Water resources planning guideline

For consultation

Contents

Section 1 – Planning for a secure, sustainable supply of water

This guideline is written for water companies in England and Wales. It is also relevant to those producing regional plans.

We note the Independent Water Commission, chaired by Sir Jon Cunliffe, has undertaken the largest review of the water industry since privatisation. The Corry Review has also made recommendations regarding the regulatory landscape. This guideline is written without prejudice to any Government outcomes from these reviews.

1.1 Your WRMP

If you are a water company in England or Wales, you must prepare and maintain a water resources management plan (WRMP).

Your WRMP sets out how you intend to achieve a secure supply of water for your customers and a protected and enhanced environment. The duty to prepare and maintain a WRMP is set out in sections 37A to 37D of the Water Industry Act 1991. You must prepare a plan at least every 5 years and review it annually.

In your plan you must forecast your supply and your demand over at least the statutory minimum period of 25 years. If you forecast a deficit you should consider:

- supply-side options to increase the amount of water available to you
- demand-side options which reduce the amount of water your customers require

To determine your preferred programme, you should identify and appraise a range of options. You should justify the selection of the options included in your preferred plan. If you do not have a deficit, you should still produce a best value plan. This should consider government policy and wider objectives such as increasing your surplus to facilitate water trading.

1.1.1 Outcome based planning

This guideline focuses on the legal requirements and technical approaches you should follow to develop a WRMP. You should consider this guideline in conjunction with any relevant government policy and outcome expectations.

Your WRMP should efficiently deliver resilient, sustainable water resources for your customers and the environment, both now and in the long term. This objective should be at the centre of all your planning methods and decisions.

You should be transparent in your methods, data, assumptions and decisions. This is so that customers, stakeholders, regulators and

government can understand and comment on your plan. Your methods should be proportional to the complexity of your problem.

1.2 This guideline

This guideline is designed to help you write a plan that complies with all the relevant statutory requirements and government policy. In this guideline we have used the word '**must**' where the action is related to a statutory requirement. If you do not follow a 'must' there is a high risk you will produce a plan that is not legally compliant.

We have used the word '**should**' where we believe this action is needed to produce an adequate plan. If you, or a regional group, decide to take a different approach you should justify your approach by clearly demonstrating how you are still fulfilling your obligations. You should discuss this approach with regulators. Regulators are fully supportive of new approaches but will need to work with you to understand and review these.

Where the guidance for water companies wholly or mainly in England and Wales differs, we refer to these companies as follows:

- for companies wholly or mainly in England – 'England' or 'water companies in England'
- for companies wholly or mainly in Wales – 'Wales' or 'water companies in Wales'

There are elements of the guideline that are subject to specific legislative or regulatory requirements that align to the England or Wales geographic boundaries. The main areas that this relates to are as follows:

- setting your environmental destination
- considering the environment and society in your decision-making
- complying with environmental legislation, Strategic Environmental Assessment (SEA) and Habitats Regulations Assessment (HRA)

- for plans affecting Wales, obligations in relation to the Environment (Wales) Act 2016 and the Well-being of Future Generations (Wales) Act 2015

1.3 Developing your WRMP

Your plan should take a long-term view. It should set a planning period that is appropriate to the risks of your company and region, but which covers at least the statutory minimum period of 25 years. It may be appropriate, depending on the challenges and risks you face, and those in the relevant regional plan[1], for you to plan for the next 50 years or more. This is so your plan identifies appropriate solutions to meet future pressures. Your plan should contribute to a protected and enhanced environment.

Before you revise your WRMP you should review which parts of your previous WRMP are still relevant. Your previous WRMP (as an agreed long-term plan) should be a starting point to build your regional plan and WRMP. Your new plan should include a review of what has, and has not, changed since the last plan and why. This should include a review of whether your previous plan is still fit for purpose.

You must develop and publish a new plan no later than 5 years from the date when your plan was last published. You must also produce a WRMP if:

- you have been directed to do so by the Secretary of State for the Environment, Food and Rural Affairs (if wholly or mainly in England) or by the Welsh Ministers (if wholly or mainly in Wales)
- if there has been a material change in circumstances, for example identified through your annual review

In producing the plan you:

- must comply with your legal duties

[1] Regional plans are a requirement by Defra for 5 regional groups within England. Some parts of Wales may be included in a regional plan

- must demonstrate how you will ensure secure supplies while protecting and enhancing the environment
- should follow the relevant government's policy expectations and any specified outcomes
- should produce a final WRMP with no deficits in any of your water resource zones over the final planning period
- should demonstrate how you will incorporate national planning (through the National Framework for Water Resources) and regional planning into your WRMP (where applicable)

1.4. Regulator roles and responsibilities

The Environment Agency, Natural Resources Wales and Ofwat are responsible for jointly writing this guideline. The following regulators have a significant role in the WRMP process.

1.4.1 Environment Agency

The Environment Agency is a statutory consultee for WRMPs. It leads on producing this guidance for you to use in compiling your WRMP. It has a statutory duty to conserve, redistribute or otherwise augment water resources in England and to secure the proper use of water resources in England, including efficient use of those resources. The Environment Agency will work with you as you prepare your plan and will provide a representation as part of your consultation.

At the statement of response stage, its role changes and it becomes a technical advisor to the Department for Environment, Food and Rural Affairs (Defra) and the Secretary of State.

1.4.2 Natural Resources Wales

The purpose of Natural Resources Wales is to deliver the sustainable management of natural resources in the exercise of its functions. This includes embedding the sustainable development principle to contribute to the well-being goals for Wales.

Natural Resources Wales is a statutory consultee for WRMPs and the advisor to the Welsh Government for plans affecting Wales. It leads on producing guidance specific to Wales. It has a statutory duty to secure the proper and efficient use of water resources in Wales. It is also the Appropriate Nature Conservation Body under the Conservation of Habitats and Species Regulations 2017. Natural Resources Wales will work with you in your preparation of your plan and provide a representation as part of your consultation.

At the statement of response stage, its role changes and it becomes a technical advisor to Welsh Government and the Welsh Ministers.

1.4.3 Ofwat

Ofwat is a statutory consultee for WRMPs. Ofwat is a key stakeholder during the development of your plan and provides a representation as part of your draft plan consultation. The WRMPs are key to informing the supply-demand balance (including metering) enhancement part of your business plans which are submitted to Ofwat as part of the price review process.

Ofwat determines the extent to, and conditions under which, you can recover the costs of investment through your charges to customers. It does this principally (although not exclusively) through determinations and decisions under Condition B of water companies' Instruments of Appointment (licences). This provides the framework for your price controls, and, where necessary, the imposition of additional supporting licence conditions. Ofwat is required to carry out its statutory functions in accordance with its duties in Part 1 of the Water Industry Act 1991. Ofwat's primary statutory duties under section 2(2A) of the Water Industry Act 1991 require it, in summary, to set price controls in the manner it considers best calculated to:

- further the consumer objective to protect the interests of consumers, wherever appropriate by promoting effective competition
- secure that water companies properly carry out their functions
- secure that the companies are able (in particular, by securing reasonable returns on their capital) to finance the proper carrying out of those functions

- further the resilience objective to secure the long-term resilience of companies' systems and to ensure that they take steps to enable them, in the long term, to meet the need for water supplies and wastewater services

Since May 2024, Ofwat also has a duty to have regard to the desirability of promoting economic growth when carrying out its work in relation to England.

1.4.4 Drinking Water Inspectorate (DWI)

DWI has responsibilities under the Water Industry Act 1991 relating to the sufficiency and quality of water supplies.

1.4.5 Regulators' Alliance for Progressing Infrastructure Development (RAPID)

RAPID helps accelerate the development of new strategic water infrastructure and inform future regulatory frameworks. It is made up of the 3 water regulators in England: Ofwat, Environment Agency and DWI. It also works closely with Welsh Government and Natural Resources Wales. You can find further information on RAPID's website.

Some water companies received additional funding to investigate and develop strategic regional water resource options in the 2024 price review (PR24) final determination. These companies should account for progress made on these options through the gated process. RAPID will then make recommendations on the solutions and Ofwat will make decisions on funding. You must present the need for these schemes, their timings, and the justification for your decisions in your regional plan and WRMP.

1.4.6 Natural England

Natural England is a statutory consultee for WRMPs that are likely to affecting designated sites in England. Its purpose is to ensure that the natural environment is conserved, enhanced, and managed for the benefit of present and future generations, thereby contributing to sustainable development.

Protection and enhancement of the natural environment including landscape and biodiversity depend critically on delivering improved, integrated, and sustainable land and water management. Natural England works closely with the water sector to ensure that objectives for European, Ramsar sites (internationally important wetland sites) and Sites of Special Scientific Interest (SSSI) (collectively known here as designated sites) are delivered by landowners and public bodies, and that all public bodies play their part in contributing to the achievement of nature recovery targets and objectives set out in the Government's 25 Year Environment Plan and the Environment Act 2021.

1.5 Assurance

You should provide an assurance statement from your Board to Ofwat and Natural Resources Wales or the Environment Agency that you are satisfied that:

- you have met your obligations in developing your plan
- your plan reflects any relevant regional plan, which has been developed in accordance with the national framework, where applicable, and relevant guidance and policy, or provides a clear justification for any differences
- your plan is a best value plan for managing and developing your water resources so you are able to continue to meet your obligations to supply water and protect the environment, and is based on sound and robust evidence including relating to costs (Section 9 defines a best value plan)

Your assurance statement should be accompanied by a supporting statement. This should detail how the Board has engaged, overseen and scrutinised all stages of development of your plan and the evidence it has considered in giving its assurance statement.

1.6 Links with other plans

Your WRMP is closely related to a number of other frameworks, plans and strategies. This includes important links to other tiers of water

resources planning through the national framework and regional plans, where applicable (see Section 2 – National, regional and local planning). You should also consider any relevant SEA and HRA that may affect your plan. You should also consider the following in your WRMP:

A. Government's Environmental Improvement Plan (England only)

Your WRMP should reflect the ambitious nature of the Government's Environmental Improvement Plan. You should:

- set out your destination for environmental sustainability and resilience
- support nature recovery
- use a natural capital approach and evidence in decision making
- use a catchment approach
- use nature-based solutions where appropriate – as an important tool for water resource management that provides wider environmental and resilience benefits
- deliver net gain for the environment
- support achievement of the water demand targets

B. Water Strategy for Wales (Wales only)

Your plan should reflect the long-term policy direction in relation to water.

C. Natural Resources Policy and area statement (Environment Wales Act 2016)

You should consider how your plan (where it affects Wales) contributes to the priorities set out within the Natural Resources Policy and any relevant area statement. Area statements are the place-based implementation of the Natural Resources Policy. You should consider the priorities, risks and opportunities highlighted within any area statement relevant to your plan and how collaborative actions linked to these could result in improved outcomes for people and the environment.

D. Business plans

Your business plan sets out your investment plans for the next asset management period. Your investment plans are the mechanism to achieve the planned outcomes set out in your WRMP and deliver wider water system resilience.

Your business plan should reflect Ofwat's price review methodology and is assessed through Ofwat's price review process. This results in a final determination which sets out how you will fund efficient expenditure from customer bills. This process is agreed on a 5-year cycle.

Ofwat's 'PR24 and Beyond: Final guidance on Long-term delivery strategies' provides a steer to companies to make sure clear links are made between WRMPs and business plans, through the production of long-term delivery strategies. This includes, for example:

- using long-term adaptive planning across all water and wastewater activities
- planning for common reference scenarios
- linking new plans to delivery of previous ones
- using robust and consistent cost estimates

E. Drought plans

Your WRMP is complemented by your water company drought plan. Your drought plan sets out the short-term operational steps you will take if the area you cover faces a drought in the next 5 years. It describes how you would manage customer demand, secure supplies and minimise environmental impacts as the drought progresses.

You should clearly explain how your drought plan and WRMP link in a way that your customers, regulators, government and interested stakeholders can understand. Your emergency plan will set out the actions you will take in a civil emergency. Your WRMP should set out your current and future levels of service and your justification for the order of actions you will take in a drought.

F. River basin management plans

Your WRMP and drought plan will contribute to the objectives set out in river basin management plans (RBMPs) by ensuring you:

- prevent deterioration and support achievement of protected area and water body status objectives
- have a secure and sustainable set of options to supply your customers
- are contributing to sustainable catchments by ensuring supplies are managed well in a drought
- are demonstrating how you will help your customers to use water wisely

You should identify integrated catchment-based solutions in your plan. These should deliver multiple benefits, for example reducing flood risk and improving resilience of the environment to droughts.

G. Drainage and wastewater management plans

Drainage and wastewater management plans are statutory plans. They set out how the sewerage undertaker will manage and develop its drainage system and sewerage system to be able to meet its current and future obligations under section 94 of the Water Industry Act 1991 and associated provisions under the Urban Waste Water Treatment Regulations (England and Wales) 1994.

The plans are expected to be consulted on in 2027 and the final versions published in 2028.

If you are a water and sewerage company, where feasible, you should ensure that your long-term planning for wastewater and water resources is aligned. You should consider aligning your growth forecasts, climate change scenarios, other future trends and assumptions, and timetable for delivering solutions.

If you are a water-only company, you should ensure your WRMP and your relevant sewerage provider’s plans within your regional boundaries are aligned where feasible. It is noted that these regional boundaries may be different.

H. Drinking water safety plans (or risk assessments)

These provide a means of identifying hazards and hazardous events that could arise in the catchment area, from the source up to the customer's tap. Your drinking water safety plans should be kept under continual review. Your WRMP should take account of these safety plans, where appropriate. Your WRMP should consider how you can mitigate any risks due to water quality which might impact your supply-demand balance or preferred options. Where these actions could improve the supply-demand balance, you should consider them as options in your plan.

I. Local authority plans

Local authority plans are prepared by local and strategic planning authorities to set out the quantity and location of future growth in their areas. Your WRMP should reflect growth ambitions and plan to support the delivery of housing and other development needs. (See sub-section 6.3)

J. National and Local Flood Risk Management Strategies (England)

Both water-only companies and water and sewerage companies are risk management authorities (RMAs) for the purpose of the Flood and Water Management Act 2010. RMAs in England have a duty to act in a manner which is consistent with the National Flood and Coastal Erosion Risk Management (FCERM) Strategy when carrying out their FCERM functions and have regard to the FCERM Strategy's objectives when carrying out their other functions. The strategy identifies nature-based solutions as a way to deliver more integrated water management. This helps with both flood and drought resilience. RMAs in Wales need to ensure they are consistent with the National Strategy for Flood and Coastal Erosion Risk Management in Wales.

Lead Local Flood Authorities produce local flood risk management strategies which set out objectives and measures for the management of floods risk from surface water, groundwater, and ordinary watercourses.

Bespoke FCERM plans and strategies can also be produced by the Environment Agency and Lead Local Flood Authorities. These can

identify opportunities for catchment-based approaches, nature-based solutions and multi-benefits, including water resources.

K. Local Nature Recovery Strategies (England)

The Environment Act 2021 introduced Local Nature Recovery Strategies for areas in England. Public authorities will have duties in relation to these. Your WRMP should support recovery and enhancement of biodiversity according to opportunities and priorities identified in strategy areas.

L. Nature recovery action plan (Wales)

The Nature recovery action plan for Wales sets out the national biodiversity strategy and action plan for Wales. Your WRMP should show how you have considered the biodiversity and resilience of ecosystems duty.

M. Local well-being plan (Wales)

Public Services Boards improve joint working across all public services in each local authority area in Wales. Each Public Service Board is required to carry out a well-being assessment and publish a local well-being plan that aligns with the Well-being of Future Generations (Wales) Act. The plan outlines the priorities and actions of Public Services Boards (PSBs) in Wales to enhance the economic, social, cultural, and environmental well-being of local areas. Your WRMP (where it affects Wales) should consider any relevant objectives set out in the local well-being plan.

1.7 Further guidance

This guideline is supported by a number of manuals and technical guidance. These are referred to throughout the guideline and include manuals produced by UK Water Industry Research (UKWIR) and supplementary guidance notes produced by the Environment Agency and Natural Resources Wales. They are listed in the annex to this guideline, which also identifies whether they apply to companies in

Wales and are available on request from the Environment Agency and Natural Resources Wales.

Email water-company-plan@environment-agency.gov.uk to request copies of the supplementary guidance.

Email WREPP@naturalresourceswales.gov.uk to request copies of any supplementary guidance specific to Wales.

Section 2 – National, regional and local planning

When you develop your plan, you should consider how it will contribute to national and regional water resources needs where applicable, while delivering local benefits. Your plan should take account of the following 3 scales of planning.

2.1 National framework (applicable to resource zones in England)

The national framework sets out the indicative scale of challenge for water resources in England over the next generation.

You are expected to work in regional groups to meet the challenge and together develop a cohesive set of plans. Section 11 of the National Framework for Water Resources summarises the expectations of regional groups and stakeholders when undertaking regional planning. This is further detailed in Appendix A of the National Framework for Water Resources.

2.2 Regional planning

Regional plans set out, at a strategic level, how the supply of water for people, business, industry, agriculture, navigation and the environment will be managed in the region. The regional plan should aim for resilient water supplies for all users for 25 years or more, while protecting and enhancing the environment. Regional plans should identify the best options to meet the challenges we face, delivering best value for the environment and society.

Regional planning should enable a collaborative approach that ensures an improved environment and seeks to secure future water supplies across all sectors, while allowing flexibility for different regional pressures.

This guideline contains the best practice technical methods for producing WRMPs and regional plans. Regional groups should follow this guidance or justify why this is not appropriate.

Regional groups and water companies should work with regulators and others to agree a long-term destination for environmental improvement and environmentally sustainable abstraction for both public and non-public water supply sources. The regional plan should show how the environmental destination, specific to England and/or Wales requirements, will be achieved. We expect regional plans to seek to:

- ensure environmentally sustainable abstraction at the catchment level
- improve environmental resilience through catchment-specific options
- facilitate collaboration among abstractors
- strengthen multi-sector planning and resilience
- improve coordination across sectors
- identify multi-sector solutions
- actively seek options that include wider benefits, such as resilience to floods and droughts, environmental restoration and recovery, improvements to water quality, and resilience improvements to drainage and wastewater systems

- continue alignment with water resources planning guideline to ensure strategic compatibility across regions and water companies

Where relevant, your WRMP must reflect regional planning work unless there is clear justification for not doing so. Your WRMP should explain how you have reflected regional planning outputs, including processes to identify, assess and select pan-company and pan-regional strategic supply options. You should present how this has informed the selection of your preferred programme.

It is expected that the regional groups will undertake their planning at varying levels of detail, in part due to the differing challenges faced by each regional group. For this reason, it is not possible for this guideline to prescribe exactly how regional planning outputs should inform your WRMP.

You should clearly explain how regional planning has informed each stage of your development of your WRMP (where applicable). As regional and company plans are developed in parallel, you should address any differences and inconsistencies throughout the process. You should describe the process for reconciling and refining your plans and you should describe the revisions needed.

There can be some legitimate reasons where your plan does not reflect relevant regional planning. These reasons include but are not limited to:

- further detail or refinement at a WRMP level, which was not undertaken at a regional level given the strategic nature of the regional plan
- identifying a better option at WRMP level, which does not affect the delivery of a regional plan
- minor additions or variation

You should provide a clear justification for any differences between the preferred programme in the regional plan and your preferred programme in your WRMP. This is so that they can be understood by government, regulators, customers and stakeholders.

A best value programme may differ depending on the geographical scale such as resource zone, company level and, where applicable, regional level. You should consider:

- how costs and performance are distributed between customers. This should also be between different companies at a regional plan level.
- how your solutions may differ (depending on the scale used)

You should explain your preferred plan programme in the context of these scales and impacted customers or companies.

Regional plans in England

Your WRMP should reflect the relevant regional water resources plans. Input into regional planning is an expectation for all water companies in England.

Regional plans in Wales

There is no current requirement from Welsh Government for regional plans to be produced in Wales.

If you are a water company in Wales and have a resource zone within England, you should also input directly into the relevant regional water resources planning.

Where you have a resource zone bordering England and Wales, which is important for cross-border shared supplies, you may also include these in the relevant regional plan.

You should discuss which resource zones should be used to inform a regional plan with the relevant regional group, regulators and Welsh Government. With regards to these resource zones:

- your WRMP should reflect the regional plan
- you should refer to the Welsh Government guiding principles. You must consider your obligations under the relevant Welsh legislation (where applicable).

2.3 Local planning

In compiling your plan you should actively engage with customers and stakeholders at a local or catchment level. You should consider any local pressures and local solutions. For example, local housing growth, or local concern around a particular stretch of river. You should engage with river basin management planning catchment groups and priority catchment groups such as Water Abstractor Groups (WAGs).

In England you should consider opportunities and priorities set out in Local Nature Recovery Strategies (Part 6 of Environment Act 2021) which embed nature recovery into your planning processes. A map of local nature recovery strategy (LNRS) areas and responsible authorities is available here: www.gov.uk/government/publications/local-nature-recovery-strategies-areas-and-responsible-authorities

www.gov.uk/government/publications/local-nature-recovery-strategies-areas-and-responsible-authorities

In Wales you should consider the Nature recovery action plan on the Welsh Government website and further details are available on the Wales Biodiversity Partnership website. You also should consider the following:

- State of Natural Resources report
- Area statements
- Well-being plans
- Protected areas of land and seas
- National Nature Reserves (NNRs) declarations
- Sites of Special Scientific Interest (SSSI)

Section 3 – How to form and maintain a WRMP

This section explains what steps you need to take to develop and publish your water resources management plan (WRMP or the plan). It starts from early engagement with regulators and customers, through to publishing your final plan. Once published, you must report on your plan annually.

