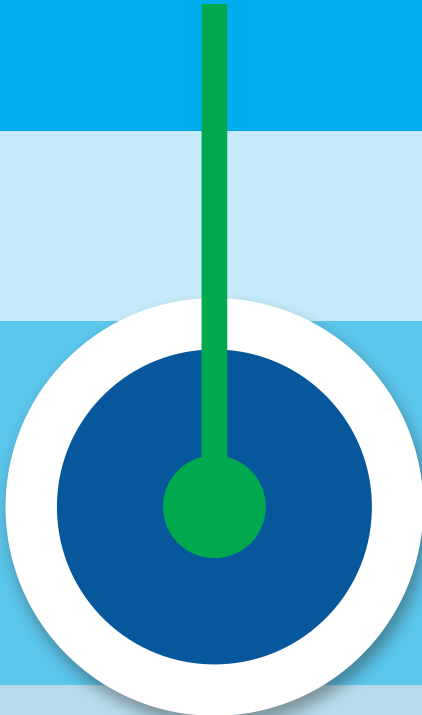


Draft Regional Plan  
**Non-technical Summary**



The **West Country Water Resources** Group is one of five regional groups in England, responsible for producing a long-term strategic plan for managing water resources in South West region for all water users to 2050.

We were created in 2018 with the purpose of developing the first ever water resource plan to protect water security across the South West of England.

This Draft Regional Plan has been produced following feedback from stakeholders and statutory consultees to our Emerging Plan. In this summary you can read more on:

- **Overview of our region**
- **Our Draft Regional Plan**
- **What outcomes we are looking to achieve?**
- **What does the future look like?**
- **What are the options for the future?**
- **Conclusion and next steps.**

## Core members



## Your feedback

We'd like to hear what you think, so please tell us about any ideas, local knowledge or concerns you may have with the Draft Regional Plan. We will consider all feedback as we continue to develop the Final Plan.

This consultation is taking place between 1 February 2023 and 26 April 2023. Please respond by 23:59 on 26 April 2023. Your feedback will help us ensure the plan considers local people, businesses and the environment across the region.

### How to feedback

You can find out how you can get involved in helping to shape the Regional Water Resources Plan by visiting our [website](#). Here you can read the full copy of the Draft Regional Plan (also available by post) and we have created a questionnaire to help you navigate the plan and capture your feedback on it.

You can also sign up to join one of the engagement events we will be holding in Spring 2023 to support this consultation process and give you an opportunity to share your thoughts on our plan.

Or, if you have a question or concern that you would like to raise, but don't want to submit a response to the consultation, you can email us at [contact@cwrg.org](mailto:contact@cwrg.org)



## Our Draft Regional Plan

In the South West we are faced with the challenge of being an important agricultural and mining area, in addition to being home to a popular, growing tourism destination.

Water is a precious resource and considering how we manage our water in a holistic way will be vital over the next 25 years. To do this, we need input from a wide range of stakeholders to ensure that our Regional Plan is the best it can be as we move into an uncertain future. Each stakeholder adds valuable and important insights which will be used to help inform and shape the plan.

By reading the plan and giving us your thoughts, you have the opportunity to contribute to the future of our water resource management, improve resilience of water supply in the South West and bring benefits to the environment. This will help us improve water management for the future of your business, your household, and the environment. To read the Draft Regional Plan and provide feedback please go to the [WCWRG website](#).

### Why has the plan been developed?

The Environment Agency has led the development of a new National Framework for Water Resources. The framework identifies the strategic long-term water needs of England for all sectors that depend on a secure supply of water whilst also ensuring the environment is protected and improved.

**The National Framework for Water Resources report concluded that if no action were taken between 2025 and 2050 an extra 3,435 million litres of water per day would be needed just to address future pressures on public water supply.**

The formation of the regional water resource planning groups was an initiative formed from the Environment Agency's 2020 Water Resource National Framework (WRNF). It identified the need for regional collaboration across five different groups of water companies operating in similar geographic locations in England and Wales.

