

# **Drought Plan 2019**

## **Annex 13: Water Framework Directive Assessment**

### **Non-Technical Summary**

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Version 1



from  
**Southern  
Water** 



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## Introduction

The Environment Agency's updated Drought Plan Guideline (2015) and associated environmental assessment guidance (2017) requires that an assessment is provided of how the final Drought Plan may affect Water Framework Directive (WFD) status or potential and how the final Drought Plan might affect the environmental objectives and measures set out in the 2015 WFD River Basin Management Plans (RBMPs). The RBMPs include:

- 2015 classification results that form the baseline for assessing deterioration in water body status for the 6-year period (December 2015 to 2021)
- Updated water body status objectives
- Updated Protected Area objectives
- Programme of Measures required to help achieve the stated water body objectives.

The Environmental Assessment for Water Company Drought Plans Guidance (2017) states that the WFD Articles most relevant to drought plans are:

- Article 4.1 Environmental objectives
- Article 4.6 Temporary deterioration in status
- Article 4.7 Defence against breach of WFD objectives
- Article 4.8 Impact on other water bodies
- Article 4.9 Level of protection.

The 2017 guidance specifically requires that the potential impacts of the Drought Plan measures on the following are considered:

- Impacts on the quality elements or features that are used to determine WFD surface water and groundwater body status and elements that could influence the status; and
- Impacts on measures to address priority substances, priority hazardous substances and other pollutants.

In accordance with the above guidance, Southern Water has assessed the potential implications of its final Drought Plan supply-side measures on WFD objectives, both in isolation and in-combination.

## Approach

Article 4.1 on environmental objectives has been interpreted and further developed in EA (2016)<sup>1</sup>, Defra/EA (2009)<sup>2</sup>, DoE NI (2012)<sup>3</sup> and WRPG<sup>4</sup> (2017) to give a series of objectives to test in the WFD assessment. Based on these, the following are set out in this WFD assessment methodology as objectives to test for the final Drought Plan:

- Objective 1: To prevent deterioration between status classes of any water body, including any temporary deterioration in status
- Objective 2: To prevent the introduction of impediments to the attainment of Good WFD status or potential for the water body.
- Objective 3: To ensure that the planned Programme of Measures in the RBMP to help attain the WFD objectives for the water body (or the environmental objectives in the 2015 RBMPs) are not compromised.
- Objective 4: To ensure the achievement of the WFD objectives in other water bodies within the same catchment are not permanently excluded or compromised.

Two further objectives have been added to review and document if the drought plan measure assists the meeting of WFD objectives, which is over and above a test of WFD compliance of the scheme:

- Objective 5: To ensure no adverse effects on Protected Areas and WFD objectives for these Protected Areas.
- Objective 6: To ensure no hindrance to measures to address priority substances, priority hazardous substances and other pollutants.

A sequential 2-stage process for undertaking WFD assessments has been applied as follows:

- WFD screening: involved a preliminary assessment of each Drought Plan measure and identified if there is any risk of temporary deterioration in WFD status. This is based on expert judgement.
- WFD assessment: This involved using expert judgement to assess the likely changes to hydro-morphology occurring as a result of the Drought Plan measure and the possible risk of changes for relevant water body features. This was then equated to the level of risk of temporary deterioration in WFD status on a scale ranging from negligible to high. This stage was supported by the Drought Permit/Order Environmental Assessment Reports (EARs).

The WFD assessment considers the cumulative, in combination effects of implementing the range of final Drought Plan measures in a worst-case, but foreseeable, severe drought event to assess how the measures may interact with each other, and in combination with other plans, programmes or projects (both within Southern Water and external to Southern Water). This dovetails with the cumulative, in combination assessment being undertaken in parallel for the Habitats Regulations

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1 EA (2016) Protecting and improving the water environment – Water Framework Directive compliance of physical works in rivers. Doc No. 488\_10.