3.1 Legal requirements

When you prepare and publish a WRMP, you must comply with the requirements of the Water Industry Act 1991, sections 37A to 37D and any secondary legislation made under those provisions. This includes the Water Resources Management Plan Regulations 2007 (2007 regulations), and any ministerial directions given under this legislation.

You must take account of the following legislation as relevant to your plan (this is not an exhaustive list):

- Water Industry Act 1991
- Water Resources Act 1991
- Environment Act 1995
- Water Resources Management Plan Regulations 2007 (2007 regulations)
- Environment Act 2021
- Environmental Assessment of Plans and Programmes Regulations 2004
- Flood and Water Management Act 2010
- Conservation of Habitats and Species Regulations 2017 following legislation (as amended)
- Water Environment (Water Framework Directive) (England and Wales) Regulations 2017, referred to in this guideline as ‘WFD regulations 2017’
- Water Supply (Water Quality) Regulations 2016
- Eels (England and Wales) Regulations 2009
- Wildlife and Countryside Act 1981
- Countryside and Rights of Way Act 2000
- Natural Environment and Rural Communities Act 2006

- Invasive Alien Species (Enforcement and Permitting) Order 2019
- Well-being and Future Generations (Wales) Act 2015
- Environment (Wales) Act 2016
- Marine and Coastal Access Act (2009)

You must consider whether you need to carry out a SEA and HRA for your plan.

3.2 Regional plan process

The expectations of the regional groups can be found in Appendix A of the national framework.

Following the value of the reconciliation process during the last regional plans and WRMPs, we expect this to continue. Regional groups are expected to undertake an initial reconciliation process in Autumn 2026 to ensure strategic options alignment, with a secondary reconciliation process expected in Autumn 2027, where required. Table 1 sets out how the regional plan and WRMP timetable fit together.

Table 1: Regional plans and WRMP timetables[2]

Regional plans dates	WRMP dates	Outcome
Autumn 2025 – Autumn 2026 – Stakeholder engagement on regional plans;	Autumn 2025 – December 2027– pre-consultation with regulators and stakeholders on WRMP29	Engagement on the regional plan will help inform you of stakeholder views on strategic options and policies ahead of WRMP consultation.

[2] These timings are indicative until the Secretary of State and Welsh Minister provides directions setting out timescales

Regional plans dates	WRMP dates	Outcome
collation of resource positions for reconciliation		Pre-consultation with regulators and other stakeholders on WRMP is an early chance to seek feedback on any approaches and options identified.
Autumn 2026 – Regional reconciliation phase 1; Autumn 2027 – Regional reconciliation phase 2	May 2027 – publication of Resource position statement by water companies February 2028 – Draft WRMP29 submissions for March – May consultation	The reconciliation of strategic cross-company and cross-regional options will be important to inform the options availability and feasible which we would expect to be reflected in the water company resource position statements. A further regional reconciliation process will then enable further options updates to be appropriately reconciled for the draft WRMP29 plans. Regional reconciliation 1 is expected to be based upon AR26 data recognising that revised data for WRMP29 may not be available. This first point is primarily intended to show alignment or opportunity in the resource position statement(s) between neighbouring companies or regions. Regional reconciliation 2, being much closer to the publication date for the draft WRMP29, is expected to focus on common option selection to solve key scenarios and the opportunities for pan-regional resource sharing / alignment.

Regional plans dates	WRMP dates	Outcome
Summer 2029 onwards – Final regional plans published	Winter 2028 – Spring 2029 – Final WRMPs published	To ensure clear and joined up plans, the final regional plans will align with the WRMPs (or have clear justification for any differences). We expect the final regional plans to be finalised after the WRMP29 plans.

3.3 Pre-consultation

You should engage at an early stage with your Board, regulators, customers and interested parties, especially if your plan is likely to be complex or include significant change. This reduces the risk of issues being identified at a later stage. You should discuss:

- your plan in the context of your previous WRMP and business plan
- your progress with the delivery of your plan
- whether you might need to move to a different adaptive pathway. Alternatively, if you do not have an adaptive plan, whether it is something you are considering for you new plan

This process will provide an early opportunity to ensure potential strategic solutions are feasible and being consistently represented. You should actively engage with regulators through the regional planning process. For regional planning, notably, the regional reconciliation process will be an important step to ensure cross-company and cross-regional strategic options being identified and taken forward are appropriate and consistent. You should complete the reconciliation step before you publish your water company resource position statements (see Section 3.3.3). This will require

initial high level supply demand balance information to inform the needs and solutions being reconciled.

You should continue engagement through the development of your plan (including highlighting significant changes) until you submit your draft plan. There should be no surprises to regulators and stakeholders when you publish your plan. A good pre-consultation should lead to less challenge of a draft plan as it should help identify and resolve concerns early in the process. This should help avoid delays in the later stages of the process which can have implications for your business plan and assessment at the next price review.

Customer and stakeholder engagement on your plan should, where possible, align with customer engagement on your business plan. This should mean that customer preferences identified as part of the WRMP process are reflected in your business plan.

3.3.1 Statutory consultees

You must carry out pre-consultation discussions with the following statutory consultees:

- the Environment Agency and the Secretary of State if your plan will affect England
- Natural Resources Wales and the Welsh Ministers if your plan will affect Wales
- Ofwat
- any licensed water supplier that supplies water to premises in your area through your supply system
- Cadw (in relation to SEA in Wales)

You should also engage as early as possible with relevant SEA and HRA statutory consultees where appropriate.

If your possible options affect a designated site in England or Wales you must contact Natural England or Natural Resources Wales as applicable. Designated sites include:

- Special Areas of Conservation (SACs, including candidate areas)
- Special Protection Areas (SPAs, including potential areas)

- Ramsar sites (including proposed sites)
- Sites of Special Scientific Interest (SSSIs)
- National Nature Reserves
- Marine Conservation Zones
- landscapes including world heritage sites, European Landscape Convention, National Parks, Areas of Outstanding Natural Beauty

Other locally designated sites and their species (e.g. local nature reserves and local wildlife sites) require specific consideration. Contact your local councils or wildlife trusts from more information.

3.3.2 Non-statutory consultees

You should also carry out pre-consultation discussions with other consultees. These should include as a minimum:

- regional groups (where applicable)
- any water supplier affected by your supply system
- any water companies you have bulk supply or shared resource agreements with
- neighbouring water companies
- local catchment partnerships
- internal drainage boards
- Wales Water Management Forum (Wales)
- any other groups your plan is likely to affect
- any potential water supplier, company or third party you may wish to trade with
- CCW (formerly Consumer Council for Water)
- Public Services Boards (Wales) and other public service providers
- water retailers for business
- Drinking Water Inspectorate (DWI)
- RAPID
- Risk Management Authorities
- National Infrastructure and Service Transformation Authority (NISA)
- Forestry Commission (where applicable in England)

- National Infrastructure Commission Wales
- local nature partnerships (where applicable)
- water efficiency groups
- local planning authorities
- Natural England (where applicable in England)
- any new appointments and variations[3] (NAVs) in your area

3.3.3 Enhanced pre-consultation with regulators

You should undertake an enhanced pre-consultation with the Environment Agency and/or Natural Resources Wales and Ofwat. You should discuss your plan's ambition, methods and the approaches that you intend to take while developing your plan.

As a minimum you should cover the following areas in your early discussions with regulators:

- progress with your WRMP24 delivery, any significant changes you expect, and how these will affect your plan
- the resource zones on which your plan will be based
- problem characterisation assessment
- your planned approach to assessing climate change
- your indicative supply-demand balance at a resource zone level
- your approach to adaptive planning (where appropriate)
- the feasible options you are including in your plan
- your proposed approach to the options appraisal process and development of you best value plan
- how your plan will reflect outcomes of the regional planning reconciliation process and the options within your plan that link across the region
- any particular risks or issues you identify in your plan

[3] NAV appointments are made under the Water Industry Act 1991 (Sections 7 and 8) and enable Ofwat to replace the existing water supply and/or sewerage undertaker for another for a specific area. NAVs undertake much of the same duties and responsibilities as the previous statutory company, including the requirement to produce WRMPs.

Regulators will review this information and provide an initial view. They will highlight the areas they wish to work with you on as you compile your plan. Regulators will not sign off any parts of your approach in advance of the consultation. This is because they need to assess the plan as a whole and offer impartial advice to government.

As part of the enhanced pre-consultation process you should produce a **Resource Position Statement**. This should be published on your website no later than the 10 May 2027. The resource position statement should also draw on the information set out in the regional reconciliation 1 process, and subsequently feed into the regional reconciliation 2.

The resource position statement should reflect the pre-consultation discussions you have had with regulators and set out the following:

- the size of the baseline supply demand problem: including a high-level supply demand balance in a table format. This should be at both a water resource zone and company level.
- the main drivers affecting your resource position
- your latest understanding of the Water Industry National Environment Programme (WINEP), National Environment Programme (NEP) and Environmental Destination position for your water resource zone(s).
- a list of options (unconstrained down to feasible) identified through your options appraisal process to address a deficit. This should include any strategic resource options relevant to your plan (note this may be provided earlier – See Section 8.2)
- a statement on your progress with WRMP24 option delivery and whether there are any delays.
- a statement on your adaptive planning position and whether you have moved or need to move to an adaptive pathway.

The resource position statement should be no more than 20 pages in length, plus any data tables setting out the supply demand balance and options information. Given this expectation of water companies, a published regional resource position statement is not formally expected, but regional groups could choose to produce one. Your water company resource positions should be able to feed into any regional resource position statements and reconciliation processes, and we expect efforts to be made to avoid duplication. Following

publication of the resource position statements, they will be reviewed by the regulators and a formal, timely response will be provided to companies. We will also produce a national summary of the resource position statements.

It is understood that the supply-demand balance may change prior to the submission of your WRMP. Where possible you should highlight any areas of large potential change or uncertainty in your resource position statement.

3.4 Write a draft plan

You should use this guideline to write your draft plan, taking into account any feedback from your pre-consultation. Your WRMP should reflect any relevant regional plan as described in Section 2. You must also follow legislation including any directions you receive from the Secretary of State or the Welsh Ministers. They will issue directions ahead of you submitting your draft plan. They will include the date by which you must submit your draft plan and any other statutory requirements. You may receive further directions during the process.

Your plan should have an easy-to-read non-technical summary that clearly sets out your planning problem and how you propose to solve it. It should also highlight specific questions you would like responses to during the consultation. It should also summarise the progress since, and differences from, your previous plan. Your non-technical summary should show how your WRMP and other linked plans such as your drought plan, regional plan (if applicable) and your business plan fit together.

Your non-technical summary should sit alongside a more detailed, but still clearly understandable, technical document. Regulators and interested parties need to understand the options you have considered and the decisions you have made. You should provide supporting information in appendices and also complete the water resources planning tables (WRMP tables). You should publish these in full at the same time as your main WRMP. When writing your plan,

you should also consider the reporting requirements for completing the stages (if applicable) of the SEA and HRA.

3.5 Send your draft plan

You must send your draft plan to the Ministers as required. This includes any supporting information and WRMP tables. If your company area is wholly or mainly in:

- England – you must send your draft plan, statement of response to your consultation and final plan to the Secretary of State. If your plan also affects sites in Wales, you must also send it to the Welsh Ministers
- Wales – you must send your draft and final plan to the Welsh Ministers. If your plan also affects sites in England, you must also send it to the Secretary of State. You must ensure your submitted plan and statement of response complies with the requirements of the Welsh Language (Wales) Measure 2011

Defra will provide you with instructions about sending electronic copies of your plan via a secure transfer site. If your plan affects sites in Wales, the Welsh Government will provide separate instructions for submitting electronic copies of your plan.

When you submit your draft plan to the Secretary of State or the Welsh Ministers for agreement to publish it for consultation, you must submit a statement from your security manager. This must certify that the plan has been reviewed and that it does not contain any information that would compromise national security interests. You must highlight the information you propose to redact or edit out in the published version, so that the Secretary of State or the Welsh Ministers may confirm whether it can be removed on grounds of national security.

In this statement you must also say whether the plan contains any information that may be commercially confidential. If you believe a draft plan should not be published because it contains commercially sensitive information, you should inform the Secretary of State or the Welsh Ministers as soon as possible.

You should also provide your assurance statement and supporting statement to the Secretary of State and the Welsh Ministers alongside your draft plan. Sub-section 1.5 describes the requirements of your assurance statement.

3.6 Publish, distribute and consult on your draft plan

You must wait to hear from the Secretary of State or the Welsh Ministers before publishing your draft plan for consultation. Once you have been instructed to publish, you must adhere to Water Industry Act 1991, the 2007 regulations and directions with regards to the consultation and making draft plans available. You must share your draft plan with all consultees listed in the 2007 regulations. If you are submitting your plan to an agreed government secure transfer site, ensure that all relevant statutory consultees have been given access.

You should also share your draft plan with all other organisations involved in the pre-consultation discussions. You should publish your assurance statement and supporting statement alongside your draft plan.

You must also publish a statement with the draft plan that:

- specifies whether you have left out any commercially confidential information
- tells people how they can make representations on the draft plan to the Secretary of State or the Welsh Ministers before the end of the consultation period

You should also consider:

- offering to explain the plan to established groups, known interested parties or companies within your area
- including an engaging summary of your plan which clearly sets out your proposals to your customers in plain language
- holding virtual events, road shows or exhibitions

- conducting questionnaires to gain views on your proposals, using phone or in person surveys or other recognised survey techniques
- using social media to highlight the consultation
- innovative web-based engagement
- joint communications with other companies

These are only suggestions and the approach you take will depend on your circumstances and the issues you are facing.

Where you are proposing joint schemes, you should ensure that your messages and narrative are consistent with the other proposers and consider holding joint stakeholder events.

You have 26 weeks (unless specified differently in any new direction) to consult on your draft plan and produce a statement of response. It is your responsibility to decide how long you will consult for. Previously, the consultation period has been around 12 weeks. However, this will depend on your situation. You should allow enough time:

- for consultees to make comments on the plan – allow more time for more complex draft plans
- to produce a statement of response based on the comments you receive

You must state in your consultation that all responses should be sent to the Secretary of State if you are in England, or to the Welsh Ministers if you are in Wales, using the following email or postal addresses.

Defra
Water Resources Management Plan Water Services
Department for Environment, Food and Rural Affairs
Seacole 1st Floor
2 Marsham Street
London, SW1P 4DF

Email: water.resources@defra.gov.uk

Welsh Government
Water Branch
Welsh Government
Cathays Park
Cardiff, CF10 3NQ

Email: waterEPC@gov.wales

Query process

Regulators expect to operate a query process during the draft plan consultation stage. The query process purpose is to allow regulators to seek clarification on aspects of your draft plans, including where in draft plans we can find relevant information. If you receive a query from a statutory consultee you should respond with supporting evidence where required within 3 working days of the request. A longer response time can be requested if you can justify this. Regulators may ask for a meeting to give you an opportunity to further provide clarification to your initial response.

Depending on commercial and security considerations, the query responses should be published on your website (within a week of responding) to support engagement on your draft plan. You should also include the queries and responses as part of your statement of response.

3.7 Publish a statement of response

You must publish a statement of response after completing the public consultation. You must publish this within 26 weeks of publishing your draft plan for consultation (unless specified differently in any new ministerial direction).

Your statement of response must:

- show that you have considered the representations you have received

- set out the changes you have made to the draft plan as a result of the representations and your reasons for making them – either set as amended text or in a revised draft plan
- say if you have not made changes as a result of representations and explain why
- describe anything that has changed during the consultation period, for example, the conclusion of any projects you had undertaken or external influences such as new sustainability changes
- clearly set out any schemes being accelerated through transitional funding in AMP8, setting out primary benefits to supply demand balance, as well as additional benefits (including resilience and multi benefits) this acceleration will have.

You should decide whether the statement of response alone allows regulators, your customers and stakeholders to understand clearly and easily the changes you have made. If it does not, you must publish a revised draft plan alongside it.

You will need to assess whether any changes in the WRMP will require changes to other plans, such as your drought plan, regional plan or business plan.

You must publish the statement of response in line with the Water Industry Act 1991, the 2007 regulations and the directions. You must inform everyone who responded to your draft plan that you have published it.

Once completed, you must send your statement of response to the Secretary of State or the Welsh Ministers. If you have a revised draft WRMP or have been requested to provide further information, you should provide it alongside your statement of response. You must notify the Secretary of State or the Welsh Ministers of any further information that may be commercially confidential or which has been, or you consider should be, removed for reasons of national security.

The Secretary of State will send your statement of response and revised draft plan (with any revised supporting information and WRMP Tables) to the Environment Agency and Ofwat for review. If the statement of response and revised plan affects Wales, this will also be shared with Welsh Ministers and Natural Resources Wales.

The Welsh Ministers will send it to Natural Resources Wales and Ofwat for review or ask you to send copies of this information to them directly. If the statement of response and revised plan affects England, this will also be shared with Secretary of State and Environment Agency. The plan will be shared with other regulators as appropriate.

3.8 Publish your final plan

The Secretary of State or the Welsh Ministers will review your draft plan or revised draft plan, the representations made and your statement of response. They will also review technical advice from the regulators and decide whether your plan can be published. They may ask you to complete further work, provide further information or have further discussions with regulators before you can publish your plan. If so, the Secretary of State or the Welsh Ministers will send you the necessary instructions.

If your plan has unresolved issues or significant public interest there may need to be a public hearing, inquiry or examination in public. The Secretary of State or the Welsh Ministers will decide if this step is needed and will inform you.

You must not publish your final plan until you have received permission from the Secretary of State or the Welsh Ministers. Before publishing your final plan you must:

- follow any directions from the Secretary of State or the Welsh Ministers
- undertake a final check of your plan to ensure it is ready to publish

You should ensure your plan still reflects any applicable regional plan, as described in Section 2. Wherever possible it should reflect any changes that have been made to the regional plan as a result of changes from other companies' draft plan consultations.

You must publish the final plan as set out in the Water Industry Act 1991 and the 2007 regulations and directions. This must be

completed within the set timescales issued or you may face enforcement action.

You should also publish your WRMP Tables in an accessible format (to be decided on by regulators), alongside your plan. You may propose redactions in your tables for commercial sensitivity reasons. This should also be carried out retrospectively for WRMP24 as soon as possible where these are not already published.

You should notify everyone who responded to your consultation and bring it to the attention of anyone else that your plan is likely to affect.

3.9 Review and maintain your final plan

You must maintain your plan. You should treat it as a live document. You should implement your plan, monitor its progress, and take action if required. Your final plan should show how the interventions within it will be translated into delivery plans and monitored during the relevant asset management period. You must review your published plan every year and report to the Secretary of State or the Welsh Ministers. This should be on or before the anniversary of publication of the final WRMP. You should follow the latest Annual Review guidance.

If through the annual review you demonstrate or indicate a ‘material change of circumstance’ (as described in the Water Industry Act 1991 Section 37A(6)) you must prepare a revised draft. A new revised plan must follow the procedures for preparing and publishing a plan as set out in the Water Industry Act 1991 Section 37B ‘Water resources management plans: publication and representations’.

The definition of a material change of circumstances is not given as it relates to the final plan. The following lists possible examples, but you should not consider them definitive:

- a significant change in level of service from what was in the published plan
- new or significant changes to the measures that were identified in the published plan and are likely to have significant public or environmental interest

- a significant change in costs
- a change that could cause significant adverse effects on the environment

As a first step you should consult with the Environment Agency and, or Natural Resources Wales on any substantial changes that you wish to make to your plan. You should also consult with Ofwat, particularly in relation to costs or delivery. You will need to inform Defra or the Welsh Government if there is a material change of circumstances, within 6 months.

The Environment Agency and/or Natural Resources Wales will provide technical advice to the relative governments.

Section 4 – Basis of planning

A WRMP must set out how you intend to maintain the balance between supply and demand for water during the planning period. The planning period should be appropriate to the risks your company faces, but must cover at least the statutory minimum of 25 years. It may be appropriate, depending on the challenges and risks in the relevant regional plans, for you to plan for the next 50 years. This is to ensure your plan identifies the right solutions to meet future pressures. WRMPs must show how you will manage and develop water resources so that you meet your obligations in relation to supplying water and protecting the environment.

Your plan should deliver value for money for your customers. It should reflect wider societal values and government expectations.

4.1 Developing your plan

When producing your WRMP, you should transparently:

- consider the continuity of your plan with your previous WRMP and business plan. Where no changes are required you should use the relevant 5-year statutory period from previous long-term plans, unless directed otherwise. Where there are differences between previous plans you should highlight them and explain the reasons. You should include a section in your plan that explains how your backwards look (including previous planned interventions and delivery) has influenced your plan.
- if your previous plan was an adaptive plan, you should explain your new plan in the context of your previous plan. For example, whether you are following your preferred pathway or moving to a different adaptive pathway. If you are changing pathways, you should explain why this is the case. If there are significant changes which mean your previous adaptive plan is not appropriate, you should explain this.
- forecast how much water, on a sustainable basis, you have available to supply your customers each year over your chosen planning period, for a minimum of 25 years (see Section 5)
- forecast how much demand there will be for water each year over the same period (see Section 6)
- allow for uncertainty in your calculations and forecasts (see Section 7)
- compare supply with demand (including uncertainty) and see if there is a surplus (more supply than demand) or a deficit (less supply than demand). If there is a deficit you must identify options to increase supply or reduce demand so that you achieve an environmentally sustainable secure supply of water throughout the planning period (see Section 8).
- if you do not have a deficit, consider whether you can identify options to supply other water companies or regional groups, other sectors and to ensure efficient use of water (see Section 8)
- produce a best value plan (see Sections 9 and 10)
- explain and justify the supply-demand balance starting position compared to the position in your previous WRMP, including justification for any significant difference or need to re-baseline from previous plans. This also includes switching to alternative pathways.