Each region has been asked to produce a single plan that:

- Enhances water supply resilience
- Considers a range of uncertainties and future scenarios
- Develops a preferred plan for the region.

Together, the five regional plans must meet the collective national need.



### Relationship with the Water Resources Management Plans (WRMP)



### What are we trying to achieve?

The pressures on water supply and the environment continue to increase as the region faces challenges such as climate change, population growth and economic growth, all of which will affect future demand.

In our Draft Regional Plan we set out our long-term water requirement for the region to 2050, and the options available to respond to those needs. The current consultation on our Draft Regional Plan is an important step in protecting our water resource for the future.

The aim of the Draft Regional Plan is to align the needs of the region between each of the three public water companies – South West Water, Wessex Water and Bristol Water – and to ensure cooperation between local and national stakeholders. This will be achieved by:

- Meeting future resilience to water scarcity (1-500 Drought)
- Securing future public water supply and non-public water supply needs
- Ensuring commitment to Environmental Improvements and Environmental Destination
- Developing scenarios that meet the adaptive target for a 50% reduction in leakage from the baseline and achieve water efficiency of 110 litres average per capita consumption by 2050.
- Ensuring the Regional Plan meets the “must, could and should” aims of the national framework
- Producing a Regional Water Resource Plan that gives value for customers and provides additional benefits to customers and stakeholders.

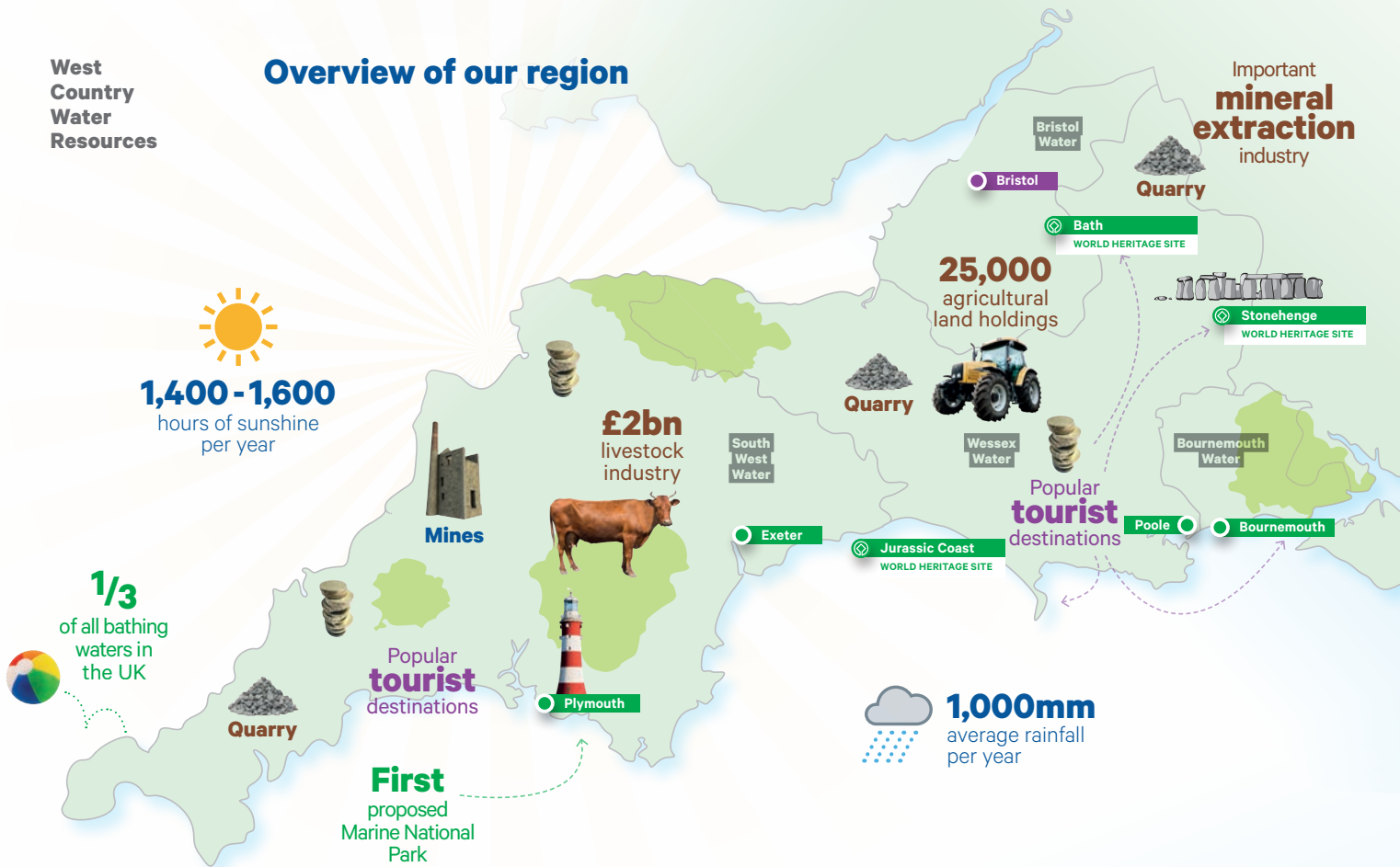
### What issues does the Draft Regional Plan address?