2 Defra/EA (2009) WFD Expert Assessment of Flood Management Impacts. Joint Defra/ EA Flood and Coastal Erosion Risk Management R&D Programme. R&D Technical Report FD2609/TR. Report prepared by Royal Haskoning.

3 Department of the Environment Northern Ireland (2012) Carrying Out a Water Framework Directive (WFD) Assessment on EIA Developments. A Water Management Unit Guidance Note. March 2012

4 Natural Resources Wales/EA (2017) Water Resources Planning Guideline: Interim update. April 2017

Assessment (HRA) and Strategic Environmental Assessment (SEA) of the final Drought Plan, as well as within the Environmental Assessment Reports for potential Drought Permits/Orders.

## Summary of Screening and Assessment Results

The demand management options in the final Drought Plan were screened out of further assessment as there is no risk of temporary deterioration in WFD status as a result of their implementation.

Only three supply-side options (the emergency desalination options for Sandown, Littlehampton in West Sussex and Sheerness, Isle of Sheppey) were screened in for further assessment, along with all of the potential Drought Orders and Drought Permits.

The WFD screening concluded that most of the options considered presented negligible to medium WFD compliance risks, indicating that the Drought Plan measures were not likely to result in actual temporary deterioration to WFD status (deterioration is a drop in status class of any element appropriate to the specific water bodies that might be affected). There is a higher risk of WFD status deterioration in respect of WFD fish elements only for several Drought Permits/Orders that may be required during severe drought conditions reflecting either the magnitude of impact and/or the sensitivity of the WFD. This higher risk relating to fish elements relates to the following Drought Permits/Orders:

- Shalcombe
- Caul Bourne
- Eastern Yar Augmentation Scheme
- Test Valley
- Pulborough
- Weir Wood
- River Medway Scheme (Stage 4)

In respect of the WFD compliance risks associated with the Test Surface Water Drought Permit, this was reviewed following the Hampshire Abstraction Licences Public Inquiry held in March 2018 and the agreement reached between Southern Water and the Environment Agency as part of the inquiry process and formalised in an operating agreement under Section 20 of the Water Resources Act 1991 (s20 agreement). In the event that agreed monitoring of the Lower River Test concludes that the Drought Permit implementation may lead to a temporary deterioration in the Water Framework Directive status of the River Test, then it is agreed in principle within the s20 agreement, that the provisions of Article 4(6) of the Water Framework Directive, can be used to enable the grant of a Test Surface Water Drought Permit authorising abstraction below 355 MI/d and that low flows on the River Test between 355MI/d and 265 MI/d are also capable of constituting exceptional circumstances for the purpose of Article 4(6) of the Water Framework Directive. Article 4(6) of the WFD details the circumstances in which temporary deteriorations do not amount to breaches of the requirements of the Directive.

While not wanting to fetter the Environment Agency's discretion, it is presumed by Southern Water that on the basis of this principle having been agreed with the Environment Agency for the Test

Surface Water Drought Permit application, the Environment Agency would support (or at least not oppose) this same principle being presented by Southern Water in any Test Drought Order application to the Secretary of State; and that low flows on the River Test of between 265 Ml/d and 200 Ml/d may equally be capable of constituting exceptional circumstances for the purposes of Article 4(6) of the Water Framework Directive. It is acknowledged that acceptance of this principle in a Test Drought Order application would be at the discretion of the Secretary of State. Southern Water would seek to secure the support of the Environment Agency prior to submission of a Test Drought Order as part of its pre-application consultations.

## Cumulative Impacts

The potential for cumulative effects between each supply-side and Drought Permit / Order drought measure was also assessed. Options that were assessed as having a temporary risk of deterioration on the same WFD water bodies as other drought management measures within the final Drought Plan were identified and grouped.

