

1<sup>st</sup> February 2022

**BY EMAIL TO:** dWRMP24 pre-consultation distribution list.



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Our Ref                      dWRMP24 PC

### **Invitation to participate in our Water Resources Management Plan 2024 pre-consultation**

We are working together with other water companies in the South East to plan for a secure, sustainable supply of water in the future. Unless we prepare to take action now, there will not be enough water across our supply area, or in the South East of England, to meet the needs of customers and our environment in years to come. Some of these solutions will take many years to plan and build, but we must take the decisions now in order to prepare.

As an important stakeholder to our plan, we would like to invite you to review and share your opinions around some of our proposed options. This will form part of the pre-consultation phase of the development of our draft Water Resources Management Plan 2024 (dWRMP24) and help us improve the next draft of our plan, which we will share with all our customers too. This is very much a high-level request for your early comments at this stage. A formal and full consultation on all the detail of our plan will follow in the autumn, but we would like to hear any comments you have now, before those plans are finalised.

Below is a brief explanation of the two most significant options we are thinking about in our plan to date and the drivers for change that prompt our thinking. In the annex at the end of the document is more detail, should you be interested. We would also be very happy to speak to you about our plans and my contact details can be found at the end of this letter.

For background, all water companies in England and Wales must prepare and maintain a Water Resources Management Plan, setting out how to secure a sustainable supply of water for customers whilst also protecting and enhancing the environment. It is a statutory requirement to prepare a Water Resources Management Plan every five years and review the plan annually.

We are currently working on our Water Resources Management Plan for 2025 onwards, which will be formally published in 2024 (WRMP24). The WRMP24 must be produced following statutory guidelines (Water Resource Planning Guidelines or WRPG) and must consider government policy and wider objectives. Through forecasting supply and demand pressures over time, we assess our future ability to meet predicted customer water needs. Our Preferred Plan will ensure we secure water supplies for customers and a protected and enhanced environment by listening to stakeholders and customers and combining the best mix of feasible options.

#### **Timetable**

- |                        |  |
|------------------------|--|
| • January - March 2022 | WRMP24 pre-consultation with regulators and stakeholders<br>This will run until Monday 28 March, supported by customer research. |
| • August 2022          | Draft WRMP24 submitted to Defra.   |
| • Sept – Nov 2022      | Draft WRMP24 public consultation.  |
| • Spring 2023          | Revised WRMP and Statement of Response published.  |
| • Autumn 2023          | Final WRMP24 endorsed by the Secretary of State.   |

## New Developments in WRMP24, reflected in our next plan:

Our WRMP24 will differ from our previous plans to reflect what we have learned since our last WRMP was published in 2019 (WRMP19) as well as changes and updates over the last few years.

The most significant of these developments is a step change in the scale and ambition of collaboration across the water sector and other water users at a regional level, delivered through the Water Resources South East planning group. We anticipate a large proportion of our WRMP24 will be directly informed by an ambitious multi sector regional plan.

### **Water Resources in the South East:**

Across the South East of England there are significant pressures on water resources, more so than any other region nationally. This regional collaboration has been so close that for many areas of this pre-consultation we refer to common, regionally agreed, methodologies and approaches.

Regional collaboration has led to more sophisticated modelling and forecasting methods being used and the alignment of regional approaches to planning. This has led directly to changes in our baseline supply and demand forecasts. Examples of improvements include using a python-based resource allocation model called PyWR to consider supply capability, and a move to dynamic demand forecasting.

To support this pre-consultation process and prevent duplication across each of the six water companies across the South East, WRSE are consulting at a regional scale on a draft emerging regional resilience plan based on least cost. We would encourage all our stakeholders to have a look and make comment on this regional consultation as well as our local one. More information about this consultation can be found at [www.wrse.org.uk](http://www.wrse.org.uk).

