history of use as drought monitoring index. However, SPI is solely based on rainfall data and hence it does not capture temperature driven atmospheric demands (i.e. evapotranspiration) or temperature driven intensification in drought monitoring. This is important given the recent occurrence of heatwaves and drought in the South of England and Europe in general, e.g. the 2022 drought and 2025 drought or dry-weather events. We therefore also compute and monitor the Standard Precipitation and Evapotranspiration Index (SPEI)[17], an extension of the SPI calculation. SPEI includes evapotranspiration data in the calculation of the drought monitoring index. Furthermore, the computation of SPEI captures what is called a climatological water balance making it suitable for monitoring water balance and soil moisture balance deficits.

Over 70% of our resources are groundwater abstractions from the Chalk and Lower Greensand aquifers and these comprise many drought sensitive sources where yields reduce when groundwater levels are low. Through our operational practices and numerous modelling studies, we have developed a good understanding of the characteristics of each aquifer block and have selected indicator boreholes which provide a reasonable representative indication of the groundwater status. Generally, these 'indicator' boreholes have long observation records, are regularly monitored, and are often included in the EA water situation reports.

3.2. Drought monitoring dashboard

Towards the end of the last drought plan cycle, we developed an improved internal drought monitoring dashboard. The Southern Water Drought Dashboard is an internal tool that is designed to support the monitoring of historical drought events and the forecasting of potential future droughts including their severity. The drought monitoring dashboard is managed by the Water Resource Policy & Regulation Team. It provides operational teams, planners, and the Executive with real-time insight into drought risk. It brings together hydrological, meteorological, operational, and regulatory data to support early warning, compliance, and strategic drought planning. By consolidating information such as reservoir levels, groundwater conditions, river flows, consumption patterns, environmental indicators, and regulatory triggers, the dashboard allows for a comprehensive and up-to-date view of water resource stress. Figure 3-1 shows the Drought Dashboard interface as each section of interest or hydrometeorological variable is opened.

Built using Power BI for visualisation, Pi system for provision of readings for groundwater, rainfall gauges and surface water reservoirs (limited to the Bewl site), Hydrology Data Explorer accessed via an API in Alteryx, this source supplies data for environmental trigger readings, surface water river flows and ground water levels for real-time inputs. The dashboard provides both operational detail and strategic oversight. It supports key functions including monitoring drought triggers, ensuring regulatory compliance, supporting drought permit decisions and improving cross-team communication. Its visual format reduces the time required for manual reporting and improves shared situational awareness across the business.

[16] McKee, T.B., Doesken, N.J., Kleist, J., 1993. The Relationship of Drought Frequency and Duration to Time Scales, Eight Conference on Applied Climatology, 17-22 January 1993, Anaheim, California.
[17] Vicente-Serrano, S.M., Santiago Beguería, J., López-Moreno, I. 2010. A Multi-scalar drought index sensitive to global warming: The Standardized Precipitation Evapotranspiration Index – SPEI, Journal of Climate 23: 1696-1718.

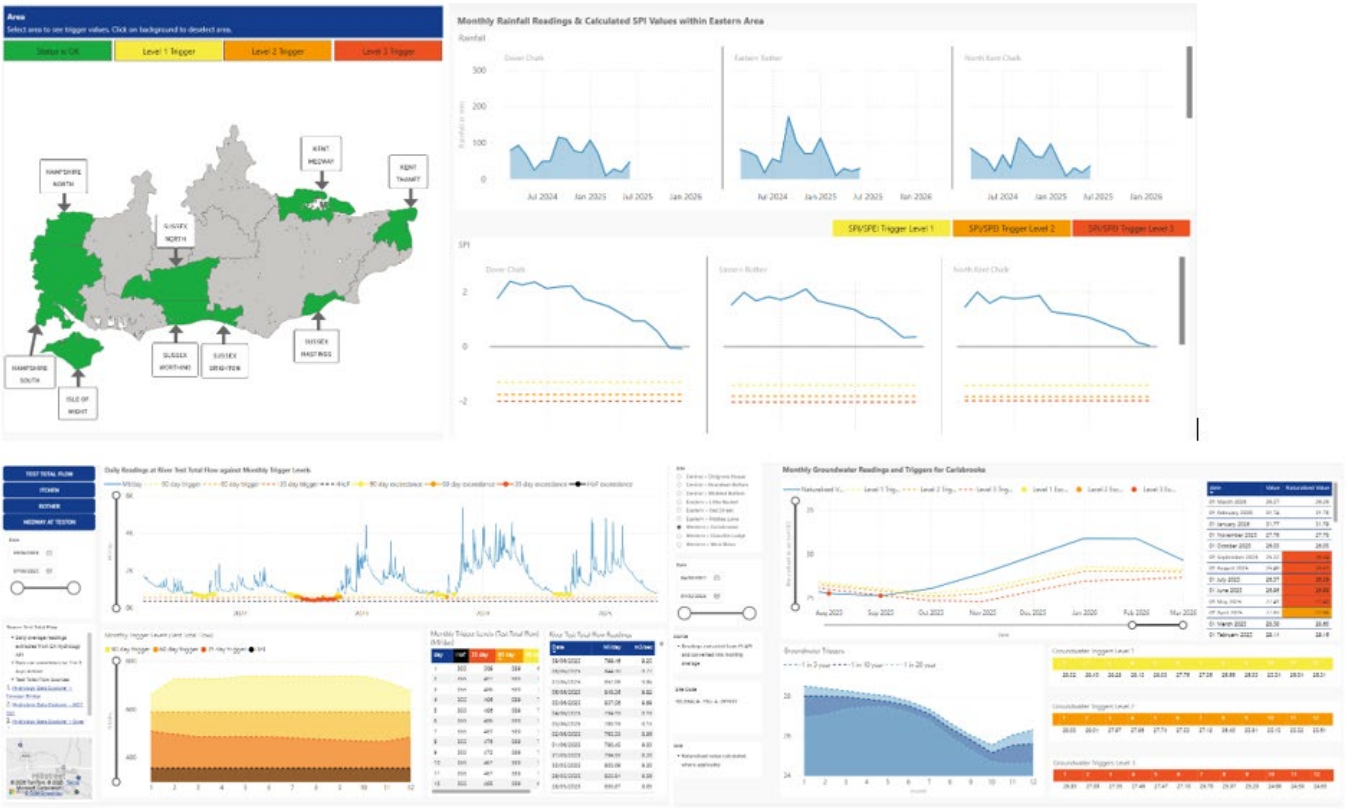


Figure 3-1 Drought dashboard interface showing area, Rainfall, River Flow and Groundwater interfaces

3.3. Forecasting a drought

Once it is recognised that there is a risk that severe drought conditions could develop, forecasting of potential drought conditions is undertaken using groundwater models (e.g. MODFLOW), hydrological models (e.g. Catchmod), and spreadsheet tools for supply–demand balance assessment.

For the streamflow forecasting, we have developed a probabilistic ensemble forecasting system that uses forecast rainfall and evaporation data within the Catchmod river flow model. The forecast is initialised using recently observed real-world streamflow data. For precipitation, a three-level 15-day forecast is combined with a 400-member synthetic rainfall series to generate a forecast that extends beyond 180 days. The 400-member synthetic series allow us to capture a broad range of variability and provides an indication of how confident or uncertain the forecast is. During the summer season, this model is run at least once a week and twice a week when the streamflow levels are close to crossing our drought triggers to appropriately time our response. An example of the output from this forecast system is shown in **Error! Reference source not found.Error! Reference source not found.** and **Error! Reference source not found.**.

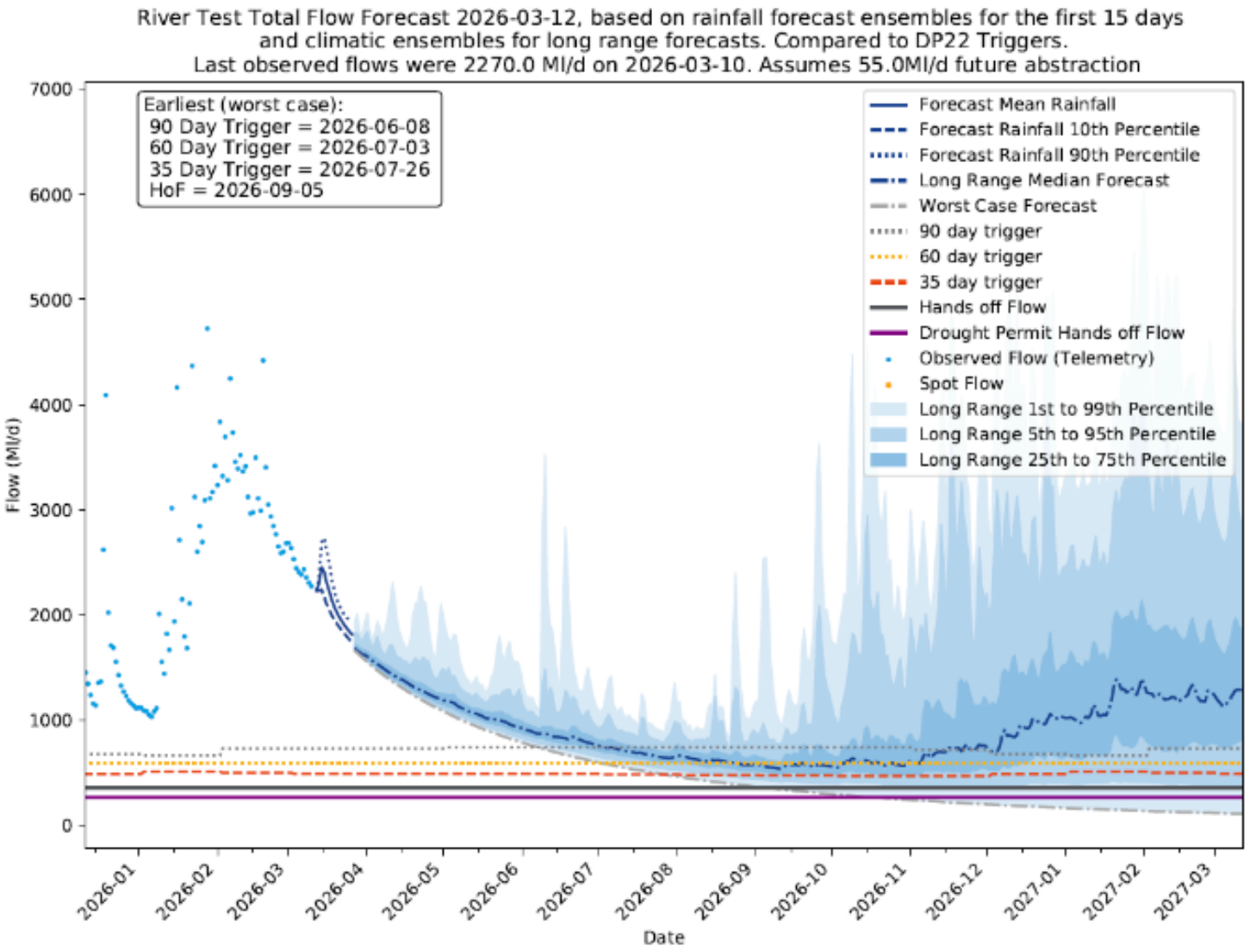


Figure 3-2

Testwood Total Flow forecast March 2026

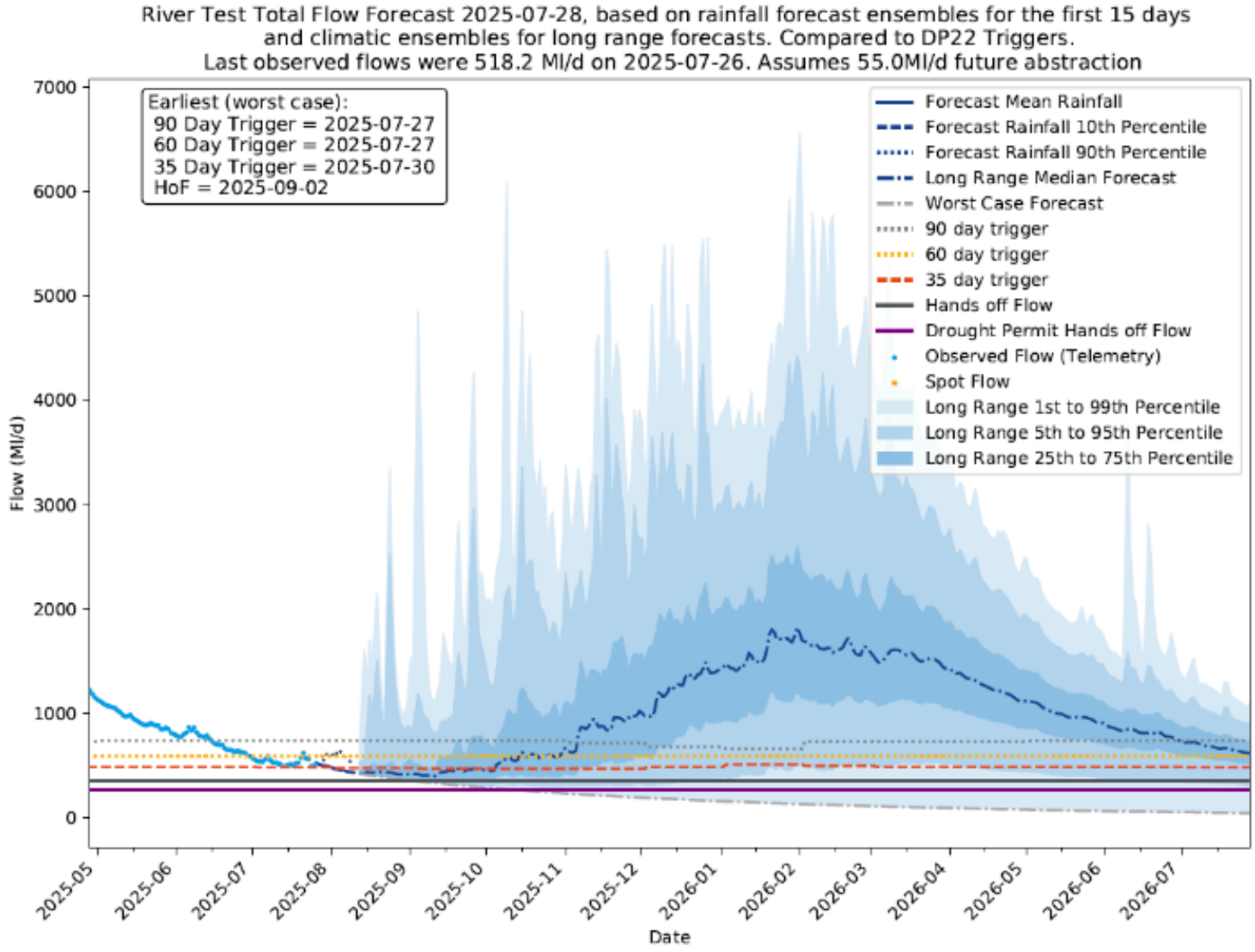


Figure 3-3: Testwood Total flow forecast July 2025

Where available, groundwater models can be used to, to establish baseline conditions, as well as forecasting. Potential rainfall and evaporation scenarios are developed based on historic sequences, and these are input into the models to predict possible resource availability from the current drought situation. Over the duration of this drought plan, we will work on a programme to improve our groundwater drought forecasting capabilities.

Forecasting of potential demand is based on current DI values adjusted for current leakage levels. These are fed into historic dry year demand 'envelope' curves to produce an unmodified demand forecast. The impact of demand management measures, including TUBs, drought orders to restrict water use and leakage reduction initiatives are then applied to the forecast as appropriate. If relevant, we will consider additional demand scenarios such as the effect of heatwaves or abnormal high household demand.

3.3.1. Supply-demand balance

As a drought progresses, we will use a variety of models to examine the current balance between available resources and forecast demand. The results from this work will allow us to examine the risk that the drought might cause to the balance between supply and demand in the coming months. The models to be used for this purpose include:

- Supply model for the strategic network (Pywr).
- Rainfall runoff models used to predict river flows (Catchmod).
- Groundwater recharge models (4R).
- Groundwater simulation models (MODFLOW, Lumped Parameter Models).
- Bespoke spreadsheet models.

