



4.0 Evidence the Company has followed its Drought Plan

March 2023



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1. BACKGROUND

South West Water is applying for a drought permit under section 79A of the Water Resources Act 1991 ("**WRA 1991**") to use, with temporary amendments, the abstraction licence SW/047/0051/003 as dated 7 February relating to abstraction from the inland water known as the River Lyd at Lifton, Devon for the purposes of Public Water Supply.

The proposed actions set out in this permit will offer support across the entire Roadford Water Resource Zone ("**WRZ**") in response to the Exceptional Shortage of Rainfall ("**ESOR**") from March 2022 and August 2022, which presents an anticipated future risk to the security of supply in 2023.

In accordance with paragraph 1.3.5 of the Drought Permit Guidance, South West Water is applying for this drought permit to reduce the risk of drought permits or orders being required in Spring/Summer 2023, to assist the recovery of water supply resources which have been excessively depleted because of drought and to assist the maintenance of water supply in drought affected areas.

This document is part of a suite of documents as set out in Table 1 which form the application for the drought permit, and which are based on the requirements set out in Appendix E of the Drought Permit Guidance (Environment Agency, 2021).

Table 1 Document structure for drought permit application

Documents: Drought Permit Proposals		
1	1.0	Description of Proposals
	1.1	Draft Permit
	1.2	Drinking Water Services Report 2023 – Operations Supporting Evidence
	1.3	Appendix 1 River Lyd Abstraction Licence
	1.4	Appendix 2 National Security Notice
2	2.0	Statement of Reasons
	2.1	Case for Exceptional Shortage of Rain (ESOR)
3	3.0	River Lyd Drought Permit Environmental Assessment Report
4	4.0	Evidence the Company has followed its Drought Plan
	4.1	Appendix 1 Enhanced Media Campaign
	4.2	Appendix 2 Leakage and pressure management
5	5.0	Consultation Process
	5.1	Appendix 1 Formal Notice
	5.2	Appendix 2 Email to Stakeholders

1.1 Executive Summary

The Roadford Water Resource Zone ("**WRZ**") is currently in in Drought Level 2, we have executed our Drought Plan through Levels 0 and 1 by:

- Stepped up our close monitoring of drought situation since May 2022. Following the governance and management structure outlined in our Drought Plan
- Instructed enhanced leakage response, which included free customer side repairs.
- Operational intervention across network and treatment estates which included pressure management, reduced flushing, treatment optimisation and source maximisation.
- Enhanced communications campaign across the Roadford WRZ.
- Commenced investigation of additional supply side options (engineering schemes),
- Prepared for the introduction of a temporary usage ban ("**TUBs**")

This application is part of an overall suite of drought permit applications as we seek to mitigate the impacts of a year of exceptionally low rainfall and recover storage position ahead of summer 2023.

South West Water achieved its best reported, in year leakage performance in 2021, as we observed the dry weather lengthening, we advanced actions noted in our Drought Plan and significantly increased our leakage resources so that we could find and fix leaks faster, ensuring we were playing our part in protecting our water supplies.

We have also minimised our own water use and maximised the capacity in our water treatment works through our supply network. Our key objective has been to maintain a stable supply and demand balance, optimising available resources, and minimising the impact of outages on network storage and customer supplies into 2023.

We continue to monitor the situation in Roadford and all our WRZs very closely and will take all necessary actions needed to protect our customers' water supplies and the environment.

1.2 Objectives of this document

This document demonstrates that South West Water has managed its operations appropriately during the preparation and application for this Drought Permit.

South West Water has: -

- 1 Followed its Drought Plan, including its triggers and expected actions.
 - 2 Engaged customers and enhanced water efficiency promotion.
 - 3 Enhanced leakage reduction activity and effectively managed outage; and
 - 4 Considered other options and risks.
-

2 OUR DROUGHT PLAN

2.1 South West Water's Drought Plan

South West Water published its Drought Plan in September 2022. The Drought Plan has been developed in discussion with the Environment Agency and has been approved by DEFRA.

South West Water has 4 Water Resource Zones ("**WRZs**"): Colliford, Roadford, Wimbleball and Bournemouth.

The Drought Plan divides drought actions into their distinct WRZs and provides updated information on the different drought options available.

2.2 Drought actions

The Drought Plan divides the possible drought actions into levels 1 – 4 and specifies which actions (supply and demand side) should be taken at each level for each WRZ.

3 HOW SOUTH WEST WATER HAS FOLLOWED THEIR DROUGHT PLAN

3.1 Water resource situation monitoring

We have been monitoring the water resources situation in the Roadford WRZ, following various metrics including rainfall and lake storage levels. Our monitoring of rainfall and storage levels indicating the progression of the drought in the region are presented in **Document 2.0 Statement of Reasons** and **Document 2.1 Case for Exceptional Shortage of Rain (ESoR)**.

3.2 Triggers

The Drought Plan divides the drought triggers into three different types: groundwater triggers, surface water triggers and demand triggers. Different types of triggers are appropriate for different water resources systems.

In the South West Water supply area, surface water abstraction dominates, with 90% of total abstraction being from rivers and reservoirs and with this abstraction being split roughly 50:50 between the two, although this ratio varies depending on the weather experienced in any particular year.

Because of this, in the South West Water supply area, drought triggers and drought management zones need to be set on reservoir storages. The triggers and drought management zones relate the storage in a reservoir to the time of year and the level of risk to water resource availability.

The drought management zones divide the storage of the strategic reservoirs into Levels 0 (normal), 1, 2, 3, and 4 and the storage of local reservoirs into Levels 0 (normal), 1, 2 and 3.

