Drought Plan 2022
Annex 9: Strategic Environmental Assessment
Non-Technical Summary

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Contents

Introduction

Under the Water Industry Act 1991 (as amended), Southern Water Services (Southern Water) is required to prepare and update a Drought Plan every five years. The Drought Plan provides a comprehensive statement of the actions Southern Water will consider implementing during drought conditions to safeguard essential water supplies to customers and minimise environmental impact. It is consistent with Southern Water's Water Resources Management Plan (WRMP), the objective of which is to set the strategic plan for the delivery of water resources to balance supply and demand over the coming decades.

Drought Plans include a range of drought management measures that will only be implemented if certain conditions arise during a particular drought event. Each drought event is different in terms of its severity, season, location and duration and each combination of these factors may require a different response in terms of the measures to be implemented. In the context of Drought Planning, individual drought management options are taken to constitute alternatives. Southern Water's Draft Drought Plan comprises a range of demand management measures and options for temporarily augmenting water supplies, including applying for Drought Permits and Drought Orders to increase the availability of water supplies.

As an integral part of developing its Draft Drought Plan 2022, Southern Water has carried out Strategic Environmental Assessment (SEA), which is a statutory requirement under the Environmental Assessment of Plans and Programmes Regulations 2004. The purpose of SEA is to incorporate environmental considerations into the preparation of plans and policy. A Habitats Regulations Assessment (HRA) and Water Framework Directive (WFD) assessment of the Draft Drought Plan 2022 have also been carried out in parallel and have informed the SEA.

The SEA provides information on the relative environmental performance of alternative drought management measures. The SEA process (together with the HRA and WFD assessments) has been used to support decisions on those measures included in the Draft Drought Plan 2022, as well as the timing and sequencing of their implementation in relation to other options.

The parallel HRA process has identified whether each drought management option (either alone, in combination or with other plans or projects) will have adverse effects on the integrity of European designated sites of conservation importance. The WFD assessment process has identified those drought management measures that present a potential risk of temporary deterioration to the environmental status of designated water bodies (reservoirs, rivers, groundwater and estuaries). The findings of the HRA and WFD assessments have been taken into consideration in carrying out the SEA, and collectively the assessments have led to revisions of the Draft Drought Plan 2022 during its development in an iterative process to minimise environmental effects and, where feasible, deliver environmental benefits.

Updated scoping information was issued on 02 February 2021 to statutory consultees to provide an opportunity for views to be provided on the proposed scope and assessment methods to be applied to this SEA Environmental Report. Once comments have been received, they will be taken into account.

The key findings of the SEA are presented within this non-technical summary, which is being published alongside the Drought Plan 2022 and the main Environmental Report.

Approach

The assessment approach adopted has been 'objectives-led'. A series of SEA objectives have been derived from environmental and social objectives established in law, policy or other relevant plans and programmes, as well as from a review of the baseline environmental information for the area covering Southern Water's water source catchment areas and water supply boundary. The SEA objectives have been categorised under the following topic areas: biodiversity, flora and fauna; population and human health; material assets and resource use; water; soil, geology and land use; air and climate; archaeology and cultural heritage; and landscape and visual amenity.

The overall findings of the SEA describe the extent to which the objectives for each topic are met by each of the drought management options. It should be noted that detailed Environmental Assessment Reports (EARs) have been produced for the various Drought Permit and Drought Order options which, along with the HRA and WFD assessments, have been used inform the SEA of these options, together with other relevant information.

The outputs of the assessment have been collated into an appraisal framework table for each drought management option with a colour coded effects summary (ranging from major beneficial effects to major adverse effects) which provides a comparative assessment of the residual environmental effects of implementing each drought measure (i.e. those impacts remaining after the implementation of any mitigation measures that Southern Water intends to implement to help address any identified adverse effects).