Key outputs from this work include:

- potential resource availability over the forecast period for different rainfall scenarios.
- Potential demand 'envelopes' based on latest measured Distribution Input and calculated leakage.
- Current and anticipated operational issues and source outages which could affect the availability of water supplies.
- Security of Supply Index (SoSI) calculations.

There are two levels of approach that are used when carrying out the supply-demand balance analysis (Figure 4-4). The 'simple' approach uses simple forecasting methods for surface water, such as the river recession curve, and standard mass balance models for reservoirs to estimate resource availability. The 'modelling' approach uses a range of modelling tools that are available for forecasting future resource positions. These include Catchmod rainfall-runoff models and groundwater models, which feed into pywr conjunctive use water resource models. These models can use recent and forecast rainfall and DI records to estimate future, area wide, conjunctive use resource availability. These are then used to produce risk-based forecasts of supply and demand.

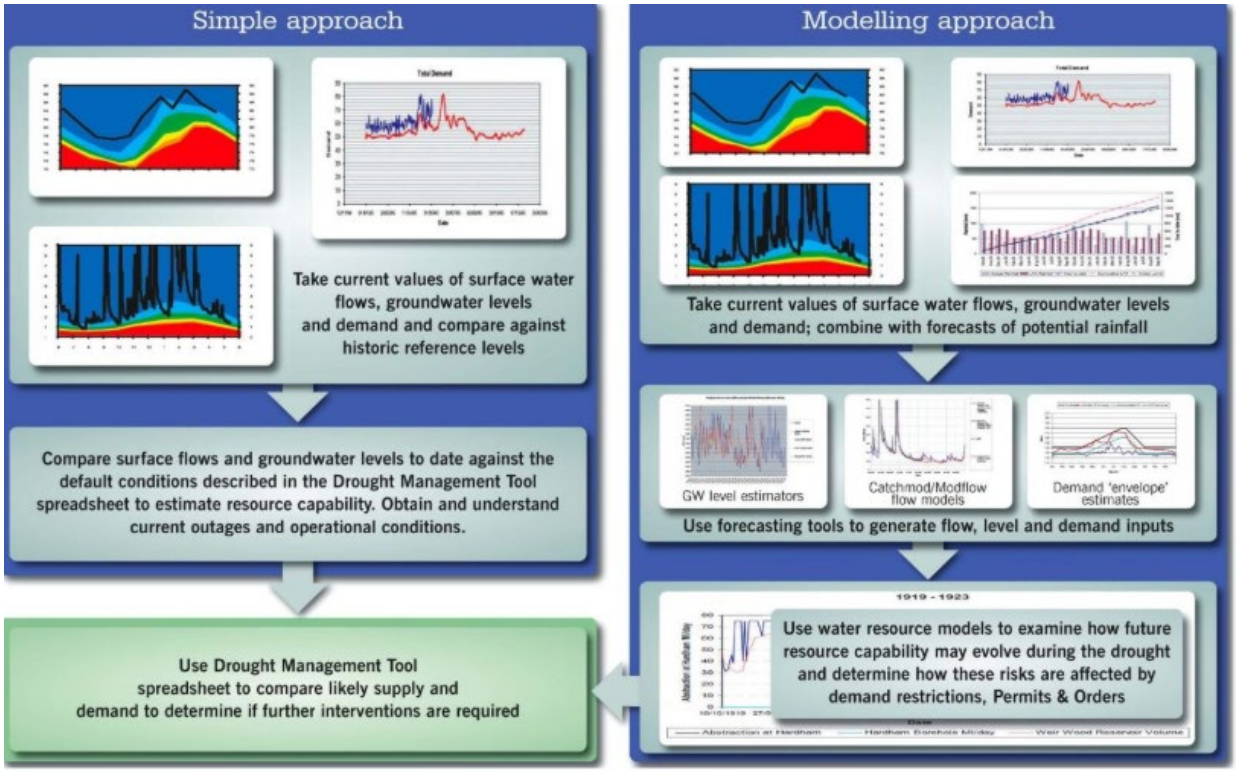


Figure 3-4: Approach to supply-demand balance analysis during drought conditions.

Two forms of demand data are used for the purpose of drought management, as illustrated in Figure 3-5:

- Average daily demand
- Average day peak week (ADPW) demand

The ADPW is used to represent critical peak summer demands and is the average daily demand in the seven continuous days when the highest demand occurs.

Summer demands are influenced by discretionary water use, especially garden watering, although agricultural use and tourism also influence the seasonal variations in demand. Typical daily profiles in household demand for water are shown in Figure 3-6. Summer demand therefore tends to be higher during hot dry weather than during periods of cool wet weather. High weather-related demand can occur at any time from May to August, although typically the highest demands occur in late July or early August.
The average daily demand is the average demand over an entire year and so considers high demands in summer and lower demands in winter. Annual average demand therefore also tends to be higher in years characterised by hot, dry summers.

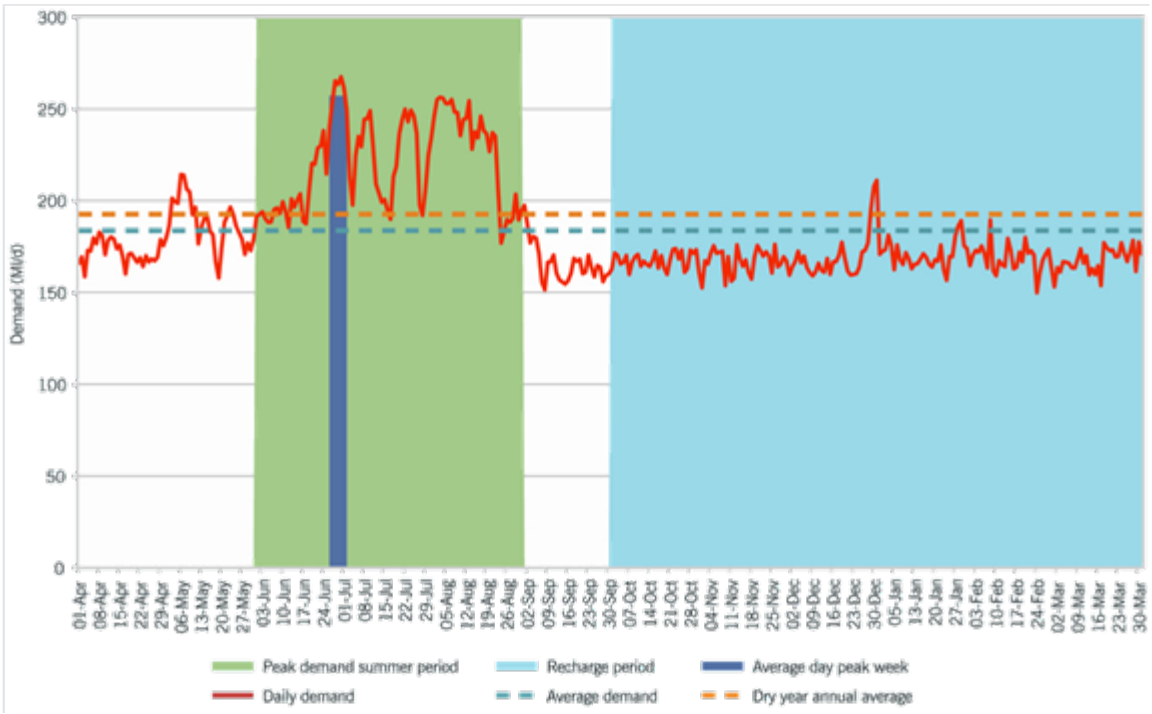


Figure 3-5 Example of demand profile over a year illustrating demand concepts.

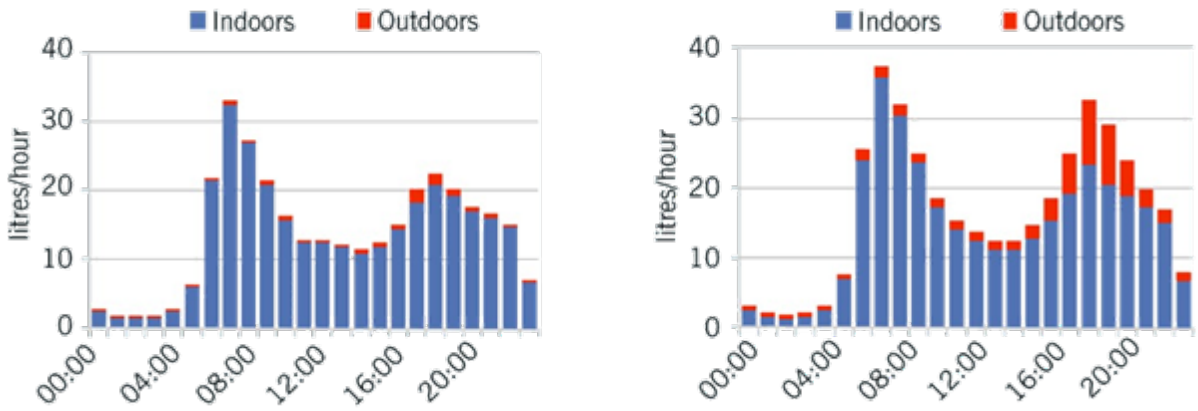


Figure 3-6 Typical daily consumption profiles in winter (left) and summer (right) (after WRc 2005[18]).

Having validated and gained confidence in the skill of our predictive models we have made a refinement to our approach.

We recognise that the triggers themselves are conservative and would lead to more drought permit / drought order applications than are required. We have learned from dry conditions since 2019 in particular from the

[18] WRc (2005: Increasing the value of domestic water use data for demand management, final report, CP187

River Test drought permit applications in 2019 and 2022. So, we would now only apply for a drought permit or drought order if both our flow forecasting shows that crossing of the hands-off flow is likely and we have discussed with our regulators that an application should take place. We discuss how our drought triggers operate in more detail in Annex 4 (drought triggers and indicators).

4. Drought Triggers

IMPORTANT NOTE:

Section 4 is incomplete and the table below describes progress, along with work still to be completed.

Drought Triggers	Description
Section Completeness	25%
Work Completed	• Scope of works for the river flow trigger development was issued. • Atkins contracted to do the river flow trigger development modelling work and should complete the task at the end of October '26. • Groundwater trigger development was done in-house, and draft groundwater triggers have been developed. • Drought Vulnerability Framework.
Work Remaining	In progress: • Final internal review of rainfall (SPI and SPEI) triggers. • Updates to reservoir triggers are being completed internally and are expected to be finalised by the end of July '26. • Atkins are progressing with the trigger development work and have completed their Phase 1 report. • Pending: Internal review of environmental triggers pending.
External Deliverables	**Consultancy support** • Modelling of river flow triggers is being undertaken by Atkins.
	Regulatory support • Review of updated groundwater triggers by May '26. • Review of Reservoir triggers in July '26. • Review of surface water triggers in October '26.
Dependencies	Development and finalization of drought triggers depends on the following ongoing work streams: • With regulatory support, revision of the Section 20 Agreement so that it covers the full planning horizon of Drought Plan 2027.

	• Regulatory agreement on the Hampshire Drought Order sequencing based on River Itchen licence renewal discussions and outcomes. • Completion of the Itchen proposed licence change process through which the EA has stated its intention to raise the HoF, which will have consequences on the frequency of use of drought orders, TUBs and NEUBs and the evidencing of ESoR. • Final decision on our WRMP24. • Testwood April 2027 licence changes.
Critical Path	The critical path for finalising Hampshire River flow triggers is the resolution of the outstanding dependencies. Clarity on whether a conditional or phased DP approval is possible, as the current S20 agreement remains in place until 2030. Following a conditional or phased approval, we will then progress the S20 work and update the trigger modelling to extend coverage to the period 2030–2032.
Timeline	• Draft updated reservoir triggers expected by July '26 • Regulatory review of draft updated groundwater triggers expected by end of May '26 • Atkins surface water drought trigger development work will be completed in draft in October '26. • Section complete November '26.
Decision points, meetings and workshops	Scheduled progress meetings are being held regularly with the consultants and internal teams working on trigger work for Drought Plan 27. Meetings with regulators will be arranged to review the drought triggers for DP27.

Drought triggers are pre-defined thresholds (e.g., reservoir storage levels, groundwater levels, river flows, rainfall deficits, or supply–demand balance indicators) that signal when a water company should move to the next stage of its drought plan. They indicate an intensification of a drought event. Drought trigger levels are used in indicate when a certain set of drought measures should be implemented. They are therefore an objective way of deciding which measures to implement and when.

We have developed triggers based on our analysis of a wide range of drought events considering a variety of different monitoring data. We have reviewed and developed drought triggers for regional groundwater indicator boreholes using EA boreholes. We have also set triggers and actions linked to the storage volumes in our reservoirs, which are critical to the supplies in some of our WRZs, particularly in our Eastern area and are based on behavioural modelling of reservoir performance during severe and extreme droughts. Similarly, for surface water supplies we have set triggers on river flow levels to inform the need to take drought actions to maintain supplies, protect the environment and to meet our HoF or MRF licence conditions. In many cases, our river flow triggers are directly linked to our drought actions, for example under the Section 20 Agreement with the EA for the River Test and River Itchen catchment drought permits/orders.

Overlying these individual suites of drought trigger levels are a series of multifactorial trigger levels that identify the key trigger sequences that reflect the underlying resources of our supply areas and WRZs.

4.1.1. Rainfall and evaporation

As mentioned above, our rainfall triggers are based on SPI. The SPI is an internationally recognised approach to categorising rainfall deficit, which is essentially a comparison of rainfall deviation from average values, normalised according to the natural variability (expressed as a standard deviation) of rainfall at a given site. It gives a good indication of the status of rainfall variation from the norm over a given period (e.g. 6, 12, 24 months) and can be assessed probabilistically.

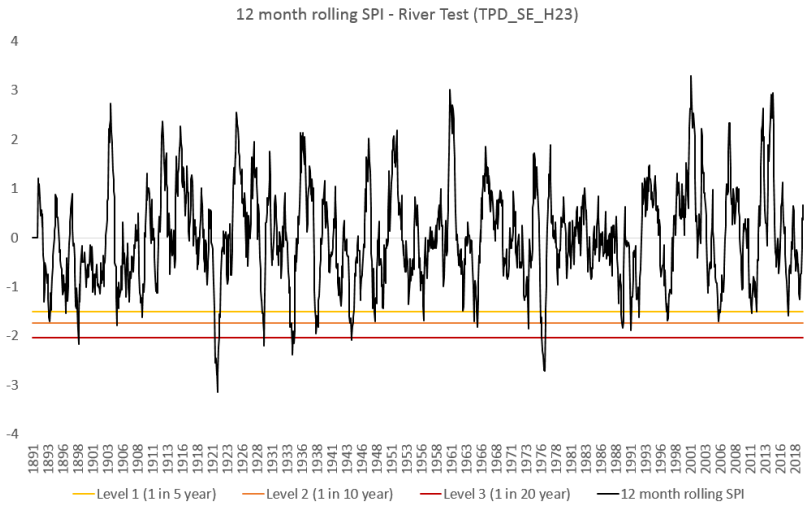
We use the Met Office ‘Had UK’ monthly rainfall data which is provided to us under licence by the EA and which are copyright of the EA and the Met Office[19].

We have developed the following rainfall triggers.

- Level 1 trigger based on a 20% annual probability (1-in-5 years). This trigger is useful for establishing the start of a drought and is more critically applied in our HSE and HSW WRZs where river flows and recession towards HoF conditions, which restrict DO, is sensitive to very mild rainfall deficits.
- Level 2 trigger based on a 10% annual probability (1-in-10 years) consistent with our target LoS for TUBs.
- Level 3 trigger based on a 5% annual probability (1-in-20 years) consistent with our target LoS for NEUBs and drought permit application (outside of Western area).

[19] Dataset name, Monthly Rainfall data for Hydrological Areas used within Water Situation Reports from the EA Daily Rainfall Tool (DRT) – 3rd Party IP: NRW, SEPA and Met Office.