The Lukely Brook Drought Permit option in combination with the Eastern Yar Drought Order option could potentially lead to a slight increase in the overall impacts on the Medina transitional water body (GB520710101600) with the potential for a small increase in the risk of temporary deterioration in WFD status (but already at 'high' risk for the Eastern Yar option operating in isolation). The Caul Bourne and Shalcombe Drought Order measures in combination with one another could increase the risk of temporary deterioration to the Isle of Wight Central Downs Chalk groundwater body (GB40701G503200) and its dependant surface water body, the Caul Bourne (GB107101006020), but which are already assessed as 'high' risk when operating in isolation).

The potential for cumulative effects on WFD water bodies between Southern Water's final Drought Plan and other water companies' previously published Drought Plans and Water Resources Management Plans was examined, along with other relevant plans and projects. The following drought management measure combinations were assessed as having the potential to increase the risk of WFD temporary deterioration if implemented concurrently, but the risks would be no greater than a 'medium' risk:

- Weir Wood Reservoir Drought Order (summer) and River Medway Scheme Stage 3 Drought Permit (summer) with Sutton and East Surrey Water's Bough Beech reservoir / River Eden Drought Permit
- North Arundel Drought Order with Portsmouth Water's "Source S" Drought Permit.

## Conclusions

The WFD assessment has concluded that:

- Several drought measures were screened out of the assessment as there was no risk of deterioration in WFD status. This included the demand-side measures and several supply-side measures, including resting the use of Weir Wood reservoir source and resting certain groundwater sources during early stages of drought.
- Some supply-side drought management options and all of the Drought Permit/Order options were screened in for further assessment.

- The assessment has indicated that several of the drought management options are potentially at risk of being non-compliant with Objective 1 which relates to the risk of a temporary deterioration in status class for any element for the impacted water bodies. However, all of the impacts are considered to be short-term, temporary and reversible. Importantly, no permanent risk of status deterioration has been identified. In some cases, these risks could be compounded by more than one option being implemented concurrently or being implemented at the same time as a Drought Permit relating to a neighbouring water company. Temporary deterioration indicates that the relevant water body element would recover and remain within its status classification when considered over the 6-year monitoring cycle for WFD status.
- Some Drought Plan options were identified as leading to a 'high' risk of temporary WFD status deterioration relating to fish elements during severe drought conditions only. .
- Cumulative effects between some drought management measures within the final Drought Plan and/or with other water company drought plan measures may lead to an increased risk of temporary WFD status deterioration. This applies to:
  - Drought Order/Permit options on the Isle of Wight
  - Weir Wood reservoir Drought Order (summer) and River Medway Scheme Stage 3 Drought Permit (summer) with Sutton and East Surrey Water's Bough Beech reservoir/River Eden Drought Permit
  - North Arundel Drought Order with Portsmouth Water's "Source S" Drought Permit.
- Several options do not meet Objective 5 relating to the attainment of objectives for Protected Areas on a temporary basis only during implementation (Sheerness temporary desalination plant option, Shalcombe, Caul Bourne, Eastern Yar (and Lukely Brook in combination with Eastern Yar), Candover Augmentation Scheme and the Lower Itchen sources Drought Permits/Orders). This is primarily due to the potential impacts on European sites as a result of the implementation of the Drought Permit/Order which are subject to more detailed assessment under the HRA process (see accompanying HRA report).

The risk of temporary deterioration in WFD status has been brought to the attention of the Environment Agency during the development of the Drought Plan and the associated Environmental Assessment Reports for the Drought Permits and Orders. Updated guidance from the Environment Agency on temporary WFD deterioration in status due to Drought Plan implementation was issued in September 2017 as part of its environmental assessment guidance for Drought Plans. The guidance acknowledges that such risks may arise as a result of drought permits and orders but that the effects are generally temporary (i.e. occur in-between formal WFD monitoring cycles for determining WFD status).

In the event that any of the Drought Plan measures are required to be implemented in a future drought, the risks to WFD compliance will be further assessed in light of any new evidence from our baseline monitoring programme and any WFD monitoring carried out by the Environment Agency.