To meet pressures arising from changes in climate, water availability, environmental condition, drought resilience and the Government’s 25 Year Environment Plan pledge to leave the environment in a better state than we found it, the Draft Regional Plan addresses five key elements:

- 1. Water stress:** without planned action for the long term the need for water will exceed the availability
- 2. Demand reduction:** high levels of uncertainty exist on how reliably reductions can be delivered
- 3. New resources options needed:** there is a need to plan new strategic water sources for future generations
- 4. Environmental vulnerability:** with increasing water stress it is necessary to understand the needs for the environment better to inform future decisions for the region
- 5. Non-public water supplies:** the region needs to better understand the supply and demand needs.



## Overview of our region



Stretching from Bristol and Wiltshire down to Devon and Cornwall, the South West of England is made up of diverse and distinct areas facing their own unique water resource challenges.

Our region not only covers **quality environmental sites** of both national and international importance but, is also a **working agricultural** landscape, a **popular tourist destination**, and **home** to over 4.7 million people. In total 1,400 million litres of water are used every day in our region, 85% of which is for domestic use.

The east of the region is dominated by chalk landscapes and rolling downs, many of the watercourses are bournes or chalk streams supporting rich habitats, but with river and stream flows that vary naturally depending on the pattern of recharge to the chalk aquifers. Water use for industry, agriculture and in our homes is mainly from underground aquifers and from the larger rivers in the area. Water sources in the west of the region are predominantly from reservoirs and rivers.

We are working to provide a regional structure to secure water availability and sustainability within our region for the next 50 years and beyond.

## What does the future look like?

The current water resource situation in the West Country is set to become more challenging for all water users and the environment.

Although the past record for meeting water needs across the West Country has been good, the future is looking different with a number of factors accumulating to result in the need for drastic change over the next few decades.

### Climate Change

The changing Climate has implications for water availability and demand in the future. There is a general trend to warmer and wetter winters and hotter, drier summers. This means we may need to store more water over the winter to ensure summer demands can be met.

The climate change value in the Draft Regional Plan shows a loss of resource of between 102 and 169 Megalitres per day by 2050 depending on the severity climate change scenario used.

### Ensuring water supply resilience

Government policy has shifted in response to changes in climate we are currently experiencing, with water companies across the UK planning to increase their resilience to drought from 1 in 200-year events to 1 in 500-year events. Planning to this higher level of drought resilience will require additional actions to be taken to either reduce demand or increase supply capacity.

### Improving the Environment

One of our key focus areas, set out in National Framework, is to deliver environmental improvements to water habitats across the West Country. The environmental outcomes will primarily be driven by a reduction to abstraction volumes.

Meaning a reduction in water available for the public supply may fall by between 180 and 201 Megalitres per day by 2050.

### Future demand

Future demand will be affected by many factors including population change, changes in consumption patterns for homes and businesses, climate change, and technological advances, this creates a high level of uncertainty in the forecasts.