SPI based trigger thresholds have been calculated for accumulation periods covering 3, 6, 12, 18, 24, 30, 36, 42 and 48-month durations for fourteen EA Hydrological Catchments which are relevant to our WRZs. An example SPI time series plot showing historical trigger crossings is shown in Figure 4-1 .



	Number of annual crossings	Annual crossings frequency
Level 1	26	0.20
Level 2	13	0.10
Level 3	7	0.05

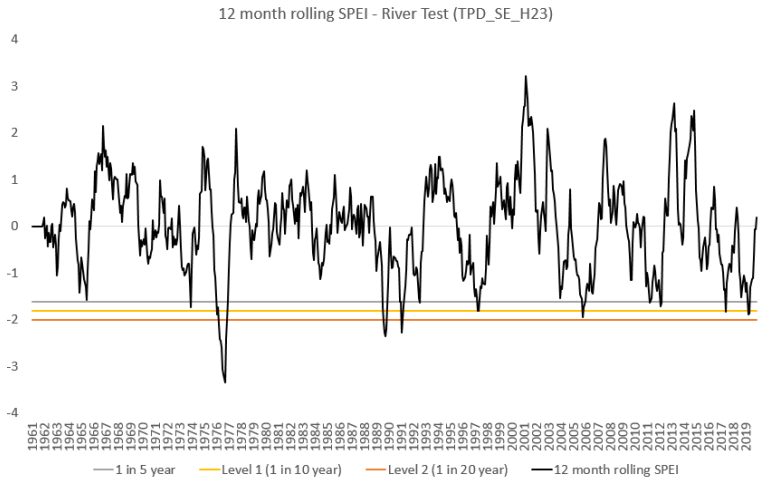
Figure 4-1: Example application of our SPI rainfall triggers to historical rainfall time series.

The SPI is a good measure for meteorological drought, i.e. a metric of the absence of rain; however, it provides only limited information about how that rainfall deficit may manifest as a hydrological drought characterised by low flows or low groundwater levels. The timing of rainfall deficits is exceptionally important to how water resources respond, and our groundwater dominated supplies are much more sensitive to rainfall deficits that accumulate over the annual winter-spring recharge period. We are less sensitive to summer rainfall droughts as we would not normally expect groundwater recharge or river baseflow recovery to be significant at this time of year due to increased evapotranspiration.

The SPEI is based on the same principles as the SPI but attempts to capture the seasonality of hydrological response by accounting for PET and hence provides a better metric of hydrological drought.

To derive our SPEI triggers we obtained monthly PET data from the EA based on their new dataset[20]. These PET data relate to the same hydrological catchments as the rainfall series used to calculate SPI and so they are directly comparable. We have then determined SPEI triggers following a similar calculation method to SPI and the same probability thresholds (1-in-5 years, 1-in-10 years and 1-in-20 years)(Figure 4-2).

[20] Environment Agency, 2020. Potential evapotranspiration datasets, v.1.0 available under the Open Government Licence



	Number of annual crossings	Annual crossings frequency
Level 1	11	0.19
Level 2	6	0.100
Level 3	3	0.05

Figure 4-2: Example application of our SPEI triggers.

Overall, we consider the SPEI to be a better metric when considering the water resource impact of droughts because it is more closely related to the hydrological response of our water resources. However, recognising that SPI and SPEI respond differently and that other water users (e.g. agriculture) may be more significantly affected by rainfall deficits alone, it is useful to consider both as complementary drought metrics.

4.1.2. Groundwater Triggers

Drought trigger curves for groundwater levels used in the last drought plan were reviewed and improved using the EA groundwater level data across a number of key indicator observation boreholes (OBHs). These boreholes have been selected based on location, aquifer type, monitoring record and frequency of monitoring.

Our groundwater triggers are based on Standardised Groundwater Indices (SGI). The SGI method was developed by the British Geological Survey[21] and follows similar principles to that applied for SPI and SPEI to estimate normalised indices for each calendar month by transforming the data via non-parametric normal scores.

Our calculation of SGI values and derivation of triggers followed these steps.

- Interpolate observed groundwater level series (z_i) to obtain the value on the first day of the month.
- Create ranked series of groundwater levels for each month.
- Calculate p_i for each groundwater level value (p_i is the probability that a value drawn at random from the fitted distribution is less than or equal to z_i).
- Apply an inverse normal cumulative distribution to the p_i values to produce a monthly SGI series

[21] Bloomfield, J. P. and Marchant, B. P., 2013. Analysis of groundwater drought building on the standardised precipitation index approach, Hydrol. Earth Syst. Sci., 17, 4769–4787, https://doi.org/10.5194/hess-17-4769-2013.

- Calculate the annual minimum SGI values and derive the 20th, 10th and 5th percentiles to provide Level 1, Level 2 and Level 3 'trigger SGI' values respectively.

More information will be added when the groundwater trigger work has been reviewed

4.1.3. River flows

We have three major surface water abstractions which are not linked to reservoir systems. These operate on the River Test and the River Itchen in Hampshire (Western area), and the River Rother in West Sussex (Central area). These river abstractions are large and drought sensitive, such that at low flows, HoF or MRF licence conditions restrict the amount of water we can abstract.

This work is incomplete; Atkins are working on this.

4.1.4. Reservoir levels

We have four main reservoirs in our supply area:

- Bewl Water reservoir (Eastern area)
- Darwell reservoir (Eastern area)
- Powdermill reservoir (Eastern area)
- Weir Wood reservoir[22] (Central area)

This work is incomplete; work to update reservoir triggers is in progress.

4.1.5. Environmental triggers

The Drought Plan guideline allows for the development of environmental triggers that would indicate when the environment might become stressed during drought due to a reduction of river flows or groundwater levels, but which may not necessarily impact water supplies.

Many of our large abstractions have been subject to sustainability investigations under the Water Industry National Environment Programme (WINEP), the goal of which has been to improve the status of abstraction-impacted waterbodies in line with the objectives of the Water Framework Directive (WFD). Many of these

[22] We are currently upgrading the water treatment works at Weir Wood reservoir.

sites have since been subject to abstraction licence changes as part of mitigations to improve water body status and prevent deterioration. These have taken the form of annual, monthly or daily quantity reductions and the imposition of HoF or MRF conditions.

In some cases, it is the loss of resource from environmentally driven licence changes that have required us to develop new drought permit/order options to be able to maintain public water supply in a drought. We acknowledge that such actions may lead to environmental impact, but the drought permit/order process seeks to limit such impact by only enacting these measures when necessary to maintain water supplies and through monitoring, mitigation and where necessary compensation for the impacts. Environmental stresses will also, to a greater or lesser extent, be mitigated within the abstraction licence conditions and our preparations for drought permits/orders.

Development of environmental stress triggers may be more practical, and provide more benefits, for sites where the environmental impacts of our abstractions are less well understood. This is most likely to be the case for our groundwater sources which are being studied under our 'No Deterioration' WINEP programme. Limited hydroecological data currently exist for such sites and is unlikely to be comprehensive for low flow periods.

In the absence of regular or live hydroecological monitoring, flow and/or water quality data are likely to provide the best indication of potential for environmental stress. We have continued to use the flow standards for the Environmental Flow Indicator (EFI) thresholds or the Common Standards Monitoring Guidance (CSMG) thresholds as an indicator for establishing environmental stress.

In Table 4-1 we have set out environmental stress triggers for several key surface water bodies in our supply area. The triggers are based on the low flow Q_{95} (95^{th} percentile) EFI which provides a good indication of water body stress during drought conditions.

We have used our understanding of the specific abstraction reductions likely to be required at the relevant individual sources to meet EFI targets to set target abstraction rates based on the work we have conducted for Sustainability Reductions in WRMP19 and for our fdWRMP24 Environmental Destination.

However, our long term WRMP planning has shown that to achieve these abstraction reduction targets before 2027 would create supply - demand deficits until some of our long term strategic water supply options are available. As these abstractions are currently operating within their abstraction licences any reductions to alleviate environmental stress would have to be made on a best endeavours basis, reflecting the drought severity and supply risk at that time.

Table 4-1: Environmental stress triggers and associated actions based on Q_{95} EFI.

River name	Q_{95} EFI (Ml/d)	Associated gauging station	Associated source(s)	Best Endeavors Abstraction Target rate	WRZ	Action
Anton	76.42	Fullerton	Andover	5Ml/d	HAZ	Increase water efficiency communications, reduce abstraction at Andover as much as possible to target rate, increase abstraction at near Whitchurch to compensate
Test, conf Dever to conf Anton	223.27	Chilbolton	Whitchurch, Overton	1.55Ml/d 1.6Ml/d	HAZ	Increase water efficiency communications, no other action presently possible, no relocation option
Test, conf Dun to Tadburn Lake	339.26	Timsbury	Romsey	5.4Ml/d	HRZ	Increase water efficiency communications No other action presently possible, no relocation option
Test total flow	450.74	Testwood, Conager Bridge, Ower, M27TV1	Test Surface Water	55Ml/d	HSE	Flow already below River Itchen flow triggers, drought actions including monitoring and mitigation set out under our Section 20 Agreement
Candover Brook	17.69	Borough Bridge, Candover Stream	Alresford	0Ml/d	HWZ	Increase water efficiency communications, reduce abstraction at Alresford (relocate to Winchester) but only shifts impacts downstream
Itchen at Easton	195.28	Easton	Winchester	13.3Ml/d	HWZ	Increase water efficiency communications, reduce abstraction at Winchester (relocate to Itchen Surface Water or the Section 20 Agreement measures), shifts impacts downstream
Itchen at Allbrook and Highbridge	283.02	Allbrook and Highbridge	Itchen Surface Water, Itchen Groundwater, Twyford	30Ml/d	HSE	Flow already below River Itchen flow triggers, drought actions including monitoring and mitigation set out under our Section 20 Agreement
Lukely Brook	24.67	Carisbrooke	Newport, Lukely Brook	3.42Ml/d 0.79Ml/d	IOW	Increase water efficiency communications, reduce abstraction at Lukely Brook and, if possible, Newport
Chillerton	12.93	River Medina at Chillerton	Rookley	0.7Ml/d	IOW	Increase water efficiency communications, relocate abstraction to Newport or Sandown (if possible)
Caul Bourne	2.82	Caul Bourne	Caul Bourne	0.8Ml/d	IOW	Increase water efficiency communications, abstraction already limited to protect HoF, no other actions possible
Eastern Yar	13.34	Burnt House	Sandown	8Ml/d	IOW	Increase water efficiency communications, Use Flow Augmentation Scheme, relocate abstraction to Newport if possible, use Cross-Solent main
Upper Rother at Durford	19.86	River Rother at Iping Mill	Rogate	0Ml/d	SNZ	Increase water efficiency communications, associated source is out of service until 2024, no other actions possible
River Lod	4.29	River Lod at Halfway Bridge	Petworth South	1.33Ml/d	SNZ	Increase water efficiency communications, relocate abstraction downstream (to Pulborough)
Western Rother	121.85	Pulborough	Pulborough Surface	40Ml/d	SNZ	Increase water efficiency communications, no other action presently possible, no relocation option
Nailbourne and Little Stour	40.19	Little Stour at Littlebourne	Near Canterbury	5Ml/d	KTZ	Increase water efficiency communications, relocate abstraction from Canterbury to other sources where possible (but may not be due to wider goundwater abstraction impacts)

Most of these water bodies are either currently subject to or have been previously subject to environmental investigations. These locations have been selected as telemetered flow data is available at nearby gauging stations that allows near real time monitoring of flow conditions compared to the EFI and so could act as a reasonable live indicator of environmental stress. Potential mitigations actions are indicated in Table 2.1, however, there are also several limitations to this approach that must be recognised.

Currently, we can only take limited actions if the EFI based environmental triggers are crossed. The most obvious is to increase water efficiency messaging and to reduce abstraction from affecting sources (e.g. those closest to surface water bodies or groundwater dependent terrestrial ecosystems) and relocate it elsewhere (e.g. from headwater catchments to downstream sources). However, this may not always be practical, particularly in a developing drought and will depend on the nature of the sources (capacity, licence, network arrangement, and drought sensitivity) and levels and distribution of demand. Relocation of abstraction also risks relocating the environmental stress elsewhere.

For sites not yet subject to environmental licence changes, or which are subject to ongoing WINEP studies, flow conditions and abstraction impacts may be such that EFI targets are not met, even under normal conditions; hence the environment may be in a degree of constant stress. This may only be fully understood and appropriate mitigation possible once these studies conclude.

There may be some physical enhancement or management actions we could take (e.g. sluice control) if such environmental stress triggers are crossed but this would rely on having a good understanding of the hydro ecological function of an affected water body to ensure that such actions are appropriate and would not cause damage themselves.

Our current WINEP studies cover many of our groundwater abstractions. The investigations will require a significant amount of monitoring, modelling and will result in an improvement in our understanding of abstraction impacts on surface water bodies and groundwater dependent terrestrial ecosystems. This is likely to lead to future licence changes and mitigations which will provide enhanced protection against deterioration of water body status but will also provide us with the data and understanding that we could use to develop more refined environmental stress triggers, and where needed, additional drought actions to provide increased environmental protection.

4.2. Multi-factor triggers and drought phasing

In general, for all WRZs, the start of a drought (Level 1), which involves voluntary actions, has been defined as any trigger crossing the 1-in-5 years SPI, SPEI or groundwater trigger thresholds. The exceptions to this are the rivers Test and Itchen where drought actions are defined under the Section 20 Agreement. In this case, the start of drought (Level 1) is defined with a 60-day threshold to start preparation of drought permit and water efficiency measures. An additional 90-day trigger is also defined to provide an internal early warning. This will nearly always be a 90-day threshold triggered for the River Test and it will typically occur in advance of even moderate rainfall deficits developing.

Level 2 and Level 3 actions will tend to be defined with triggers crossing the 1-in-10 years and 1-in-20 years thresholds respectively, except for the rivers Test and Itchen where drought actions are defined under the Section 20 Agreement. For each WRZ, primary and supporting triggers have been defined.

Our multi-factorial approach considers the adoption of primary and secondary triggers to aid our decision making through Level 2 and Level 3 actions. Primary triggers include the river flow, reservoir storage or groundwater levels and supporting triggers include SPI and SPEI for associated durations as well as

groundwater levels and triggers based on other WRZs. We have defined the associated duration for SPI and SPEI based on a comparison of historic drought occurrence between the primary trigger and different SPI and SPEI durations.

Level 2 or Level 3 actions can be initiated based on the primary trigger or if the secondary SPI or SPEI triggers are breached, and the primary trigger is close to its respective trigger level. If this is the case, it is likely there will still be risks to supplies as indicated by the SPI and SPEI rainfall deficits. It is important to note that the trigger levels do not require both SPI and SPEI to initiate the next phase of drought actions. This multi factor approach also helps to mitigate some of the uncertainties associated with our triggers, for example where groundwater triggers have necessarily been based on limited datasets.

In the case where, due to data availability or recording issues, a trigger is not available, actions may be initiated based on primary or supporting triggers alone. In addition to this we may consider the use of alternative duration SPI and SPEI metrics as necessary to support an ESoR case for any drought permit/order applications. This follows the lessons learned from the Section 20 Agreement process for the River Test surface water Drought Permit in 2019 and 2020.

A drought ends when normal conditions resume and the risk to security of supply and the environment are no greater than they would be under normal conditions. Several indicators are used to determine that a drought has ended. This varies for each WRZ but in general consists of the primary trigger (river flow, reservoir storage or groundwater level) exiting the defined trigger thresholds and SPEI reaching a defined threshold. From comparisons with historic droughts, we found that SPEI for the associated durations for each WRZ corresponds well to the progression of the primary triggers as it considers not just the significance of the rainfall deficit but also seasonality by accounting for PET and hence providing a better metric of hydrological drought.