- consider the risks to the supply-demand balance that you face and future uncertainties across the planning period. The risks that you identify in your plan, and where appropriate mitigate, should be set in the context of your overall company resilience and risk register
- provide all of this information at a water resource zone level and summarise it at a water company level. You should use specialist water resources modelling software for system modelling all water resource zones. Given advances in planning requirements, and accessibility of specialist modelling software, this is expected for both conjunctive use and simpler water resource zones. If you choose to use a different approach for simpler zones, you should set out in your problem characterisation and explanation of subsequent chosen methods why this approach still allows you to undertake the same assessments of resilience for the zone as appropriate.

Your plan should demonstrate that you have:

- complied with any statutory requirements (Section 3.1) and had regard to the government policy
- an efficient, environmentally sustainable, secure supply of water, with no final planning deficits, for each water resource zone over your chosen planning period, which must be a minimum of 25 years. Where there are significant challenges, a longer timescale should be considered

4.1.1 High-level considerations

You should take account of these high-level considerations in your plan.

England and Wales

You should:

- include your destination for improving the environment, suitably evidenced and which reflects the relevant regional plan (where applicable). In addition, you can plan for a local improvement that is not relevant at a regional scale. You should present

evidence for your plan where this is the case. This should be in addition to any approaches or sustainability changes set out by the Environment Agency, Natural England or Natural Resources Wales

- fulfil your WFD regulations obligations. You must ensure your plan does not potentially cause deterioration or is preventing a water body or protected area from achieving the environmental objectives in the RBMPs, as well as not preventing a water body from reaching ‘good’ or ‘good potential’ status in the future
- ensure that your plan meets the requirements of the Conservation of Habitats and Species Regulations 2017 (Habitats Regulations) and carry out an HRA, including an appropriate assessment, if your preferred plan would be likely to have a significant effect on the designated features of a European site (either alone or in combination with other plans or projects)
- ensure that any previous HRA included in your preferred plan remains current and covers any material changes in circumstance. Any HRA needs to be available for review and assessment by Natural England and, or Natural Resources Wales and other relevant parties. You should explain how you have considered advice from these bodies. For further information on HRA see Section 9.4.3
- ensure that your plan meets the requirements of the Environmental Assessment of Plans and Programmes Regulations 2004 (Strategic Environmental Assessment). All ‘stages’ of SEA are likely to be required if your plan is likely to result in significant impacts on the environment
- .consider how your primary duty to supply wholesome water is related to your WRMP, especially in relation to resilience and contingency planning. This should include the requirement that drinking water quality is not allowed to deteriorate over time
- show the impact of your plan on bills, and any potential affordability concerns resulting from these bill impacts (and any others likely for price review 2029 (PR29)), including any measures to mitigate these
- consider intergenerational and distributional impacts in your plan
- consider how your plan is compatible with Defra’s or Welsh Government’s long-term ambitions for the environment and sustainable management of natural resources

- ensure that you consider a twin-track approach which considers demand management options alongside any supply options
- reflect the regional plan, where applicable, unless there is clear justification for not doing so (see Section 2)
- if you are in surplus, or have additional sources available, you should provide evidence that you have worked with your neighbouring water companies and regional groups to identify whether this water is available for trading. You should also consider if you have options to further facilitate inter-company trading
- take a catchment-based approach, including engagement across sectors to develop options that provide broader benefits to society
- consider what your company can do in its WRMP to address the climate emergency. In particular how your plan will contribute to achieving net zero in line with your sector, company, and government specific commitments
- consider nature-based solutions (NBS) where practicable. For England you should align with forthcoming Environment Agency guidance on Nature-Based Solutions for Sustainable Water Resources. For Wales – discuss any proposals for NBS with Natural Resources Wales.
- consider improving water supply resilience to pressures such as floods by using the latest flood risk information

England

You should:

- consider how your plan contributes to solving the challenges set out in the national framework for England, published in June 2025
- ensure your plan contributes to nature recovery, enhances biodiversity, delivers environmental net gain and uses proportionate natural capital approaches and evidence. See supplementary guidance ‘Environment and society in decision-making (England)’
- consider your duty to further the general biodiversity objective under Section 40 of the Natural Environment and Rural

Communities Act 2006 and the list of species and habitats of principal importance set out in Section 41 of the Act

- consider how your plan will contribute to nature recovery and the establishment of Nature Recovery Networks incorporating opportunities and priorities identified in Local Nature Recovery Strategy areas

Wales

If you supply customers in Wales or your plan affects sites in Wales you must:

- consider the biodiversity and resilience of ecosystems duty (Section 6) and biodiversity lists (Section 7) under the Environment (Wales) Act 2016
- consider how your plan could contribute to the Well-being of Future Generations (Wales) Act 2015,

You should:

- work with the Welsh Government and Natural Resources Wales to understand the implications of the Environment (Wales) Act and sustainable management of natural resources principles for the development of Regional Plans and WRMPs that affect Wales
- ensure your plan considers supplementary guidance 'Environment and society in decision-making (Wales)' and 'Environmental destination for Wales'
- take into account Welsh Government's guiding principles regarding water trading and commence early consultation with Natural Resources Wales, the Welsh Ministers and other relevant stakeholders in Wales
- consider local multi-sector needs and include within your supply-demand balance if you are directly supplying them or if they have the ability to switch your supply during peak periods. You should consider your policies for supporting other water users, such as those who are not connected to your water supply network (for example private water supplies) in circumstances where they are seeking 'alternative water supplies' such as in a drought

4.2 New appointments and variations

If you are a new appointment and variation [4] (NAV) you must produce a WRMP that demonstrates that all the statutory requirements have been met.

Specific guidance for NAVs is provided here.

The level of detail within your plan may be relative to the size of your customer base and on how you obtain your water supplies. If you operate under bulk supply agreements with other water undertakers, some parts of your plan (supply) may be proportionate to reflect this. You should set out how you will:

- engage with the supplier and your customers to continue to maintain water supplies
- feed into the development of your supplier's planned levels of service. Your level of service should reflect the incumbent's level of service.
- take account of donor or neighbouring undertaker's data and information when preparing your plan
- where appropriate, show how you have taken account of household water usage levels in the relevant Local Authority plan in alignment with Building Regulations Part G requirements.

You should clearly present and explain any differences in planned drought actions in your plan.

You should discuss the requirements for your plan with the Environment Agency or Natural Resources Wales at an early stage in the process.

NAVs and water companies should ensure that their bulk supply volumes and forecasts are consistent. These volumes should reflect the contractual volume once the site is fully built and occupied. Before this the NAV and water company should agree a realistic, staggered

[4] NAV appointments are made under the Water Industry Act 1991 (Sections 7 and 8) and enable Ofwat to replace the existing water supply and/or sewerage undertaker for another for a specific area. NAVs undertake much of the same duties and responsibilities as the previous statutory company, including the requirement to produce WRMPs.

profile. The NAV and incumbent should ensure that the contracted supply amount is realistic and appropriate. This contract should be reviewed at appropriate points, for example after the site is fully developed.

4.3 Water supply and sewerage licences

Retailers with water supply and sewerage licences (WSSLs) can supply non-household customers using public water supply networks. Retailers with a WSSL are not required to prepare their own plans. However, if they are operating in your area, under terms of their special licence conditions, they must provide you with any relevant information you request to inform your plans. You should work with any retailers operating in your area to plan and implement any demand management proposals relevant to non-household customers in your preferred programme.

In Wales

Retailers with WSSLs can only apply for a restricted retail authorisation that authorises the holder to use the supply system of an appointed water company to supply the eligible premises of its customers only. Those retailers eligible to supply non-household customers under restricted retail authorisation must also provide you with any relevant information for your plans. They should also work with you to deliver any demand management proposals relevant to these eligible customers.

4.4 Defining a water resource zone

Your plan should be built up of assessments undertaken at a water resource zone level. A water resource zone describes an area within which the sources of water and distribution of water to meet demand is largely self-contained (apart from any agreed bulk transfers). You may divide your supply area into one or more water resource zones.

You should define your water resource zones using the Environment Agency's latest guidance: Water resource zone integrity (2025). You should review your water resource zones in the context of the new, updated guidance and discuss the outcomes of this review with the regulators through the enhanced pre-consultation process.

Your customers in a resource zone should face the same risk of supply failure and the same level of service for demand restrictions. There will be limitations to achieving this due to the specific characteristics of a distribution network. Water within a water resource zone should be useable throughout your network and for your customers, in terms of water quality and hardness.

You should review whether future changes to your planned supply or demand would cause sub-zonal issues such as changing the timing, location or mode of zonal failure. If this is the case, you should consider sub-dividing the resource zone, improve the granularity of your water resource modelling, justify maintaining the current zonal area or consider options to improve address this sub-zonal issue.

You should provide your planned resource zone configuration and reasoning to the Environment Agency and/or Natural Resources Wales, Ofwat and the DWI during pre-consultation. If you need to combine or divide a resource zone during your planning period, you should discuss your approach with the Environment Agency or Natural Resources Wales.

4.5 Problem characterisation

You should understand the scale and complexity of your planning problem so you can select appropriate methods. You should use the problem characterisation step of UKWIR's Decision making process guidance to identify the scale and complexity of your planning problem and your vulnerability to various strategic issues, risks and uncertainties. You should use this information and UKWIR's Risk-based planning method to inform your choice of methods so they are proportional in terms of the effort, complexity and costs.

4.6 Drought vulnerability assessment

You should assess the water supply resilience of your current supply system to a range of droughts of differing severity and duration to understand what drought scenarios your supply system and resources are vulnerable to. You could test the system beyond the droughts available in your stochastic record with plausible events that test your system's specific vulnerabilities. If you do this you should use an approach that is best suited to the data you have available, and the modelling approaches you use to assess your resources. Such approaches could use drought libraries to build up specific rainfall deficit scenarios, or 'storylines' approaches to explore how your resources would have responded if a drought had continued for longer, started earlier or been more intense than those experienced in the historic and/or stochastic record.

The report 'Review of stochastic and other approaches in water resource planning' (Environment Agency, June 2025) identifies and recognises the limitations of stochastic assessments and sets out alternative approaches that can be used to complement the stochastic simulation methods used in water resource planning and test the supply systems in different ways. Alternatively, you could explore other available improvements to existing stochastic datasets and use these in drought vulnerability and uncertainty assessments.

You should also test your supply system against different demand scenarios to understand how increasing temperatures as a result of climate change may affect water supply resilience. The climate change scenarios used should align with that used to test your supply forecast. See Section 6.8 for more detail on climate changes impacts on demand.

You should use the results:

- to highlight any specific types of droughts your system is vulnerable to
- to consider how you can improve your resilience to droughts through your plan

4.7 Levels of resilience

The point of failure is defined as: implementing exceptional demand restrictions on customers, associated with emergency drought orders, such as standpipes.

Your plan must set out your planned level of service for this failure, as well as your actual level of service. Your plan should explain how your company defines this level of failure. Where companies share a water source that is managed through a formal agreement, you should develop a shared user understanding of the system's resilience, including rule curves and failure point. You should discuss with regulators (as relevant) your assumptions for resilience of the shared source and clarify any differences from other companies who share that source.

You should plan so that your system is resilient to a 0.2% annual chance of failure caused by drought, where failure is defined as implementing an emergency drought order. This is described as '1 in 500 year' level of resilience in this guideline. You should aim to achieve this level of resilience by 2039/40 (see Section 4 'Pathway to resilience' of the supplementary guidance 'Planning to be resilient to a 1 in 500 drought').

Your plan must also set your planned level of service for other customer restrictions over the planning period. You should explain the frequency that you plan to restrict water supplies through:

- temporary use bans for your household customers
- non-essential use bans for your non-household customers

These should be consistent with your drought plan and the assumptions in the regional plan, where relevant. Water companies are not financially penalised by Ofwat if they implement temporary use restrictions during a drought, when appropriately following their drought plan.

You should describe how you have engaged your customers and stakeholders, and how you have taken account of their views and requirements in developing your level of service.

If you are a NAV entirely supplied by bulk supplies, you should reflect your incumbent's levels of service.

You should determine an optimum timing for achieving this through the regional groups, considering the costs and benefits of alternative approaches. Your preferred timescale should consider:

- a balance of customer and environmental resilience
- the affordability of the programme (along with distributional impacts)
- deliverability

In delivering this level of resilience, you should consider how you can use innovative technology, such as smart networks, and planned operational interventions, to avoid the risk of developing large infrastructure which is used infrequently.

Some flexibility in the timescales for achieving a resilience of '1 in 500 year' is possible, where costs can be demonstrated to be exceptionally high locally in comparison to benefits (for example at a WRZ level) or where options may not be delivered fast enough to achieve this level of resilience. For example, at a water resource zone level. Where more flexibility is considered appropriate, you should present meeting a '1 in 500 year' by 2050 scenario. You should clearly identify the changes to your preferred programme and the level of service during this time. You should have a robust drought plan in place to protect those customers where this is the case.

In the short term, you could consider the increased use of drought management options to achieve the expected level of final plan resilience and/or consider reducing your level of service in the interim. Any supply-side drought management options that are included as short-term measures in your WRMP should be included in your drought plan and be 'application ready' drought permits or drought orders where applicable. More information about 'application ready' for sites in England or Wales is available in Environment Agency's or Natural Resources Wales' drought plan guideline.

Your increased resilience in the medium (2035-40) and longer term (2040 and beyond) should not rely on the increased use of drought measures to boost supplies. For example, by allowing additional abstraction during drought, where this is environmentally damaging.

You should plan, where appropriate, to use drought permits and orders less frequently in future, particularly in sensitive areas. You should use your understanding of the environmental risks associated with each permit in order to inform your planned frequency of use. You should also indicate, through the relevant tables, the likely order and frequency of use of your drought permits and drought orders. The assumptions should be consistent with your drought plan.

The supplementary guidance ‘Planning to be resilient to a 1 in 500 drought’ provides further guidance on planning for this level of resilience.

If you are a Welsh company planning a new transfer with an English company, you should plan to be resilient to any drought of an approximate return period of once in 500 years (0.2% per annum failure probability) by the implementation of the transfer, for those zones affected by those trading options. The principle should be that a new transfer from Wales should only be considered if the level of service in the Welsh resource zone (and any other zones in Wales affected by this) is equivalent or higher than the recipient resource zone.

4.8. Planning assumptions

Your plan should be based on a baseline scenario which considers the supply-demand balance when your supplies are low and your demand is high. This is your design scenario.

You should assess whether you need to include in your plan, a ‘dry year critical period’ scenario, or scenarios, to show how you will plan for a period of peak strain on your system. For example, high seasonal demand such as during a heatwave (for example 2018, 2020 and 2022), winter leakage, or when holiday-makers increase demand significantly during the summer. You could consider a critical period which includes a combination of pressures.

Where these types of peak strain have a much shorter duration or localised impact than is considered in a WRMP, you should address

them as part of your business plan, for example as part of a separate resilience scheme.

As a minimum you should provide a statement describing how you have assessed the need to plan for a ‘dry year critical period’ scenario, or scenarios, across your water resource zones. This should include testing and justifying your water resource integrity under such a scenario, as well as the water resource model representation. You should also identify where you have localised or shorter duration peaks and where you intend to address these in your business plan.

Your baseline water resources planning scenarios should include the following assumptions:

- leakage remaining static from the first year of your plan (2030/31) throughout your whole planning period (unless otherwise agreed by regulators)
- your forecast of customer consumption without any further water company intervention. You should assume you end your water efficiency programmes and metering programmes after what you have been funded to deliver in AMP8. This should include any relevant government interventions which are confirmed to be in place before the start of the planning period, for example legislation that has been laid before parliament. All other interventions (including government interventions yet to come into effect) should be reflected through options and, if selected, included in your final plan.
- existing transfers to the extent of the agreed bulk supply agreements or other arrangements
- include sustainability reductions (see sub-section 5.5 for further details)
- the benefits of non-supply-demand balance solutions such as capital maintenance
- risks to groundwater and surface water sources due to declining water quality. These should be captured in your baseline so that the measures to address them can be properly explored and set out in your plan. If there is significant uncertainty you can include this risk in headroom

- should not include the contributions from any demand or supply drought measures[5]
- benefits of schemes that have met one and, or more of the following conditions:
    - have planning permission to go ahead
    - a funding allowance made by Ofwat in a business plan or other funding mechanisms for the construction/delivery phase of the scheme. You should clearly show and explain how the benefit of schemes already in delivery (but not yet contributing deployable output) have been factored into your supply demand balance.
    - other necessary permissions such as abstraction licences or environmental permits

Consideration of strategic options in the baseline planning scenario is discussed further in Section 9.6.

You should discuss and agree these assumptions with the regulators at the pre-consultation stage.

You should include forecasts for non-potable water demand and supply as additional lines in the water resources planning tables where relevant. Full definitions of non-potable water supplies and non-potable water consumption are provided in the WRMP Table instructions.

You should report data at a water resource zone level using the water resources planning tables. Your preferred plan should address any deficits in your dry year annual average and critical period scenarios.

You should also present your assessment, for each resource zone, of the demand you might expect during a 1 in 500 year drought event calculated as an annual average.

You should base your design scenario on the following:

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[5] Supply drought measures are those that increase available supplies during a drought, for example drought permits, drought orders and re-commissioning sources. Demand-side measures would include temporary use bans and non-essential use bans.

Supply forecast

Your estimate of supplies which are available in a drought-caused failure[6] of a likelihood of once in 500 years or 0.2% in any one year. This should be consistent throughout the planning period, even if your planned levels of service vary. If this is not consistent, it should be explained and justified. See Section 5 and the supplementary guidance 'Planning to be resilient to a 1 in 500 drought' for further details.

Demand forecast

Your forecast dry year annual average demand, when demand for water is at its highest before temporary use bans are imposed. If you have evidence that suggests that demand in a 1 in 500 year drought with drought measures in place is higher than your dry year annual average demand, you can consider using this as an alternative. You should present your evidence and discuss this approach with regulators. If agreed, you will also need to report an unrestricted dry year per capita consumption (PCC) and a dry year annual average supply balance.

Section 5 – Developing your supply forecast

In your WRMP you should set out how much water you have in your base year and how your forecast for this will change throughout the planning period. You should clearly reflect data in the pre-plan years from your base year onwards as part of your tables' submission. You should demonstrate that you understand how your sources respond to droughts, the current constraints and potential future changes to your sources of water.

[6] The point of failure is defined as using exceptional demand restrictions associated with emergency drought orders, such as standpipes.

5.1 How to develop your supply forecast

You should assess how much water is available to supply your customers in each of your water resource zones. Your baseline supplies should be available in a 0.2% annual chance of failure caused by drought.

The water available in each resource zone will be dependent on the water available from each source and how you will use those sources in conjunction. In relevant resource zones[7], you should use a system response deployable output[8].

You should discuss your approach to developing your supply forecast with the Environment Agency or Natural Resources Wales (as appropriate) as early as possible.

When developing your supply forecast, you should account for the impact of the following pressures on your sources:

- changes to your abstraction licences to ensure environmental sustainability and meet your long-term environmental destination (see sub-sections 5.4 and 5.5)
- the impact of the changing climate (see sub-section 5.6)
- issues arising from pollution or contamination of sources
- issues arising from development and new infrastructure
- changes in contractual or other arrangements, for example, with transfers of water between companies

You should consider supplementary guidance ‘Planning to be resilient to a 1 in 500 drought’. This explains how you should define a ‘1 in 500 year’ planning scenario and the assumptions you should use.

[7] Relevant is where there is a new planned transfer from Wales to England or where you have justified the need to plan for a level of 1 in 500 year drought within a zone

[8] For further information on the system response deployable output see the supplementary guidance ‘Planning to be resilient to a 1 in 500 drought’

5.2 What to include in your baseline supply forecast

You should base your baseline supply forecast on the response of your system. Using your system response is preferable to rainfall or effective rainfall. This is because of the problems in presenting duration, rainfall patterns and start and finish months when evaluating the return period. Using a system response means that your supply forecast will adequately capture your system constraints, conjunctive use capability and operational response.

If you abstract water in your water resource zone, you should produce a breakdown of your supply forecast that includes:

- the deployable output for each source (or group of sources)
- future changes to deployable output from sustainability changes, including your long-term environmental destination, a changing climate and any other changes you expect
- existing transfers and schemes where planning permission is already in place
- an allowance for short term losses of supply and source vulnerability, known as outage
- any operational use of water or loss of water through the abstraction-treatment process
- a supply forecast that combines all the elements described into water available for use (WAFU)

The water resources planning table instructions define the individual components of your supply forecast and how you should define them.

If you require a critical period scenario or scenarios, you should provide supply-demand forecasts for them in addition to the baseline scenario.

If your water resource zone receives all of its water via transfers or third parties, your supply forecast should only reflect your contractual arrangements. However, you should confirm that the supplier company has made the necessary assessments to meet the statutory and policy obligations, for example climate change assessments. You should also confirm that it will be able to supply you with water during

your design scenario and that you can meet your incumbents planned level of service.

5.3 What to cover in your deployable output assessment

If your source of water is not solely provided by a transfer, you should assess and report your deployable output. You should determine using a system response deployable output so that your system is resilient to a 0.2% annual chance of failure caused by a drought. Deployable output is the yield of a commissioned source, or group of sources constrained by:

- hydrological yield
- licensed quantities
- environment (represented through licence constraints)
- pumping plant and well and aquifer properties
- raw water mains and aqueducts
- transfer and output restrictions
- treatment
- water quality, including any risks to your groundwater and surface water sources due to declining water quality or saline intrusion

You should consider the risks of non-renewal for time-limited licences that are due to expire during the period covered by the plan. You should review whether these licences are sustainable and that their use does not cause environmental deterioration. If there are risks with renewal you should describe how you will manage these in your plan.

Your deployable output should not include the contributions from any demand or supply drought measures[9] such as drought permits or orders.