**Due to these pressures, we anticipate a deficit of between 131-246 Megalitres per day<sup>1</sup> by 2050. If no action is taken to improve the resilience of the region, the West Country is likely to face a shortfall in water availability by 2050. It is vitally important that we work together as a region to reduce the overall risk for the whole area.**

<sup>1</sup> These figures incorporate the reduction of available water from climate change and improving the environment, as well as the predicted benefit of the demand management activities by 2050. Further explanation of the figures above can be found in the [Draft Regional Plan](#).

## What does the future look like?

continued

### Future scenarios

Five different future scenarios were investigated to forecast future water need (see pages 18-22 of the full report for more detail), high level assessment suggested that new water resource options are needed in all scenarios as demand reductions alone are not enough. The future situation for water in the West County is uncertain. We have combined each of the pressures on the water resource described above with their uncertainties to identify water resource needs under baseline conditions and five potential future scenarios, as set out below, assuming that the 1 in 500-year drought resilience has been achieved.

The five scenarios are set out below:

<b>Baseline</b>	Water resources need under a central climate emissions scenario, with no further demand reduction, and no additional abstraction reduction, besides that presented in our 2019 WRMPs
<b>Future scenarios</b>	
<b>1. Policy future</b>	The minimum policy requirements on demand reduction and environmental destination are met
<b>2. High demand future</b>	Attempt to meet policy expectations but demand delivery proves difficult to achieve due to external factors beyond companies' control
<b>3. Bad future</b>	Climate change and demand increases outside of companies' control mean more water is required
<b>4. Stretching future</b>	Climate change and demand follow more challenging paths, and an enhanced environment is delivered
<b>5. Alternative future</b>	Climate change impacts follow a more central emissions scenario, with delivery of demand reduction targets and an enhanced environment

### What are the options for the future?

To help meet future predicted needs we have considered the options available to both increase the supply of water and options to reduce the demand for water and increase the efficiency of its use.

#### Considerations

We have considered the following in the future supply and demand balance:

- Demand reduction targets set out by the Environment Agency's National Framework:
  - Average household consumption of 110 litres per person per day (l/p/d) by 2050
  - Water companies to reduce leakage by 50% by 2050, from baseline leakage levels in 2018
- The measures to reduce personal water consumption supported by the Environment Act which was passed and became law in November 2021:
  - Introduction of a mandatory water efficiency label to encourage the purchase of more efficient products
  - Development of a roadmap towards greater water efficiency in new developments and retrofits, including the exploration of revised building standards
  - Production of an action plan to reduce business water consumption.

### Future options

The Draft Regional Plan sets out the future options across supply, demand and leakage schemes to ensure a resource deficit is mitigated against during the plan and that adequate room is maintained across the region. For further information on the options we considered see pages 35-52 of the full Draft Regional Plan.

The table below sets out the options available to increase the supply of water and those that are available to reduce the demand for water and increase the efficiency of its use. We have considered the adverse and beneficial impact for the supply side strategic options, which can be found on page 41 of the full Draft Regional Plan.