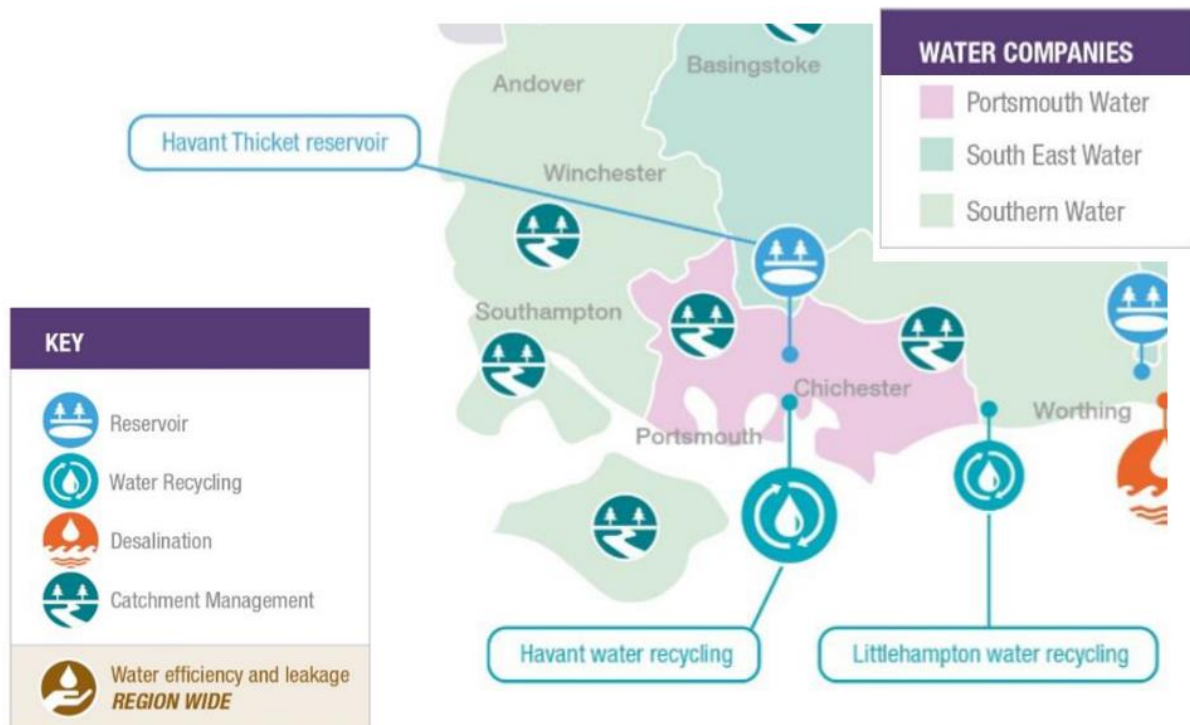


Figure 1: What the draft emerging regional plan is signalling for Portsmouth Water

This emerging draft adaptive regional plan, considering the wide range of plausible future scenarios, recommends Portsmouth Water deliver the following demand and supply schemes to ensure a secure supply:

- **Havant Thicket Reservoir** supplied by a combination of winter spring water and a water recycling scheme. The reservoir will help meet the need for water to supply both Portsmouth Water and Southern Water customers.
- **Universal household metering** is required as part of the 'High Plus' demand reduction scenario which also includes support to customers with how to save water as well as work on our part to further reduce leakage from our pipes.

## **What is driving the plan to suggest these options?**

### **Designated water stress:**

In 2021, the Environment Agency designated the Portsmouth Water supply area as 'seriously water stressed'<sup>1</sup>. This designation is regulatory recognition that there is a driver for widespread domestic metering. Other Companies across the South East (Southern, South East, Affinity, and Thames) have all either completed or are in the process of rolling out domestic metering and have seen average domestic demand savings of 15-18% as a result. We would appreciate your views on universal metering for our supply area.

### **Environmental Ambition:**

We operate in an environmentally important and fragile area - home to unique chalk stream habitats – 100% of the water we supply to customers comes from a chalk-based source. Our area also contains several designated Special Areas of Conservation (SACs), Special Protection Areas (SPAs), and Sites of Special Scientific Interest (SSSI).

Replacing a reduction in the amount of water we currently take from the environment and put into public supply, is the single biggest driver for the investment proposed in our plan. The specific speed and scale of these reductions from our existing sites will be determined in conversation between ourselves and the Environment Agency.