You should clearly explain in your plan which factors constrain deployable output. To calculate your deployable output, you should use:

- UKWIR (2014) Handbook of source yield methodologies
- UKWIR (2016) WRMP19 methods – risk-based planning

Given the complex nature of deployable output calculations in the context of stochastically generated droughts, you should talk to the Environment Agency and, or Natural Resources Wales when developing your plan. You should also refer to the supplementary guidance 'Planning to be resilient to a 1 in 500 drought (England)' and to the supplementary guidance 'Stochastics'.

5.4 Your role in achieving environmentally sustainable abstraction

Environmentally sustainable abstraction is essential to support healthy ecology and the natural resilience of our rivers, wetlands and aquifers.

Your plan should protect and improve the environment, considering both current and future challenges. This might mean, for example, tighter environmental protection for some sensitive habitats and vulnerable rivers, such as chalk rivers. This is to enable these rivers, wetlands and aquifers to meet environmental objectives in the future.

Your plan should demonstrate that your abstraction is environmentally sustainable now and over the long term. Where your existing abstraction is not environmentally sustainable, your plan should

[9] Supply drought measures are those that increase available supplies during a drought, for example drought permits, drought orders and re-commissioning sources.

address the problem as soon as possible. Where your abstraction is contributing to a current environmental problem or poses a deterioration risk in the near future, you should prioritise action to remove this risk for AMP 9. Where that is not possible, you should plan to deliver the required abstraction reduction by the earliest feasible AMP and identify improvements that could be delivered in the interim to improve environmental resilience.

Companies in England or affecting England should refer to the supplementary guidance 'actions required to prevent deterioration - England'. The supplementary guidance sets out how the Environment Agency will change abstraction licences to prevent deterioration. You must plan for these changes and take action to ensure that your abstractions do not cause deterioration. Where your abstractions interact with European sites, you must ensure that your plan meets requirements for protected areas. If your existing abstractions are within or affecting sites in Wales, you should consult Natural Resources Wales.

Your plan:

- must deliver the regulatory actions required to avoid deterioration
- must meet requirements for European site protected areas as soon as practicable. Our guidance for PR24[10] explains what water companies should do to establish the need for and timing of action.
- must deliver actions required to achieve environmental objectives as defined in Regulations 13 and 14[11] of the WFD Regulations and to the timescales set out in the WFD Regulations unless one or more of the exemptions are applicable
- should take account of government and regulators' objectives for the environment

[10] PR24 WINEP Water Resource Supporting Guidance: Flows for Riverine European Sites and Sites of Special Scientific Interest (SSSI)

[11] Regulation 13 and 14 sets out the environmental objectives which include: - prevent deterioration of water bodies and to protect, enhance and restore each body of surface and ground water. The RBMPs set out how these objectives will be delivered

- should include the measures in the Water Industry National Environment Programme (WINEP) in England and the National Environment Programme (NEP) in Wales (where applicable)
- should include your environmental destination, clearly setting out the actions you will take in the short (2030-34), medium (2035-2040) and long term (2040 and beyond) to achieve it. You should distinguish between actions that are required to meet current regulatory requirements, for example:
    - actions that address risk of deterioration caused by abstraction
    - actions to improve a water body where your abstraction is contributing to the water body (and biological, physio-chemical and hydro-morphological elements) not achieving good status or potential as set out in RBMPs
    - where abstraction related issues are known now to be currently affecting the environment, they should be dealt with as soon as is feasible, not delayed.

You should fully reflect and support the achievement of the regional plan environmental destination and the achievement of your WRMP environmental destination.

For England, further information can be found in the Environment Agency's Environmental Destination for Water Resources Planning Guidance.

For Wales, you should use UKWIR environmental destination investigation framework. This sets out prioritising and identifying the actions that could be taken in the short, medium and long term.

In Wales you have a duty to maintain and enhance biodiversity and promote the resilience of ecosystems. To help achieve this, a holistic catchment approach should be adopted. Measures including river restoration or Nature-Based Solutions may be implemented in catchments and water bodies where abstractions are unsustainable via the AMP process (as identified via NEP) alongside any potential abstraction licence reductions.

5.4.1 Current statutory requirements and regulatory expectations

You have a duty to have regard to RBMPs when exercising your functions. You must assess all your current and future predicted

abstractions to ensure they comply with and are consistent with the achievement of WFD Regulations requirements and the environmental objectives set out in the RBMPs. This includes protected area objectives.

Water companies are statutory undertakers under Section 28G of the Wildlife and Countryside Act 1981.

The full range of expectations for water companies in England is described in the water industry strategic environmental requirements (WISER).

You must consider any other environmental obligations where applicable, including those in the Environment Act 2021, and the Environment Improvement plan, as well as obligations towards SSSIs, NNR and AONB covered by the Wildlife and Countryside Act 1981, sites designated under the Conservation of Habitats and Species Regulations 2017 duties under Section 40 Natural Environment and Rural Communities Act 2006 and Sections 3 and 4 of the Water Industry Act 1991 and any international agreements.

If you are a water company within or affecting Wales, you must also consider your Biodiversity and resilience of ecosystems duty and the biodiversity lists under Section 6 and Section 7 of the Environment (Wales) Act 2016. You must also consider how you can contribute towards achievement of the well-being goals under the Well-being of Future Generations (Wales) Act (2015).

In England and Wales, you should also determine any changes needed to your abstractions to protect or improve locally important sites (undesignated sites), including those supporting priority habitats and species.

The Environment Agency and Natural Resources Wales set out measures in the WINEP or NEP respectively for you to investigate or deliver. You should include any sustainability changes identified in your WINEP or NEP in the regional plan (where applicable) and in your WRMP.

The Environment Agency or Natural Resources Wales will also identify other measures in the WINEP and NEP. This could include:

- protecting eels under the Eels (England and Wales) Regulations 2009
- improving fish passage under the Salmon and Freshwater Fisheries Act 1975 and WFD Regulations
- protecting raw drinking water supplies
- river restoration and other nature-based solutions to improve biodiversity and low flow resilience.

You should assess the effect that these and other measures will have on your supply forecast.

You should not retain unused water on your abstraction licences that poses a risk of deterioration and is not justified by your water resources management plan. If you have any abstraction licences that fall in this category, you should plan to give them up. For companies in England or affecting England, see the supplementary guidance ‘actions required to prevent deterioration - England’ for further information. Where companies have any licences within Wales, you should consult Natural Resources Wales.

Your plan should set out how you will manage the risk of deterioration caused by your abstractions. Along with assessing any options that would be required to maintain the security of your supply-demand balance if the risk is significant.

Where licence change is necessary to prevent deterioration, an appropriate change such as a reduction in licensed quantity will be applied to licences. Where licences in England are capped at maximum peak abstraction, this will give you some flexibility to meet short-term peaks in demand. However, you must not plan to service future growth in demand through unsustainable increases in abstraction under licences that fall into this category.

Demand management measures, nature-based solutions, hydro-morphological rehabilitation and the Catchment Based Approach may also have a complementary role to play in mitigating potential deterioration.

You must ensure that abstraction reductions are not double counted when licence changes to prevent deterioration are combined with environmental destination scenarios and detail on assurance and

engagement on near term risk of licence changes must be provided in your plan.

5.4.2 Developing your environmental destination

England

The environmental destination for water resources identifies where and by how much water abstraction needs to change to achieve and maintain a healthy water environment now and in the future.

The Environment Agency has developed an environmental destination guidance document, which you should use when preparing your environmental destination. This is being consulted on alongside this guideline.

Your plan should include an environmental destination which:

- is based on understanding long term environmental requirements for water resources
- accounts for a changing climate
- plans for the full range of environmental requirements
- uses the best available evidence
- considers local priorities to inform the pace of delivery

The principles that guide the Environment Agency's approach to environmental destination are set out in Appendix D to the National Framework for Water Resources 2025: Environmental Destination: principles for protecting the water environment in water resources planning. You should use the Environment Agency's Environmental destination for water resources planning guidance to apply these principles to your environmental destination planning.

Your plan should take account of the full range of environmental legislation and government commitments for protecting the environment from over abstraction.

Actions to develop your environmental destination should involve:

a. using local evidence to improve upon the Environment Agency's 'full' and 'current' scenarios which are outlined in Appendix C of the National Framework for Water Resources 2025. Results from AMP 8 environmental destination investigation can be used where these increase confidence in the scale of abstraction changes needed
b. planning for the full range of future needs
c. developing a range of approaches to achieve future needs
d. planning to deliver current regulatory requirements as soon as technically deliverable
e. developing alternative pathways that reflect local priorities (including current regulatory requirements as a minimum)
f. including environmental destination pathways as an integral part of your total WRMP future water needs
g. presenting a comparison of the cost effectiveness of each environmental destination pathway considered in your plan
h. engaging through the relevant regional group on the preferred environmental destination pathway
i. aligning your environmental destination scenario plan with the relevant regional group and using this to inform WRMP option selection.

The approach you should follow is outlined in detail in Sections 6 and 7 of the Environment Agency's Environmental destination for water resources planning guidance.

You should clearly set out in your plan the abstraction changes and consequent licence changes that are needed to achieve your environmental destination (where applicable). These should be included in your baseline supply forecast. You should also set out any short, medium and long-term actions other than abstraction reductions that you intend to take to achieve your environmental destination.

Wales

If you are a company within or affecting Wales, you should refer to Natural Resources Wales' document 'Setting an environmental destination for water resources: Enhancing ecosystems in Wales'. This document has been provided to regional groups and water

companies and is available on request from the contact details provided in Section 1.

In Wales, where applicable, you should use the regional long term environmental destination as the base for your long-term environmental destination for your WRMP. For other resource zones that are not included in a regional plan, you should consider short-, medium- and long-term actions to enhance biodiversity and create more resilient ecosystems within your plan. These actions should be prioritised in catchments where your abstractions are not environmentally sustainable. For example, in Wales this may include investigations and actions for achieving principles of 'sustainable management of natural resources' (SMNR) and delivery of the well-being goals.

5.5 How to include changes to your abstraction licences in your plan

You should incorporate the implications of the following into your forecast supply:

- the impact of any confirmed and likely sustainability changes that will be identified in the PR29 WINEP in England and NEP in Wales, for implementation in AMP9. On 31 March 2027, the Environment Agency or Natural Resources Wales will formally notify water companies and Ofwat of the confirmed, likely and unconfirmed sustainability changes required in AMP9 to meet environmental obligations, through the PR29 WINEP and the Welsh NEP
- the impact of other licence changes required across the planning period as set out in your long-term environmental destination, and any consequent reduction in deployable output from future changes to abstraction licences

You should present the confirmed and unconfirmed sustainability reduction separately in your water resources planning tables (see

Tables guidance). However, both should be included within your baseline.

For each sustainability reduction in your plan narrative, you should provide:

- a description of the change being made, including the licence and deployable output changes
- the timing of the reduction
- the location (adhering to national security considerations)
- the reason for the reduction, for example to prevent deterioration, or to achieve protected area or WFD Regulations water body objectives by 2027

Your plan narrative should include a clear table of all sustainability reductions considered in the plan, including:

- licence number
- licence reduction
- deployable output implications
- delivery date

We expect sustainability changes to be implemented as soon as possible. You should discuss appropriate timescales to implement these sustainability changes with the Environment Agency or Natural Resources Wales. This is to make sure you achieve an efficient, sustainable and secure supply of water that protects the environment effectively. You should consider and plan for permanent licence changes needed to address any remaining seriously damaging abstractions early in the planning period. If sustainability changes mean that the source and, or the blend of water supplied to customers changes in composition, you should discuss with DWI at an early stage, before sustainability changes take effect.

You should also consider scenarios in your plan to show the impact of:

- unconfirmed sustainability changes that may be required in the short term
- the different environmental destination planning scenarios

You should consider whether there are implications to your resource zone integrity as a result of sustainability reductions (see Section 4.4).

You should not include any uncertainty in target headroom for sustainability changes within your plan. You can consider any uncertainty through scenario testing and adaptive planning.

You should assess whether any increase in flows or groundwater from sustainability reductions will benefit other abstractions. For example, increasing the deployable output of a downstream source or having adverse impacts from groundwater level rebound. You should liaise with neighbouring companies where appropriate. Where there are concerns about the adverse effects of groundwater rebound, you should liaise with local authorities. Environmental objectives must still be met but solutions may need to be adjusted to mitigate the risks of secondary impacts if agreed with the Environment Agency.

5.6 Climate change

Our climate has changed and will continue to change. Your plan should assess the risk and possible impact of climate change and report the likely implications for deployable output of current and future sources of water.

Your climate change assessment should:

- plan for a 2^0C temperature rise by 2050
- assess the risks associated with a 4^0C temperature rise by 2100[12]

You should use the UKCP18 climate change products that best reflect these climate change positions for your region and where possible use a number of products to assess the different pathways to the

[12] Climate change committee (2021) Independent assessment of UK climate risk: Advice to Government for the UK's third climate change risk assessment (CCRA3)

specified warming level. See supplementary guidance ‘Climate change’.

You should:

- use the latest climate change information from UKCP18 regional models
- assess the Representative Concentration Pathway (RCP) that best reflects the target levels of warming outlined above and has the products available that fit best with your assessment tools and approaches.
- model your adaptation pathways to multiple climate products to understand the uncertainty in the different climate change models and their associated products/datasets.

Your climate change assessment for each water resource zone should be proportionate to the level of risk from a changing climate. You should refer to the supplementary guidance ‘Climate change’ when assessing water resource zone vulnerability to climate change. Water companies in Wales should also refer to the ‘Addendum on UKCP18 scenarios for use in WRMP29 (Wales)’.

For water resource zones that have a low vulnerability to climate change, it may be appropriate to constrain your climate change assessment to only a specific percentile within the chosen RCP. For water resource zones that have a medium or high vulnerability to climate change, you should sample the full range within the RCP, and where vulnerability is highest, a range of climate products across different climate models should be used.

You should explore consistency of input datasets with other companies within your region, and nationally, where possible. This is particularly relevant where there are cross-boundary (water company, regional) interactions of supply including cross-boundary transfers of water. You should discuss your preferred approach with the Environment Agency, Natural Resources Wales and regional planning groups (if appropriate) at an early stage of developing your plan. You should do this before you analyse the impact of climate change on water availability. Your plan should:

- clearly state the vulnerability to climate change for each water resource zone
- describe the risk and vulnerability to the range of climate change impacts on your sources
- state why you have chosen your method and assumptions when presenting the results including, if appropriate, links to regional plans
- explain which scaling method you have used to factor in any climate change that has already happened
- clearly explain how climate change uncertainty has been included in the plan

5.7 Water transfers

You should clearly describe all your existing raw and potable water imports and exports; both internally between water resource zones and externally between you and neighbouring companies. You should include details in the relevant sections of the water resources planning tables. The volumes and timings should be consistent between your plan and any donor or recipient companies. You should provide information on the:

- agreed limits between supplier and recipient companies and ensure consistent reporting in the relevant plans. This should be described for both normal operation and your design event. This is a ‘1 in 500 year’ drought
- total volume available for each year of your plan (excluding any water that cannot be transferred due to operational or infrastructure constraints)
- variations related to contractual or other arrangements such as decreases in transfers due to drought, responding to operational incidents or pain-share agreements
- direction of flow and whether it is uni- or bi-directional
- (if it is a new or increased transfer, or if the source of the water is changing) the chemical quality of water being transferred and the impacts on the receiving area water quality (even within a water resource zone)

5.8 Outage

You should include an allowance to cover the risk of temporary or short-term losses of supply. This is called your outage allowance. The allowance should include both unplanned and appropriate planned outage as defined in the supplementary guidance ‘Outage’.

When determining your outage allowance, you should use the following guidance:

- UKWIR (1995) Outage allowances for water resources planning
- UKWIR (2016) WRMP19 methods – risk-based planning
- EA (2020) supplementary guidance ‘Outage’

You should describe in your plan:

- how you selected your outage method
- how you estimated your outage allowance
- the sensitivity of the assessment

If you report a forecast of zero outage, you should clearly explain how you will achieve this.

You should consider options to reduce your outage, particularly where your outage allowance contributes to a potential deficit in the planning period and/or where you have reported significant actual outage in your WRMP annual review and/or when reporting your Ofwat Unplanned Outage performance commitment. You should have a clear understanding of outage risk across your assets and the likely implications for your water available for use and this should be represented in your WRMP outage allowance. You should also consider whether your outage is likely to change through the planning period.

You should also assess whether you need to improve your data collation, assessment and estimation of outage.

5.9 Losses from processing and treatment

You are expected to operate your network efficiently and should look to reduce losses where possible. For example, catchment options to reduce your treatment works losses, while still complying with drinking water regulations. You should identify these types of options in your feasible options list and appraise them through your decision-making.

In your plan you should provide the values for:

- raw water losses
- raw water operational use
- treatment works losses
- treatment works operational uses

Your plan should consider whether your operations could be more efficient and whether these losses could be reduced. You can consider these opportunities as options in your plan. If you are unable to accurately estimate these, you should calculate the difference between raw water abstracted and distribution input. However, you should prioritise the installation of meters at the inlets of treatment works as part of your base operations to ensure you understand where losses are occurring.

5.10 Water available for use

In your plan, you should clearly state the total WAFU in each water resource zone taking account of any changes to deployable output, transfers, operational use and outage.

5.11 Common reference scenarios

Common reference scenarios set out scenarios apply consistent datasets across the planning frameworks for water resources and wastewater. This means greater alignment of climate change,

population and industry growth across various strategic planning frameworks.

Regulators will provide further information on common reference scenarios in future updates to the guideline.

5.12 Drinking water protected areas

You must show how your plan will support the objectives for drinking water protected areas, as designated under Regulation 8 Water Environment (Water Framework Directive) (England and Wales) Regulations 2017. Supporting these objectives may benefit the maintenance or increase of deployable output.

Your plan should consider delivery of the measures necessary to address the risk in drinking water protected areas so that your treated drinking water meets the standards of the Water Supply (Water Quality) Regulations (England) 2016 (as amended) or Water Supply (Water Quality) Regulations (Wales) 2018, preventing deterioration in water quality with a view to reducing the level of treatment required.

To support the objectives, you should ensure:

- that all groundwater sources identified in your plan and drought plan have delineated source protection zones, and where appropriate, safeguard zones. The Environment Agency and Natural Resources Wales can work with you in the delineation of these zones

- that all designated drinking water protected areas referenced in your plan that are considered at risk have delineated safeguard zones and associated action plans that have been agreed with the regulator and are updated regularly

- that any relevant water company actions identified in the action plans are proposed for funding in your business plans in line with guidance.

5.13 Drinking water quality

The regulatory framework for drinking water quality and sufficiency of supplies is established in the Water Industry Act 1991. You must ensure that your plan takes account of:

- Section 86 which relates to the appointment and delegated powers of the Chief Inspector of Drinking Water. It includes reference to “such other powers and duties in relation to the quality and sufficiency of water supplied”. This is particularly relevant to powers and duties relating to the protection of public health, and to resilience and contingency planning
- Section 68 of the Act, the duty to supply wholesome water[13]. This section states: “It shall be the duty of a water undertaker…so far as reasonably practicable, to ensure, in relation to each source or combination of sources from which water is so supplied, that there is, in general, no deterioration in the quality of the water which is supplied from time to time from that source or combination of sources”. This primary duty may have implications for how you develop your plans, especially in relation to resilience and contingency planning

You must review these duties when you include any transfers of water for supply (raw or treated) or in the development of new sources. Further guidance is provided in Resilience of water supplies in Water Resource Planning - Guidance Note.

5.14 Environmental Permitting Regulations

In England, government plans to move the abstraction and impoundment licensing regime into the Environmental Permitting Regulations. This will bring it in line with our other permitting regimes, and lead to a more modern and consistent regulatory framework.

1. [13] Wholesomeness requirements are set out in the Water Supply (Water Quality) Regulations 2016 (as amended) (in England) and the Water Supply (Water Quality) Regulations 2018 (in Wales), and associated amendments. ↩

It is not expected that this will impact water company licences. However, if you believe it will, you should discuss any concerns with the Environment Agency.

Defra consulted on its proposals in 2021. You can view the consultation on the Defra consultation hub. Following the publication of the final report by the Independent Water Commission, we are awaiting a decision from Ministers on the recommendation to move abstraction into the EPR and the timescales for this to happen.

In Wales, Natural Resources Wales has been working closely with Welsh Government on moving abstraction and impoundment licensing into the Environmental Permitting Regulations. Please contact NRW or the Welsh Government for the latest updates on timescales for consultation and implementation.

5.15 Invasive non-native species

Aquatic and riparian invasive non-native species (INNS) have significant adverse social, economic and environmental impacts. They can cause the ecological status of Water Framework Directive water bodies to deteriorate or fail to achieve their ecological objectives. You must review whether your current abstraction operations and future solutions will risk spreading INNS or create pathways which increase the risk of spreading INNS. Where there is increased risk, you must propose measures to manage that risk in your plan.

You may need to contact the Environment Agency or Natural Resources Wales to discuss these issues on a case-by-case basis. For more details on INNS and their impacts, visit the non-native species secretariat website.

England

If you are considering transfers of raw water between catchments in England you should refer to the position statement[14]. The statement sets out the Environment Agency's position regarding managing the

[14] The documents mentioned in this paragraph are available on request from the contact details set out in Section 1

risk of the spreading INNS through raw water transfers. The position statement is supported by a short risk assessment guidance note and a map which states which catchments are considered isolated.

If you propose a new scheme that creates a hydrological connection between locations not already connected, you will be required to have mitigation measures in place to ensure INNS cannot be spread by the new transfer. If you propose a new scheme that will create a hydrological connection between locations that have an existing hydrological link, you will need to undertake an assessment of the increased risk that their scheme poses.