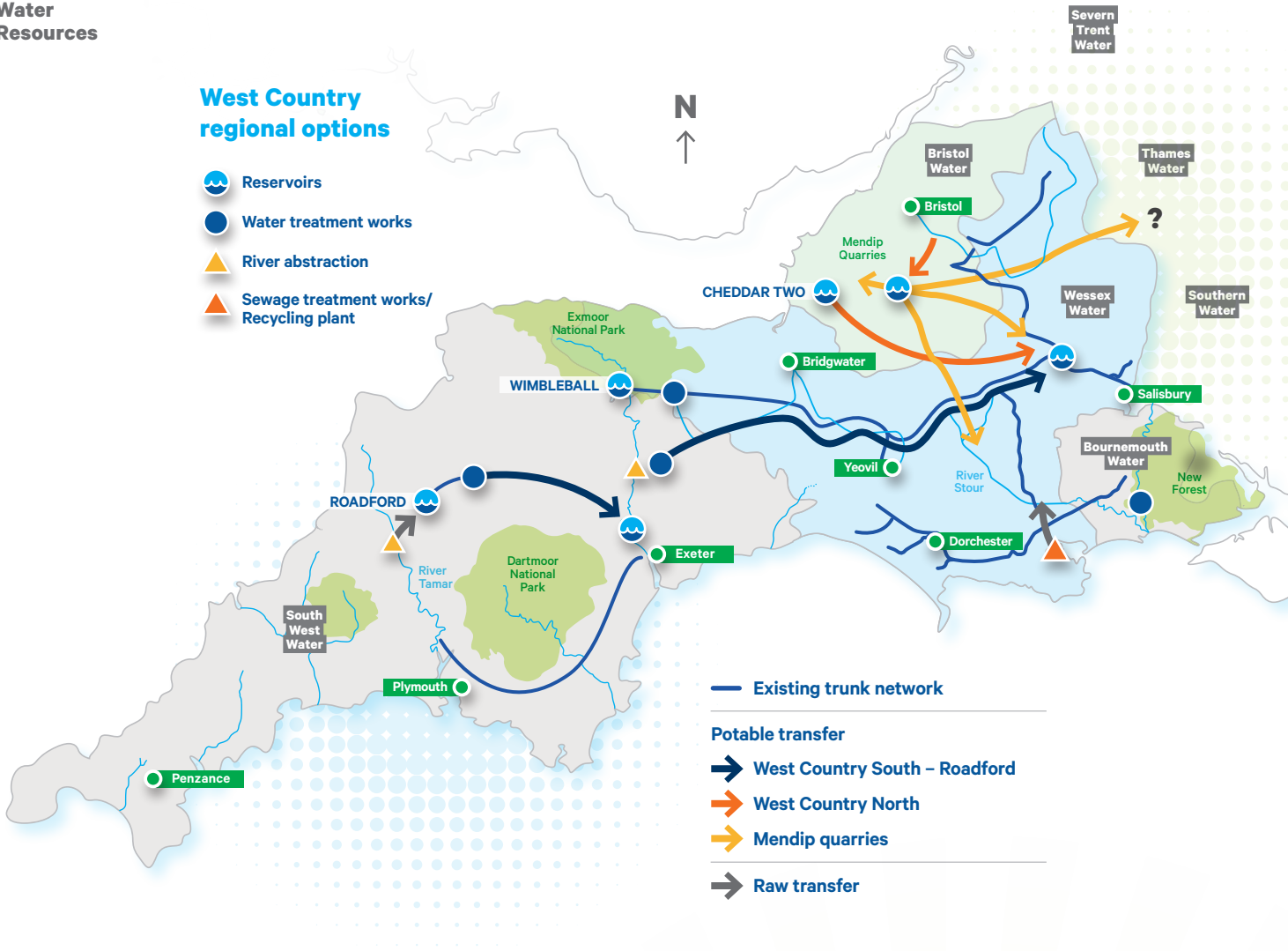
New supply options		Demand side options	
<b>Effluent reuse</b>	Poole Sewage Treatment	<b>Water labelling with minimum standards</b>	
<b>Enhancements to existing reservoirs</b>	Existing reservoirs can be enhanced by the addition of pumped storage to increase their drought resilience and/or by dam raising	<b>Development and new homes</b>	Mandatory water efficiency standards in new homes
<b>New reservoirs</b>	Second reservoir at Cheddar		Reduced infrastructure charge for high efficiency development
	Repurposing of a quarry in the Mendips as a reservoir once mineral extraction is complete		New development rainwater harvesting
<b>Abstraction from rivers</b>	Refill abstraction and conveyance from the Bristol Avon	<b>Smart metering</b>	Progressive smart metering
<b>Regional transfers</b>	Inter/intra-regional transfers may happen but only if uncertainty in water availability is reduced		Targeted smart meter installation
		<b>Efficiency audits</b>	Home efficiency audits
			Virtual home efficiency audits
		<b>Water labelling with minimum standards</b>	
		<b>Targeted incentive schemes</b>	
		<b>Changed WC standards</b>	
		<b>Targeted leaky loo fixes</b>	
		<b>Community group water efficiency programme</b>	
		<b>Targeted incentives scheme</b>	
		<b>Schools water efficiency programme</b>	
		<b>Consumption feedback to metered customers</b>	
		<b>Rainwater harvesting (community and new development)</b>	



What does the future look like?  
continued

West Country  
regional options

-  Reservoirs
-  Water treatment works
-  River abstraction
-  Sewage treatment works/  
Recycling plant



What outcomes are we looking  
to achieve?