4.2.1. Western area

In the Western area, the primary triggers for HSE and HSW WRZs relate to the Test and Itchen River flows and are subject to a specific set of thresholds and actions as defined in the Section 20 Agreement and which were set out in DP19. In addition, the groundwater OBHs for Clanville Lodge (for HAZ and HKZ WRZs in Hampshire North) and West Meon (for HWZ, HRZ, HSE and HSW WRZs in Hampshire South) are also included though these are more drought resilient than the surface water sources.

More information will be added when the Trigger work is completed.

4.2.2. Central area

More information will be added when the Trigger work is completed

4.2.3. Eastern area

More information will be added when the Trigger work is completed

5. Drought Management Actions

IMPORTANT NOTE:

Section 5 is incomplete and the table below describes progress, along with work still to be completed.

Drought Management Actions	Description
Section Completeness	70%
Work Completed	This section is incomplete.
Work Remaining	The likely benefit/saving from demand and supply actions also need to be completed (Table 6.2 and Table 6.3). Timescales for implementation of demand and supply side drought management actions need to be confirmed. This work will be completed alongside the development of drought triggers. A section describing the use of TUBs needs to be included, based on future discussions with the EA.
External Deliverables	**Consultancy support** Atkins surface water drought triggers.
	Regulatory support
Dependencies	Demand and supply actions will also need to be amended based upon: • Outcomes from the EA 2025 drought lessons learned workshops. Awaiting dates from the EA for an ESoR workshop (2025 drought lessons learned workshop). • Agreement with the EA on a change to the River Itchen licence (and HoF). • Agreement on IROPI and ESoR regarding the proposed River Itchen licence change; and • An amended S20 Agreement between SWS, EA and Portsmouth Water.
Critical Path	Implementation of TUBs needs to be agreed with regulators. The timing of their use needs to be revised based on 2025 drought lessons learned and an agreed future use of TUBs in Hampshire based on proposed changes to the River Itchen HoF and abstraction licence.

Drought Management Actions	Description
Timeline	• Draft of demand and supply side action timescales – TBC with EA. • River Itchen licence change – TBC with EA. • S20 Agreement – TBC with EA. • IROPI and ESoR – TBC with EA. A programme of meetings and workshops needs to be agreed between the EA, Defra and Southern Water.
Decision points, meetings and workshops	Defra, EA and Southern Water need to discuss how ESoR, IROPI, TUBs and NEUBs apply in Hampshire based on the proposed change to the River Itchen licence.

This section outlines the drought management measures which need to be applied before, during, and after a drought within our operational areas. It also details the approach for implementing these measures, taking into account local conditions and circumstances. Further information on each of our actions is provided in Annex 2.

Drought actions are divided into two categories: demand-side and supply-side. Demand-side actions focus on reducing water consumption, while supply-side actions aim to increase the volume of water available. We prioritise supply-side measures that do not cause environmental harm, alongside demand-side actions, before considering options that may have greater environmental impacts.

This is reflected in the drought levels.

- Level 1 (impending drought): We will aim to increase our water efficiency campaigns and increase leakage activities.
- Level 2 (drought): We will increase media campaigns, introduce demand restrictions and start requiring drought permits/orders.
- Level 3 (severe drought): We will review the benefit of implementing NEUBs as well as seek to implement drought permits/orders that may have an environmental impact.
- Level 4 (extreme drought): This would lead to the most extreme drought actions. We will carry out all possible measures before we implement these.

In normal conditions before we reach Level 1, we would be utilising water efficiency campaigns and home visits as part of our water efficiency programme. We will also continue to tackle our leakage and outage volumes.

Irrespective of reaching any drought levels, we will remain focused on reducing water consumption and highlighting water scarcity risks as per our WRMP and other water efficiency campaigns and efforts. This may include enhanced leakage activity, specific communications campaigns and other initiatives such as the free distribution of water butts or water saving incentives for business customers.

5.1. Demand actions

We have identified a range of actions to help reduce water demand during a drought, ensuring supply and demand remain balanced. The standard actions set out in the Drought Plan for drought stages up to Level 3 are summarised in Table 5-1 Actions we will take in a Level 4 drought (worse than 1-in-500 years) are discussed in Section 7.

Table 5-1: Demand-side interventions for each level of drought

Normal conditions	Impending Drought (Level 1)	Drought (Level 2)	Severe Drought (Level 3)	
Water efficiency household & non-household audits and retrofits.	Media campaigns to encourage water efficiency and to raise awareness of impending drought	Introduce demand restrictions (phase 1 TUBs) in addition to Level 1 activities.	Introduce phase 1 of demand restrictions through a drought order.	Introduce phase 2 of demand restrictions through a drought order plus phase 2 TUBs.
Waterwise advice and talks to schools and community groups.	Increase leakage monitoring and repair activity.	Mains pressure reduction in addition to Level 1 activities.		
	Engage with partner organisations to ensure co-ordinated approach to interventions, including New Appointment and	Enhanced media campaign to publicise restrictions and encourage water savings in addition to Level 1 activities.		

Normal conditions	Impending Drought (Level 1)	Drought (Level 2)	Severe Drought (Level 3)	
	Variations (NAVs) & Non-Household Retailers.			
	Initiate discussions with local authorities regarding watering regimes for public parks and gardens.			
	Business retail customer initiative.			

Table 5.2 provides further details of the key interventions including estimates of the likely reduction in demand that would be achieved by each intervention, and the time between when a measure is triggered and implemented. Ideally the times between the measures will be as long as possible in order to allow the previous measure to be effective before the next, more significant measure, is taken. However, the measures must also be introduced in a timely manner keeping in mind the nature of the drought, its development and management in order to maintain balance between restricting water use and minimising environmental impacts of abstractions.

For Temporary Use Bans (TUBs) we would plan to announce the restrictions at least 1 week before imposition. For Non-Essential Use Drought Orders (NEUBs) to restrict water we expect these would follow the normal Drought Order Application Process and may include a hearing to address concerns and our estimate is a timescale of a minimum of 30 days from application to imposition.

The trigger levels for the demand restrictions are slightly different for each WRZ, given the characteristics of the resources, the forecast supply demand position and the prevailing demands (see Annex 4).

As can be seen from Table 5-2, effective communication with our customers and other stakeholders is going to be of key importance in implementing demand-side measures. Annex 6 provides details of our communications plan.

5.1.1. Effectiveness of demand actions

The effectiveness of demand actions used in Hampshire during the drought of 2025 have been provided in Annex 5. Our drought demand actions are provided in Table 5-2.

Table 5-2: Demand actions

This table needs to be amended.

Trigger for action to be used	Type of action	Area	Summary of action	Likely benefit / saving	Risks, constraints and requirements	Environmental impacts	Timescales for implementation[a]	Priority
Level 0: Normal conditions	Water efficiency	Company wide	Water efficiency household & non-household audits and retrofits		Uncertainty in the effectiveness of this measure (whether customers will collaborate and conserve water or not).	Limited benefit as demand is reduced		1
Level 0: Normal conditions	Water efficiency	Company wide	Waterwise advice and talks to schools and community groups		Uncertainty in the effectiveness of this measure (whether customers will collaborate and conserve water or not).	Limited benefit as demand is reduced		1
Level 1: Impending Drought	Water efficiency	Affected water supply area	Engage with partner organisations to ensure co-ordinated approach to interventions including New Appointment and Variations (NAVs) & Non-Household Retailers.		Inform the EA, NE, DWI, Defra, fire authorities and local authorities of impending drought status. Include NAVs & NHH Retailers.	Limited benefit as demand is reduced		1
Level 1: Impending Drought	Water efficiency	Affected water supply area	Initiate discussions with local authorities regarding watering regimes for public parks and gardens		Inform the EA, NE, DWI, Defra, fire authorities and local authorities of impending drought status.	Limited benefit as demand is reduced		1
Level 1: Impending Drought	Water efficiency	Affected water supply area	Media campaigns to encourage water efficiency		Inform the EA, NE, DWI, Defra, fire authority and local authorities of impending drought status. Uncertainty in the effectiveness of this measure (whether customers will collaborate and conserving water or not).	Limited benefit as demand is reduced		1
Level 1: Impending Drought	Network management	Affected water supply area	Increased leakage control and repair		Time needed for training and resourcing staff may delay the implementation.	Limited benefit as demand is reduced		1
Level 2: Drought	Network management	Affected water supply area	Mains pressure reduction		Work closely with the fire authorities to ensure no adverse risk.	Limited benefit as demand is reduced		2

Trigger for action to be used	Type of action	Area	Summary of action	Likely benefit / saving	Risks, constraints and requirements	Environmental impacts	Timescales for implementation[a]	Priority
Level 2: Drought	Water Efficiency	Affected water supply area	Enhanced media campaign to encourage water savings and publicise restrictions when implemented		Inform the EA, NE, DWI, Defra, fire authorities and local authorities of impending drought status. Uncertainty in the effectiveness of this measure (whether customers will collaborate and conserve water or not).	Limited benefit as demand is reduced		2
Level 2: Drought	TUBs	Western area[b]	TUBs (Phase 1)		Inform the EA, NE, DWI, Defra, fire authorities and local authorities of drought status. including New Appointment and Variations (NAVs) & Non-Household Retailers. Advertise the TUB (Phase 1). Time for representations (objections) may delay the implementation. Large number of responses possible. Customer satisfaction requires careful considerations for the right balance of water saving and minimum of inconvenience for customers.	Limited benefit as demand is reduced		2
		Central area						2
		Eastern area						2
Level 3: Severe Drought	NEUBs	Western area[b]	NEUBs drought order (Phase 1)		Inform the EA, NE, DWI, fire authority and local authorities of severe drought status. Consult with Defra and apply for a drought order. including New Appointment and Variations (NAVs) & Non-Household Retailer Objections from commercial water users. Financial costs to provide compensation against any impacted licence holders.	Limited benefit as demand is reduced		3
		Central area						3
		Eastern area						3
Level 3: Severe Drought	NEUBs	Affected water supply area	NEUBs drought order (Phase 2) and TUBs (Phase 2)		Consult with Defra and apply for a drought order. Advertise the TUB (Phase 2). Objections from commercial water users. Financial costs to provide compensation against any impacted licence holders.	Limited benefit as demand is reduced.		4

[a] Although these timings apply for the majority of drought permit/order options in the Drought Plan there are different procedural and timing intentions for the drought permit/order options on the River Test and River Itchen. These are set out in a Water Resources Act 1991 Section 20 Agreement (March 2018) between SWS and the EA. In particular the drought permit on the River Test will be needed as an early measure (applied for during Normal conditions and potentially implemented during Drought conditions). The Section 20 Agreement sets out the sequencing of applying for and implementing drought permits/orders and the triggers for demand interventions which are linked to flows in the River Test and Itchen.
[b] Excluding the IOW.

5.2. Supply actions

In addition to introducing measures that will help us reduce demand, we will be taking a number of steps to maintain supplies during a drought. The generic actions that we will take in drought stages up to Level 3 are summarised in Table 5-3: Supply. Actions we will take in a Level 4 drought (worse than 1-in-500 years) are discussed in Section 7.

Table 5-3: Supply actions for each level of drought

Normal conditions	Impending Drought (Level 1)	Drought (Level 2)	Severe Drought (Level 3)
Outage recovery	Operation of sources	Operation of sources	Operation of sources
Operation of sources	Intercompany bulk transfers	Intercompany bulk transfers	Intercompany bulk transfers
Intercompany bulk transfers	Discuss bulk supply agreements with major commercial customers	Recommission mothballed sources	Use of tankers to move water between WRZs or from other companies with surplus
		Enhance drought yield from existing sources by adjusting infrastructure and process	Use of drought permits/orders in order to increase abstraction and/or conserve water storage.
		Modification of distribution network to maximise drought yield and utilisation of available supplies.	
		Use of tankers to move water between WRZs or from other companies with surplus	
		Use of drought permits/orders in order to increase abstraction and/or conserve water storage.	

Table 5-4 provides further details of the key interventions including estimates of the likely increase in supply that would be achieved by each intervention, and the time between when a measure is triggered and then implemented. Ideally the times between the measures will be as long as possible in order to allow the previous measure to be effective before the next, more significant measure, is taken. However, the measures must also be introduced in a timely manner keeping in view the nature of the drought, its development and best management in order to maintain balance between restricting water use and minimising environmental impacts of abstractions.

In extreme circumstances (more severe than 1-in-500 years return period), we may need to implement standpipes and rota cuts via an Emergency Drought Order. We expect the need for these to only arise in conditions of civil emergency and as such our Emergency Plan covers this in more detail. Before we reach this stage, we will take every possible measure to avoid this scenario as part of our ‘more before four’ planning discussed in Section 7.1.

Table 5-4: Supply actions

This table needs to be amended.

Trigger for action to be used	Type of action	Area	Summary of action	Likely benefit/saving[a]	Risks, constraints and requirements	Environmental impacts	Timescales for implementation[b]	Priority
Level 0: Normal conditions	Outage recovery	Affected area	Outage already being reduced as part of outage recovery plan. As a drought becomes reality, we would undertake the action to recover outage in advance of our outage recovery plan.		Financial implications of bringing back outage ahead of schedule. Risks around the time to implement outage recovery. Constraints around whether the outage to be recovered is in the right area for a drought.	Limited		1
Level 0: Normal conditions	Inter-company bulk transfers[c]	HSE, SNZ, KTZ	Optimise management of bulk transfers between water companies.		Constraints surrounding whether the donor company has spare water, as drought intensifies the likelihood of receiving transfers will reduce. Majority of bulk transfers agreed up to a 1:200 drought severity	Limited		1
Level 1: Impending Drought	Operation of sources	Affected area	Adjustment of source operations to maximise storage and reduce environmental stress.		Inform the EA around plans for any changes in source operation.	Limited as any changes in abstraction regime will be monitored.		1
Level 2: Drought	Recommission mothballed sources	Affected area	We have a limited number of sources that, for a variety of reasons, were never commissioned, have been decommissioned or are subject to long term outages. We maintain a list of these sources and site plans. During the course of a drought, we would consider recommissioning these sites, which could include the installation of temporary pumps, headworks and pipework and treatment.		Inform the EA for any plans to recommission a mothballed source. Constraints around whether sources to be recommissioned are in the right area for a drought.	Potential adverse environmental effect from bringing back a mothballed source. Would require monitoring in place to help identify mitigation. Risk of deterioration under the WFD if a source is brought back in the longer term.		2
Level 2: Drought	Enhance abstraction at existing sources	Affected area	Enhance yield from existing sources by adjusting infrastructure and process		Inform the EA for any plans to increase abstraction or to change abstraction patterns.	Potential adverse environmental effect from increasing abstraction.		2

Trigger for action to be used	Type of action	Area	Summary of action	Likely benefit/saving[a]	Risks, constraints and requirements	Environmental impacts	Timescales for implementation[b]	Priority
						Would require monitoring in place to help identify mitigation.		
Level 2: Drought	Distribution network modification	Affected area	Modification of distribution network to maximise yield and utilisation of available supplies.		The actual impact on resource availability over the course of a drought may be limited.	Limited, potential environmental gains.		2
Level 2: Drought	Road tankering from alternate supplies[d]	Affected area	Use of tankers to move water between WRZs or from other companies with surplus		Water quality risks, network constraint risks (traffic, discharge points, tanker availability). Availability of water. Would enter discussions with neighbouring companies and water suppliers regarding water availability. As drought intensifies, the availability of water from other regions will reduce.	Increased carbon emissions from transporting supplies, increased abstraction at source of tankering.		2
Level 2: Drought	Drought permits/orders	IOW, HSE, HSW, SNZ, SWZ, KMW	Use of drought permits/orders in order to increase abstraction and/or conserve water storage		For drought permits work closely with the EA when applying for, during the course of, and after the end of a drought permit. EA determine the outcome of whether the drought permit is granted. Defra determine the outcome of whether the drought order is granted. Advertise drought permit and discuss with any impacted organisations.	Environmental impacts vary from minor to major. Details of specific drought permits/orders in Section 4.4.		2
Level 3: Severe Drought	Inter-company bulk transfers	HSE, SNZ, KTZ	Optimise management of bulk transfers between water companies.		Would look to increase potential imports from neighbouring companies but, this will likely decrease as drought intensifies. Constraints surrounding whether the donor company has spare water	Limited		3

Trigger for action to be used	Type of action	Area	Summary of action	Likely benefit/saving[a]	Risks, constraints and requirements	Environmental impacts	Timescales for implementation[b]	Priority
Level 3: Severe Drought	Discuss bulk supply agreements with major commercial customers	HSE, SHZ	Discuss bulk supply agreements with major commercial customers.		Would liaise with our major commercial customers in the event of a severe drought to discuss pain share agreements	Limited environmental impact Some economic and social impact.		3
Level 3: Severe Drought	Use of drought permits/orders to increase abstraction and/or conserve water storage.	IOW, HSE, HSW, SNZ, SWZ, KTZ,, KME, KMW, SHZ	Use of drought permits/orders to increase abstraction and/or conserve water storage.		For drought permits work closely with the EA when applying for, during the course of, and after the end of a drought permit. EA determine the outcome of whether the drought permit is granted. Defra determine the outcome of whether the drought order is granted. Advertise drought permit and discuss with any impacted organisations	Environmental impacts vary from minor to major. Details of specific drought permits/orders in Section 4.4.		3

[a] Outage benefits estimated using the difference between current average outage levels as of February 2021 and the outage recovery plan 2025-26 position. The action here expatiates that plan in the event of a drought forming.
[b] Although these timings apply for the majority of drought permit/order options in the Drought Plan, there are different procedural and timing intentions for the drought permit/order options on the River Test and River Itchen. These are set out in the Section 20 Agreement between SWS and the EA. In particular, the River Test drought permit will be needed as an early measure (applied for during Normal conditions and potentially implemented during Drought conditions). The Section 20 Agreement sets out the sequencing of applying for and implementing drought permits/orders and the triggers for demand interventions which are linked to flows in the River Test and Itchen.
[c] Details of our bulk transfers to and from other water companies can be found in Annex 2.
[d] Road tankering would not be the priority at Level 2 drought but we would start to explore this option at this stage. As drought intensifies we would to explore further tankering options if required.