The Environment Agency will decide whether mitigation will be necessary for schemes on a case-by-case basis to ensure they do not significantly increase the risk of INNS transfers.

The Environment Agency has developed an INNS risk assessment tool. The tool provides a consistent approach to assessing INNS risks across water supply options and is available for use to assess INNS risks for Strategic Resource Options and other WRMP options.

Wales

If you propose an option that creates a new hydrological connection in Wales, you will need to undertake an assessment of the risk that the scheme poses and identify mitigation measures to ensure that the scheme will not increase the risk of INNS transfer.

Natural Resources Wales will decide whether mitigation will be necessary for schemes on a case-by-case basis.

Section 6 – Developing your demand forecast

Your plan should demonstrate the demand for water in your base year and your forecast across your planning period. Base data should be clearly reflected in the pre-plan years of your tables' submission. Your

demand includes all the water which is required beyond the treatment works. It therefore includes leakage from your distribution network and service pipes, customers' supply pipes, the consumption of water by the people and businesses you supply, and water used for operational purposes from the distribution network.

Government and regulators expect that all parts of demand are managed and (where possible) reduced, while acknowledging that demand is also influenced by consumer behaviour.

You should reflect the demand forecasts of the regional plans for the customers you supply, where applicable. You should demonstrate how you have collaborated at a regional level with neighbouring water companies and non-public water supply abstractors to generate your forecasts. You should show how you made use of best available data and information.

6.1 How to develop your demand forecast

You should produce a baseline and final plan demand forecast for your entire planning period. These forecasts should include your estimates of demand from:

- consumption from household customers
- consumption from non-household customers
- water that leaks from your network of pipes, service reservoirs and the supply pipes of your customers
- any other losses or uses of water such as water taken unbilled and distribution operational use

You should use the following guidance to develop your dry year annual average and critical period forecasts:

- UKWIR (2016) WRMP19 methods – household consumption forecasting
- UKWIR (2016) Population, household property and occupancy forecasting
- UKWIR (2006) Peak water demand forecasting methodology

You should also refer to other relevant reports such as:

- the water industry project on ‘Water Demand Insights from 2018 (Artesia 2020)’
- the joint study ‘Understanding changes in domestic water consumption associated with COVID-19 in England and Wales’ (Artesia 2020)
- the collaborative research report ‘The impact of COVID-19 on water consumption during February to October 2020’ (Artesia 2021)
- UKWIR (2021) Improved Understanding of Household Consumption

When developing your demand forecast, you should consider any relevant influences including:

- housing development and population changes, including changes in occupancy
- non-household development and changes to existing demand, including potential changes in demand from the energy sector, heavy industry and heating and cooling needs as the UK moves to low carbon technology
- increased demand from data centres
- any projections involving the above industrial drivers must be treated with caution and should be supported by scenario-based approaches of sensitivity testing where possible
- your programme of metering and smart metering
- the impact of prolonged high demand and the strain this can put on your network
- changes in water use behaviour and distribution of demand in both household and non-household users. You should consider any residual impacts of the coronavirus pandemic on your demand. For example, changing working patterns and the impact this might have on household and non-household demand. You should also consider how your customers’ water use is affected by hot dry weather such as the heat waves experienced in 2018, 2020, 2022, 2023 and 2025
- changing water efficiency and sustainable water use practices

- changing design standards of devices that use water such as more efficient washing machines and toilets
- changes in technology and practices for leakage detection and repair
- impact of a changing climate on consumption
- changing weather patterns
- changes to your approach to repairing customer supply pipes, where appropriate
- changes in government policy and expectations including mandatory water efficiency labelling as set out in the 2022 Defra and the Welsh Government consultations[15] assuming implementation from 2026. Further information will be given on the demand reduction expected from labelling in early 2026.

You should set out any benefits you assume from potential government interventions (i.e. those not in place before the start of the planning period) through your options and clearly in your plan narrative. The benefits should be realistic and phased over time in line with published plans. You should clearly demonstrate and justify any assumptions you have made in your plan.

In England, you should specifically consider:

- your contribution to the Environment Act 2021 water demand target[16] and the associated Environmental Improvement Plan
- the water efficiency proposed actions for new developments and retrofit set out in Section 3 of the Environmental Improvement Plan and the Water UK leakage route map

6.2 Baseline demand forecast

[15] https://consult.defra.gov.uk/water-efficiency-labelling/water-efficiency-labelling/ or Mandatory water efficiency labelling | GOV.WALES

[16] https://consult.defra.gov.uk/natural-environment-policy/consultation-on-environmental-targets/supporting_documents/Water%20targets%20%20Detailed%20Evidence%20report.pdf

Your baseline demand forecast should include the following.

Baseline dry year annual average

From 2030/31, your baseline customer demand should take account of:

- customer household and non-household demand without any additional water efficiency or metering intervention from yourselves
- forecast population growth
- change in household size (occupancy)
- changes in property numbers
- the impact of climate change on customers' water usage behaviour

You should align your forecast with that used in the relevant Drainage and Wastewater Management Plan which covers each Water Resource Zone in your plan.

From 2030/31, leakage in your baseline should remain static from the start of your plan to the end of the planning period. If there is significant growth planned in a resource zone you should discuss and agree your approach with regulators.

The starting position for the WRMP29 supply and demand balance needs to be clearly and robustly justified. Any significant difference at the beginning of the WRMP29 planning period to the final WRMP24 2029-30 year figure should be explained.

Baseline critical period or periods

If baseline critical period or periods are applicable (see sub-section 4.8), then a baseline demand forecast for a critical period should be included in your plan.

Normal year demand forecast (reflects the demand in a non-dry year in the final plan)

In this scenario you should provide:

- distribution input

- household and non-household demand
- leakage
- per capita consumption

You should provide this for the first 5 years of your plan and then at 5-year intervals until the end of your planning period. You should present the data alongside your dry year forecast so that a clear comparison can be made. You should set out your assumptions on the ratio of normal years to dry years or uplift factors used to calculate average demand. Regulators will use this information when considering your plan alongside your business plan submissions and annual reviews.

Assumptions and supporting information

You should clearly describe the assumptions and supporting information you have used to develop your plan. You are encouraged to discuss these with the Environment Agency or Natural Resources Wales as early as possible. As a minimum you should:

- use the UKWIR's Consistency of reporting performance measures and Ofwat's Reporting guidance – leakage
- explain how your current best estimates of demand have been reconciled with other parts of the water balance
- estimate future demand, describe the method you have used and shown you understand what is driving any changes
- use dry year annual average unrestricted demand in developing your demand forecast. If you believe an alternative is appropriate you should discuss and agree this with regulators. You will still need to provide an unrestricted dry year annual average demand
- clearly state which data you have used as the base for your forecasts and reflect this in the pre-plan years of your tables' submission. You should base your base year on your actual data as far as possible, adjusted to dry year if appropriate. If you need to extrapolate, you should use the data you think is most appropriate and justify why. If your position is significantly different from your previous plan forecasts you should discuss and agree your approach with regulators. Regulators will expect you to achieve your WRMP24 commitments, however your data

should reflect the most up-to-date forecast of your outturn level. Where this varies from WRMP24 commitments, you should provide evidence to justify this[17]. If you are using regional planning data, you should ensure that there have been no significant changes since it was produced. If there are, you should update your plan accordingly and ensure that the regional planning data is updated to reflect your changes

- ensure your forecasts are aligned, where appropriate, with neighbouring companies, regional water resources groups and regional plans and provide a comparison with other demand forecasts, including the population forecast and scenarios developed at a regional level where this is relevant

England

For companies in England, the national framework provided information on the demands of other sectors, which the regional groups will have developed further. Regional plans consider multi-sector needs. Your plan should take into account regional and local multi-sector demand when it is relevant to your supply-demand balance. For example, customers you supply directly or indirectly or options you are building jointly with other sectors.

Wales

You should consider local multi-sector needs and include them within your supply-demand balance if you are directly supplying them. You should also consider within your forecasts those customers, such as agriculture, who have the ability to switch to your supply during peak periods.

You should consider your policies for supporting other water users who are not connected to your water supply systems (for example private water supplies) in circumstances where they are seeking

[17] These commitments should be reflected in the baseline up until 2029/30. Beyond this you should assume static leakage. Your final plan however should assume or exceed your WRMP24 leakage commitments. See sub-section 9.3.1 for further details about the expectations for your final plan level of leakage.

‘alternative water supplies’, such as droughts. This should include your ability to supply other water users.

When forming your policies, you should consider whether they overlap with any of the work carried out by government, regulators or other stakeholders, to understand any mutually beneficial solutions. You should discuss your approach for your plan with Natural Resources Wales.

If you have resource zones in England, you should consider any information on the demands of other sectors provided by regional groups and the national framework.

6.3 Forecast population, properties and occupancy

England

The Environment Agency is continuing to work closely with the Ministry of Housing, Communities and Local Government (MHCLG) on its Plan for Change and other guidance on national infrastructure growth. Water companies should monitor developing policy and use the information in the development of their plans.

The National Planning Policy Framework is clear that local planning authorities are expected to assess housing needs using the standard method set out in Planning Practice Guidance. The standard method was revised in December 2024 to set a baseline number using a share of local housing stock and adjusts this upwards in accordance with local affordability pressures.

Once local housing need has been assessed, local planning authorities should establish a housing requirement in their Local Plans, by making an assessment of the number of new homes that can be provided in their area. This should be justified by evidence on land availability, constraints on development and any other relevant matters.

Your planned property and population forecasts, and resulting supply, should not constrain planned household and non-household growth. For companies supplying customers in England, you should base your initial forecast population and property figures on strategic and local plans. Local authorities will be at different stages of publication of their local plans. You can find the latest list of local plans on GOV.UK.

Local plans are likely to cover the first 10 years of the planning period with spatial development strategies looking further ahead. You will need to check the duration of, and timescale for, producing local and strategic plans with relevant authorities and use the latest information up to 6 months before the publication of your plan. You should continue to monitor changes to planning data and use it to inform reviews of your plan and before and after publication. In some cases, you may need to use your own property forecasts.

If relevant local planning authorities have:

- an adopted plan that is not being updated – you should take account of the planned property forecast. You will need to ensure your planned property forecast, and resulting supply, does not constrain the planned growth by local councils and strategic housing developments. If you adjust the planned property forecast and select a higher or lower number, you will need to justify why you have selected a different forecast and provide evidence
- published a draft plan, but it has not yet been adopted – you should take account of and use this as the base for your forecast. You should discuss with your local council whether it expects to make changes to the forecast for the adopted plan
- not started or published a draft plan – you should rely on the revised Standard Method for calculating local housing needs to assess potential increases in housing in any given area.

The government is introducing a system of strategic planning that will sit above local plans called spatial development strategies (SDS). These are being introduced through the Planning and Infrastructure Bill which is expected to gain Royal Assent in late 2025. SDSs will set the high-level spatial strategy for their area, and set out key locations for growth, infrastructure requirements and potentially will re-distribute housing need between constituent local planning authorities. Once SDSs are adopted, local plans will have to be in general conformity

with the relevant SDS. Therefore, SDSs will increasingly become the first point of reference for water companies when considering the scale, nature and broad locations of expected growth.

It will be important that water companies engage with the strategic planning authorities when they are preparing their SDS. SDSs will be produced by combined authorities where they exist, and government expects such authorities to be created across all of England in due course. Ahead of that point, SDSs will be produced by County Councils and unitary authorities where no combined authority or combined county authority exists, and counties and unitary authorities are generally expected to produce SDSs in strategic groupings. You should explain where timing of SDSs is leading to uncertainty in your draft plans.

Where your area includes major strategic housing and growth locations such as the Oxford-Cambridge Arc or New Towns and Garden Communities, you should include an estimate of the planned growth in the baseline. You should explain where timing of this information is leading to uncertainty in your draft WRMPs.

You should discuss the plans with relevant local and strategic planning authorities because they may have additional information on potential household and non-household developments, and strategic planning authorities may re-distribute housing needs across their areas.

The government is also introducing a new legal mechanism to enable strategic and local planning authorities to require that prescribed public bodies provide assistance to develop or review plans. The government expects that this mechanism will be used appropriately and only when necessary. Prescribed public bodies will be listed in regulations and will include important infrastructure providers, including utility companies.

Your plan should clearly set out how you will resolve any deficits caused by planned or un-planned growth.

Where relevant, you should also work with your regional water resources groups to assess and test the impact of these developments and possible scenarios on your plans. You should

consider the uncertainty around these forecasts in scenarios. An adaptive plan might be useful to manage significant uncertainty.

You should work closely with local planning authorities to determine planned build rates for new developments. This will allow you and the planning authorities to align water resources development with planned building and vice versa. You should also discuss the potential for high levels of water efficiency in new developments through local plan policies. For example, water companies, the Environment Agency and Natural England have provided guidance for LPAs in the Water Resources East area to help them set more stringent water efficiency policies in their local plans: shared-standards-in-water-efficiency-for-local-plans.pdf

ONS also produces population projections and household projections. Population projections provide an indication of the future size and age structure of the population based on mid-year population estimates and a set of assumptions of future fertility, mortality and migration. However, it is worth noting that these projections have limitations as they are based on recent trends in data that can be influenced by recent economic, political and natural situations. Therefore, it is appropriate to test the impact of alternative population and household growth scenarios on your plan. You should consider an adaptive plan where there is a significant difference in projections, particularly where this might affect your investment decisions in the first half of your plan. You should make sure your plan does not lead to over-investment or constrain planned growth.

You should set out how you have developed and used alternative scenarios in your plan and the impact they have had on your plan. You should explain any uncharacteristic changes in projected properties or population in your forecasts.

You should work with regional groups and neighbouring companies to make sure you develop consistent planning scenarios where relevant. This includes regional groups adjacent to your own.

Wales

For companies supplying customers in Wales, you will need to base your forecast population and property figures on the latest local authority population and property projections published by the Welsh

Government. The projections are trend based and use the ONS population estimates. You will need to explain the methods you have used to forecast population and property figures beyond the period covered by the projections published by the Welsh Government. You can find the Welsh Government's latest local authority population and property projections at:

- subnational population projections for Wales
- subnational household projections for Wales

When looking at the projected population of Wales as a whole, the national population projection for Wales produced by ONS should be used instead of adding up the local authority population projections. You should also engage with the local planning authorities in Wales to consider the local development plans in your supply area to inform your analysis of the uncertainties in your forecast population and property figures.

England and Wales

In your plan you should:

- clearly describe the assumptions and supporting information used to develop population, property and occupancy forecasts. You should demonstrate how you have incorporated local authority information (particularly in relation to their published adopted local plans), neighbourhood plans and housing need in England and whether this is the latest information available up to 3 months before the plan.
- explain the methods you have used to forecast property figures after the planning period used by local councils (for example from years 15 to 25 in the planning period)
- demonstrate how you have included other information sources and amended your forecast accordingly
- clearly describe any limitations in your forecasts
- demonstrate that you understand the uncertainty associated with your forecasts and how you will manage it
- clearly describe how you have worked with regional groups (where applicable), neighbouring companies and those involved with strategic water resource solutions to align your forecasts

- clearly describe how you have worked with local and strategic planning authorities to understand current and future growth and development for both households and non-households
- explain the assumptions about how you have derived any population that is not accounted for in the sources you have used to estimate population
- describe how you have allocated populations to water resource zones, such as using neighbourhood plans or census data to further subdivide the populations
- use improved and updated population and household data in your final WRMP if it is available and describe how you will do this in your draft plan. This should be consistent with that used in your business plan
- clearly explain the assumptions, risks and uncertainties associated with the results

If you are using a planning period beyond 25 years and are basing decisions on this forecast, you should explain the range of uncertainties this long range forecast will have. You should explain in your plan how you will manage this uncertainty.

6.4 Forecasting your customers' demand for water

You should select baseline demand forecasting methods appropriate to the data available and the supply-demand situation in individual water resource zones. You should consider using the problem characterisation as described in the UKWIR Decision making process guidance. You should develop your forecasts with neighbouring companies and, where relevant, your regional group. This is to ensure you understand and can explain any significant differences in demand and use patterns such as PCC. Your forecasts should also reflect the improvements in your understanding of water consumption as a result of metering programmes and recent research.

You should produce a forecast demand for a dry year annual average scenario, normal year and critical period or periods (if required)

scenarios. You should present this data in the corresponding water resources planning tables at a resource zone level and a break-down into micro-components at a company level. You will find information on how to do this in the instructions for the water resources planning tables.

Your plan should show your normal year PCC for the first 5 years of your plan and every 5 years until the end of the planning period. You should present the data alongside your dry year forecast so that a clear comparison can be made.

Your demand forecast should include your estimate of any residual changes in water use behaviour and distribution of demand during the planning period as a result of the coronavirus pandemic, for example from changed working patterns.

6.4.1 Data and methodologies

You should collect good quality, recent data about your customers' water use to produce your baseline demand forecast. To help determine future forecasts you should understand current behaviours and attitudes to water use and report this through use of micro-components in the water resources planning tables. You should provide micro-components at a company level, unless you are aware of significant differences between your resource zones which makes reporting separately appropriate.

You should use this guidance on demand forecasting:

- UKWIR (2016) WRMP19 methods – household demand forecasting
- UKWIR (2016) WRMP19 methods – risk-based planning
- UKWIR (2016) Integration of behavioural change into demand forecasting and water efficiency practices
- UKWIR (2012) Customer behaviour and water use – a good practice manual and roadmap for household consumption forecasting
- UKWIR (2020) Improving understanding of current and future household water use
- UKWIR (2022) Review of 2022 Drought Demand Management Measures

You should state:

- why you have chosen a particular method
- the assumptions you have made
- the uncertainty associated with your demand forecasts

You should also show how you have allowed for the uncertainty in your plan.

Your demand forecast should consider the impacts of prolonged dry weather and droughts on demand. You should consider whether there are alternative methods to define dry year demand. You should do this in a way that takes account of your specific situation and lessons learned from the high demands experienced in previous hot dry weather.

Your plan should also consider the results of water industry project on 'Water Demand Insights from 2018' (Artesia 2020). You should consider, for example, how prolonged dry weather could affect your customers' demand. Also whether your planning scenario adequately considers short and long term peaks in demand that you have experienced and the impact on your networks.

If your plan includes a critical period of high demand, it should be informed by previous peak demand years, such as 2018, 2020, 2022 and 2025. You should consider the influence of weather on demand, the impact of seasonal population changes on demand and the potential for extreme weather events such as a significant freeze-thaw event causing high demand.

It is important that you are able to maintain supply during peaks of demand, whilst maintaining compliance with your abstraction licences.

6.4.2 Base year customer demand forecast

You should clearly state which data you have used as the base for your forecasts and whether you have used reported actual data or your planned position as set out in your 2024 plan. You should base the base year on your actual data as far as possible, adjusted to dry year where appropriate. If you need to extrapolate, you should use the data you think is most appropriate and justify why.

If you are using regional planning data, you should ensure there have been no significant changes since the forecasts were produced. If there are, you should update your plan accordingly.

If your position is significantly different from your previous plan forecast, you should discuss and agree your approach with regulators. Regulators expect you to achieve your previous WRMP commitments. If your approach to calculating base year and forecast PCC leads to significant uncertainty or changes in your base year or projected consumption compared to your previous plan, you should:

- assess the impacts on the water balance (such as non-household consumption)
- describe how this affects the options you have considered in your plan and consider scenario testing or adaptive planning (see Section 10)
- explain the reasons for the change
- explain any uncertainty in PCC levels
- describe how this affects your ability to meet any relevant planning assumptions in the national framework, regional plans and government aspirations to reduce PCC over the planning period
- use improved and updated PCC data if it is available in your final WRMP and describe how you will do this in your draft plan. This should be consistent with that used in your business plan (PR29)
- set out how you will review your forecasts during the planning period to monitor any short or long-term changes and the impacts this could have on your plan

6.4.3 Baseline customer demand forecast

Your baseline forecast should reflect your forecast of customer consumption without any further water efficiency or metering activity from you from the start of the planning period. The baseline should still include an assessment of how many of your customers will opt for a meter without any encouragement from you.

6.5 Forecasting your non-household consumption

You should produce a forecast of your non-household demand. This is the demand for water being used by non-household premises (such as businesses and industrial premises) and for the population living in communal establishments (for instance hospitals, prisons and educational establishments).

Your forecasts of non-household use should be based on principal use. This should be in line with Ofwat's:

- eligibility guidance on whether non-household customers in England and Wales are eligible to switch their retailer
- supplementary guidance on assessing whether non-household customers in England and Wales are eligible to switch their water and wastewater retailer

You should also work with non-household customers to improve water efficiency where you believe there are savings to be made. You should clearly demonstrate how you will deliver non-household water efficiency. Your final plan should see an overall reduction in non-household consumption.

In England, you should set out how it contributes to Defra's water demand target and associated Environmental Improvement Plan. These seek a net 9% reduction of non-household water consumption by 2037/38, from a 2019/20 in-year baseline, as part of the delivery of the distribution input per person reduction. In Wales you should set out how you plan to achieve demand reductions set out in Ofwat's PR24 final determinations and any set out by the Welsh Government.

You should explain why your plan does not show an overall reduction in non-household water consumption if this is the case; for example because of a large commercial development. You should plan to meet the demands from your non-household customers and support and promote sustainable growth and development within your region. You should clearly explain if your WRMP includes controls or constraints on non-household growth, why this is the case and your timetable for removing these constraints.

It is your role to engage with the retailer and the retailer's role to engage with their customers. If there is any engagement with non-household customers, it should be with the agreement of the retailer or retailers to avoid confusion. You should engage with the retailers early on in the process.

In Wales you should engage with retailers for those non-household customers eligible under restricted retail authorisation.

You should provide evidence of your engagement with retailers in your plan. You should also explain the implications of your chosen drought management actions (such as non-essential use bans) on non-household customers.