Draft Regional Plan outcomes

- 1 Improve the environment** – deliver long-term environmental improvement through reducing water taken from the environment where this is needed to protect it for the future
- 2 Ensure water supply resilience** – deliver a drought resilient/secure water supply to customers
- 3 Deliver benefits for society** – deliver affordable customer bills and improved environment for human benefit.

How will we achieve our outcomes?

By drawing together what future water needs might look like, the risks the region faces and the types of options and responses available, has led to the development of four strategic themes to frame our overall Draft Regional Plan strategy.



### Conclusions from our analysis

- Understanding the future water needs of the environment is critical to decision making
- The impact of climate change is material to water availability
- The region only has a rudimentary understanding of non-public water supply needs
- Demand-side reductions are part of the solution for the region, but there is large delivery uncertainty
- Strategic water resources schemes have been identified as needed, but they are not guaranteed in themselves
- Lead-times for strategic schemes are too great to adapt to demand-side delivery uncertainty



### Our strategic themes

#### 1 Reduce the uncertainty associated with demand reduction and environmental needs

Undertake actions to reduce the uncertainty associated with reductions in the overall demand for water and what the environment needs. For demand savings it will confirm whether they are achievable and the costs. For the environment it will confirm if the predictions are sound. In both cases this removes a key risk in the planning for the region and will improve decision-making. As such this is a low regrets approach.

#### 3 Ensure future strategic options can be implemented

In all the futures, new water resources are needed. Strategic water resources options for the region should continue to be developed for potential deployment by 2039. This ensures there is a 'plan B' if the targeted demand reductions do not materialise, or environmental needs are found to be higher than expected.

#### 2 Improve the use of existing water sources

Forecasts show increased water stress and the region faces a wide range of future uncertainties. As a low regrets action, all current water users and regulators should look to see if they can operate water sources differently with smarter licensing to increase resilience to drought whilst also reducing the impact on the environment at times of stress. This is a low regrets approach with low cost impact.

#### 4 Improve understanding of need, increase connectivity and storage for non-public water supply

Implement actions to better understand non-public water demand (particularly agriculture and the food sector) and start a process to increase water availability to support it. Whilst we do not know all the future needs, climate change and environmental requirements are likely to increase pressure on sectors that may not have robust plans to meet future demand.