### **Additional factors:**

As well as the factors mentioned above, our future WRMP will also reflect the following developments;

- **Increased resilience.** The Government, through the WRPG, require us to plan for more extreme dry weather events than previously. Specifically, moving from planning for a resilient water supply in a 1:200 dry year event (0.005% chance of happening in any given year) to a 1:500 dry year event (0.002%).
- **Our Havant Thicket Reservoir** now has planning permission and will come into service in 2029. This source of water was not certain during our last planning round.
- **Technical drought planning** is now fully incorporated into the WRMP24. The Drought Plan is now an operational plan.

Since we started the initial work to understand demand for WRMP24 we have seen the Covid pandemic hit the country. Lock downs and working from home has had a demonstrable effect on where and when water is used by our customers. Because of the timing of the pandemic, these changes have not yet been reflected in the current baseline demand forecast. Questions remain if demand will return to the pre-Covid normal or not and we are still working on how this should be addressed in our plans.

## **How to get involved**

Please email us at [Water.Resources@portsmouthwater.co.uk](mailto:Water.Resources@portsmouthwater.co.uk) with your thoughts or, if you would rather, to arrange an (on-line virtual) meeting during February or March to discuss our draft WRMP24

The plans we are developing now will ensure a secure, sustainable supply of water in the future.

We look forward to hearing from you,

Yours faithfully



Jim Barker

Head of Water Resources, Leakage and Smart Networks  
Portsmouth Water

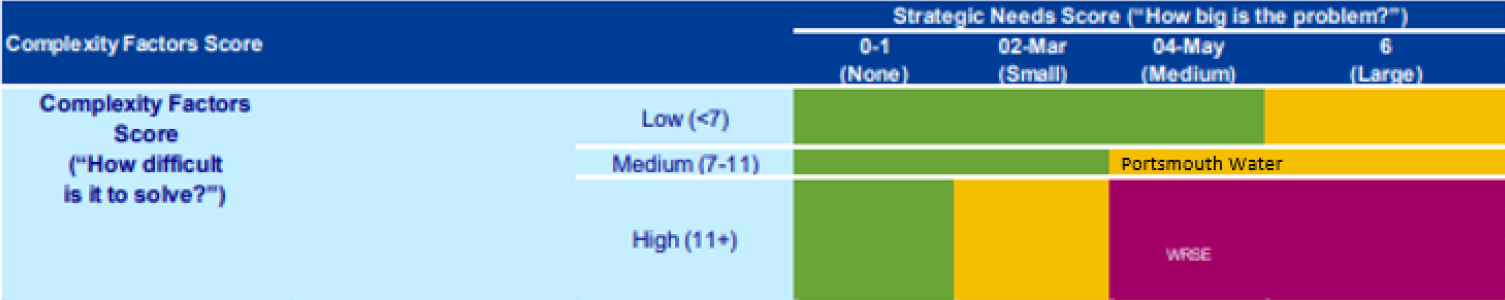
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<sup>1</sup> This is a reflection that 'the current household demand for water is a high proportion of the current effective rainfall which is available to meet that demand. Or, the future household demand for water is likely to be a high proportion of the effective rainfall which is likely to be available to meet that demand'.