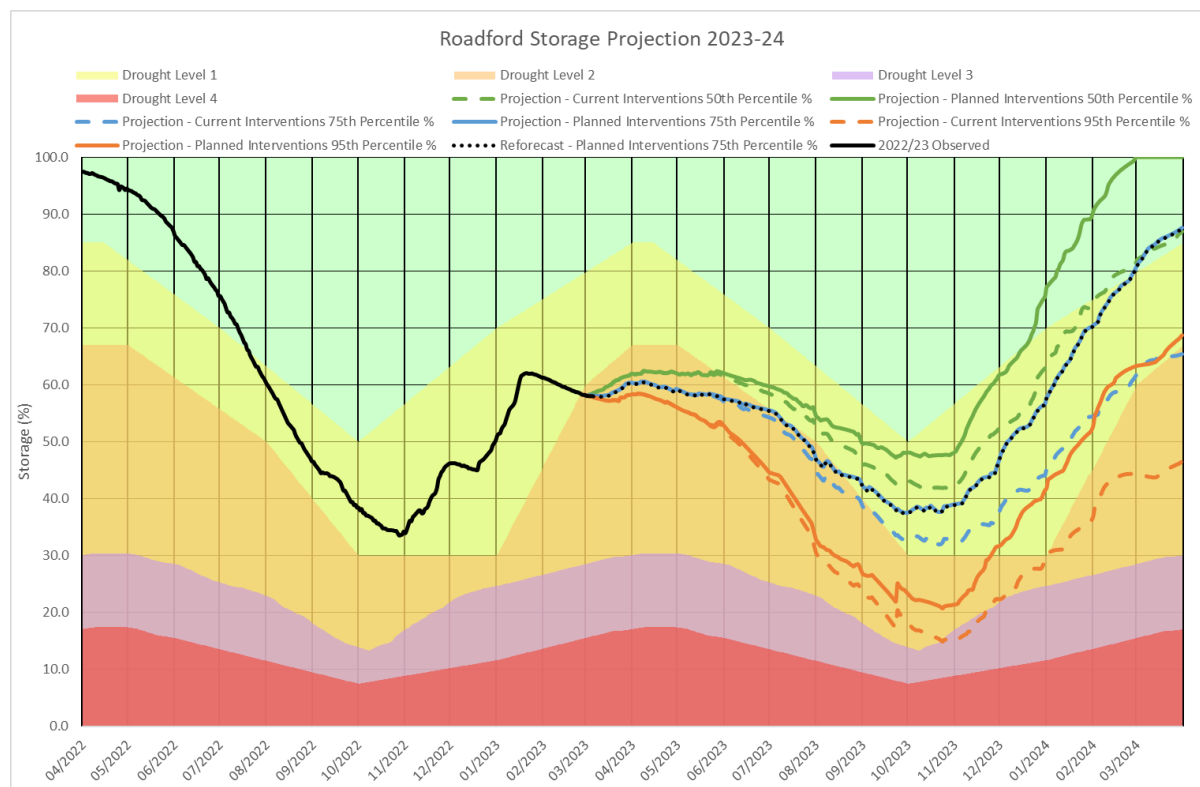
The drought management zones relate to levels of service and define drought management actions that could be taken. Figure 2 below sets out a summary of the actions that would be taken as the drought severity increases.

Figure 1 - Summary of drought management actions for each drought level

	Drought severity	Actions	
		Demand side	Supply side
INCREASING DROUGHT SEVERITY ↓	LEVEL 1	Communications campaign Increased leakage control	Drought actions with minor environmental impacts (optimising sources, reducing outage)
	LEVEL 2	Temporary use bans	Drought actions with minor environmental impacts
	LEVEL 3	Non-essential use bans	Moderate environmental impact drought permit and ordinary drought orders
		All possible actions to avoid emergency drought orders	All possible actions including major environmental impact drought permits and orders

As Figure 2 below shows, Roadford Reservoir has now entered Drought Level 2.

Figure 2 – Roadford Storage Projections without interventions



3.3 Alteration of operations

We have utilised all our strategic treated water network options to support the Roadford WRZ, reflecting interventions which have been implemented this year.

Please see **Document 1.2 Drinking Water Services Report 2022 – Operations Supporting Evidence** which details how the company has altered operations during periods of high demands/low rainfall to minimise impacts on supply and demand.

3.4 Environmental mitigation

We have commissioned an Environmental Assessment Report and have submitted an (**Document 3 River Lyd EAR**) in respect of the drought permit application.

The monitoring and mitigation plan within the Environmental Impact Review submitted with the permit application outline the environmental monitoring and mitigation to be carried out during the period of the permit.

3.5 Communications and customer engagement

We recognise that customer engagement and communications activities form a significant part of our response to drought conditions. Please see **Document 4.1** which sets out details of South West Water's customer engagement and enhanced media

3.6 Leakage and pressure management

Please see Document 4.2 for a detailed breakdown of the leakage and pressure management work conducted by South West Water.

3.7 Temporary Use Ban (TUB)

On 26 February Roadford Reservoir crossed drought level 2. Since last year we have been communicating with customers within the region asking them to reduce their water use.

The company has also actively prepared for the implementation of a TUB for the Roadford WRZ. The implementation requires internal approval and the proposal to implement a TUB is currently going through the company's internal process so that its implementation is at a time which will have most impact on customer demand.

4 REFERENCES

Environment Agency, 2021, Drought permits and drought orders – Supplementary Guidance from the Environment Agency and Department of Environment, Food and Rural Affairs

South West Water, 2022, Final Drought Plan, September 2022.