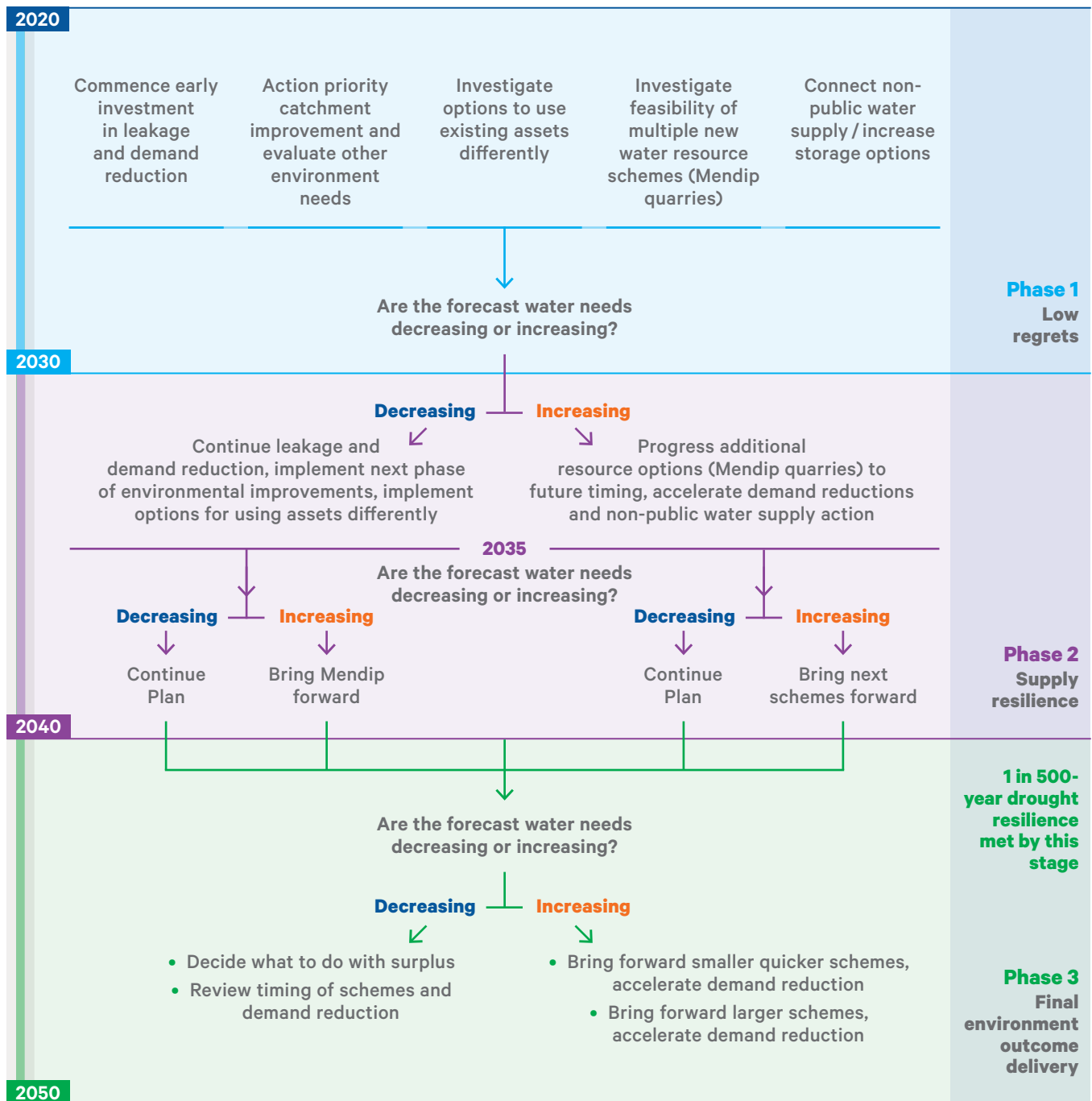
## Draft Regional Plan summary

The Draft Regional Plan brings together the strategic themes, the future scenarios and the options available for the region.

We have set out the Draft Regional Plan in phases to ensure it is adaptive, a brief summary of each section is outlined below, for further detail please refer to the full [Draft Regional Plan](#).