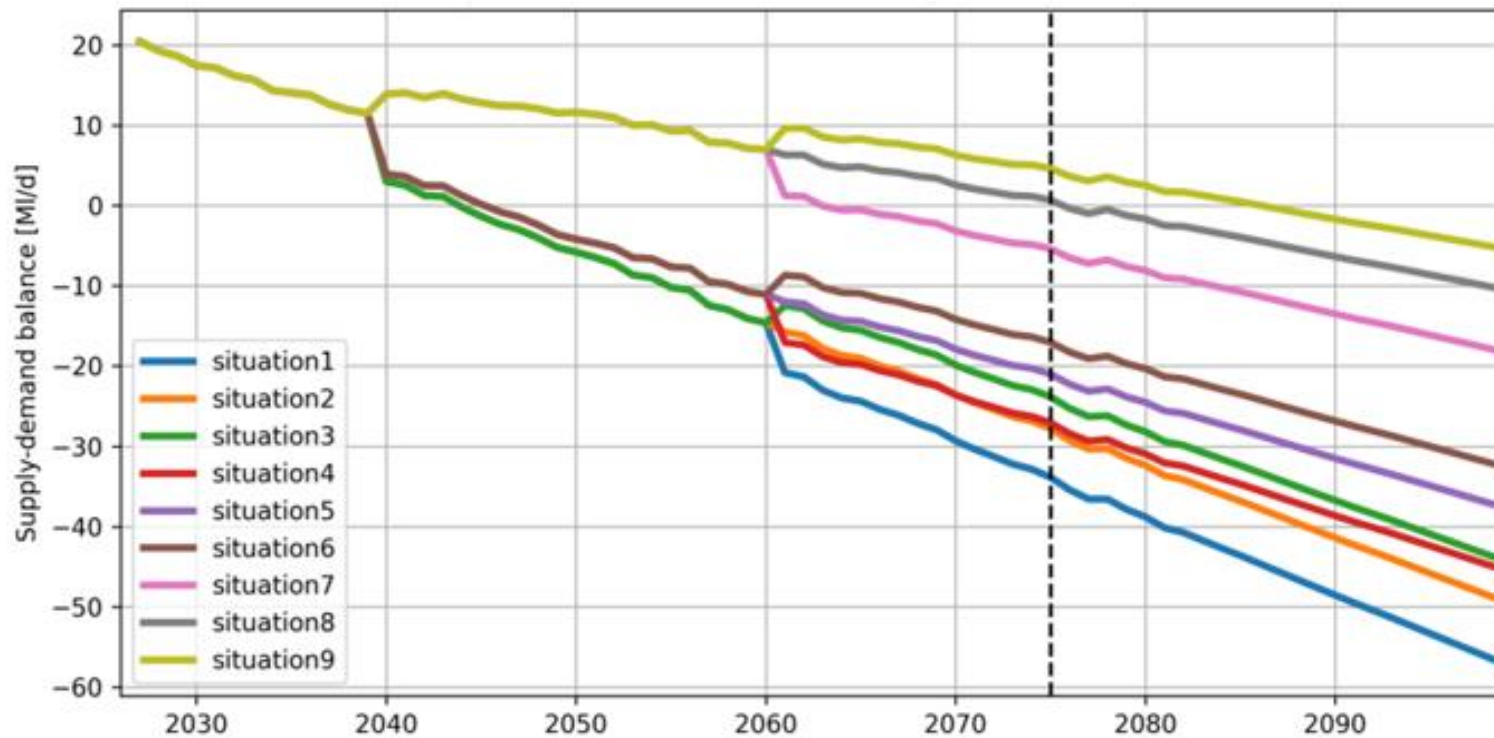
**Appendix A: Scope of this pre-consultation with helpful links:**

We are happy to discuss any of the following elements of WRMP24 development with you.