5.3. Bulk Supply Agreements

We have a number of bulk supply agreements with neighbouring water companies that cover both imports and exports. The terms and conditions of these transfers are set out in the bulk supply agreements with the companies. During a drought we will maintain close communication with our neighbouring water companies to ensure that the drought situation is understood by all parties so that if there is a need to change a bulk import or export, we can take decisions in a timely manner in accordance with the Drought Plan and, jointly with the other company.

We have bulk supply agreements with:

- Portsmouth Water.
- South East water.
- Sutton and East Surrey Water; and
- Wessex Water.

Out bulk supply agreements with neighbouring water companies are detailed in Annex 2, Section 3.2.

5.3.1. Portsmouth Water

Our bulk supply agreement assumptions have been amended with Portsmouth Water as part of the 2025 water company Annual Review process.

The remainder of this section comes from the Portsmouth Water WRMP Annual Review 2025 Technical Note: Southern Water and Portsmouth Water Common Understanding on Bulk Supplies, dated December 2025 which was included as an Appendix of the Portsmouth Water updated Annual Review 2025. Portsmouth Water text is in italics.

> *Table 5-5 shows the revised bulk supply assumptions to SWS in the event of a 1 in 200 year drought event compared to the original WRMP24 assumptions. These volumes have been agreed with the EA and with SWS with the caveat that they are applicable as long as no other assumptions linked with the bulk supplies change from SWS's point of view.*

Table 5-5: Portsmouth Water updated bulk supply export amounts

Year	*2026-27*	*2027-28*	*2028-29*	*2029-30*	*2030-31*	*2031-32*
Superseded Bulk Supply to SWS (WRMP24)	*30 Ml/d*	*30 Ml/d*	*30 Ml/d*	*30 Ml/d*	*30 Ml/d*	*30 Ml/d*
Revised Bulk Supply to SWS (Updated WRMP24 Dec 25)	*15 Ml/d*	*20 Ml/d*	*25 Ml/d*	*30 Ml/d*	*30 Ml/d*	*30 Ml/d*

> *By 2029-30 the bulk supply amounts to Southern Water in annual average and critical conditions are again consistent with the existing bulk supply agreements and WRSE modelling included in the WRMP24 that was published in 2024.*

> *There are future additional proposed bulk transfers to Southern Water included in our WRMP24. As this drought plan is an operational plan that will be finalised in 2027 and superseded by a revised drought plan before 2032, only bulk transfers that are planned to be operational before 2032 are being considered here in this revision of our drought plan.*

The additional bulk transfer of up to 21 Ml/d once Havant Thicket Reservoir is constructed and commissioned will be available to Southern Water's Hampshire Southampton East (HSE) WRZ via a new bulk supply from 2032 and so will be accounted for in our Drought Plan 2032.

Bulk supply communications

We have routine operational liaison meetings with Southern Water, where in the rare event of such issues emerging, there is open discussion of any temporary revisions to our commitment.

As drought develops, we will engage closely with Southern Water to ensure that we regularly review our water resources and supply demand balance situations. We will share situation reports with increasing frequency as the drought progresses and will agree joint statements to the Press and to customers as required. If we need to seek restraint or restrict water use by our customers to maintain supply to Southern Water, then it is expected that Southern Water would also seek restraint or restrict water use by its customers. It does not necessarily follow that if Southern Water are seeking restraint or restricting water use by its customers, that we will have to do the same. We will examine these scenarios in more detail through the River Itchen drought triggers project and incorporate our learning into our final plan if available.

Itchen Drought Order

Approximately 10 per cent of the total water we abstract comes from the River Itchen in Hampshire. This is our only surface water abstraction. This rare and sensitive chalk stream is home to many species. It is this abstraction from the River Itchen that provides much of our bulk supply to Southern Water's Hampshire South East (HSE) zone.

Upstream of our River Itchen abstraction point, Southern Water have abstractions and discharges into the River Itchen. This means that their operations can have significant impacts on the flow available in the River Itchen and therefore the volume we can abstract. The Environment Agency have set abstraction licence conditions for both companies relative to the respective river flow and influences upstream of the respective abstraction points. Consequently, Southern Water's abstractions are constrained when river flow reduces to 198Ml/d at the Environment Agency's river flow gauging station at Allbrook and Highbridge, and our abstraction is constrained when river flow falls to 194Ml/d at the Environment Agency's Riverside Park gauging station.

Southern Water's Section 20 (s20) agreement with the Environment Agency, recognises that during low flows, it could be environmentally preferable to abstract water at our River Itchen abstraction point rather than at their abstraction points on either the River Itchen or the River Test. This would be achieved through the implementation of a Drought Order to reduce the 'Hands off Flow' (HOF) constraint in our abstraction licence, from 194Ml/d to 150Ml/d. This will allow us to continue abstracting up to 45.5 Ml/d, noting that our abstraction licence places further restrictions on monthly abstraction during June to September each year. In preparing the s20 agreement, it was agreed that if a Drought Order is needed at our Lower Itchen source in order to allow the continuation of our bulk supply to Southern Water, then Southern Water would take responsibility for the application, environmental commitments and costs of that Drought Order.
We continue to liaise with Southern Water about their drought triggers on the Itchen. The joint Southern Water and Portsmouth Water Pywr model includes a variety of different flows forecast under a range of climate change scenarios. These forecast that flows will reduce in the future and we will be more likely to reach HOF constraints on the River Itchen, which impacts the amount of available surface water for abstraction.

The future development of the Havant Thicket Reservoir will mean that Southern Water can reduce the amount of water that they take from the chalk River Itchen.

6. Drought Management in Water Supply Areas

IMPORTANT NOTE:

Section 6 is incomplete and the table below describes progress, along with work still to be completed.

Drought Management in Water Supply Areas	Description
Section Completeness	5%
Work Completed	This section is incomplete.
Work Remaining	This whole section still needs to be written. It will combine all the modelling and assessments into the drought response plan. Thus, in line with best-practice, this section should be completed only after all contributory components have been finalised, quality-assured, and formally validated.
External Deliverables	**Consultancy support** • Atkins trigger modelling to completed by October 2026.
	Regulatory support • Need a decision on fdWRMP24. • Regulatory review and input on proposed drought triggers as outlined in Section 5 of this draft Plan.
Dependencies	• A decision on our fdWRMP24 as the drought actions in the WRMP inform this section. • Updated Section 20 that goes up to 2032. • Availability of Candover. • Proposed River Itchen licence (and HoF) changes. • Testwood April 2027 licence changes.
Critical Path	• Completion of trigger assessment and receipt of regulatory input or feedback on the triggers • Completion of River Itchen licence (and HoF) changes and S20 processes.
Timeline	This section will be completed by November '26.
Decision points, meetings and workshops	Decision points: • Defra, EA and Southern Water need decide how the S20 agreement will be updated. • If a new S20 agreement cannot be drafted before October 2026, a decision is needed on whether a conditional or phased DP approval is possible, as the current S20 agreement remains in place until 2030. A conditional DP approval could allow the DP to be approved under the

Drought Management in Water Supply Areas	Description
	current S20 which is valid up to 2030. After a conditional or phased DP approval, SWS will progress the S20 work and update the modelling to extend coverage to the period 2030–2032. • Defra, EA and Southern Water need to discuss how ESoR, IROPI, TUBs and NEUBs apply in Hampshire based on the proposed change to the River Itchen licence. • Completion of the Itchen proposed licence change process through which the EA has stated its intention to raise the HoF, which will have consequences on the frequency of use of drought orders, TUBs and NEUBs and the evidencing of ESoR. • Agreement on IROPI and ESoR regarding the proposed River Itchen licence change.

6.1. Western area

This section sets out the bespoke drought management measures and interventions we will use in our Western area at each level of drought severity.

The main drought risk, particularly in Hampshire, relates to flows on the River Test and the River Itchen and the need to provide greater protection to these designated rivers. Changes to abstraction licences in our Western area mean that stricter conditions have been placed on the amount of water we can abstract from these rivers and the EA's Candover Augmentation Scheme boreholes. This means that we currently have a greater reliance on drought permits/orders in order to meet our statutory obligations to our customers until we have fully implemented our long-term supply solutions. The Section 20 Agreement continues to govern this interim abstraction scheme.

6.1.1. The Section 20 Agreement and the Drought Plan

The Section 20 Agreement implements an interim abstraction scheme and an agreed procedure allowing the increased use of drought permits/orders while long-term solutions are implemented. The agreed procedure does not vary the statutory requirements for applications but agrees the sequencing and timing of drought permit applications to the EA and a set of principles to ensure that this process can be used and relied on more effectively.

The Section 20 Agreement was approved by the Secretary of State on 25 February 2019 and was incorporated into our Drought Plan 2019.

Key features of the Section 20 Agreement are as follows.

- Arrangements for the River Test Surface Water Drought Permit are subject to a six-monthly review to ensure for application readiness. It operates on a timetable for acceptance and determination of 35 days (or less in the case of extreme urgency). Low flows on the River Test between 355Ml/d and 265Ml/d are also deemed capable of constituting exceptional circumstances for the purposes of Article 4(6) of the WFD.
- At the time of application of a River Test Surface Water Drought Permit, the case for an exceptional shortage of rain (ESoR) can include a forecast component and water use restrictions do not have to be in place pre-application (only at the time of implementing the permit). Refusal of access by landowners for monitoring and/or mitigation is not a detriment to being ‘application ready’.
- It is accepted that SWS has a good case that it has no alternative solutions to its Candover and Itchen Drought Order schemes in order to maintain public water supply and that the schemes satisfy the test in Article 6(4) Habitats Directive, for an IROPI. Our outline IROPI case is set out in Annex 3.
- The Section 20 Agreement allows us to submit a Test surface water Drought Permit application before water use restrictions (e.g. TUBs) are imposed provided that they are imposed before the Test Drought Permit is implemented. It also assumes an application for a drought order to impose a NEUB after a Test Drought Permit is implemented but, before any other drought orders of the Section 20 Agreement are required.

The Section 20 Agreement sets out the sequencing for the implementation of the Test Surface Water Drought Permit/Order, Candover Augmentation Scheme Drought Order and Lower Itchen sources Drought Order. Aquatic environmental monitoring of prevailing drought conditions in the rivers Test and Itchen will be used to help inform the final sequencing of drought order implementation in any future drought event, as well as taking account of our supply duties.

Because of the enhanced dependency on drought permits/orders for maintenance of supply as drought develops, we may need to utilise demand restrictions and drought permits/orders in our Western area more often than our target LoS until such time as we expect long-term supply solutions to become available[23]., No changes to the sequencing, frequency of drought interventions or the timing for reliance on IROPI in the Western area are set out in this Drought Plan.

6.1.2. Update on the Section 20 Agreement

We are currently discussing amendments to the Section 20 Agreement with the Environment Agency, as a revised agreement is needed beyond 2030. This Section will be updated once a revised agreement has been developed with the Environment Agency.

6.1.3. Linking our drought triggers and actions

Details to be added.

To insert figures:

Figure 6-1: Linking drought triggers and actions – groundwater dominated WRZs

Figure 6-2: Linking drought triggers and actions – HSW WRZ

Figure 6-3: Linking drought triggers and actions – HSE WRZ

Figure 6-4: Drought triggers for River Test Drought Permit

Figure 6-5: Drought triggers for River Test Drought Order

[23] We will describe the way we will balance supply and demand in our Western area in our 2024 water resources management plan (WRMP24)

Figure 6-6: Drought triggers for Itchen and Candover Drought Orders

6.1.4. Level 1 bespoke actions for the Western area

The key drought trigger for entering Drought Level 1 in our Western area is for either:

- Flows on the River Test or River Itchen to fall below their respective 60-day flow triggers
- SPI or SPEI to fall below their Level 1 (1-in-5 years drought trigger)
- Groundwater levels fall below their Level 1 (1-in-5 years drought trigger)

Supply actions

Details to be added.

Demand actions

Details to be added.

6.1.5. Level 2 bespoke actions for the Western area

The move to level 2 conditions for our Western area would be triggered by any of the following conditions:

- SPI and/or SPEI triggers and/or groundwater level triggers falling below 1 in 10-years levels.
- River Test Flows falling below 360/355Ml/d and the imposition of TUBs.
- River Itchen Flows falling below the application threshold for the Candover Drought Order. This threshold is based on our flow forecasting tool and will be discussed with the EA to provide sufficient time for the drought order application.

Supply actions

Details to be added

Further details for our Level 2 drought permits are summarised in Table 6-1

Table 6-1: Summary of drought permit/order options available at Level 2 for our Western area.

Trigger for action to be used	Type of action	WRZ	Summary of action	Likely benefit / saving	Risks, constraints and requirements	Environmental impacts category**	Confidence level	Time to implement	Sequencing of implementation within WRZ
Level 2: Drought conditions	Drought permit River Test (surface water source Drought Permit)[b]	HSE and HSW							
Level 2: Drought conditions	Drought permit Lukely Brook (groundwater source)	IOW							

[a] Detailed environmental impacts found in the respective environmental assessments on request

[b] Required as part of the Section 20 Agreement

Demand actions

Details to be added.

6.1.6. Level 3 bespoke actions for the Western area

The move to Level 3 conditions for our Western area would be triggered by any of the following conditions:

- SPI and/or SPEI triggers and/or groundwater level triggers falling below 1 in 20-years Level 3 trigger levels
- River Test Flows falling below 310Ml/d and the imposition of the first phase Drought Order to restrict water use
- River Itchen Flows fall below 205Ml/d and implementation of the Candover Augmentation Scheme Drought Order or implementation of the Lower Itchen Drought Order if flows fall below 198Ml/d

Supply actions

Details to be added.

Demand actions

Details to be added.