A cumulative, or in-combination, assessment has also been undertaken which has involved examining the potential effects of each of the drought management options in combination with each other and in combination with the implementation of other relevant plans and programmes. This has included considering cumulative effects with drought management measures of neighbouring water companies where these may be in close spatial proximity and affecting the same water body.

The area under consideration for the SEA reflects the spatial scope of the Draft Drought Plan 2022 and covers an area of approximately 4,450km^2, extending from East Kent, through much of Sussex, to Hampshire and the Isle of Wight in the west. The area extends beyond the boundaries of the Southern Water supply area to encompass the catchment areas of various water sources that supply Southern Water's customers (for example, Bewl Water reservoir in the upper River Medway catchment in Kent) as well as water sources that provide bulk water supplies to Southern Water from other neighbouring water companies.

SEA Findings

Demand management options

Demand management measures serve to reduce pressure on water resources in a drought by temporarily reducing customer demand for water, and in turn, reducing the amount of water required to be abstracted from the water environment.

Demand management measures typically provide mostly minor beneficial effects through their contribution to sustainable abstraction, protecting human health and well-being by helping conserve water supplies in drought for customers' essential uses, and helping to reduce drought stress on the water environment. However, some moderate to major adverse effects have been identified with respect to those demand management measures that temporarily prohibit specific non-essential water uses due to the adverse effects such measures have on those people who rely on those uses of water for their livelihoods. Minor adverse effects on landscape/townscapes, land use, population,

air quality (restrictions on using water for dust suppression) and some water dependent recreation and heritage facilities may be associated with Temporary Use Bans and non-essential water use ban Drought Order.

The potential application of an Emergency Drought Order to ration water supplies by using standpipes or rota cuts in emergency conditions has been assessed as having major adverse effects on the wider population, economic activity and livelihoods across the Southern Water supply area, as well as risks to human health.

As a consequence of this assessment, no demand management options were rejected from being included in the draft Drought Plan, but the phasing and timing of the different measures have reflected the SEA findings, with those measures having the least environmental and social effects selected for earlier implementation and other measures only being considered if more severe drought conditions occur. The demand management measures have been compared with the selected supply augmentation measures (see below) to determine the overall sequencing of the implementation of measures as reported in the Draft Drought Plan. In view of its major adverse effects on people and livelihoods, the Emergency Drought Order is not included as a demand management measure to be implemented for droughts up to and including a 1 in 500 year severity and would only be considered as an emergency measure in droughts more severe than a 1 in 500 year event.

Supply augmentation options

A range of alternative water supply augmentation options have been considered through the SEA process to help inform decisions on those measures to be included in the Drought Plan. Options included:

- 'rest' certain water sources to conserve water stored in reservoirs or natural groundwater bodies for use at a later stage in a drought.
- applying for Drought Permits or Drought Orders to temporarily change the conditions of existing abstraction licences to provide additional volumes of supply.
- potential use of water tankering to bring small volumes of water to specific locations from areas where there is a surplus availability of water supplies (likely to be from outside of the Southern Water supply area).

Most of these options do not require any construction works, with the exception of the provision of a pipeline to make a flow release to the Lukely Brook (for the Lukely Brook Drought Permit).

‘Rest’ water sources

The options to ‘rest’ certain water sources by reducing abstraction during the onset of drought conditions to conserve water storage for later use if drought conditions intensify provides minor beneficial effects in respect of resilience to the prolonged effects of drought, as well as minor beneficial effects on the water environment by reducing the impact of abstraction at times of more intense drought conditions by drawing on the stored water rather than impacting on river flow.

Drought Permit and Drought Order options

Many of the Drought Permit and Drought Order options involve temporary modifications to existing abstraction licence conditions (e.g. to increase the volume of water that can be abstracted or to reduce the river flow conditions at which abstraction would normally need to cease) and therefore they do not involve any construction works.

Beneficial effects of Drought Permits and Drought Orders options largely comprise minor beneficial effects on population and human health and maintaining water supply resilience in drought conditions.