Your forecasts should reflect the outputs of regional plans (if appropriate) for the customers you supply.

Your forecasts should include an assessment of the demand for water from new customers switching to public water supplies, from other sources of abstraction such as agriculture in a significant drought. This allowance can be on top of your dry year annual average demand for non-household customers. You should include it as a separate line in the water resources planning tables to differentiate it from the dry year forecast.

You should also consider whether there are any implications from private water supplies failing and therefore calling on you as a supplier of last resort. If so, you could consider an allowance for this demand in your non-household demand. If you do this, you should explain how you have assessed this demand and the evidence you have used.

6.5.1 Retailers

In England, all eligible business customers and public sector, charitable and not-for-profit organisations are able to choose their water supplier (retailer).

In Wales, only non-household customers who meet the 50 megalitres a year threshold requirement are able to choose a different supplier for water retail services. Non-households under this threshold are direct customers of the incumbent water company.

You (the incumbent water supplier or wholesaler) are still responsible for delivering the water to the customer and should continue to plan for non-household customer demand in your area. You should ensure there is no double counting in your plan between this forecast and any bulk supply to an incumbent. The general duty to promote the efficient use of water under Section 93A of the Water Industry Act 1991 applies to both the wholesaler and the retailer.

When you prepare your plan, you can work closely with any applicable retailers through the national retailer and wholesalers WRMP working group, which will be set up as part of the joint action plan. This will allow retailers to provide information and data in a timely manner as you prepare or revise your plan. You should continue to work with the retailers, including through the actions in the retailer roadmap (see below), to ensure the promotion of water efficiency and demand management with all customers. You should outline details of this joint planned work in your plan as a discrete section.

We recommend that you refer to and use the 'Supplementary guidance on retailer involvement in water resources planning'. The retail and wholesale water efficiency subgroup produced this to help working together with retailers on the production of your WRMP.

England

For companies in England, a joint regulators letter was issued to retailers and wholesalers in March 2020. It sets out what you and retailers should be doing to meet your water efficiency obligations. This letter asked retailers and wholesalers to submit a joint action plan by September 2020 outlining the actions that both wholesalers and retailers need to complete to increase water efficiency. The action plan comprises 5 key headline actions and supporting actions designed to identify and tackle barriers to improved water efficiency in the sector, together with a timetable for achieving progress. This includes measures to understand non-household demand and water efficiency potential.

As a follow on from the action plan in 2021, the Retailer Wholesaler Group Water Efficiency sub-group produced a roadmap for the development of water efficiency in the non-household sector. The group updated the roadmap in 2023. The revised roadmap sets out a

series of proposals, highlighting where progress is already being made, and where the ‘gaps’ remain. The immediate priorities currently are:

- options and models for wholesaler/retailer collaboration during AMP8
- a common method for tracking and measuring the impact of water efficiency activities

6.5.2 Information you should provide in your plan

You should work with retailers and through regional groups (where applicable) to share appropriate information, data and expertise to ensure your forecasts and solutions are robust. You should make sure that:

- your plan contains an estimated demand forecast for non-households
- you describe how you have derived the figures and assumptions you have made
- you make use of the market operator of the non-household water market (MOSL) system that stores retail company data as needed. MOSL is the market operator of the non-household water market
- you describe the make-up of non-household demand in different sectors either by using the service and non-service split (identifying the main sectors), or by using Standard Industrial Classification (SIC) categories published by the ONS. MOSL is working with non-household trading parties to produce a proposed plan for non-household industry segmentation based on SIC categories but down to division level. You should use this when it is available
- you clearly explain the existing water efficiency initiatives planned by both the wholesaler and retailer or retailers. Your baseline should reflect non-household demand without any further intervention. Your final planning scenario should include any forecast savings from water efficiency programmes
- you consider non household water efficiency as an option to manage the supply-demand balance and meet government policy or targets on water consumption

- you consider any uncertainty associated with reducing demand and show how you will monitor the water efficiency programme and how the plan can be adapted if required
- you have collaborated at a regional level and engaged with non-public water supply abstractors or relevant organisations to produce your forecasts.
- rather than just using local plan information, you should also review the relevant national strategies to assess where growth may be coming in your supply areas, e.g. Artificial Intelligence growth plans; British Energy Policy; UK Hydrogen Strategy; NESO strategic planning[18], Future Wales: the national plan 2040
- the planned level of service provided to customers is clear and you set out if you will give a different level of service to particular non-household customers
- you have considered the potential demand for other sources such as agriculture and those on private water supply in a significant drought
- you deliver the relevant actions in the wholesaler and retailer action plan

6.6 Considering NAVs in your demand forecast

An increasing proportion of new growth is being supplied by new appointments and variations[19] (NAVs). Developments supplied by NAVs are supplied via a bulk supply from the incumbent.

You should engage with existing NAVs to understand any future plans for your area and incorporate these into your plan.

In your plan you should set out what your assumptions are around the amount of new growth that you expect to be supplied by NAVs and any assumptions you make around supplying NAV sites. You could consider scenario analysis around these assumptions to understand their sensitivity.

[18] Note that existing strategies exist for regions like Mid Wales, North Wales, and South West Wales.

[19] NAV appointments are made under the Water Industry Act 1991 (Sections 7 and 8) and enable Ofwat to replace the existing water supply and/or sewerage undertaker for another for a specific area. NAVs undertake much of the same duties and responsibilities as the previous statutory company, including the requirement to produce WRMPs.

6.7 Forecasting leakage

Reducing leakage is an essential part of reducing the demand for water, not least because many customers are more responsive to reducing their own water use if water companies reduce their leakage.

Reducing leakage is important for the efficient use of resources, improving resilience and reducing the environmental impact. Leaking water costs you as you pump, abstract and treat the water. You should therefore show leadership by making sure you keep leakage under control. You should follow government policy and regulators and customers' expectations to continue to reduce water loss through leaks.

You should demonstrate how your leakage proposals build on your work to manage leakage to date and form part of a long-term approach to demand management.

You should determine your leakage levels consistently with the approach used to report your annual leakage performance against the Ofwat and Environment Agency reporting requirements.

You should take account of the supplementary guidance 'Leakage'. You should also refer to Water UK's leakage routemap.

6.7.1 Base year leakage

You should clearly state which data you based your base year forecasts on. You should state whether you have used reported actual data or your planned leakage from your 2024 WRMP or the PR24 final determination. Your base year should be based on your actual data as far as possible, adjusted to dry year if appropriate. If you need to extrapolate, you should use the data you think is most appropriate and justify why. If your forecast first year of plan (2029/30) leakage is significantly different from your previous plan forecast, you should discuss and agree your approach with regulators.

If your approach to calculating base year and forecast leakage has significant uncertainty around it, or is significantly different from your previous plan, you should use scenarios to:

- assess the impacts on the water balance (such as PCC and non-household use)
- describe how this affects the options you have considered in your plan
- explain the reasons for the change
- explain any uncertainty in leakage levels

You should also:

- describe how this uncertainty affects your ability to meet planning assumptions as set out in your previous plan, the national framework, regional plans and government aspirations to reduce leakage over the planning period
- use improved and updated leakage data in your final WRMP and describe how you will do this in your draft plan. This should be consistent with that used in your business plan
- clearly state your current policy for repairing customer supply pipes in your plan and how this compares with other companies' policies
- discuss the changes that result from the revised approach to calculating leakage and the impacts with regulators
- set out how you will address any performance issues experienced while undertaking your planned leakage programme during the 2025 to 2030 period
- describe the impacts of extreme weather and climate change on leakage and the ability to meet your leakage targets together with your approach to manage this, taking account of the outputs of the UKWIR Improving approaches to demand forecasting project (to be published).

6.7.2 Baseline leakage forecast

Your baseline leakage forecast should remain static from the first year of your planning period. If you have significant growth in a resource zone, you should discuss and agree your approach with regulators.

6.8 Other components of demand

You should describe how other components of demand have been assessed in your plan. This includes water taken unbilled, which should include usage which is permitted but not charged for (such as water used for firefighting) and water taken that is not permitted (such as unauthorised connections). You should also assess the amount of water expected to be used by your operatives and contractors for operational purposes, such as new mains commissioning and network flushing. You should demonstrate what assumptions you have made when assessing these components and what data sources you have based your assessment on.

6.9 Impacts of climate change on demand

The impact of a changing climate on water consumption is uncertain. You can make an allowance for the impact of climate change on the demand for water. You should consider which factors would have the greatest impact on demand, such as temperature (in particular above threshold levels) and sequences of days without rainfall. You should align with the climate change assessment used in developing your supply forecast, as detailed in Section 5.6. You should provide details of the allowance, the evidence you use and the assumptions you make. You should refer to:

- UKWIR (2009) Assessment of the significance to water resources management plans of the UK climate projections 2009
- UKWIR (2013) Impact of climate change on water demand

You should also consider the outputs of the UKWIR Improving approaches to demand forecasting project which is due to deliver in 2026.

Section 7 – Allowing for uncertainty

You should use the most up-to-date and appropriate tools, methods and data available to produce your supply and demand forecasts. However, given there is uncertainty in all forecasts, you should include an uncertainty allowance relating to your supply and demand. This is known as headroom.

You should analyse the sources of uncertainty around the components of your supply-demand balance and the range of uncertainty around these variables. The following documents set out different approaches to assessing uncertainty:

- UKWIR (2016) Risk-based planning
- UKWIR (2016) Decision making process guidance
- UKWIR (2002) An improved methodology for assessing headroom

You should consider the appropriate level of risk for your plan. If target headroom is too large, it may drive unnecessary expenditure. If it is too small, you may not be able to meet your planned level of service. You should accept a higher level of risk further into the future. This is because as time progresses the uncertainties will reduce and you have time to adapt to any changes.

You should provide a clear justification of the assumptions and the information you use to assess your uncertainties. You should assess the relative contributions of uncertainty, showing which uncertainties have the biggest impact in each water resource zone. You should communicate this clearly so that regulators, customers and interested parties can understand it easily. You should also consider whether there are any steps you could take to reduce uncertainty during the planning period.

In your assessment of uncertainty you should:

- ensure your plans can adequately adapt to over or under-achievement of demand management activity. You should use scenario testing to examine the potential uncertainty of any future demand forecasts.
- not include uncertainty related to non-replacement of time-limited licences on current terms. If there are risks to supply because your abstraction licences may not be renewed, you

should address this uncertainty directly in your plan through investigations and planning alternative supplies as necessary.
- work with the Environment Agency or Natural Resources Wales, and regional groups (where applicable) to discuss how to consider possible future sustainability changes. Longer term potential sustainability changes can be explored through the environment destination work carried out locally and at a regional level. You should not include any allowance for uncertainty related to sustainability changes to permanent licences, as the Environment Agency or Natural Resources Wales will work with you to ensure that these do not impact your security of supply.
- consider the inbuilt headroom in the NAV bulk supply agreements and how this affects your headroom allowance to ensure that there is no double-counting
- reflect the preferred options in the headroom of your final plan.

Adaptive planning may be a beneficial approach in managing uncertainty. For further details, see Section 10 of this guideline and the supplementary guidance ‘Adaptive planning’. When you use adaptive planning, you should consider what implications this will have for your management of uncertainty, for example target headroom.

If you are a company in Wales, you should discuss your adaptive planning approach with Natural Resource Wales.

Alternative methods of calculating headroom

You can consider whether a simple percentage of Water Available For Use and Distribution Input is appropriate for capturing uncertainty. If you use this approach, you should clearly state the percentage selected, the assumptions used and the justification for your approach. You should also clearly state what the major areas of uncertainty are.

If you use risk-based planning tools or a decision-making tool to assess uncertainty and variability, you may not need to calculate target headroom. Alternatively, if you use the UKWIR (2002) *An improved methodology for assessing headroom* approach to calculating uncertainty you may need to exclude some target

headroom components. If so, you will need to explain the methods and assumptions you have used and demonstrate that you have not double counted or omitted uncertainties. It is recommended, however, that you provide a headroom value which represents uncertainty. This is so that the uncertainties in your plan are explicit, even if you are using more advanced methodologies.

Section 8 – Identifying possible options

You should identify possible options in your regional plan (if applicable) and WRMP for one or more of the following reasons:

- you have a deficit in your supply-demand balance
- to supply potential regional or national needs, or supply other sectors
- to address government expectations, concerns of your customers or local stakeholders
- to ensure the efficient use of water
- to address the requirement in Wales to maintain and enhance biodiversity while also promoting the resilience of ecosystems.

You should produce your list of options to appraise.

1. Identify an unconstrained list of all possible options (sub-section 8.1).
2. Develop a feasible list (sub-section 8.2). Sub-section 8.3 lists the information you should provide for your feasible options.

You should consider a wide range of options (both at the unconstrained and feasible list stages). Your range of options should:

- demonstrate that real choices are possible in the selection of your preferred programme
- enable you to meet your identified objectives for your plan

- provide confidence to regulators, stakeholders and customers that your preferred programme represents best value across the planning period

You must assess whether your plan and the options in your plan are subject to a SEA and HRA. You must also ensure that you have complied with any other statutory requirements and legal directions. You may wish to refer to:

- UKWIR (2021) Environmental assessments for water resources planning
- Office of the Deputy Prime Minister (2005) A practical guide to the Strategic Environmental Assessment Directive
- Welsh Government, Strategic environmental assessment in Wales

If you have options within or that affect sites in Wales, you must also consider the requirements of the Environment (Wales) Act and the Wellbeing of Future Generations Act.

8.1 Unconstrained list

You should compile a list of all possible options that could reasonably be used in your plan. This unconstrained list should be initially developed from a generic list of option types. UKWIR The Balancing of Supply and Demand Guidelines 2002 produced a comprehensive list of water management option types which you can consider. You are encouraged to use this list as a base from which you can add or subtract. As a minimum, the unconstrained list should include all the options considered in the previous planning round, as well as any options that have been identified since. You should include supply-side and demand-side options, as well as making efficiencies in your network such as removing network constraints where they contribute to the supply-demand balance.

In forming your list of options, you should explore those presented by regional groups, including regionally scaled and joint-company options (see Section 2). For England, you should also identify other potential

transfers from neighbouring water companies and consider third party options (see sub-section 8.1.1).

You should demonstrate that you have systematically considered opportunities at all your existing assets to feed into the unconstrained list. As a minimum this should include, but not be limited to:

- water recycling opportunities at all wastewater treatment works
- expansions of all water treatment works
- expansions at all reservoirs

Your systematic consideration of all existing assets should be carried out for all water resource zones. This includes those with forecast baseline surpluses, in order to demonstrate opportunities to expand surpluses for trade and transfer. The nature of the unconstrained list means most existing assets should systematically be considered for inclusion as possible options. However, you could set minimum thresholds that allow you to consider and immediately screen out the option prior to inclusion in the unconstrained list. This would be where it is clear and known that assets outside of this threshold would not be reasonably possible options due to limitations from asset size, licensing or government policies which may limit opportunities. Thresholds must be clearly set out, justified and discussed with regulators at pre-consultation stages.

You should also demonstrate opportunities for switching existing third party non-domestic potable use to non-potable sources.

An unconstrained option may not be completely free from restrictions, such as environmental or planning issues, but should be technically feasible. You should provide an indicative deployable output or range for your unconstrained options.

8.1.1 Third party options

England

You should identify whether third parties could provide viable options or if there are opportunities for collaboration to develop supply or demand options. You should consider third party options in the widest sense, for example:

- a transfer of water between water companies – including developing options to support transfers
- a water efficiency scheme provided by a third party
- a water trade with a third party
- provision by a third party of reclaimed water
- switching third party non-domestic potable use to non-potable sources

You should identify these opportunities through your regional group (if applicable), and before your pre-consultation. Your regional group may have identified options delivered partly, or wholly, by third parties. You should appraise these options against the same criteria as you use for assessment of your own options. Options for identifying and inviting third parties include (but are not limited to) contacting neighbouring water companies and other abstractors, or advertising. It is up to you to determine the most appropriate method for your circumstances.

You should actively engage with third parties who could provide options to you at a lower cost, or provide additional benefits than your own options. WRMP29 Tables that you publish in an accessible format (i.e. where numbers can be extracted and utilised) on your website will aid third parties in developing bids by making water resource data more accessible. If you have not already done so, you should retrospectively publish WRMP24 tables as soon as possible to aid third party option development for WRMP29. Bids could include services such as the provision of water, leakage detection and demand management options. You should utilise your Bid Assessment Framework to support third parties in their provision of information and analysis as part of the development of third party options.

In your plan you should show evidence that:

- third parties have been able to propose options for appraisal
- you have used a set of screening criteria for third party options which is consistent with those applied to your own options, and provide full justification for the outcomes of your screening process in line with your own options

- you have appraised third party options in line with your published bid assessment framework
- you have actively engaged with regulators on any regulatory or political barriers identified in the scoping of third-party options for mitigation opportunities

Wales

You are encouraged to engage with third parties who could provide solutions to you at a better value than your own options. These options should not reduce the scope for you to provide innovative solutions, especially if they deliver wider benefits, such as green infrastructure. In determining value, your consideration of costs and benefits should take into account environmental, economic and wellbeing costs as well as financial costs, including natural accounting principles.

The WRMP Tables that you publish in an accessible format to be directed by regulators on your website will aid third parties in developing bids by making water resource data more accessible. You should retrospectively publish WRMP24 tables as soon as possible where these have not already been published to aid third party option development for WRMP29

If you include an option to transfer water from a water resource zone of a Welsh water company, you should discuss these options with the Welsh Ministers and Natural Resources Wales.

8.2 Feasible list

You should develop your feasible list of options from your unconstrained list of options. The feasible list is a set of options that you consider to be suitable to assess for inclusion in your preferred programme of options. As such, it should not include options with unalterable constraints that make them unsuitable for promotion. For example, unacceptable environmental impacts that cannot be overcome or options which have a high risk of failure. For example, WFD regulations and Habitats regulations constraints.

You should discuss your feasible options with the Environment Agency or Natural Resources Wales, Ofwat and Natural England (where appropriate) as early as possible. In your discussions with Ofwat, you should also include an indication of the maturity of options costing. You should also discuss feasible options with relevant non-statutory consultees as early as possible, for example engaging Forestry Commission in England where options may affect woodland.

You have the flexibility to decide on the most appropriate screening method for your situation. You should clearly show the criteria you have used to select feasible options. You should clearly state the reasons for rejecting any options.

You can present options that do not provide specific supply-demand balance benefits, but which offer wider water supply and/or ecosystem resilience benefits or meet specific legislative requirements that form part of your best value plan. These options can be presented as part of your WRMP, however will need to be discussed with Ofwat for inclusion in the business plan process. For catchment schemes without supply-demand balance benefits, the resilience investment category as part of enhancement funding could be considered as a funding route. The approach adopted at PR24, including what evidence and considerations need to be included in investment plans for the resilience enhancement schemes is detailed in Section 3.4.3 of the PR24 final methodology Appendix 9. While elements of this approach may change for future price controls, we currently consider this to be a reasonable guide for planning purposes. Examples of these options could be catchment schemes to provide flood resilience, improved environmental resilience to drought, biodiversity gain (England) or maintain and enhancing biodiversity and promote ecosystem resilience (Wales). To be considered for supply-demand balance enhancement funding, a scheme should have some benefit to one or more components of the supply-demand balance. For example, through providing deployable output or reducing outage.

You should provide the following information to regulators, prior to the submission of your draft plan at a mutually agreed time:

- unconstrained options list, including review of existing assets
- rejection register
- feasible options list

This is to allow early discussion and review of your options lists.

England

Your feasible list should also include any demand-side options such as changes to temporary use bans and non-essential use bans as well as drought permits and orders. This is so they can be clearly appraised alongside other options. Your options list should include any impact of drought measures which you removed from deployable output.

Wales

Your feasible list should include demand side options. You can include drought permits and orders in your feasible list that have no significant impacts to the environment (see Section 9.3.5).

You can use your understanding of your drought plan to assess any environmental risks for drought permits or orders. However, this information can only be used where:

- no material information has emerged that means it is out of date
- the underpinning analysis is sufficiently rigorous and robust

8.2.1 Further screening

If you have a large feasible list, you can consider further screening to produce a more manageable number of options to assess for inclusion in your preferred plan. Your refined feasible list should still contain sufficient options to allow real choices when assessing the preferred programme. This is in terms of both numbers, type and size of options. You should ensure that the process for further screening does not contain any undue bias. You should discuss your approach with regulators.

8.2.2 Assessing environmental constraints

A. River basin management plan and WFD regulations

RBMPs and WFD regulations environmental objectives for water body status and protected areas are a constraint on your options. You

should screen out any options that have unacceptable environmental impacts that cannot be overcome.

You should ensure that there is no risk of deterioration from the option, such as a potential new abstraction or from increased abstraction at an existing source, before you consider it as a feasible option. Alternatively, if investigations are yet to be completed, you should set out what your alternative options would be should those investigations demonstrate that there will be an unacceptable environmental impact.

You should also assess all your supply options against the latest RBMP measures and objectives for each water body and meet your obligations to avoid future deterioration. You should ensure that your feasible options do not compromise the achievement of the latest RBMP objectives, which may have changed since your last plan.

You should talk to the Environment Agency or Natural Resources Wales about any intended actions that may:

- cause deterioration of water body status (or potential)
- prevent the achievement of the water body status and protected area objectives in RBMPs
- prevent the achievement of water body status (or potential) for new modifications

You should do this as soon as possible before developing your plan. You should make a clear statement in your plan about any potential impacts.

B. Habitats Regulations (Conservation of Habitats and Species Regulations, 2017 (as amended))

Your plan, including any options within it, should support the achievement of favourable conservation status of habitats and species identified by the regulations. They must also not prevent the achievement of favourable condition of sites designated under the regulations. You must assess if there are any likely significant effects on European sites from any of your options (such as a potential new abstraction or from increased abstraction at an existing source) before you consider them as feasible options.

