

# Draft Water Resources Management Plan 2024

## Supplementary Addendum: Summary of Western Area supply- demand balance and preferred strategy

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from  
**Southern  
Water** 

## Contents

1. Introduction .....	3
2. Managing future uncertainty .....	3
3. Supply-demand balance summary data .....	4
4. Changes in river abstraction .....	5
Appendix 1: Western Area supply-demand balance data .	7

## 1. Introduction

This document describes additional information we have provided to aid interpretation of our draft 2024 Water Resource Management Plan ([WRMP24](#)). It includes:

- A summary of our baseline supply and demand forecasts and the resulting supply-demand deficit for our Western Area
- A summary of proposed schemes in our draft plan which address the supply demand deficit and the resulting final supply-demand balance or surplus that would be achieved when those schemes are delivered.
- The resulting levels of abstraction in the River Test and River Itchen under each of our Environmental Ambition Scenarios. Our preferred plan represents the “High” Ambition scenario.

## 2. Managing future uncertainty

We address uncertainty in our WRMP through a number of approaches:

- We include a headroom allowance (target headroom) into our supply demand balance to account for uncertainty in our baseline forecasts
- We have developed an adaptive plan which branches at key decision points in the future to address uncertainty in our long-term forecasts of population growth, climate change and environmental ambition.
- We have considered uncertainty in scheme reliability as part of our “best-value” planning approach and specifically scheme metrics which include an assessment of a scheme’s reliability, adaptability and evolvability.
- We have included sensitivity runs of our investment modelling to address long term uncertainty in terms of either policy choices or scheme delivery. For example, if a scheme is not deliverable or it is delayed, to determine the impact on our supply-demand balance and investment strategy, these runs set out what the alternative plan would look like. For the draft WRMP24 in the Western Area this specifically included:
  - Earlier achievement of 1:500 drought resilience and termination of the use of supply side drought permits and orders after 2036
  - Delaying achieving 1:500 drought resilience to 2050 and longer reliance on drought permits and orders until 2052
  - Removing the water recycling scheme to support refill of Havant Thicket Reservoir from our strategy
  - Inclusion of a revised demand forecast to reflect recent uncertainty following the COVID-19 pandemic

The results of all sensitivity runs are described in Section 7.4 and [Annex 21](#) of our draft WRMP24.

In addition, in our draft WRMP24, we also included Annex 22, which comprises a contingency plan for our Central Area where we had identified a number of delivery risks to our strategy, largely associated with schemes assumed to be delivered as part of our strategy from our 2019 Water Resource Management Plan.

The key purpose of the contingency plan is to mitigate for any risks around the benefit and timing of delivery of schemes in the short term. Where this could have an impact upon the supply-demand balance, and potentially security of supply, it is important that options can be quickly implemented to ensure a supply-demand deficit situation does not occur. The plan we have included in Annex 22 covers the risk of deficits occurring during the period from 2023–30. This covers the remainder of the current, and the next, five-year scheme delivery period (AMP7 and AMP8).

We propose to extend our contingency plans to cover the Eastern and Western areas in the next iteration of the plan, following feedback on our draft plan.

### 3. Supply-demand balance summary data

We have provided a simplified breakdown of our baseline supply-demand balance in Appendix 1: Western Area supply-demand balance data. This sets out the starting position of the supply-demand deficit challenge for WRMP24 if we were to do nothing, and the solutions we are proposing through our draft plan to meet that deficit.

These data are derived from those already published in detail in our Water Resource Planning Tables (available here: [Water Resource Planning Tables](#)) but we have collated the relevant information for our seven Western Area water resource zones to provide a summary of our total challenge and investments across the Western Area which covers Hampshire and the Isle of Wight and the catchments of the River Test and River Itchen.

The data are broken down into several colour coded sections to aid interpretation as set out in more detail below. In the data we have also provided the relevant line references of the water resource planning tables so the data can be cross checked against those previously published. We have provided a summary for both our Dry Year Annual Average and Dry Year Critical Period planning scenarios.

**Table 1: Summary of Western Area supply–demand balance data provided**

Section	Description
Baseline Demand Forecast (Housing Plan Scenario)	Forecast of baseline water demand for our preferred planning scenario (based on Local Government Housing Plans). Includes household, non-household, leakage, and forecasts of total demand (distribution input)
Target Headroom (Uncertainty Allowance)	Target Headroom represents an additional allowance we make for uncertainty in our baseline forecasts of supply and demand, it is effectively treated like additional demand in the supply demand balance
Baseline Supply Forecast	<p>This provides our forecast of available water supplies from our existing sources.</p> <p>Our supply forecast accounts for the forecast impacts of climate change and forecast or known changes to our abstraction licences to protect the environment.</p> <p>We also account for operational losses and make an allowance for “outage” where water supply works may be temporarily out of service.</p> <p>It excludes the use of any drought permits and orders but does account for the effect of imports and exports.</p> <p>The total volume of our supply base is known as the Water Available for Use (WAFU)</p>
Total Supply-Demand Balance	This compares the Total Water Available for Use against the Distribution Input and the Headroom allowance to determine if the baseline position is in surplus (positive) or deficit (negative).
Final Plan to address Supply-Demand Balance Deficit	This section sets out the options we propose to implement to address the supply-demand deficit with an estimate of utilisation through the planning period. We have broken this down in sub-sections which cover water efficiency and leakage, demand side drought restrictions, supply side drought permits and orders, new supply schemes and changes to imports and exports.
Total WAFU	This final section summarises the final planning supply-demand balance if all schemes are implemented as planned.

## 4. Changes in river abstraction

This additional information summarises the forecast reductions in abstraction we expect will be required over the planning period to meet River Flow Targets and the Environmental Ambition by 2050.

There are four scenarios representing “high”, “medium” and “low” levels of ambition (abstraction reduction) as well as the BAU+ scenario which represents a Business as Usual scenario with some additional reductions which had been previously excluded on cost-benefit grounds. We expect our ongoing environmental investigations in the Test and Itchen catchments will provide a robust evidence base to refine the level of reduction required, in collaboration with the Environment Agency, Natural England and other stakeholders.

Our preferred plan, Situation 4 of the nine future supply-demand pathways we considered, includes the “High” Environmental Ambition scenario which includes proposals to cease abstraction from the Itchen catchment entirely by 2050.

We have included profiles that show the reduction in abstraction for each of our sources, however, please note that for the three Lower Itchen Sources at Otterbourne we have aggregated the reduction due to common licence conditions (on total monthly abstraction volumes and Hands-off-Flow constraints).

This summary excludes the sources in our Isle of Wight and Hampshire Kingsclere water resource zones as none of these have an impact upon the River Test or River Itchen catchments.

The data presented here correspond with changes in our drought supplies (deployable output) represented in line references 7.2BL and 7.3BL of our supply demand balance information and water resource planning tables.

## Appendix 1: Western Area supply-demand balance data

Please refer to accompanying excel spreadsheet