2020-2030	2030-2040	2040-2050
<p><b>Phase 1</b> <b>Low regrets actions required for all futures</b></p> <ul style="list-style-type: none"> <li>• Implement leakage and demand reduction measures</li> <li>• Water companies should look to increase investment to reduce uncertainty in long term demand reductions and leakage reductions</li> <li>• Assessing environmental needs to reduce uncertainty</li> <li>• Work on focus catchments identified in full report</li> <li>• Develop strategic options such that they can be ready by 2039 or earlier, including intra-regional transfers. This should include Mendip Quarries, a second reservoir at Cheddar and Poole Effluent re-use options, but others should also be included as needed</li> <li>• Commence programme of work to increase connectivity and storage availability for non-public water supply users (initially agriculture focussed)</li> </ul>	<p><b>Phase 2</b> <b>Supply resilience outcome met</b></p> <ul style="list-style-type: none"> <li>• Make a decision at the beginning of this stage if new water resource schemes should be commenced to meet 1 in 500-year resilience standards. Expected to be, Mendip Quarry Strategic Solution, Poole Effluent Reuse and a second reservoir at Cheddar</li> <li>• Look at intra-regional transfer options to deliver increased flexibility in the West Country including in the future if there is surplus water compared to the needs of the West Country</li> <li>• Decision should be made on whether course correction is needed to respond to the success of demand reduction measures. Activity should be adjusted to the performance achieved</li> <li>• Next step of environmental improvements should be delivered. This would use the information from the previous phase which should have increased confidence on what the environment needs and when</li> </ul>	<p><b>Phase 3</b> <b>The detail of this phase will depend on how the future unfolds</b></p> <ul style="list-style-type: none"> <li>• Based on current projections this phase should see the delivery of the environmental improvements comprising those which have: <ul style="list-style-type: none"> <li>– a) Significant investment requirements to offset the reduction in water available for use resulting from leaving more in the environment</li> <li>– b) have the lowest cost-benefit</li> </ul> </li> <li>• Likely to be characterised by decisions on further phases of resource development. Under a ‘worst case’ scenario, this would see multiple strategic resource schemes needed for the region and significant investment to reduce leakage and customer demand</li> <li>• Effectively by this phase 1 in 500 resilience will have been delivered and at least business as usual Environmental Destination</li> <li>• The 50% leakage and 110 litres per person per day demand reduction would have been achieved, or as stated above, if not then strategic schemes will be in place to offset that risk</li> <li>• The demand for water (and in turn abstraction) should at least 5-10% lower than current levels</li> </ul>

### How will the Regional Plan adapt over time



### 2050 Environmental destination

	Demand reduction only	Demand reduction and single schemes	Schemes delivered to meet demand	Multiple schemes needed and accelerate demand reductions	Multiple large schemes needed and accelerate demand reductions
<b>End position</b>	<b>Policy future</b>	<b>Alternative future</b>	<b>High demand future</b>	<b>Bad future</b>	<b>Stretching future</b>
	← Water surplus ← No strategic schemes ← Early leakage and demand reduction investment				Severe water deficit future → Early strategic schemes → Leakage and demand reduction accelerated but not successful →

## Conclusion and next steps

We welcome all stakeholders to read and comment on the Draft Regional Plan via our consultation page on the [WCWRG website](#).

We would love to hear views from our stakeholders on the direction of travel of the Draft Regional Plan following publication in January 2020 of the Emerging Plan and the conclusions below.

### Stakeholder engagement

The water resource planning process and the guidance from the multi-sector West Country Water Resources Board has improved our understanding of the water resource issues that the region faces in the period up to 2050. We also have an improved understanding of which areas lack data and are most uncertain.

### 2022 drought

The drought has brought considerable clarity and focus on the value of water and how regional changes in the short term (such as hybrid working, second home use and the expansion of affordable 'at home' water-based recreation such as home swimming and paddling pools) can in a very short time influence the geography and timing of demand changes and subsequent impact on long term plans.

### Sustainable public supply

The Draft Regional Plan demonstrates that the region currently has a sustainable public water supply position for the immediate term but requires additional new water supply resources and a greater focus on water efficiency in the medium to long term to ensure that both future environmental and demand requirements are met.

### Environmental improvements

The Draft Regional Plan accounts for the need to deliver substantial environmental improvements associated with the Environmental Agency environmental destination ambition for the region to protect the environment.

### Improve understanding

In the overall South West Regional Plan area it is important to continue to improve the understanding of non-public water supply demands both now and in the future.

### Uncertainty

Whilst it is accepted that uncertainty exists there is a need for a flexible approach to changes in uncertainty as the future emerges.

The development of this Draft Regional Plan and the three Draft Water Resource Management Plans Defra has been a positive catalyst for the building of a consistent and collaborative approach across the companies to water resources planning.

The plan will inevitably change and develop the coming months as we gain clarity on some of the uncertainties and continue to understand learnings from the 2022 drought. This will all help as we continue to develop our Final Regional Plan in 2023.

### Regional Plan timeline