Where you decide there is a risk of ‘likely significant effects’ on a European site or do not have enough evidence to rule out a risk, an ‘appropriate assessment’ is required to establish if the option can be delivered without having an adverse effect on the integrity of any European site.

You must consult Natural England and/or Natural Resources Wales about any intended actions that may cause adverse effects to designated sites within England and Wales, respectively. You should do this as soon as possible before developing your plan, and you should make a clear statement in your plan about any potential impacts. You should refer to the information on the HRA provided in Section 9.4.3.

The need to do a HRA should not be a reason on its own to screen out an option. This is because a HRA screening may conclude that there are ‘no likely significant effects’. Alternatively an appropriate assessment may conclude ‘no adverse effects on integrity.’ Either of which may allow the option to be retained within the plan.

C. Environment Wales Act

If your option is within or affecting Wales, you must have regard to Environment Wales Act 2016 and Section 6 and Section 7 under this act in your assessment of ecosystem resilience.

8.2.3 Climate change adaptation

Your plan should take a proactive approach to mitigating (see 8.3.2) and adapting to climate change. Adaptation to future challenges is fundamental to WRMPs. Both the risks and benefits associated with options can change due to the impacts of climate change. Many options will help climate adaptation, for example, demand reduction that leaves more water for nature during low flows, or development of new sources that increase resilience to drought. You should embrace opportunities to make nature more resilient to climate change in feasible options. For companies in England or affecting England, you could use Natural England’s ‘Climate Change Adaptation Manual’ (second volume) to help plan for biodiversity enhancements.

You should engage with risk management authorities to help identify innovative solutions for integrated water management so that

solutions are better coordinated with flooding and coastal change investment. This is an important feature of the FCERM strategy in England.

8.3 Information you should provide for each option

You should provide the information set out in this section for each of your feasible options (or refined feasible list), including third party and partnership options.

You should clearly set out the evidence that has informed the assumed benefits of your supply and demand options.

If you have developed a refined feasible list, you should discuss with regulators how much information you should provide for feasible options which are not on the refined feasible list.

Supply and transfer options

You should include in your plan a description of the option including an appropriate schematic map and, or conceptual diagram showing:

- the source of supply
- the main operational features
- the areas over which the option is to be implemented
- any links or dependencies to other options

Demand management options

You should include in your plan a description of how the option being described differs from baseline activities. Demand management options should not be presented as aggregated at a combined programme level. Options should be presented with sufficient granularity to clearly distinguish activity levels, benefits and costs, e.g. where benefits are being delivered on leakage or PCC, household or non-household use.

You should also look to assess and quantify wider benefits from reducing water demand on your operational activities. This may include reduced treatment and pumping costs and associated carbon savings.

All options

You should provide the following:

(a) A profile of the deployable output, contribution to the supply-demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. For a supply option, the deployable output should be based on the same assumptions as your baseline options. The yield of a demand side option should be based on a dry year (see sub-section 4.6). These option benefits must not be double-counted, and you should clearly describe any interdependencies between options.

(b) An estimate of the lead-in time needed to investigate and implement the option, including the earliest date the option could put water into supply or reduce demand.

(c) An assessment of the risks and uncertainty associated with the option, including the likelihood and impact on yield of climate change, environmental constraints or customer behaviour (for demand options). You should include an assessment of INNS (where relevant).

(d) A drinking water safety plan assessing the risks to drinking water quality. If there is a risk to wholesomeness, (such as discolouration, nitrates, pesticides) or a risk of deterioration in the quality of supply, the option will not be permitted until steps to mitigate those risks are in place (see Resilience of water supplies in Water Resource Planning - Guidance Note.

(e) An explanation of whether the option depends on an existing scheme or a proposed option or is mutually exclusive with another option.

(f) Any constraints specific to the option.

(g) An assessment of your customers' support for the option.

(h) An assessment of the flexibility of the option to adapt to future uncertainty. i.e. could it be scaled up or down?

(i) A description of how the option will be utilised and the impact on operating costs and carbon costs.

The description should include:

- Quantitative presentation of anticipated utilisation rates for the preferred plan determined from company and/ or regional modelling.
- Utilisation rates for dry year annual average operation, for events such as 1:500 year droughts, peak demand or as part of emergency response, in addition to standby, or normal-year operation.
- Where uncertainty exists in utilisation rates, a range of potential utilisation rates presented, evidenced with modelled calculations and descriptions of scenarios considered.
- Third party options explored to increase utilisation and value from solution supply.

(j) An assessment of the environmental and social impacts of the option, including any SEA at an option level, an evaluation of the impacts on RBMP objectives and nature recovery objectives.

(k) A HRA, if the option could affect any European site

(l) (For supply and transfer options) a natural capital assessment including an assessment of the predicted impact of the option on natural assets and service flows.

(m) (England only) an assessment of the contribution of the option to the conservation and enhancement of biodiversity and a high-level assessment of biodiversity net gain (if the option requires planning permission).

(n) An assessment of wider environment and society benefits

(o) (Wales only) an assessment of how the option will improve biodiversity and enhance ecosystem resilience and contribute to achievement of the well-being goals

(n) Cost information (see sub-section 8.3.1).

(o) Greenhouse gas emissions (see sub-section 8.3.2).

(p) Other information relating to metrics developed to inform selection of your preferred programme (see Section 10).

8.3.1 Cost information

All cost information should be maintained in a price base of [price base to be determined. Likely to align with PR29 (or equivalent) price base e.g. most probably 2020-21 + 5 years] throughout your draft plan, final plan and all tables.
The cost of an option should represent the cost of a deliverable solution which includes any mitigation or design changes for environmental or drinking water quality issues. The cost of an option should be the full cost to realise the gain in WAFU or demand reduction. For example, including associated treatment process, pumping or pipework connection costs.

The costs of delivering 10% biodiversity net gain in England (to gain planning permission where this is necessary) should be included in option costs prior to your option appraisal. Biodiversity net gain may be delivered through the option itself at no additional cost, onsite provision or offsite as part of a wider Catchment and Nature-Based Solutions.

-
- Catchment and Nature-Based Solutions addressing another primary driver relating to company activity (e.g., Biodiversity and Ecosystem resilience duty (Wales) or improving water quality) should be presented in appropriate enhancement lines in the business plan. These can be set out within the narrative of your plan.

Sub-zonal schemes (not impacting your supply) can also be set out within the narrative of your WRMP. However, these schemes should be presented for funding with your business plan rather than your WRMP (as covered in 8.2). Interconnection required to deliver full WAFU benefit of the option can be included as part of WRMP option level cost and benefit.

Your cost information should be set out in the water resources planning tables and you should follow the water resources planning

table instructions. You should provide the following cost information, where necessary for each option:

(a) Option costs should be split into total pre-benefit costs and post-delivery annual costs (including operational, maintenance, replacement), with both costs being reported in terms of totex.

(b) The total net present cost and net present benefits. You should calculate the net present costs and benefits using the Treasury standard declining long-term discount rate as set out in the HM Treasury 'Green Book (HM Treasury 2020)'. The appraisal period should at least cover the lifetime of the longest lasting asset under consideration. Your appraisal period should be consistent within your regional group, where applicable. You should calculate finance costs as a stream of annual costs over the life of the option, where the annual cost is the cost of financing the net book value of assets that contribute to the Regulatory Capital Value, adjusted for straight line depreciation, using the assumed average cost of capital (the wholesale weighted cost of capital in PR24 final determinations).

(c) The average incremental cost (AIC) of the option based on the NPV of its costs and outputs. Note: you no longer need to provide average incremental social cost (AISC).

(d) Environmental and social monetised cost impacts should be presented against natural capital services where applicable.

(e) Total carbon cost impacts (see Section 8.3.2).

We do not expect you to present the detailed calculations used to derive the total net present costs for all options. However, you should clearly identify the assumptions used to calculate net present costs, net present benefits, and AIC. You should present worked examples for preferred demand-side and supply-side (where selected) options showing the profile of annual costs. Although you do not need to present as part of your draft plan, regulators may request these calculations for other preferred options.

You should undertake enhanced cost estimation methods for the schemes which:

- represent the key cost drivers to your plan

- are a priority to maintaining your supply demand balance, or
- are subject to specific risks and uncertainties.

For many companies, this will include Strategic Resource Options (SROs) and other major projects such as schemes similar to those in Ofwat's Large Scheme Gated Process. However, you could consider applying the same methods in a proportional approach to all or other supply schemes in your plan, particularly where you do not have supply schemes which cross large project thresholds but remain important for enhancing resilience for customers and the environment.

Enhanced cost estimation methods should include (but are not limited to):

- describing where solution cost scalability moves from marginally more expensive to substantially more expensive (tipping points)
- providing option cost envelopes to indicate uncertainty and range in costs that may develop as further scoping and option development occurs
- undertaking sensitivity analysis to show where option cost changes within or outside of cost envelopes triggers a reconsideration of the option as best value
- benchmarking key activities and options across the industry and wider cost databases to give indication of confidence and efficiency in your costing.

Cost estimation guidance for major projects has been commissioned by Ofwat, due for draft consultation in early 2026. When developing your cost estimation methodology, we encourage you to feed into this guidance development. Outcomes of the guidance will help shape cost estimation expectations set out in this section in future guideline updates.

You should review costs regularly for strategic resource options and major projects that span multiple investment periods. A scheme which is ‘in delivery’ will need to be reassessed if outturn costs and forecast costs fall outside of the cost envelope described above. Your reassessment will need to confirm if the scheme still represents the best value or optimal solution. As a minimum cost reviews should happen consistently with the requirements of the gated process and when a new WRMP is under development. Consideration of mature

strategic schemes in baseline planning scenario is discussed in Section 9.6.

The costing approach and calculations you use should be a fundamental component of the evidence that your Board considers in giving its assurance statement. We expect the approach to costing resultant option costs, assured by your Board, to not vary significantly between WRMP and business plan submissions. Where variances occur, we expect you to well-evidenced them and to have reassessed the impact of the variance on the optimisation of the plan. We expect you to present assurance that cost benchmarking has been undertaken as part of your costing estimation methodology. This should include statements around the proportion of overall schemes, or parts of schemes, that have been assured. However, detailed evidence of cost benchmarking could be reserved for business plans submission.

Costs presented within the final plan (WRMP29) are expected to be the consistent with those submitted in your business plan at PR29. Given the short time between the final plan and PR29 submissions this should be achievable. If there are any significant changes in your plan post draft WRMP29 (in particular on the plan's costs, expected benefits and impact on the environment), you should consider how these will be managed through your statement of response, final plan and the timeline for submission of your business plan (Section 3.3).

8.3.2 Accounting for and reducing greenhouse gas emissions

The UK and Welsh Governments have committed to statutory net zero greenhouse gas emissions (GHGs) targets by 2050. The water sector has a role to play in supporting the achievement of these targets. The water sector, through Water UK, has committed to net zero operational carbon by 2030. You should consider carbon through your options appraisal and your plan should set out how you are contributing to the sector, company, and government commitments to net zero. You should take a whole life carbon approach.

Wales has statutory targets to reduce greenhouse gases[20]. Your proposals should therefore include an assessment of their carbon

[20] The Climate Change (Interim Emissions Targets) (Wales) (Amendment) Regulations 2021

impact in Wales from the outset. You should email enquiries to decarbonisationmailbox.@gov.wales.

England

In your plan, you should:

- assess the carbon cost of both the construction and operation of your options, along with the impact of land use change on carbon sequestration. You should present your assessment of carbon impacts and operational and embodied carbon of the solution (in tCO2e) for all variations of solution options

- use the most up-to-date carbon costs and values as given in the latest government guidance and present these costs together with your options cost. You should:

    - use the central series of values for modelling
    - carry out sensitivity analysis using the high and low series
    - present the tonnes of carbon (tCO2e) you will emit from the construction and operation of your preferred options

- when you assess the carbon impacts of your options, you should take into account any mitigation. For example, using renewable energy or carbon off-setting. Carbon off-setting can contribute to wider environmental benefits such as tree planting or upland and peatland restoration, if there is no alternative to reducing emissions. You should refer to the GHG management hierarchy and, where possible, prioritise the elimination and reduction of greenhouse gas emissions, before the use of offsets for residual emissions

    - Ofwat (2022), Net Principles discussion paper
    - IEMA (2020), Pathways to Net Zero - Using the IEMA GHG Management Hierarchy

- set out how you will monitor and evaluate the outcome of your decisions on GHG emissions

Your plan should contain evidence of policies, frameworks and approaches you are following to drive down whole life carbon in option choices and within solution design. You should engage with

recognised standards and frameworks, such as PAS2080, ISO14064, the GHG Protocol, and the Science Based Target initiative. These will help you to robustly demonstrate reductions in emissions. Consistent use of a chosen framework in your plan can help with accuracy of carbon estimations. You should ensure that the level of uncertainty associated with your carbon assessment of your options reduces as your options are developed and mature.

You should consider the 6 main greenhouse gases, presented in tonnes of CO2 equivalent (tCO2e) in your plan. We expect to see consideration of Scope 1, Scope 2 and Scope 3 emissions. Taking a whole life approach to carbon assessment ensures that there is a focus on reducing both operational and embedded emissions. You should design solutions in line with the GHG Management Hierarchy, prioritising the elimination and reduction of GHG emissions, followed by substitution measures such as renewable energy, before the use of offsets. Your options should embrace innovative designs and opportunities to generate or be powered by renewable energy or sequester carbon (or both).

You should refer to the following guidance on whole life carbon assessment:

- UKWIR (2024) Supporting whole life carbon reduction (24/CL/01/40)
- UKWIR (2012) Framework for accounting for embodied carbon in water industry assets (12/CL/01/15)
- PAS 2080: Carbon management in buildings and infrastructure (2023)
- Towards a science-based approach to climate neutrality in the corporate sector (2019)
- ISO 14064-1:2018 - Greenhouse gases
- GHG Protocol (2015) Corporate Accounting and Reporting Standard & GHG Protocol (2011),
    - Corporate Value Chain (Scope 3) Accounting and Reporting Standard:

- Supplement to the GHG Protocol Corporate Accounting and Reporting Standard.

You should also consider the following guidance:

- UKWIR (2024) Workbook for estimating operational greenhouse gas emissions - version 18 (24/CL/01/43) or the latest available CAW
- UKWIR (2021) Land carbon sequestration tool development
- For carbon costs associated with the projected emissions, you should use the latest government guidance on the cost of carbon. In particular, you should consider the Green Book Supplementary Guidance
- Environmental reporting guidelines: including streamlined energy and carbon reporting guidance
- Ambitious corporate climate action - Science Based Targets Initiative (website)
- HM Treasury infrastructure carbon review
- The Carbon Accounting (Wales) Regulations 2018

Section 9 – Aspects to consider in compiling a best value plan

This section:

- explains what a best value plan is – sub-section 9.1
- explains the factors that should be taken into account in compiling your best value plan – sub-section 9.2
- sets out government and regulator policy that you will need to take into account in developing your plan – sub-section 9.3
- provides an overview of how you should ensure environment and society are properly considered in your decision-making – sub-section 9.4

Section 10 sets out how you should compile your best value plan.

9.1 What is a best value plan?

The aim of a regional plan and your WRMP is to present a best value plan, across the planning period, both in the short term and the long term. Your WRMP must ensure a secure supply of wholesome drinking water for your customers and protect and enhance the environment.

A best value plan is one that considers factors alongside economic cost and seeks to achieve an outcome that increases the overall benefit to customers, the wider environment and overall society[21].[footnote 26]

A best value plan should be efficient and affordable to deliver, legally compliant and account for the range of legislation that applies to it.

9.2 What you should consider in compiling your best value plan

In compiling your best value plan, you should consider all the most appropriate options for your system (regionally and nationally where appropriate), taking into account the following factors:

- government policy and regulator expectations (see sub-section 9.3)
- regional plans (see Section 2)
- any schemes approved for acceleration through transitional funding in advance of AMP9
- customers' preferences
- protecting and meeting the needs of vulnerable customers
- environmental improvements
- biodiversity
- costs including cost envelopes of options and your best value plan

[21] The outcome of increased benefits will be typically measured relative to the 'least cost' programme that delivers the minimum requirements to meet supply duties

- sensitivity of option cost changes within or outside of the cost envelope that result in an option or plan requiring re-justification as best value
- using natural capital approaches and evidence to consider the impacts on natural assets and the ecosystem services and benefits they provide to people, the environment and the economy
- benefits (both monetary and non-monetary) for customers, environment and society (such as public health, well-being, and recreation) and how these are distributed spatially and over time
- clearly demonstrates how good optioneering has enabled decision making to select a best value plan that differs from a least cost plan
- both short- and long-term risks and benefits, including delivery risk
- the flexibility and adaptability of your options to meet future uncertainties
- the robustness of your options to cope with future uncertainties
- the resilience of your network and supplies (see sub-section 9.5)
- the regional and national need and the needs of other sectors
- the impact of your preferred programme on the affordability of your customers' bills
- the level of uncertainty and sensitivity of your assessment of best value
- non-drought resilience such as water supply system resilience
- economic factors such as affordability, distributional impacts, local regeneration and economic growth
- achieving net zero
- how climate change could affect expected risks and benefits
- how options could help with climate change adaptation
- (England) your objectives to further biodiversity and enhance the natural environment by providing opportunities for biodiversity net gain where planning permission will be needed and other measures to conserve and enhance biodiversity consistent with actions you can properly take

- (Wales) the biodiversity and resilience of ecosystems duty including an assessment of ecosystem resilience and how enhance it, and well-being goals

A best value plan should be efficient and affordable with distributional impacts, societal equity and intergenerational equity considerations transparently discussed. It should be clear that the additional benefits identified could not be delivered more efficiently through other means.

9.2.1 Regulation 19 WFD Regulations

England

Exemptions from meeting statutory environmental objectives for water bodies set out in river basin management plans are an exception rather than the rule. It is unlikely that a new abstraction and/or impounding proposals will meet the Regulation 19 criteria as you should be able to find an alternative through your options appraisal.

However, if this is not possible and your plan relies on abstraction or impounding activities that will require a derogation under Regulation 19 of the Water Environment (Water Framework Directive) Regulations 2017 having met all the conditions, you must highlight this in your plan.

A Regulation 19 derogation can only be applied to a project that requires an authorisation (in this case an abstraction or impounding licence) and not to a WRMP.

If your plan sets out that there is no alternative to derogation and therefore that you will need to apply for a Regulation 19 exemption at a future permitting stage, you should do the following in your plan:

- justify why a Regulation 19 derogation will be required
- demonstrate that a Regulation 19 derogation could not be achieved by ‘other means’ that are a significantly better environmental option, technically feasible or do not involve disproportionate costs.

In the context of water resource options:

- ‘other means’ includes alternative locations, different option types, scales, designs or demand measures
- ‘technical feasibility’ can be determined following the appraisal process in Section 8, but this should be applied to options at a wider geographical scale including outside a water company supply area and, in some instances, outside of a regional plan area
- ‘disproportionate costs’ is a judgement that has political, technical and social dimensions informed by economic information and the analysis of costs and benefits. The point of disproportionality should not begin at the point where measured costs simply exceed quantifiable benefits, the margin by which costs exceed benefits should be appreciable and have a high level of confidence
- ‘significantly better environmental option’ should include a reference to how many water bodies and elements are impacted alongside wider environmental implications such as carbon impacts and wider impacts covered by taking a natural capital approach

If you do not take into account Regulation 19 derogation requirements for an option at the planning stage, it may affect your ability to obtain a derogation at the permitting stage, thereby putting that option at risk. Including your Regulation 19 case in your WRMP does not prejudge the outcome of the application of Regulation 19 in the future, but you can use the justification set out in your plan as part of any future application.

9.3 Government and regulator policy

Your best value plan should be shaped by government and regulator policies and ambitions. You should account for future demand reduction planning assumptions and targets set out in the national framework (England only) or set through government policy and legislation including the Environmental Targets (Water) (England) Regulations 2023 and introduction of the Environment (Principles, Governance and Biodiversity Targets) (Wales) Bill.

You should consider which policy aims and aspirations should be set as minimum criteria for your plan, and which will be balanced against other objectives.

You should consider at what point in time you expect these policy objectives to be achieved. You should consider a suitable range of scenarios around the policy objectives to enable you to produce an optimised plan[22]. You should consider how your application of policy expectations affects costs, affordability, deliverability and intergenerational equity.

9.3.1 Your planned level of leakage

In your final plan forecast you should consider current government policy and assess all options to reduce leakage further, alongside other feasible options. You should consider the value that your customers place on reducing leakage and the benefits this will bring to your customers' willingness to participate in demand management, as well as other benefits to the environment. You should consider government's, regulators' and customers' views when deciding on your planned level of leakage.

You should explore the use of innovative approaches to achieve leakage reductions in line with leading companies.

When selecting your final plan leakage forecast, you should clearly explain the different activities that contribute to this level, including the costs and volumetric benefits that contribute to the supply-demand balance.

Government and regulators expect you to achieve the leakage reductions in your preferred programme, particularly in the short term. You should consider and manage the uncertainty around your leakage programme and the implications for security of supply if your planned level is not met.

[22] For example, if a leakage reduction of 20% was required by 2030, then level of leakage reduction should be a plan metric, with a minimum of 20% by 2030 set as an optimisation criteria and suitable range of leakage options with varying benefits and lead times considered in producing an optimal plan. When considering other metrics it may be best value or indeed lowest cost to deliver a 25% reduction by 2030. This would be missed if reduction by 20% by 2030 was pre-selected as an option

English companies should (as a minimum) plan to meet Water UK's commitment, on behalf of the industry, to reduce total leakage levels in England by 50% by 2050 (from 2017/18 levels). The 50% reduction target has previously been adopted by Welsh companies and should continue to be considered in the context of delivering the Welsh Governments strategic objectives. In addition, you should plan to meet any leakage targets set out in Ofwat's price review methodology or by government.