| 1                 | Progress with WRMP19 delivery, any significant changes expected, and how these will affect our plan | <p>Our <b>WRMP19</b> was published in Nov 2019. Since then, we have been reporting our outturn Key Metrics through our Annual Reviews. These metrics include a higher than forecast household use of water, an overperformance in reducing leakage and a new delivery schedule for our supply side schemes. These can be downloaded from our website: <a href="#">Water Resources Planning   Portsmouth Water</a></p> <p>We have subsequently been developing a <b>Revised WRMP19</b> (latest version sent to Ofwat on 22nd December 2021). This has used our newly developed PyWR water resource model to fully understand scheme benefits and impacts of new delivery schedule.</p> <p>We have been working closely with the Environment Agency (EA) in the development of our rWRMP19 and the approach we have taken using WRMP24 updated scenarios, has been agreed as the most suitable to ensure a smooth transition from WRMP19 into WRMP24. The detail of these updated methodologies and assumptions is as follows:</p> <table border="1" data-bbox="430 783 1946 1382"> <thead> <tr> <th>WRMP component</th> <th>Change made between WRMP19 and rWRMP19 (Dec 2021)</th> </tr> </thead> <tbody> <tr> <td>System modelling</td> <td>Using the latest Pywr Water Resource model developed for WRSE / WRMP24</td> </tr> <tr> <td>Baseline Licences</td> <td>Updated to reflect November 2021 Pywr assessment</td> </tr> <tr> <td>Outage Allowance</td> <td>Updated forecast (as per WRSE / WRMP24 guidance)</td> </tr> <tr> <td>Baseline Demand</td> <td>Updated forecast (as per WRSE / WRMP24 guidance)</td> </tr> <tr> <td>Headroom</td> <td>Updated forecast (as per WRSE / WRMP24 guidance)</td> </tr> <tr> <td rowspan="2">Preferred options</td> <td>AMP7 GW enhancement schemes - Updated to reflect Nov 2021 Pywr assessment</td> </tr> <tr> <td>Demand Management strategies – Updated to reflect latest PCC recovery plan &amp; leakage forecast</td> </tr> <tr> <td>Bulk Supplies</td> <td>Assumptions as per WRMP19 (i.e maximum capacity included as baseline)</td> </tr> </tbody> </table> | WRMP component | Change made between WRMP19 and rWRMP19 (Dec 2021) | System modelling | Using the latest Pywr Water Resource model developed for WRSE / WRMP24 | Baseline Licences | Updated to reflect November 2021 Pywr assessment | Outage Allowance | Updated forecast (as per WRSE / WRMP24 guidance) | Baseline Demand | Updated forecast (as per WRSE / WRMP24 guidance) | Headroom | Updated forecast (as per WRSE / WRMP24 guidance) | Preferred options | AMP7 GW enhancement schemes - Updated to reflect Nov 2021 Pywr assessment | Demand Management strategies – Updated to reflect latest PCC recovery plan & leakage forecast | Bulk Supplies | Assumptions as per WRMP19 (i.e maximum capacity included as baseline) |
|-------------------|---|---|----------------|---|------------------|--|-------------------|--|------------------|--|-----------------|--|----------|--|-------------------|---|---|---------------|---|
| WRMP component    | Change made between WRMP19 and rWRMP19 (Dec 2021)   |   |                |   |                  |  |                   |  |                  |  |                 |  |          |  |                   |   |   |               |   |
| System modelling  | Using the latest Pywr Water Resource model developed for WRSE / WRMP24                              |   |                |   |                  |  |                   |  |                  |  |                 |  |          |  |                   |   |   |               |   |
| Baseline Licences | Updated to reflect November 2021 Pywr assessment  |   |                |   |                  |  |                   |  |                  |  |                 |  |          |  |                   |   |   |               |   |
| Outage Allowance  | Updated forecast (as per WRSE / WRMP24 guidance)  |   |                |   |                  |  |                   |  |                  |  |                 |  |          |  |                   |   |   |               |   |
| Baseline Demand   | Updated forecast (as per WRSE / WRMP24 guidance)  |   |                |   |                  |  |                   |  |                  |  |                 |  |          |  |                   |   |   |               |   |
| Headroom          | Updated forecast (as per WRSE / WRMP24 guidance)  |   |                |   |                  |  |                   |  |                  |  |                 |  |          |  |                   |   |   |               |   |
| Preferred options | AMP7 GW enhancement schemes - Updated to reflect Nov 2021 Pywr assessment                           |   |                |   |                  |  |                   |  |                  |  |                 |  |          |  |                   |   |   |               |   |
|                   | Demand Management strategies – Updated to reflect latest PCC recovery plan & leakage forecast       |   |                |   |                  |  |                   |  |                  |  |                 |  |          |  |                   |   |   |               |   |
| Bulk Supplies     | Assumptions as per WRMP19 (i.e maximum capacity included as baseline)                               |   |                |   |                  |  |                   |  |                  |  |                 |  |          |  |                   |   |   |               |   |