6.1.7. Agreements with other licenced water suppliers

We have a number of bulk transfer agreements with our neighbouring water companies which are summarised in earlier Sections

Table 6-2: Summary of drought permit/order options available at Level 3 for our Western area

Trigger for action to be used	Type of action	WRZ	Summary of action	Likely benefit / saving	Risks, constraints and requirements[3]	Environmental impacts category[a]	Confidence level	Time to implement	Sequencing of implementation within WRZ
Level 3: Severe drought conditions	Drought permit Caul Bourne (groundwater source)	IOW							
Level 3: Severe drought conditions	Drought permit Eastern Yar Augmentation Scheme (surface water source)	IOW							
Level 3: Severe drought conditions	Drought order River Test (surface water source) (Drought Order)[b]	HSE and HSW							
Level 3: Severe drought conditions	Drought order Candover Augmentation Scheme (groundwater source)[b]	HSE							
Level 3: Severe drought conditions	Drought order Lower Itchen (SWS and PRT) (groundwater and surface water sources)[b]	HSE							

[a] Detailed environmental impacts found in the respective environmental assessments on request.

[b] Required as part of the Section 20 Agreement.

Table 6-3: Modelling output showing frequency of trigger crossings for the River Itchen at Allbrook & Highbridge (A&H)

Trigger curve/ threshold	Itchen – A&H (with Candover)		Itchen – A&H (without Candover)	
	Number of years trigger crossed in 19,200 years	Return Period (years)	Number of years trigger crossed in 19,200 years	Return Period (years)
90-day trigger curve				
60-day trigger curve				
35-day trigger curve/ TUBs				
Ml/d - NEUBs				
Ml/d Candover augmentation				
Ml/d - HoF				
Ml/d - HoF				

6.2. Central area

This section sets out the bespoke drought management measures and interventions we will use in our Central area at each level of drought severity. These actions are linked to the different drought trigger levels.

6.2.1. Frequency of drought measure implementation in SNZ WRZ

Details to be added.

6.2.2. Utilisation of inter-zonal transfers between SWZ and SNZ WRZs

Our Central area includes a bi-directional inter-zonal transfer between SWZ and SNZ WRZs, as well as an inter-zonal transfer from SWZ to SBZ WRZs.

Details to be added.

Table 6-4: Inter-zonal transfers in the Central area.

Trigger for action to be used		Type of action	Donor WRZ	Recipient WRZ	Capacity	Risks, constraints and requirements	Environmental impacts	Timescales for implementation[4]	Priority
Level 0: Normal conditions		Internal transfer	SNZ	SWZ					
Level 0: Normal conditions		Internal transfer	SWZ	SNZ					
Level 0: Normal conditions		Internal transfer	SWZ	SBZ					
Level 0: Normal conditions		Internal transfer	SWZ	SBZ					
Level 0: Normal conditions		Internal transfer	SBZ	SWZ					

6.2.3. Relationship between Pulborough Drought Permit and the Pulborough groundwater abstraction licence

The output of the Pulborough surface water source which abstracts from the River Rother is particularly sensitive to drought conditions as the abstraction becomes constrained by a MRF licence condition when flows in the river become low.

Details to be added

6.2.4. Extreme drought option to vary the Pulborough groundwater licence

Details to be added

To also reflect on the Pulborough groundwater sustainability investigation

6.2.5. Linking our drought triggers and actions

Figure 2.11 sets out the phasing of how each of our four drought levels is recognised in our Central Area based on our drought trigger levels, more details on how these triggers were derived is provided in Annex 4.

Figure 3.7 summarises the links between the drought triggers and the initiations of drought intervention actions we will take at each stage of a drought. Figure 3.1 is a general set of actions that is applicable to any groundwater dominated zone which for our Central area could include SNZ, SWZ and SBZ. Figure 3.7 sets out the bespoke actions, for our Central area.

6.2.6. Level 1 bespoke actions for the Central area

The key drought trigger for entering Level 1 in our Central area is for either:

- Cumulative flow deficit falls below Level 1 trigger
- SPI or SPEI to fall below their Level 1 (1-in-5 years) drought trigger
- Groundwater levels fall below their Level 1 (1-in-5 years) drought trigger

Supply actions

If the cumulative flow deficit falls below the Level 1 trigger, we would start engagement with local authorities such as the EA and other water companies and stakeholders such as PRT, whereby we would look to activate the PRT bulk supply. We would also start consultations with NAVs and Non-Household Retailers.

We would begin the Pulborough Level 1 surface water drought permit preparation and pre-consultation. The Level 1 drought permit looks to reduce the MRF from 63.65Ml/d to 53.65Ml/d which would allow us to abstract up to 10Ml/d extra from this source in times of drought.

We would begin the East Worthing groundwater drought permit preparation and pre-consultation. When applied for, and if granted, this would allow us to increase the abstraction daily licence limit from 4.5Ml/d to 7.0Ml/d between the months of October and December inclusive. Output of the site would have to be manually increased to achieve this benefit.

Demand actions

Further to the supply actions, we will increase our water efficiency messaging, explaining the onset of a drought and urging our customers to reduce their water use where possible. As part of this we will escalate water efficiency measures, including targeted media campaigns to reduce water usage in drought affected areas. At this time, we would also consider if there are any further appropriate opportunities to reduce demand.

To insert figure

Figure 6-7: Linking drought triggers and actions – Central area

6.2.7. Level 2 bespoke actions for the Central area

The move to Level 2 conditions for our Central area would be triggered by any of the following conditions:

- SPI and/or SPEI triggers and/or groundwater level triggers falling below 1-in-10 years levels
- Cumulative flow deficit falls below Level 2 trigger
- River Rother flows fall below 63.65Ml/d
- River Rother flows fall below 53.65Ml/d

Supply actions

When the cumulative flow deficit falls below the Level 2 trigger, we would look to submit an application for the Pulborough Level 1 surface water drought permit and the East Worthing groundwater drought permit.

We would enter the pre-consultation with the EA to apply for the North Arundel groundwater drought permit. This will increase the abstraction licence daily limit from 4.5Ml/d to 7.0Ml/d. As part of this we would look to enact infrastructure changes and increase pump capacity.

We would at this stage begin a pre-consultation with the EA to apply for the Weir Wood[24] reservoir drought order. This aims to reduce the statutory compensation flow from Weir Wood reservoir to the river Medway from 3.64Ml/d to 2.5Ml/d in Winter and 5.64Ml/d to 2.5Ml/d in summer yielding a max daily benefit of 1.14Ml/d in winter and 3.14Ml/d in summer. This drought order is reliant on our outage recovery plan of bringing Weir Wood source back online in 2024-25.

We would enter the pre-consultation with the EA to apply for the Pulborough Level 2 surface water drought permit. This drought permit aims to reduce the MRF at Pulborough source Weir from 63.65Ml/d to 43.65Ml/d allowing a further 10Ml/d abstraction on top of that offered under Level 1.

When the flows in the River Rother reach less than 63.65Ml/d, we would implement the Pulborough Level 1 surface water drought permit, would submit the application for the Pulborough Level 2 surface water drought permit and enter pre consultation with the EA to apply for the Pulborough Level 3 surface water drought order. The Pulborough Level 3 drought order looks to reduce the MRF at Pulborough source weir from 63.65Ml/d to 33.65Ml/d, allowing a potential further 10Ml/d on top of Level 2.

When flows in the River Rother reach less than 53.65Ml/d we would implement the Pulborough Level 2 surface water drought permit and submit applications for both the Pulborough Level 3 surface water drought order and the Weir Wood drought order.

Further details for our Level 2 drought permits are summarised in Table 3.10.

[24] We are currently upgrading the water treatment works at Weir Wood reservoir.

Table 6-5: Central area Level 2 drought permits.

Trigger for action to be used	Type of action	WRZ	Summary of action	Likely benefit / saving	Risks, constraints and requirements	Environmental impacts category	Confidence level	Time to implement	Sequencing of implementation within WRZ
Level 2: Drought conditions	Drought permit Pulborough (1) (surface water source)	SNZ							
Level 2: Drought conditions	Drought permit Pulborough (2) (surface water source)	SNZ							
Level 2: Drought conditions	Drought permit East Worthing (groundwater source)	SWZ							

Demand actions

It is likely that TUBs would be applied if the Level 2 triggers are reached. This is consistent with EA guidance for drought permits/orders in that steps to reduce demand should be taken before the implementation of drought permits/orders.

If flows on the River Rother continue to recede towards the Level 3 triggers, then we will begin preparation for the drought order to bring in Phase 1 water use restrictions (NEUBs)

6.2.8. Level 3 bespoke actions for the Central area

The move to Level 3 conditions for our Western area would be triggered by any of the following conditions:

- SPI and/or SPEI triggers and/or groundwater level triggers falling below 1-in-20 years Level 3 trigger levels
- Cumulative flow deficit falls below Level 2 trigger
- River Rother flows fall below 43.65Ml/d

Supply actions

Level 3 conditions would lead to a significant escalation in drought interventions in our Central area. We would already expect Pulborough Level 1 and Level 2 surface water Drought Permit and the East Worthing groundwater Drought Permit to be implemented.

We would look to implement the Weir Wood[25] drought order and North Arundel groundwater drought permit and once River Rother flows fall below 43.65Ml/d we would implement the Pulborough Level 3 surface water drought order.

Further details on each individual Central area Level 3 Drought Permit and Order are provided in Table 3.11.

Demand actions

Once cumulative flow deficit falls below the Level 2 trigger, we would implement our Phase 1 Drought Order (NEUBs) to restrict water use.

[25] We are currently upgrading the water treatment works at Weir Wood reservoir.

Table 6-6: Central area Level 3 drought permits/orders

Trigger for action to be used	Type of action	WRZ	Summary of action	Likely benefit / saving	Risks, constraints and requirements[3]	Environmental impacts category	Confidence level	Time to implement	Sequencing of implementation within WRZ
Level 3: Severe Drought conditions	Drought order Pulborough (3) (surface water source).	SNZ							
Level 3: Severe drought conditions	Drought order Weir Wood reservoir (surface water source).	SNZ							
Level 3: Severe drought conditions	Drought permit North Arundel (groundwater source).	SWZ							

6.2.9. Agreements with other licenced water suppliers

We have a number of bulk transfer agreements with our neighbouring water companies which are summarised in Section 5.3.

6.3. Eastern area

This section sets out the bespoke drought management measures and interventions we will use in our Eastern area at each level of drought severity. These actions are linked to the different drought trigger levels

The principal drought risks in our Eastern area relate to storage in our three reservoirs at Bewl, Darwell and Powdermill and the ability to refill the reservoirs during periods of low flow in the associated river systems. There are also many groundwater sources, which offer some drought resilience as the majority are constrained by infrastructure or abstraction licence limits though some are vulnerable to low groundwater levels, particularly in our KTZ WRZ.

Our primary and supporting triggers for each WRZ are defined.

- KTZ: Little Bucket observation borehole groundwater level.
- KME and KMW: The combined storage volume for the Bewl, Darwell and Powdermill reservoir system with Riddles Lane observation borehole groundwater level as a supporting trigger.
- SHZ: The combined storage volume for the Bewl, Darwell and Powdermill reservoir system.

6.3.1. Linking our drought triggers and actions

To add details and figure linking triggers to actions.

Figure 6-8: Linking drought triggers and actions – KMW and SHZ

6.3.2. Level 1 bespoke actions for the Eastern area

The key drought trigger for entering Drought Level 1 in our Eastern area is if any of the following occur:

- Combined Bewl, Darwell and Powdermill volumes fall below their Level 1 trigger curve (1-in-5 years drought trigger).
- SPI or SPEI to fall below their Level 1 (1-in-5 years) drought trigger
- Groundwater levels fall below their Level 1 (1-in-5 years) drought trigger

Supply actions

To add details

Demand interventions

To add details

6.3.3. Level 2 bespoke actions for the Eastern area

The move to Level 2 conditions for our Eastern area would be triggered by any of the following conditions:

- SPI and/or SPEI triggers and/or groundwater level triggers falling below 1-in-10 years levels
- Groundwater levels fall below their Level 2 (1-in-10 years) drought trigger
- Reservoir Storage falls below the Level 2 (1-in-10 years) drought trigger

Supply actions

To add details

Demand actions

To add details

Table 6-7: Summary of our Level 2 drought permit/order options in our Eastern Area

Trigger for action to be used	Type of action	WRZ	Summary of action	Likely benefit / saving	Risks, constraints and requirements[3]	Environmental impacts category[4]	Confidence level	Time to implement	Sequencing of implementation within WRZ
Level 2: Drought conditions	Drought permit Bewl Water reservoir / River Medway Scheme - Stage 1 (surface water source)	KMW							

[3] Note the EA determines and approves drought permits. The Secretary of State determines and approves drought orders (subject to representation from the EA and other stakeholders).
[4] Detailed environmental impacts found in the respective EARs on request.

6.3.4. Level 3 bespoke actions for the Eastern area

The move to Level 3 conditions for our Eastern area would be triggered by any of the following conditions:

- SPI and/or SPEI triggers and/or groundwater level triggers falling below 1-in-20 years levels
- Groundwater levels fall below their Level 3 (1-in-20 years) drought trigger
- Reservoir Storage falls below the Level 3 (1-in-20 years) drought trigger

Supply actions

To add details

Demand actions

To add details

6.3.5. Agreements with other licenced water suppliers in our Eastern area

To add details

Table 6: Summary of our Level 3 drought permit/order options in our Eastern area.

Trigger for action to be used	Type of action	WRZ	Summary of action	Likely benefit / saving	Risks, constraints and requirements[1]	Environmental impacts category[2]	Confidence level	Time to implement	Sequencing of implementation within WRZ
Level 3: Severe drought conditions	Drought permit Darwell reservoir (2) (surface water source)	SHZ							
Level 3: Severe drought conditions	Drought permit Bewl Water reservoir / River Medway Scheme - Stage 2 (surface water source)	KMW							
Level 3: Severe drought conditions	Drought permit Darwell reservoir (1) (surface water source)	SH							
Level 3: Severe drought conditions	Drought order Bewl Water reservoir / River Medway Scheme - Stage 3 (surface water source)	KMW							
Level 3: Severe drought conditions	Drought order Bewl Water reservoir / River Medway Scheme - Stage 4	KMW							

Trigger for action to be used	Type of action	WRZ	Summary of action	Likely benefit / saving	Risks, constraints and requirements[1]	Environmental impacts category[2]	Confidence level	Time to implement	Sequencing of implementation within WRZ
	(surface water source)								

[1] Note the EA determines and approves drought permits. The Secretary of State determines and approves drought orders (subject to representation from the EA and other stakeholders).
[2] Detailed environmental impacts found in the respective EARs on request.
[3] The winter Darwell reservoir option would be the first priority for implementation in SHZ subject to the timing of need and further assessment of its deliverability and application readiness
We have removed the Faversham and Sandwich drought permits from this table for the reason described in section 3.5.4.

7. Extreme Drought Management (Level 4)

IMPORTANT NOTE:

Section 7 is incomplete and the table below describes progress, along with work still to be completed.

Extreme drought management (Level 4)	Description
Section Completeness	100%
Work Completed	Draft section is complete but needs a final technical review once the draft plan is complete.
Work Remaining	Quality assurance and final technical review. This section will also need to be updated once the Emergency Drought Plan has been written for submission to Defra during 2026.
External Deliverables	**Consultancy support** N/A
	Regulatory support Awaiting regulatory timeline for draft Emergency Drought Plan development and submission to Defra for review in 2026.
Dependencies	Emergency drought plan being developed during 2026. This Section will need to be reviewed and amended once the Emergency Drought Plan has been written.
Critical Path	None identified.
Timeline	This section will be amended by the late Autumn of 2026 once the Emergency Drought Plan has been shared with Defra. Alternatively, if draft DP27 has been published and public consultation is in progress, this section will be amended ready for publication of the regulatory approved DP27 in 2027.
Decision points, meetings and workshops	Regulatory timeline for development and publication of Emergency Drought Plans.

All actions considered Level 4 are beyond normal drought planning and are part of the Emergency Drought Plan. The specific details of the Emergency Drought Plan are not made publicly available for security reasons but more general information on the transition from normal drought planning to emergency drought planning and the measures included in this plan are provided below. We are developing a new Emergency Drought Plan during 2026 based on new guidance provided by the Environment Agency. The triggers for Level 4 drought measures have been discussed in Section 4.