The adverse effects of the Drought Permit or Drought Order measures vary considerably depending on the scale of the additional abstraction to be authorised and the sensitivity of the environment, in particular the affected water bodies. For Water Resource Zones with a number of Drought Permit or Drought Order options available, the SEA findings (together with the HRA and WFD assessments) have been used to determine the phasing of implementation of the different options, such that those options with the greatest adverse environmental effects would only be implemented in more severe drought events.

Tankering of water

Tankering of water as an emergency measure to maintain water supplies has negligible adverse effects on biodiversity, archaeology and cultural heritage, or landscape and visual amenity. There is the potential for minor adverse effects with respect to local nuisance due to increased traffic on the roads and the resulting local impact on air quality and greenhouse gas emissions. Tanker movements and operations at tanker filling and discharge sites (which could involve 24-hour activity, lighting and use of pump generators) have the potential for minor to moderate temporary adverse effects regarding the wellbeing of local communities.

Tankering of water would result in minor beneficial effects in respect of human health through maintaining water supply during severe drought conditions. However, on the basis of experience from previous droughts, there is likely to be limited resource availability across the Southern Water supply area and neighbouring water companies are likely to be similarly affected and seeking to conserve their own resources, so the scale of beneficial effects is limited. Tankering is only considered to be viable at a very small, localised scale in each Water Resource Zone, although this would be more challenging in the Isle of Wight due to the need to get tankers delivered by sea as there is unlikely to be any surplus water supplies available on the island in a severe drought.

Cumulative effects assessment

The potential for cumulative effects between each drought management measure has also been assessed. Due to the uncertainty of timing of implementation of the drought management measures in an actual drought event, each of the drought management measures have been reviewed to assess whether they may have the potential for cumulative impact on the same receptors (human, physical or environmental). In the event of a drought, the findings of the SEA can be reviewed and an updated cumulative assessment can be made of the specific measures proposed for implementation at that time, based on the findings of the SEA.

For the majority of combinations of Drought Plan measures, cumulative effects are assessed as unlikely, but the assessment has identified some risks of cumulative adverse effects, for example, where both drought management measures draw on the same river, groundwater body or estuary. These cumulative effects are summarised below:

- The Lukely Brook Drought Permit option may have cumulative, in combination effects with the Eastern Yar Drought Order option could potentially lead to a slight increase in the overall adverse effects of the Eastern Yar Drought Order on the Medina estuary.

The potential for cumulative effects between Southern Water's Drought Plan and other water company's Drought Plans and Water Resources Management Plans (WRMPs) has also been examined, along with other relevant plans and projects. The following drought management measure combinations have been assessed as having the potential for cumulative effects:

- Weir Wood reservoir Drought Order (summer only) and the 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 nearby "Source S" borehole Drought Permit
- Concurrent implementation of Temporary Use Bans and/or Drought Orders to ban non-essential water use by neighbouring water companies has the potential to increase the risk of adverse effects on population, recreation and landscape/townscapes, but equally may provide greater environmental benefits to certain water bodies and catchments where there are abstractions by more than one water company.
- Concurrent implementation of an Emergency Drought Order by other neighbouring water companies would possibly place additional adverse effects on population and human health.

A regional water resources management plan is being delivered as part of Water Resources South East (WRSE). The group consists of six water companies in the South East (Affinity Water, Portsmouth Water, SES Water, South East Water, Southern Water and Thames Water) and includes the EA in the project management board. The aim to is to develop a resilient plan that considers the whole of south east England as a single region, unconstrained by water company boundaries, in assessing the options to best meet the water requirements of the domestic and non-domestic consumers in the area. The regional plan is to be finalised in 2023. The WRMPs to be published by individual water companies in 2024 are expected to align with the regional plan.