| 2   | Water Resource zones (WRZ) integrity study   | <p>WRMP19 data has been the starting place for WRSE modelling. Where there have been no changes, WRMP19 work has been referenced rather than being repeated, for example for WRZ Integrity where we continue to operate as a single zone supply area.</p> <p>The PyWR water resources model of our supply system has provided a useful insight into the conjunctive way in which our sources work together and connectivity across our supply network.</p>   |                          |                    |   |  |  |  |               |                   |                    |              |   |          |       |       |        |     |               |       |        |                  |     |            |       |        |      |     |
|---|--|--|--------------------------|--------------------|---|--|--|--|---------------|-------------------|--------------------|--------------|---|----------|-------|-------|--------|-----|---------------|-------|--------|------------------|-----|------------|-------|--------|------|-----|
| 3   | Problem characterisation assessment          | <p><b>Summary of company/zonal problem characterisation(s)</b><br/>         Problem characterisation was carried out at a regional level based on WRMP19 Company Assessments.<br/>         Reference: <a href="https://www.wrse.org.uk/technical-note">Technical note (wrse.org.uk)</a></p> <p>Our WRMP19 assessment score (shown in the matrix below) was mainly driven by bulk supplies driving changes in demand and investments. There are plans to update this problem characterisation based on WRMP24 base data in March 2022.</p>  <table border="1" data-bbox="434 628 1935 928"> <thead> <tr> <th colspan="2" rowspan="2">Complexity Factors Score</th> <th colspan="4">Strategic Needs Score ("How big is the problem?")</th> </tr> <tr> <th>0-1<br/>(None)</th> <th>02-Mar<br/>(Small)</th> <th>04-May<br/>(Medium)</th> <th>6<br/>(Large)</th> </tr> </thead> <tbody> <tr> <td rowspan="3">Complexity Factors Score<br/>("How difficult is it to solve?")</td> <td>Low (&lt;7)</td> <td>Green</td> <td>Green</td> <td>Yellow</td> <td>Red</td> </tr> <tr> <td>Medium (7-11)</td> <td>Green</td> <td>Yellow</td> <td>Portsmouth Water</td> <td>Red</td> </tr> <tr> <td>High (11+)</td> <td>Green</td> <td>Yellow</td> <td>WRSE</td> <td>Red</td> </tr> </tbody> </table> | Complexity Factors Score |                    | Strategic Needs Score ("How big is the problem?") |  |  |  | 0-1<br>(None) | 02-Mar<br>(Small) | 04-May<br>(Medium) | 6<br>(Large) | Complexity Factors Score<br>("How difficult is it to solve?") | Low (<7) | Green | Green | Yellow | Red | Medium (7-11) | Green | Yellow | Portsmouth Water | Red | High (11+) | Green | Yellow | WRSE | Red |
| Complexity Factors Score                                      |  | Strategic Needs Score ("How big is the problem?")  |                          |                    |   |  |  |  |               |                   |                    |              |   |          |       |       |        |     |               |       |        |                  |     |            |       |        |      |     |
|   |  | 0-1<br>(None)  | 02-Mar<br>(Small)        | 04-May<br>(Medium) | 6<br>(Large)                                      |  |  |  |               |                   |                    |              |   |          |       |       |        |     |               |       |        |                  |     |            |       |        |      |     |
| Complexity Factors Score<br>("How difficult is it to solve?") | Low (<7)                                     | Green  | Green                    | Yellow             | Red   |  |  |  |               |                   |                    |              |   |          |       |       |        |     |               |       |        |                  |     |            |       |        |      |     |
|   | Medium (7-11)                                | Green  | Yellow                   | Portsmouth Water   | Red   |  |  |  |               |                   |                    |              |   |          |       |       |        |     |               |       |        |                  |     |            |       |        |      |     |
|   | High (11+)                                   | Green  | Yellow                   | WRSE               | Red   |  |  |  |               |                   |                    |              |   |          |       |       |        |     |               |       |        |                  |     |            |       |        |      |     |
| 4   | Planned approach to assessing climate change | <p>Based on UKCP18 products (in line with guidance), we have used probabilities around RCP8.5 as scenarios in our adaptive plan approach.</p> <p>Climate change is addressed in the following WRSE DO Method Statements:<br/> <i>WRSE Method Statement: Climate Change – Supply Side Methods</i> - <a href="#">wrse_file_1335_wrse_ms_climate-change.pdf</a><br/> <i>WRSE Method Statement: Stochastic Climate Datasets</i> - <a href="#">Microsoft Word - WRSE File 1332 WRSE MS Stochastic Datasets.docx</a></p>   |                          |                    |   |  |  |  |               |                   |                    |              |   |          |       |       |        |     |               |       |        |                  |     |            |       |        |      |     |
| 5   | Indicative supply-demand balance             | <p><b>Without intervention, demand for water is predicted to be greater than our ability to supply it.</b></p> <p>Using a planning approach called ‘adaptive planning’, we have considered a range of different situations we could experience in the future and what each of these different future scenarios could mean for water resources. In all these scenarios our ability to supply is less than our forecast customer demand. This is called a supply demand deficit, as indicated by the diverging situation lines on the graph below all falling below zero during the planning period.</p>   |                          |                    |   |  |  |  |               |                   |                    |              |   |          |       |       |        |     |               |       |        |                  |     |            |       |        |      |     |