7.1. “More Before 4”

This section describes the actions that we could implement as a severe drought (Level 3) gradually moves towards an extreme drought (Level 4). This would be after Level 3 restrictions are applied but before the need for Level 4 Emergency Drought Orders. These actions are exceptional and would not be used in normal drought conditions but would instead be used to prevent or delay the implementation of our Emergency Plan in which emergency measures such as standpipes and rota cuts would be deployed where necessary.

These actions termed ‘more before four’ measures have been discussed with the WRSE group and they have been considered for viability in terms of cost, environmental impacts, feasibility and effectiveness. Depending on the nature of the drought and the situation, we would consider the measures in Table 7-1 as part of our Level 3 drought measures beyond a severe drought as it gradually became an extreme drought.

7.1.1. Media and communications

Action: Enhanced hard hitting communications to encourage water conservation measures to reduce PCC to 80 or 50 litres/head/day. In 2018, after the worst drought in recorded history, Cape Town was on the verge of becoming the first major urban centre to run out of water. In order to avert the crisis, water use restrictions of just 50 litres/person/day were imposed. This scenario was explored by WRSE for viability should we find ourselves in a similar severity of drought.

As the measure is extreme, we would only consider implementing such a requirement after we have exhausted all of the drought actions in Levels 1 to 3 with the aim of avoiding Level 4 requirements of standpipes and rota cuts.

In order to achieve such large PCC reductions (from a 2024-25 PCC of 127.5 litres/person/day, normal year annual average conditions) we would require a significant change in water use and customer behaviour. There is a large uncertainty around the level of adherence to the messages that will be achieved, particularly if there is no legal requirement for customers to comply with the restrictions.

Further to this, there are potential environmental effects as there would be lower flows and higher concentrations from wastewater discharges and the receiving waterbodies will be naturally low as well. Monitoring would need to be increased to help consider what mitigation is possible.

Table 7-1: "More Before 4" Interventions

Trigger for action to be used	Type of action	WRZ	Summary of action	Likely benefit / saving	Risks, constraints and requirements	Environmental impacts	Timescales for implementation	Priority
Level 3/4	Media and communications	Affected area	Enhanced hard hitting communications to encourage water conservation measures to reduce PCC to 80 or 50 litres/person/day.	Up to 70 litres/person/day depending on existing water use.	Require customer campaigns, liaison with regulators and working with neighbouring water companies. Large social impacts as a result of this measure.	Potential environmental impacts from reduced wastewater treatment works discharges at a higher concentration. Would need to increase monitoring and consider what mitigation is possible. High social and economic impacts.	Quick impact as already on Level 3 communications.	4
Level 3/4	Removal of exceptions and exemptions	Affected area	Consider removal of exceptions in place for imposed TUBs and NEUBs.	Limited as reductions will already be high and exceptions will affect a small proportion	Require customer campaigns, liaison with regulators and working with neighbouring water companies. Large social and economic impacts because of this measure.	Limited environmental impacts but high social and economic impacts.	Quick impact as already on Level 3 communications.	4
Level 3/4	Wastewater effluent recycling	Affected area	Provision of treated effluent for agricultural and/or horticultural use to reduce demand on public water supply.	Low to moderate.	High cost. Requires close working and coordinated discussions with the EA. Requires discussions with other south east companies.	Carbon increase. Public perception issues. Potential environmental impacts from the treated effluent.	Quick implementation depending on availability of portable supplies.	4
Level 3/4	Tankering - Sea tankering from within the UK	HSW, IOW, SWZ, SBZ, SHZ, KME, KMW, KTZ	Sea tankering from within the UK considered as part of 2018 dry weather impact.	High.	Water quality risks (blending of water), network constraint risks, require tanks, require deep-sea port.	Potentially extremely high Carbon emissions from transporting supplies. Increased abstraction at source of tankering.	A lead time of 2 years is quoted to cover 'a pilot delivery, any necessary infrastructure provision and all necessary legal agreements. There is significant uncertainty around the 2-3 month ramp-up time for the service	4
Level 3/4	Bulk transfers	HSE, HAZ, SNZ, SWZ, KME, KMW, KTZ, SHZ	Discuss with neighbouring companies the opportunities for additional bulk supplies beyond existing contractual arrangements.	Limited depending on source company excess water.	Not guaranteed volume (depends on regional / national drought).	Extra abstraction at source of transfer	Ongoing activity throughout duration of drought	4

Trigger for action to be used	Type of action	WRZ	Summary of action	Likely benefit / saving	Risks, constraints and requirements	Environmental impacts	Timescales for implementation	Priority
Level 3/4	Alternative supply tanks (tanks / bowsers)	Affected area	Smaller volume tanks distributed to support customers in smaller areas of impact.	Small size makes likely benefit uncertain.	Would need sufficient tankers and water availability. Potential risks to security and water quality.	Limited	Potentially high local demand for the system from other water companies in an extreme drought scenario would increase timescales	4

7.1.2. Removal of Exemptions

Action: Removal of exceptions - Consider removal of exceptions in place for imposed TUBs and NEUBs. A number of exceptions are available under TUBs and NEUBs. As a drought goes past Level 3, but before the severity reaches Level 4, we would consider removing some or all of these exceptions. However, there is large uncertainty around how much of an effect this will have on the demand and as such the demand levels will continue to be monitored throughout the drought and assessed as to whether this 'more before 4' drought action would be needed. It is expected that should customers reduce water usage to 80 or 50 litres/person/day then that would have far greater effect than removing exceptions.

7.1.3. Wastewater effluent recycling

Action: Provision of treated effluent for agricultural and/or horticultural use to reduce demand on public water supply. We would consider wastewater recycling options that could be used during extreme drought scenarios. This could be using treated wastewater effluent for agriculture and horticultural use, in order to free up water supply for use elsewhere. There are ongoing discussions with the National Farmers Union (NFU) and the EA as to the environmental impact of this.

This could also include using treated effluent to fight fires, which would require close liaison with the local fire departments to ensure that they are assured that there are no risks involved in using treated effluent in this manner. This could also help to overcome any issues surrounding low water pressure affecting firefighting capabilities during a drought.

7.1.4. Wastewater recycling

Wastewater recycling is generally not considered to be an option within the timescale of a Drought Plan due to the lead-in time of implementing such schemes. However, if there is a scheme under development for the long-term WRMP, there could be potential to increase investment to accelerate this activity during a drought. It is estimated that up to 20Ml/d of water could be treated for use in an emergency.

Note: this option is being reviewed as part of the WRMP29 options appraisal process. Regulators have instructed water companies to consider options for wastewater recycling at wastewater treatment works under normal water supply scenarios. As a consequence, this source of water in an emergency may not be available in the future.

7.1.5. Bulk transfers

Action: Discuss opportunities with neighbouring companies for additional bulk supplies beyond existing contractual arrangements. We would discuss with our neighbouring companies the opportunity to increase the bulk transfers from existing contractual arrangements. There is high uncertainty surrounding the effectiveness of this action as the neighbouring companies will likely be affected by drought at the same time.

7.1.6. Alternative supply tanks (tanks/bowsers)

Action: Smaller volume tanks distributed to support customers in smaller areas of impact. This option would require a source of water to fill the storage tanks as well as the tankers to transport the water. There would be potential security risks and water quality risks. A constraint would also be on the size of the storage tank and how long it could supply water in the area deployed. If water demand is high, there may also be a

shortage of small portable storage tanks as other water companies would want to use them in an extreme drought. This could increase the timescales for implementation as availability of the storage tanks and tankers would become an issue.

7.1.7. Regional and national collaboration

Regional and national collaboration will be vital at this stage in drought management. As we approach a Level 4 drought, we would continue to work with our neighbouring water companies, suppliers, customers and regulators to avoid implementing Level 4 restrictions.

Some of these measures need to be developed further in discussion with relevant organisations and the EA and we will progress these for inclusion in the final plan. Specifically, we will consider the potential benefits, barriers and degree of environmental assessment needed.

7.2. Level 4 Emergency Drought Measures

Much like Level 1 to Level 3 actions, the actions we will take in an emergency as a result of extreme drought will vary, depending on the risks and uncertainties at the time including hydrological conditions, time of year, customer response to water use restrictions and long-term weather forecasts. We will make full use of all other measures, where possible, before level 4 Emergency Drought Orders are implemented.

The actions we would take in advance of the application for Emergency Drought Orders are summarised as follows:

- Applications for drought permits/orders to maintain abstraction through reductions in MRFs, river regulation releases from reservoirs and/or reservoir compensation flow releases.
- Applications for drought orders to prohibit or limit the abstraction of water by third parties to allow us to maintain or increase our authorised abstractions.
- Applications for drought orders to vary discharges to the environment; and
- Applications for drought orders to limit or restrict the use of water for certain activities as stated in the Drought Direction 2011.

Some of the measures listed above may also need other consents, such as discharge consents and planning permissions.

Emergency Drought Orders, amongst other measures, can allow water companies to restrict supplies to customers through the imposition of rota cuts and/or the introduction of standpipes. These measures exist to deal with the possibility of a drought much worse than any seen in the last century or more in the UK. Emergency Drought Orders to restrict water supplies have not been put in place in England since 1976. Ministers have made it clear that such measures should be avoided at all costs and introduced only as a last resort. If similar conditions to those experienced in 1976 were to occur again, there should not be the need for an Emergency Drought Order given the investment by water companies since then to improve resilience to drought.

The legislation governing Emergency Drought Orders is contained within the Water Resources Act 1991 and gives powers to the Secretary of State on application by the water company to make such provision as appears to him/her to be expedient with a view to meeting the supply deficiency. In practice, such powers are generally held to include the following water use restriction measures:

- To limit the use of water for such purposes as it considers necessary (i.e. further measures not specified in the Drought Direction 2011).
- To introduce rota cuts; and
- To set up and supply water by means of standpipes or water tanks.

Emergency Drought Orders may be granted for a period of 3 months and cannot be extended by the Secretary of State beyond 5 months.

In the event of Emergency Drought Orders being authorised and implemented to further restrict water use, we will give as much warning (minimum 72 hours) as is possible to the local fire authority before we decide to enact an Emergency Drought Order. We will also take all reasonable measures to secure adequate supplies of water for the fire authority's use in the event of fire. Fire authorities will be consulted closely during all stages of a drought event (not just when considering Emergency Drought Orders) and will be made aware of the implications that any measures taken by us might have on the availability of adequate supplies for firefighting. Due to the importance of water for firefighting, the relevant local fire authorities in our supply area will receive formal notice in writing of the introduction of an Emergency Drought Order, and we will inform these fire authorities of any forecast shutdowns to the water distribution network.

An Emergency Drought Order could also be sought to further reduce MRFs or increase abstraction from licensed and unlicensed water sources, which is likely to lead to additional and more severe environmental impacts. The scope of monitoring, environmental assessment work and mitigation measures that might be required under such circumstances will be reviewed with the EA if drought conditions become more severe.

7.2.1. Sea Tankering Water from within the UK

Bulk import of water from Norway via sea tankers was considered for the WRSE regional plan and our dWRMP24 but not taken forward due to water quality concerns, risks of introducing Invasive Non-Native Species (INNS). costs and the number of ships needed to provide the required volumes of water. In addition, a scheme of this type has not been undertaken in the UK before and there are therefore no current regulatory procedures to follow.

Notwithstanding these risks, an alternative source of water from within the UK would be considered for sea tankering to water supply areas during a Level 4 Emergency drought, provided an alternative source of water could be found and agreed with regulators as an appropriate response to the emergency.

7.2.2. Construction of new satellite boreholes

New boreholes could be drilled at existing sources (where appropriate) to spread the load of abstraction and reduce the risk of existing boreholes failing. This intervention is part of the resilience options of our WRMP; however, due to the time needed to implement these schemes they are not considered to be part of the Drought Plan. It is estimated that up to 10Ml/d of groundwater could be abstracted for use in an emergency.

7.2.3. Mothballed or Abandoned Sources

The use of mothballed or abandoned water sources would be considered as part of a Level 4 emergency drought response. We are currently reviewing sources that we have stopped using based on regulatory decisions, with a view that during a Level 4 emergency drought we would be able to re-use these sources for a short period of time.

8. Environmental monitoring and mitigation

IMPORTANT NOTE:

Section 8 is incomplete and the table below describes progress, along with work still to be completed.

Section 9 Environmental Monitoring and Mitigation	Description
Section Completeness	5%
Work Completed	• Scope of works issued August 2025. • Contracts with consultants signed February 2026. This was due to supply chain resource constraints necessitating a re-base of the tender pack and second round of tendering. • Methodology Statement submitted for regulator review on 13/03/2026. • 10 out of 14 EARs for drought orders and permits completed by the end of May 2026.
Work Remaining	**In progress** Sections 9.1-9.5 of this chapter are under internal review and further updates will be provided following: • Completion of 2025 Hampshire drought lessons learned workshops with the EA, Defra and NE. • Test, Itchen and Candover Drought Order EARs regulatory agreement. • Drought order/permit HRAs completion and regulatory agreement. • Revision of the Section 20 Agreement. • Regulatory agreement on Hampshire Drought Order sequencing. • Regulatory agreement on the use of Drought Permits on the River Test during the period DP27 covers. **Not started** • Full update to the Environmental Monitoring Plan (EMP).
External Deliverables	**Consultancy support** • In addition to the EMP, Mott MacDonald are reviewing and updating 9 of the drought permit/order HRAs and the plan level HRA and SEA. • Haskoning have updated 10 of the EARs for the drought permits/orders, and these are undergoing internal review. • WSP Binnies are updating the WFD assessment • WSP are updating the Hampshire (ie; Test/Itchen/Candover) drought order HRA and EARs.

Section 9 Environmental Monitoring and Mitigation	Description
	Regulatory support • EA & NE to review the methodology statement. • EA & NE to review draft EARs and HRAs for drought permits/orders.
Dependencies	The drought plan EMP will be informed by **updates to the drought permit/order HRAs and EARs**. Due to their complexity, the Hampshire HRA and EARs have a longer timeline for delivery and are due to be complete in Autumn 2026. As a result, there is a risk that the drought plan EMP may need to rely on some older HRA and EAR assessments. If this is the case, it will be made clear within the relevant section of Chapter 9, and will be resolved by the time of final draft submission in 2027. Other dependencies that will impact the identification of suitable mitigation and compensation are: • Outcomes from the Testwood Drought Order Lessons Learned sessions held on 18th and 19th March 2026 with the EA, NE and Defra. Including a workshop needed in April 2026 to discuss ESoR. • Regulatory agreement of Test, Itchen and Candover Drought Order EARs. • Regulatory agreement of Drought order/permit HRAs completion. • Revision of the Section 20 Agreement. • Regulatory agreement of Hampshire Drought Order sequencing based on River Itchen licence renewal discussions and outcomes. This will also include identification of necessary mitigation and compensation which will need to be implemented across DP22, DP27 and DP32. • Regulatory agreement on the use of Drought Permits on the River Test during the period DP27 covers.
Critical Path	The Hampshire HRA updates will assess impacts covering an extended timeframe for reliance on drought permits and orders from 2030 up to 2034. These updated HRAs will determine any new mitigation compensation needed to secure the use of these options beyond 2030.

Section 9 Environmental Monitoring and Mitigation	Description
	To ensure the mitigation package for these options is sufficient an update to the drought plan SEA is also required. However, the Itchen Drought Order HRA will be assessed using the current Hands-off Flow (whilst the new raised HoF is yet to be agreed/implemented) and *without* the availability of the Candover scheme (due for delivery in 2027). The HRA will then need to be revised when either a) the HoF changes and/or b) the Candover scheme becomes available. This may happen before final DP27 is published and will therefore mean further changes to the plan are required. A further HoF change on the Itchen licence is also currently proposed for 2032, but this is likely to be a matter for DP32. Natural England have advised that assessments of the Hampshire drought orders up to 2034 are required for the submitted drought plan to be compliant with Habitats Regulations.
Timeline	• Majority drought permit/order EAR updates due by May 2026 • Completion of '25 Hampshire drought lessons workshops with the EA, Defra and NE. • Hampshire drought order HRA and EAR updates due Autumn 2026. The extended timeline for the delivery of these is due to complexity significantly increasing workload involved. • Draft EMP ready for SW review – August '26. • Section complete September '26
Decision points, meetings and workshops	Fortnightly progress meetings with Mott MacDonald are taking place, along with regular coordination/update meetings with other suppliers. Meetings with regulators will be arranged if required.