All of the options considered through Southern Water's Drought Plan 2022 and other water companies Drought Plans and WRMPs have been included in the list of constrained options that have been provided to WRSE for consideration in the development of a 'best value' plan for the region. These options are currently being considered, including cumulative/ in-combination effects, through the SEA, HRA and WFD assessments for the regional plan and the in further detailed through individual WRMPs. If available, the outputs of this work will inform revised Final Environmental Report published alongside Southern Water's final Drought Plan 2022.

Role of SEA in developing the overall phasing of drought management measures

The SEA findings as summarised above have helped to inform the overall phasing of drought management measures in the Drought Plan, with those demand management measures with negligible to minor adverse effects being introduced during impending drought conditions alongside a number of supply augmentation options with negligible to minor adverse effects. As drought conditions intensify, demand management measures with minor adverse effects would be implemented first followed by those supply augmentation measures with minor adverse effects. If severe drought conditions arise, the SEA has indicated those measures with moderate adverse effects that should be considered ahead of those measures that have major adverse effects identified. A small number of options that were previously considered through the SEA process for the current Drought Plan 2019, were excluded and not considered through the SEA for this Drought Plan 2022 due to environmental concerns and feedback from statutory bodies, this included emergency temporary desalination plants.

Mitigation and monitoring

During implementation of a specific drought management measure, appropriate monitoring will be undertaken to track any potential environmental and/or social effects which will in turn trigger deployment of suitable and practicable mitigation measures as may be available. Monitoring and mitigation measures for each of the drought management measures have been considered as part of the development of the Drought Plan. The SEA has taken account of the mitigation measures in assessing the residual effects of each drought management measure. This included taking account of the specific monitoring and mitigation packages agreed between Southern Water and the Environment Agency as part of a Section 20 Agreement signed in March 2018 in relation to the Test Surface Water Drought Permit/Order, the Candover Augmentation Scheme Drought Order and the Lower Itchen sources Drought Order.

Additional mitigation measures will be put in place if monitoring indicates that further management of adverse impacts is required. Prior to implementation of any Drought Plan measures, Southern Water will review the specific requirements for environmental monitoring and mitigation in consultation with regulatory bodies and relevant stakeholders who may be affected or have a role in representing customers and/or the environment.

Consultation

The public, regulatory bodies and stakeholders are invited to provide comments on the SEA Environmental Report and this non-technical summary alongside expressing their views on Southern Water's Draft Drought Plan. The SEA Environmental Report and non-technical summary will be updated in due course to reflect the comments received and any revisions made to the Drought Plan as a result of the consultation process.

Updated position relating to the Candover Drought Order

As at the date of publication of Drought Plan 2022 (August 2025), the Candover Augmentation Scheme is unavailable, with a revised planning application for the pipeline necessary to the operation of the scheme due to be submitted towards the end of 2026.

In order to fully assess the potential environmental effects of the Candover Augmentation Scheme being unavailable before 2027, we have committed to progress a project level HRA and accompanying EAR for the River Itchen Sources Drought Order (without Candover), and work

towards this is now underway. At this stage it is only possible to provide a very high-level summary of assumed environmental implications based on information that is currently available;

1. As stated above, without the availability of the Candover Drought Order, there is an increased likelihood of a need for the Lower Itchen Sources Drought Order: where the Candover Augmentation Scheme is unavailable, the return period of flows reaching the 198 Ml/d HoF and triggering implementation of the Lower Itchen Sources Drought Order increases from 1:141 to 1:59.

2. Due to the increased risk of more frequent use, and potentially longer duration of the Lower Itchen Sources Drought Order, post drought recovery on the Itchen may be extended. However, this will depend on individual drought scenarios and a more detailed assessment and investigation in the project level HRA is needed to clarify the degree of risk and effects.

3. Conclusions as to likely significant effects of the Lower Itchen Sources Drought Order (without Candover) alone, or in-combination with the River Test Drought Permit/Order on River Itchen SAC features could change.

Following the conclusions of the Lower Itchen Sources Drought Order (without Candover) HRA, we will work with the Environment Agency and Natural England to review the Section 20 compensation package as required.