How quickly the forecast ability to supply water falls below predicted demand for water largely depends upon the impact of climate change, population growth and the level of environmental ambition.



The balance between forecast ability to supply and customer demand for water over the course of the 75- year planning period for a range of future scenarios.

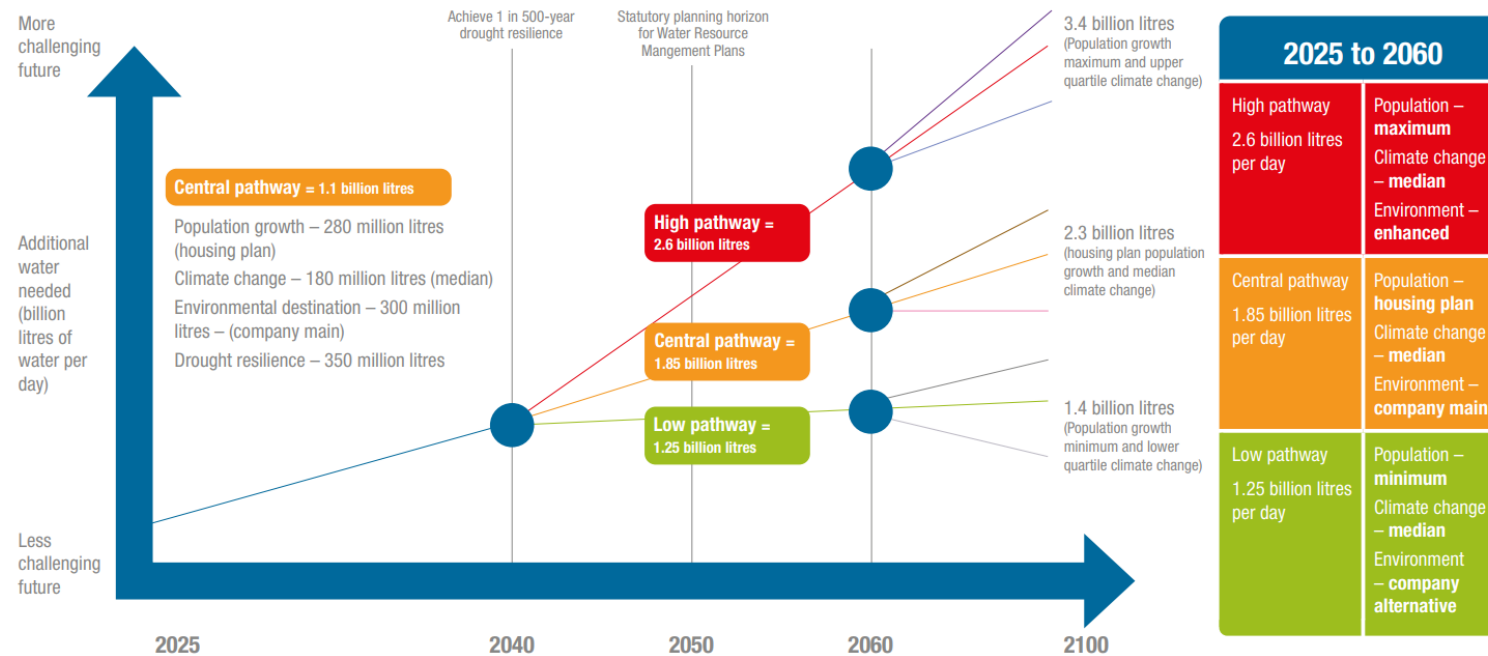
6 Details of adaptive plan

In line with the recommendations of the National Framework and the WRPG for a region facing complex water resources challenges, WRSE and companies in the SE have developed an adaptive plan.

Supply Demand Balance - Nine adaptive branches combine individual scenarios and have been selected to best represent the full range of 5,400 different potential futures (EBSB runs) from 2025 to 2100. The regional plan considers a unique supply demand balance for each of these branches which will in turn each have its own best value solution.

These branches encompass a wider range than the Ofwat common reference scenarios. Through this adaptive planning method, we consider a wider range of possible futures and uncertainty.

Headroom – The adaptive planning method will address the long-term uncertainties associated with population growth, climate change, and environmental destination. These uncertainties have been removed from our Headroom assessment to avoid double counting with each adaptive branch using the same (reduced) headroom profile. [www.wrse.org.uk](http://www.wrse.org.uk)



Ref: WRSE regional plan non-technical report v17, pp 12 , Our Adaptive Plan, and Section 4, How We Have Developed Our Plan.

7 Provisional preferred schemes

Reference WRSE draft emerging plan consultation  
WRSE Emerging Regional Plan – Annex 3 Consultation version – [www.wrse.org.uk](http://www.wrse.org.uk)

|                  |  |   |
|------------------|--|---|
| <p><b>8</b></p>  | <p>Wider benefits and outcomes to deliver beyond a least-cost plan</p> | <p>Our draft emerging regional plan is based on least cost optimisation of feasible options that had been reviewed for the following:</p> <ul style="list-style-type: none"> <li>• <b>How much water each option would produce</b> - We've calculated how much water each option