8.1. Our obligation

We have a responsibility to monitor, assess and, where required, mitigate the environmental impacts of the supply-side actions we take during a drought. EA guidance governing the Drought Plan requires us to produce an Environmental Monitoring Plan (EMP) for each of our supply actions in our drought plan. Consequently, a detailed EMP (Annex 7) is being produced to accompany our Drought Plan. A summary of the key points that will be covered in the EMP will be presented in this section.

8.1.1. The Section 20 Agreement

The current Section 20 Agreement expires in 2030, two years before the end of this drought plan which will cover the period 2027-2032. To inform any updates to this agreement, updated HRAs for the Test, Itchen and Candover up to the anticipated delivery of HWTWRP will be required. These are currently under development and will inform further updates to this section once complete.

8.2. Data and monitoring

8.2.1. Baseline monitoring

This section is under review.

8.2.2. Monitoring during drought

Our EMP details the surveys that will be carried out to inform environmental assessment of the prevailing conditions at the onset of drought during drought permit/order implementation as well as post-drought.

Monitoring during implementation of a drought permit/order helps assess the actual impacts on environmental features and helps to determine the timing of mitigation measures, where applicable by the agreed trigger conditions. The evidence collected also helps to verify the impacts predicted in the EARs and used to subsequently update the EARs.

Monitoring post-drought will help assess any impacts that continue despite the cessation of the drought permit/order and to assess the rate and nature of recovery of the environment. It will also help to establish any damage or loss linked to the drought permit/order implementation and guide any applicable mitigation or post-implementation compensation measures.

There are two key elements of monitoring during drought:

1. **Control site selection:**
   Control sites are the sites that are not impacted by drought permit/order. These sites therefore provide a basis for assessing the extent to which drought permit/order has had an impact above and beyond the impacts of environmental drought alone at the impacted sites. The assessment is done both during and after a drought. The precise locations of these sites are finalised in discussions with EA, NE and other relevant stakeholders.

   Ideally:
   a. The location of control sites will be consistent with baseline monitoring.
   b. The control sites will be situated in the un-impacted reaches of the same catchments containing the impacted sites. However, this may not always be possible and comparable locations in neighbouring catchments may need to be used.
   c. The total number of sampling sites should be split equally between control and impact locations to provide balanced statistical assessments.

2. **Specific monitoring requirements:**
   Each drought permit/order requires specific environmental monitoring at the onset of drought conditions, during and post implementation of drought permit/order. In many cases, habitat and features walkover surveys are recommended as part of the monitoring requirements for each of the

three drought stages. These would build on the recommended walkover surveys carried out for the baseline monitoring and enable a rapid review of the prevailing environmental conditions and to identify those features likely to be at greatest risk in the specific drought conditions arising (e.g. risks in winter will be different to those in summer). In some cases (e.g. fish), the walkovers are a substitute for in-river monitoring of the feature as the monitoring would lead to additional stress on the feature under drought flow conditions.

All the monitoring activities are the responsibility of SWS, but we may work with other parties to deliver the activities taking account of the organisations that would be best placed to carry out the requirements. Where relevant, appropriate licences and approvals will be needed to carry out the monitoring and we have a responsibility to ensure that all surveyors have the appropriate licences, approvals and experience to carry out the monitoring to the required standards.

Annex 7 provides details of the control sites and the specific monitoring requirements at each drought stage at each of the sites where a drought permit/order is likely to be implemented.

We have provided comments on updates we have made to our monitoring programme in our environmental monitoring plan (EMP) which is annex 7 to this drought plan.

8.3. Mitigation measures

8.3.1. Requirements

The development of mitigation requirements is based upon the assessment of sensitive features identified in the EARs as having a significant risk of impact as a result of implementing drought permits/orders. Following the EA guidance, significant risk is where the significance of impacts is identified as being moderate or major in the EARs.

Walkover surveys and other in-drought monitoring provide information on the effects of the drought and drought permit/order implementation to inform decisions on the application of any mitigation measures. Further targeted surveys would then be required following implementation of mitigation measures to assess their benefit and make adjustments as may be necessary (or to suspend the mitigation measure if it is shown to have an adverse effect).

Monitoring at the onset of environmental drought will inform the risks of adverse effects of any drought permit/order implementation and inform the agreement as to the precise mitigation measures to consider and the appropriate trigger for their implementation in dialogue between SWS, EA, NE and other stakeholders, as appropriate.

The mitigation measures set out in the EMP accompanying this Drought Plan (see Annex 7) are based on the likely impacts to sensitive features and these should be further reviewed in a drought, particularly if monitoring identifies additional ‘new’ risks or indicates that the stated measures are not appropriate in the specific drought conditions faced. Similarly, post-drought monitoring should inform the precise nature of any required post-drought compensation measures. The compensation measures, except for statutory compensation measures required under the Habitats Regulations which must normally be ‘secured’ prior to damage occurring, are therefore not precisely defined as they will necessarily need to reflect the precise nature of the loss or damage identified post-drought.

8.3.2. Potential mitigation measures

This section is under review.

8.3.3. Habitat Regulation Assessment (HRA)

We are carrying out numerous environmental assessments to accompany this plan. These include a strategic environmental assessment (SEA), environmental assessment reports (EARs) and HRAs. We will provide the HRA for this plan as Annex 8..

Further updates to this section will be provided on completion of the aforementioned environmental assessments.

8.4. Permits and approvals

Many of the mitigation (and compensation) measures will require specific permits and/or approvals to be obtained by SWS (or its agents acting under contract to SWS) prior to implementation as summarised in Table 8.

Irrespective of the need for a permit or permission, all planned mitigation measures would be discussed with the EA in advance of implementation, as well as with NE, other authorities, stakeholders and site or landowners as appropriate.

All works will have regard to the requirements of protected species legislation and any necessary licences will be obtained in accordance with the provisions of the Wildlife and Countryside Act 1981 (as amended).

Where assent is required for works on a Site of Specific Scientific Interest (SSSI) under section 28i of the Wildlife and Countryside Act 1981 (as amended), this assent will be obtained as properly required under legislation.

Table 8: Mitigation and compensation measures, permits and approvals.

This table is under review.

8.5. Data exchange

We will exchange data with and receive it from our stakeholders, the EA and NE under normal conditions, during a drought and post drought.

8.5.1. Data exchange during normal conditions

Under normal conditions, key routine baseline environmental monitoring data relevant to the Drought Plan (e.g. river flows, groundwater levels, water quality and ecological data) is exchanged between SWS, EA and NE on a regular basis. Data is exchanged electronically wherever possible and only after the appropriate quality assurance checks have been carried out. Any issues with the data are identified as part of the exchange process.

Each party is responsible for notifying the other parties of any planned changes to the monitoring programmes as early as possible such that the other parties have an opportunity to address any gaps in the dataset that this may cause.

Under the Section 20 agreement we are also committed to initiate liaison in relation to the Test Surface Water Drought Permit every six months. We have offered availability of the River Test Drought Permit documentation at six monthly stakeholder meetings. The main focus of most of the six-monthly meetings has been progress of application readiness in the sense of the progress of the monitoring, mitigation and compensation work as well as updates on the water resources situation and drought risk forecast.

8.5.2. Data exchange during drought

During a drought, we will liaise closely with the EA and NE regarding in-drought monitoring programmes of each party. In the initial stages of a developing drought, there will be regular communication established and the onset of drought environmental monitoring will be confirmed so that each party is aware of planned activities.

As far as practicable, any relevant environmental data collected by each party will be made available to the other parties (subject to appropriate licensing arrangements where necessary, which are assumed to have been agreed as part of the baseline data exchange process) through electronic transfer wherever possible in a timely manner (suggested as normally **within 1 working week** of the necessary data compilation and/or analysis having been completed).

In addition to the data exchange, each party shall share as early as possible their planned in-drought monitoring programmes together with any triggers established to enhance or extend the monitoring frequency and/or spatial coverage. Any changes to the plans should be communicated in a timely manner so that other parties can react accordingly.

We will also establish communications with relevant contacts in the EA and NE to discuss potential mitigation measures in respect of proposed drought permits/orders and agree the specific monitoring and trigger conditions for their implementation, building on the information within the EMP but taking account of the prevailing environmental conditions.

8.5.3. Data exchange post drought

Post-drought, we will continue to liaise closely with the EA and NE to agree and confirm the targeted, specific post-drought monitoring programmes of each party. For SWS, this will be based on the monitoring measures set out in our EMP and further informed by the findings of the specific in-drought monitoring activities and the prevailing environmental conditions. Given that compensation measures may be required in light of the in-drought and post-drought monitoring of impacts linked to drought permits/orders, it is considered appropriate that the data exchange timeframes set out for the in-drought monitoring should apply in the initial weeks following the cessation of the drought permits/orders, but reverting to the baseline frequency once drought recovery has been agreed to have occurred (noting this will vary from location to location, and from feature to feature).

The post-drought monitoring data should be pooled by all parties and meetings arranged to review and agree the key findings arising from the data on a regular basis (frequency to be agreed dependent on the prevailing conditions) until it is agreed that environmental recovery has largely occurred. It is recommended that a joint summary paper is produced to set out the key findings of fact in relation to any damage and subsequent recovery of relevant key environmental features. This should be used to direct and target any required post-drought compensation measures which should be recorded for future reference.

All data collated during the drought and post-drought (to the point of recovery of the relevant environmental features) should be reviewed by SWS and used to update the EARs, HRA and WFD assessment reports as necessary in advance of the next Drought Plan submission.

9. End of a Drought

IMPORTANT NOTE:

Section 9 is incomplete and the table below describes progress, along with work still to be completed.

After a drought	Description
Section Completeness	30%
Work Completed	Sections 10.2 and 10.3 are complete as an early draft.
Work Remaining	**In progress** • Section 10.1 needs to be completed once end of drought triggers have been developed and agreed with regulators. • Sections 10.2 and 10.3 will require updating after completion of 2025 Hampshire drought lessons workshops with the EA, Defra and NE, revision of the Section 20 agreement and changes to the River Itchen licence. • Section 10.3 needs to be revised based upon outcome of lessons learned workshops with the EA held in March and April 2026. **Not started** • N/A
External Deliverables	**Consultancy support** Atkins drought trigger development to be completed in April 2026.
	Regulatory support Review of drought triggers.
Dependencies	• Drought triggers, which will be finished in draft in October 2026. • Consultation with EA and Defra on draft drought triggers. • Completion of 2025 Hampshire drought lessons learned workshops with the EA, Defra and NE. • Revision of the Section 20 Agreement. • River Itchen licence renewal.
Critical Path	The development of draft drought triggers and regulatory review of the triggers is needed before this report section can be completed. An agreement on the use of TUBs and NEUBs in relation to a revised River Itchen licence is also needed, in order to update our communications plan for Hampshire.
Timeline	• Drought trigger development will be finished in draft in October ‘26.

	• Regulatory lessons learned ESOR workshop – April ‘26. • Drought trigger consultation with the EA. • Section complete November ’26.
Decision points, meetings and workshops	Regulatory workshop to discuss ESOR.

9.1. Identifying the end of a drought

A drought does not necessarily end as soon as it starts raining again. It is important to recognise that there is a difference and often a delay between the ending of a drought event in terms of normal rainfall patterns resuming and the recovery of water resources back to within the normal range of conditions. Depending on the severity of the drought, it can take time for the rain to recharge the aquifers and increase river flows. This time delay or lag between the rain and recovery in groundwater levels and/or river flows could be several months. Accordingly, we do not consider a drought to have ended until conditions have returned to normal.

9.1.1. End of Drought Indicators

Several indicators are used to determine that a drought has ended, these are set out in Table 9-1.

Note: Table 10-1 and this report section will be finished once drought triggers have been developed and agreed with regulators.

Table 9-1: Trigger Thresholds defining the end of a drought

This table is under review.

WRZ	End of drought triggers
HAZ, HKZ, HRZ, HWZ, SWZ, SBZ, KTZ	
HSE, HSW	
IOW	
SNZ	
KME KMW	
SH	

It is important to track the recovery from a drought and recognise when it has ended. This allows a safe and considered de-escalation of drought related activities whereby any temporary impacts upon customers and the environment are reduced and finally removed in a timely manner.

We must also consider the implications of the Section 20 Agreement on our Western area and the drought management measures that might be needed in Hampshire, alongside any changes to our abstraction licences in the River Test and River Itchen.

9.1.2. De-escalation of drought activities

This section is under review. It will need to reflect how the River Itchen Drought Order will operate under a River Itchen licence change if ESoR is not the driver for starting the drought order process.

The process for de-escalation of our drought activities is summarised in Table 9-2.

Table 9-2: Summary of drought activities de-escalation process.

This table is under review.

9.2. Customer communication

It is important that we keep customers aware throughout the process of lifting restrictions and declaring the end of a drought. Since our water resources are dominated by groundwater, there can often be a lag between rainfall events and a rise in groundwater levels and groundwater levels only tend to recover through winter rainfall. Clear communication with customers is therefore important to help understanding of this relationship.

We have a robust communications plan which sets out the communication we will undertake with both household and non-household customer depending on the severity of the drought. This is to ensure we can communicate effectively with customers, stakeholders, regulators and critical organisations during all stages of a drought, including recovery. Our communication plan is detailed in Annex 6.

9.3. Post drought review

Once the end of a drought has been declared we will review our performance during the drought event. This will include an assessment of the effectiveness of the Drought Plan, and to determine the improvement actions that might be needed from lessons learnt.

To facilitate a common transparent understanding, both within the business and with regulators, we will develop and publish a post drought review report three months after the end of a drought has been declared. We will consult with the EA and other regulators during this time.

This review will include an assessment of the following:

- The hydrological and water resource evolution of the drought.
- The impact on the delivery of customer promises and customer survey responses.
- The performance of the drought intervention measures deployed.
- The triggers and monitoring methods used.
- The EARs for drought permits/orders. This will likely be needed to reflect new evidence collected of the impact of a drought permit/order on the environment and the effectiveness of any mitigation measures implemented. The monitoring data collected might allow an improved assessment of the potential impact of the drought permit/order. It may also inform an updated environmental monitoring and mitigation programme for the particular drought permit/order that would be reflected in an updated EMP. This would be discussed and agreed with the EA.
- The estimated reduction in demand from any demand-side measures implemented.
- The extra water delivered from any supply intervention implemented.
- The need to reassess any DOs as a result of the drought.
- Any updates required for WRMP and Drought Plan; and
- The effectiveness of the communication activities, based on feedback from representatives of customer groups, individual customers, and other institutional stakeholders, such as the EA.

Table 9-3 provides an indicative timescale for completing the post-drought review report.

Table 9-3: Indicative timescale for completion of the post drought review report.

Month after normal conditions have returned	Post drought review activities
1 Month	• Appoint author of post drought review. • Hold internal workshop and interviews to collect summary of experiences of drought interventions.
2 Month	• Meet with the EA, any affected neighbouring water companies, and other stakeholders, as appropriate, to discuss lessons learnt.
3 Month	• Publish post drought review report internally and to the EA.
3-18 Months	• Continue collecting environmental monitoring data. • Update EARs as appropriate. • Consider updating the WRMP and Drought Plan if necessary.

9.4. Always improving

In addition to the review of the effectiveness of our drought plan and actions following a drought event, we also believe that it is important to keep the Drought Plan under review and to update it when necessary, for example to reflect on any changes to our supplies, network, or drought actions.

We intend to undertake an annual internal review of the Drought Plan and will provide a summary of the outcomes to the EA alongside our annual WRMP reporting. This review will consider but is not limited to the following:

- Any changes to our drought interventions or the associated supply and demand benefits.
- Any changes to our drought triggers from further technical work, data availability or drought experience.
- Any changes to our environmental monitoring programme and mitigation packages; and
- A summary of any drought plan actions implemented in the reporting period and an assessment of and their effectiveness.