will provide during normal years and in a range of different drought scenarios</li> <li>• <b>Cost</b> - We've used the most up-to-date cost information so we can understand how much each option will cost to build and run, including the carbon cost of that option</li> <li>• <b>Environmental performance</b> - We have carried out an environmental assessment of each option, made up of six elements</li> <li>• <b>Time</b> - We've considered how long it will take for water to become available from each option.</li> </ul> <p>Regionally, our next step is to identify if we can deliver additional value through our plan that will further improve the region's environment and benefit wider society. This could mean some alternative options are chosen as they deliver greater value to the region, however this could come at a higher cost. In Summer 2022, the WRSE will present our draft 'Best Value' regional plan.</p> <p>We will also consider options that are specific to Portsmouth Water to improve resilience or connectivity within our supply network.</p> |
| <p><b>9</b></p>  | <p>Relationship between WRMP24 and WRSE regional plan</p>              | <p>We work collaboratively at a regional level across the South East of England to develop a resilient and sustainable plan for future water resources. Our intension is that our dWRMP24 will reflect the regional plan although there may be minor adaption to reflect local situations or stakeholder preferences.</p> <p><a href="#">About us   WRSE - Water Resource South East</a></p> <p><a href="#">Microsoft Word - WRSE Method Statements Summary Final</a></p>   |
| <p><b>10</b></p> | <p>Risks or issues identified in plan</p>                              | <p>There are several risks identified in our plan. One of the purposes of adaptive planning is to address and mitigate risk by identifying the 'low regret' path to choose that will be able to adapt to a wide range of plausible futures.</p> <p>A notable risk to the plan is the impact of covid on demand has occurred since the forecast base year, and as such is not reflected in the current baseline demand forecast. Questions remain if demand will return to the pre-covid normal or not? And how and if this should be addressed in our plans.</p>  |