We expect both English and Welsh companies to consider the 50% reduction by 2050 as a starting point for developing leakage reduction ambition. We expect companies to take account of their regional situation, levels of leakage relative to other companies in the sector and other countries, and customer views when planning leakage reductions. We expect for some companies with higher levels of leakage relative to others it will be necessary to set targets greater than a 50% by 2050 (from 2017/18 level) on this basis.

In the medium to longer term, it is recognised that reducing leakage by 50% will require innovation and you may not know how you are going to achieve these levels. If this is the case, you should demonstrate that you are actively investigating how to achieve your ambitions. Your historical leakage data and future forecasts should be consistent with the performance commitment data you report to Ofwat in annual reporting and include in the business plan you provide to Ofwat as part of its price review process.

See also the supplementary guidance 'Leakage'.

9.3.2 Your planned level of metering

You should follow the requirements set out in the current legislation for the provision of information and appraisal of household metering and report it in the relevant water resources planning tables. You should clearly state in your plan your current and future metering and smart metering policy and how you will protect vulnerable customers. Government and regulators expect smart meters (AMI) to be the default meters installed unless there are justifiable technical reasons why this is not possible.

Your plan should evaluate charging by volume based on universal metering for areas determined to be in areas of serious water stress or if compulsory metering would be one of your preferred options.

In England, if you are not in an area determined to be of serious water stress, you should include a scenario in your plan that shows the impact of universal charging by metered and smart metered volume on demand for water. This should include both household and non-household properties. This should show the impacts of this approach it if becomes available in your company area. You should also consider smart metering, metering on change of occupier and metering street-by-street with comparative billing as options in your plan.

You should fully consider the benefits of increasing meter penetration, including the installation of smart meters. You should consider a range of scenarios as part of your decision-making, including one that assumes roll-out as fast as possible. You should consider the multiple benefits of metering (and smart metering) which include reducing leakage in your network and on customers' own properties such as supply pipes. You should also consider the additional costs and deliverability and uncertainty of achieving the assumed benefits.

You should learn from the good practice of some companies that have achieved high levels of meter penetration. For example, some companies have used enhanced or progressive approaches to install meters and have encouraged their customers to switch to being charged according to the volume they use. You should evaluate these enhanced approaches in your options appraisal. You should also consider the option of selective metering where there is high discretionary use. Your assessment should include the wider benefits of these options, including:

- understanding and managing the demand for water
- improving customer engagement
- introducing innovative tariffs to manage demand
- protecting vulnerable customers
- reducing leakage
- supporting customers to identify and repair leaks on their own property including supply pipes

9.3.3 Your planned programme of water efficiency

You have a duty to promote the efficient use of water to your customers. Your WRMP should set out how you will meet this obligation.

Your plan should demonstrate your approach to home and business visits, and customer engagement, to help reduce demand. As a minimum you should consider visits to vulnerable customers, the biggest water users and where the biggest water and financial savings can be made.

You should work with retailers to ensure non-household customers receive the best advice for improving their water efficiency. Water companies in Wales will need to work directly with customers unless they are supplied by a retailer.

You should consider how appropriate the use of different tariffs and incentives is to your company, and you should assess this as part of any options appraisal. If you have any reverse block tariff structures in place for non-household customers, you should specifically assess the benefits of transitioning from these.

9.3.4 Your planned per capita consumption

Your preferred programme PCC should take into account any relevant future demand reduction planning assumptions set out in the national framework, regional plans and targets set by government or regulators. It should also allow for ambitions that may be set through government policy in future. Specifically, your preferred programme should deliver a PCC of no greater than 110 litres per person per day by 2050 under your dry year annual average scenario.

We acknowledge that achieving 110 litres per person per day could be a challenge for some companies and insufficiently ambitious for others given current levels and customer base. We would not want companies to plan for unrealistic forecasts that could jeopardise future water security. By exception, if you determine that you cannot fully deliver this, you must provide clear evidence and justification to customers and stakeholders through your plan, explaining why it isn’t possible. Justification may also draw on the options and level of investment that would otherwise be required to meet the target.

Your forecasts of PCC should be consistent with the data you include in the business plan (PR29) that you provide to Ofwat as part of its price review process. You should refer to Ofwat's consistent reporting guidance when producing your forecasts. If the level of PCC and demand reduction set out in your WRMP is greater than that allowed for in your business plan or final determination, you should still meet your commitments in your WRMP.

9.3.5 Drought permits and orders

You should plan, where appropriate, to use drought permits and orders less frequently in future, particularly in sensitive areas. You should use your understanding of the environmental risks associated with each permit or order, to inform your planned use of drought permits and orders.

In Wales, you should only consider supply drought measures in your WRMP as options where they have no significant environmental impacts associated with them.

Where drought permits and orders are assessed and included through best value plans, the utilisation of other available sources of supply and transfer should be prioritised first. Any supply side drought management options that are included as short-term measures in your WRMP should be included in your drought plan and follow the expectations of the relevant regulator regarding being 'application ready' drought permits or drought orders. You should be confident that their planned use will comply with environmental and drought legislation.

9.4 Environment and society

It is important the environment and society are properly considered in your decision-making. Your plan should deliver a protected and improved environment and provide benefit to society.

In England, you should demonstrate that your plan provides overall positive environmental benefit. For example, you should ensure that the options you are putting in place have less impact on the environment than any environmental problems you are trying to solve. If your plan affects Wales, you must demonstrate how it has improved biodiversity and enhanced ecosystem resilience, as well as how you have considered the well-being goals.

In England, you should use your SEA, HRA and natural capital approaches and evidence to inform your decision-making. If you are a water company within or affecting England, the supplementary guidance 'Environment and society in decision-making' sets out how you might consider these approaches. You can also consider alternative approaches if you believe them to be more appropriate. If so, you should discuss your approach with the relevant regulator.

If you are a company within or affecting Wales, the supplementary guidance 'Environment and society in decision-making (Wales)' sets out how you might consider these approaches. You can also use alternative approaches if you consider them to be more appropriate. If so, you should discuss your approach with Natural Resources Wales.

9.4.1 Natural capital

Natural capital encompasses all the elements of the natural environment that, directly or indirectly, provide benefits to people, including ecosystems, species, freshwater, land, minerals, the air and oceans, as well as natural processes and functions. A natural capital approach is a practical framework to sustainably manage nature as an asset so that it can continue to provide services that benefit people. You should use a natural capital approach as part of your decision-making.

We have developed Natural Capital Evidence and Metrics for the water industry to use in its decision-making which supports a consistent approach across plans and programmes. You should use this in your assessment of natural capital. Further details on how to access this tool can be found in the Environment and Society supplementary guidance.

In Wales, the water strategy outlines how the Welsh Government wants people to value and identify with water and take responsibility

for the supporting the management of natural capital. You should discuss your approach to natural capital with Natural Resources Wales and refer to the Environment and Society decision making document for Wales.

9.4.2 Strategic Environmental Assessment

The Environmental Assessment of Plans and Programmes Regulations 2004 require a formal environmental assessment of certain categories of plans and programmes which are likely to have significant effects on the environment. You will need to assess whether your plan, or options in your plan, are subject to SEA. You may wish to refer to:

- UKWIR (2021) Environmental assessments for water resources planning
- Office of the Deputy Prime Minister (2005) A practical guide to the Strategic Environmental Assessment Directive
- The English and Welsh Governments have transposed the Directive into appropriate Regulations: (SI 1633 English Regulations / SI1656 Welsh Regulations).

The stages in the SEA process are the following.

1. Screening to determine if SEA required - the criteria for determining the likely significance of effects on the environment are set out in Schedule 1 of the SEA Regulations.
2. Scoping to identify environmental issues - setting the context and objectives, establishing the baseline, key issues and trends and deciding the scope, e.g., method of assessment (and consulting on it).
3. Assessment of effects, consideration of alternatives and mitigation – assess the likely significant environmental effects of the plan ‘alone and in-combination’, consider reasonable alternatives, design mitigation for negative effects and identify wider benefits.
4. Preparing the SEA environmental report - provide findings of the assessment of significant effects and describe reasonable alternatives.

5. Consultation and engagement - consulting on the SEA environmental report which is usually in parallel to the draft WRMP consultation
6. Refining and finalising - review consultation responses, summarise how the consultation have influenced the plan, e.g., changes from draft to final version
7. Monitoring the significant effects of implementing the plans or programmes on the environment and produce a statement.

All the stages of SEA are likely to be required where your environmental assessment indicates that the plan is likely to result in significant effects on the environment.

An SEA is not required if it is determined, in consultation with consultation bodies, that the plan is not likely to have significant effects on the environment. You will need to prepare a statement of your reasons for this determination within your plan.

You must consult with Natural Resources Wales and Cadw if the SEA affects Wales. You must consult with the Environment Agency, Historic England and Natural England if your plan affects England. You must also consult any other statutory consultees. The SEA regulations stipulate that consultation and engagement is a statutory requirement during scoping and the Environmental Report (ER) stages. However, it is good practice to undertake consultation with bodies and wider engagement with stakeholders (informal) throughout the development of your SEA (at all stages). In Wales, the aims of SEA must be consistent with the Well-being of Future Generations Act 2015 and the Environment (Wales) Act 2016. Key Welsh legislative requirements, policies and plans that must be woven into your SEA objectives where it affects Wales are:

- Well-being Goals
- Section 6 Biodiversity Duty to promote ecosystem resilience, by maintaining and enhancing biodiversity
- Area Statements
- Well-being Plan

Baseline data can be drawn from a wide variety of sources. Prior to sourcing data, consider what environmental effects are most likely

based on the scope of the SEA. There are a wide variety of sources of environmental baseline data, including:

- State of Natural Resources Report (SoNaRR)
- Area Statements
- Wales Environmental Information Portal
- Water Watch Wales

9.4.3 Habitats regulations

You must ensure that your WRMP meets the requirements of the Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations). You must carry out a screening to determine if all stages of Habitats Regulations Assessment (HRA) are required. You must assess if your plan or project is likely to have a significant effect on the designated features of a European site alone, or in combination with, other plans or projects, for example, the effects of supply options on European sites.

HRA refers to the assessment of the likely significant effects of a plan or project on one or more European sites, namely

- designated SACs and SPAs
- candidate SACs (those submitted formally but not yet adopted or designated)
- proposed SPAs and SACs (sites subject to consultation on whether they should be designated)
- proposed and designated Ramsar sites, which are not designated under the Habitats Regulations but under government policy should have the same level of protection as SACs and SPAs

Special Areas of Conservation (SAC) or Special Protection Areas (SPA), and Ramsar sites (together referred to as European sites) all require a high level of confidence for decision making due to their designated status. Your plan may require a more detailed appropriate assessment depending on the effects on the designated features (species and habitats) of the European sites(s).

Find more information on designated sites in England and protected areas of land and sea in Wales.

The main stages in the HRA process

1. Screening stage, including the test of likely significant effect.

2. Appropriate assessment stage, including deciding the scope and method used for this assessment.

3. Derogation stage, to consider if proposals where it cannot be concluded would not have an adverse effect on a European site qualify for an exemption.

You must take account of the effects of the plan or project alone or in combination with other plans or projects.

Natural Resources Wales and Natural England are statutory consultees for the HRA process and you should consult them (as appropriate) at an early stage and particularly during the screening stage. It is a legal duty to have regard to their advice at the appropriate assessment stage. You should also consult the Environment Agency.

The scope of WRMP HRA

Your HRA must follow the process set out above and should include consideration of relevant water resources planning matters that could have potential effects on European sites. This may include consideration of matters beyond just new supply options.

It is important that your HRA is started as early as possible during preparation of your plan. This will give the HRA the greatest opportunity to influence the plan and therefore avoid or minimise impacts on European sites. HRA should be seen as an iterative process throughout the plan's development. When impacts are identified, you should consider how you can change your plan and projects, before reassessing them. You should not screen out a potential option just because you need to undertake a HRA.

HRA in relation to existing abstractions (England only)

Supplying water in the future will inevitably include the continued use of existing licensed abstractions. You should plan to address existing

abstraction that is not environmentally sustainable as soon as possible (see Section 5.4).

The presence of an existing abstraction effect at the start of the WRMP planning period is not a likely significant effect of the plan on a European site. However, the increased use of licensed headroom to supply growth, if it could increase the risk of adverse effects risks within the plan period is an effect of the plan that should be addressed in the HRA and considered in the context of previous appropriate assessments. The time period within the planning horizon, in which existing abstractions are planned to be used, and any increase in the level of utilisation, including within licence use of headroom, are water resources planning matters. Where existing abstractions have risks of adverse effects on European and/or Ramsar sites, and sustainability reductions are needed to meet the requirements of the European and/or Ramsar site, the HRA of the WRMP should reference existing appropriate assessments[23] which outline the potential adverse effects of using those abstractions. The HRA of the WRMP should reference mitigation in place for the relevant period of the planning horizon before sustainability reductions are made.

This outline of the scope of WRMP HRA does not require that companies re-assess the level of sustainability reductions needed at the individual licence level.

Derogations

A plan or project cannot normally be enacted or adopted unless it can be shown that it would not have an adverse effect on the integrity of a European site, alone or in-combination with other plans or projects. In exceptional cases, a plan or project can be authorised or adopted despite having an adverse effect on the integrity of a European site, but only when the following apply:

- there are no alternative solutions to delivering the objectives of the plan or project
- there are Imperative Reasons of Overriding Public Interest

[23] Existing appropriate assessments may include appropriate assessments completed by other competent authorities, providing it addresses the source of the adverse effect risk in question and there are no material changes since the assessment occurred.

- compensatory measures are secured to maintain the overall coherence of the National Site network

‘Down-the-line’ assessments

Deferring the Appropriate Assessment for options identified in the HRA as having a “likely significant effect” may be acceptable in a WRMP context only when all the following criteria have been satisfied:

1. Where, due to scientific uncertainty of a novel or complex process and a need for more research, information cannot reasonably be gathered at this draft WRMP29 plan stage
2. Options are proposed for delivery late on in the plan (post 2035 for dWRMP29) ensuring that there is time to allow for assessment and delivery of alternatives if necessary
3. Alternatives are included in the plan at company and/or regional level where the avoidance of an adverse effect on integrity of European sites is certain, and these are available, feasible and deliverable
4. A commitment is made to pursue alternatives if an adverse effect on integrity of a European site cannot be avoided for the preferred options set.

See published guidance on HRA assessment and derogation for further information.

9.4.4 Biodiversity gain (England)

Your plan should look to contribute to, and enhance, the natural environment by providing opportunities for biodiversity gain and enhancement.

You should consider what actions you can take in your plan to conserve and enhance biodiversity. You should set objectives to further biodiversity and these should influence your decision-making. You should clearly set out in your plan how your WRMP is contributing to enhancing biodiversity and how you are leaving the natural environment in a measurably better state that it is currently. If you conclude that you cannot take any actions to enhance biodiversity you should justify this in your plan.

You should follow your legal obligations regarding Biodiversity Net Gain and include this in the option cost.

9.4.5 WFD regulations

You must take account of the requirements of the WFD regulations when considering your preferred plan. This includes the legally binding environmental objectives in the RBMPs.

Drinking Water Protected areas are defined by the WFD regulations with the aim of avoiding deterioration in the quality of raw water sources. This is to reduce the level of purification treatment required in producing drinking water. Water companies should work with others to reduce the level of purification treatment and deliver these requirements in a cost-effective way.

Your plans should include targeted and cost-effective implementation of no deterioration and restoration measures required at the catchment scale, either working solely or in partnership with other catchment-based organisations. Where there is a delay in implementing measures, other actions which mitigate impacts should be outlined in your plan and included in the WINEP. Catchment and nature-based solution options should be considered in your plan especially where they have a benefit to supply-demand balance and/or enhance ecosystem resilience (Wales). They should be listed in your WRMP data tables.

Given the uncertainty over the level of confidence, you should consider the principles of adaptive management, with associated pre- and post-project monitoring.

9.4.6 Well-being of Future Generations (Wales) Act 2015

If your plan is within or affects Wales, you will need to consider your contribution to the well-being goals under the Well-being of Future Generations Act. The well-being act embeds the sustainable development principle into Welsh legislation. Sustainable development is defined as the process of improving the economic, social, environmental and cultural well-being of Wales. This needs to be done by taking action in accordance with the sustainable development principle so that the well-being goals are achieved. You should apply the ways of working as set out within the sustainable

development principle in order to maximise your contribution to the well-being goals. The Well-being of Future Generations (Wales) Act (2015) includes a goal to develop a more resilient Wales, which is described as:

a nation which maintains and enhances a biodiverse natural environment with healthy functioning ecosystems that support social, economic and ecological resilience and the capacity to adapt to change (for example climate change).

9.4.7 Environment (Wales) Act 2016

If your plan is within or affects Wales, you are regarded as a public authority and you must have regard to the Environment (Wales) Act 2016 (Section 6 and 7) in your assessment of the environment.

The State of Natural Resources Report (SoNaRR) highlights the extent and condition of the natural resources in Wales and the challenges they face. It provides more information and examples of its use to assess ecosystem resilience, and opportunities to build resilience in Wales. SoNaRR also includes water efficiency measures.

Other locally designated sites (such as local nature reserves) may be considered lower risk, but you may need to give specific consideration to particular features.

- **Principles of SMNR** – you should embed the principles of SMNR within your plan with the objective of maintaining and enhancing ecosystems. Doing this will also contribute to the well-being goals. You should clearly show that these principles have been truly embedded within your thinking and decision-making.
- **Section 6 – Biodiversity and resilience of ecosystems duty** – Biodiversity is defined to mean the diversity of living organisms whether at the genetic, species or ecosystem level. You must seek to maintain and enhance biodiversity in the exercise of functions in relation to Wales, and in so doing promote the resilience of ecosystems, so far as is consistent with the proper exercise of your functions.
- **Section 7 – biodiversity lists** and duty to take steps to maintain and enhance biodiversity. You must ensure that you

take all reasonable steps to maintain and enhance the species and habitats included within the Section 7 biodiversity lists and should consider the Nature recovery action plan for Wales. These lists will be reviewed and revised. More information is available here Environment (Wales) Act Section 7 and OSPAR: Marine Species

- **Area statements and Natural Resources Policy** – you should consider how your plan (where it affects Wales) contributes to the priorities set out in the Natural Resources Policy (NRP). Area statements are the place-based implementation of the NRP. You should consider the priorities, risks and opportunities highlighted within any area statement relevant to your plan and how collaborative actions linked to these could result in improved outcomes for people and the environment.
- **Carbon reduction** – your plan (where it affects Wales) should support a policy of reducing the carbon footprint associated with the abstraction, storage, treatment and provision of water. Your plan should support the reduction in greenhouse gas emissions at least in line with the latest Welsh Government carbon budget.

9.4.8 Other considerations

You should seek to ensure any development delivers wider environmental gains relevant to the local area, such as reduced flood risk, improvements to air or water quality, or increased access to natural greenspace.

9.5 Supply resilience

Your final plan should show how you will improve the resilience of your supplies. You should also ensure that the options you select are resilient to droughts and other hazards such as flooding and weather extremes, both now and in the future, throughout their intended lifetime.

If your preferred programme provides wider resilience benefits, you should clearly set out what risks you are addressing and how the options will reduce these risks. You should clearly set out the additional resilience benefits expected from any schemes you are

accelerating through transitional funding in advance of AMP9. You should explain how the risks you are addressing in your plan sit within the wider risk faced by your company and region.

Your preferred plan should not include any final planning deficits. Achieving resilience to a 1 in 500 year drought (where applicable) could leave you with some initial deficits at the beginning of the planning period while you implement your preferred best-value solutions. If this is the case, you should show the additional drought measures you would use to reach this level of resilience in the interim. Alternatively, you should demonstrate your reduced level of service, as a selected option, for this interim period and present this in your planning tables.

9.6 In-delivery schemes

Some strategic resource options and major projects span multiple investment periods in development. Whilst a scheme remains under development it is necessary to reassess, test and justify its best value and affordability for its continued selection in subsequent WRMPs preferred plan.

Section 4.8 sets out that options that meet certain maturity stages may be considered for inclusion in the baseline planning scenario in your WRMP. It could be appropriate to include strategic schemes in the baseline planning scenario when specific levels of maturity and additional criteria have been achieved. You can consider a strategic scheme for inclusion in the baseline plan when:

- the scheme has been publicly consulted on and published in a previous final water resources management plan
- the scheme has achieved Ofwat Major Project Gate 3 (DPC / SIPR Stage 3) in its development. Specifically with consent order and the main planning applications submitted, and Ofwat approval to commence procurement processes
- you can demonstrate that there has been no significant change to the options cost, programme, scope or benefit of the scheme, or that of its close alternatives.

If you believe a strategic scheme should be considered for the baseline planning scenario, you should discuss this with regulators during pre-consultation. Defra or Welsh Government will make the final decision as to whether a scheme can be considered for inclusion in the baseline planning scenario and not subject to subsequent options appraisal.

It is important that strategic schemes' costs, programme, scope and benefit are thoroughly reviewed and reassessed before this point. When change triggers are met, such as increased cost forecasts beyond established cost envelopes (see Section 8.3.1) or change in expected benefits, your current WRMP should be updated with any new changes to these schemes. This includes evidence on how changes impact the previous decisions on feasibility, best value and affordability.

Section 10 – How to compile your best value plan

This section describes how you should compile your best value plan. The following terminology is used in this section:

- outcome – achieving a best value plan as described within this document
- objectives – high level deliverables such as ‘increasing resilience’
- metrics – measurable indices for best value which relate to the objectives

You should undertake the following as you develop your best value plan, with reference to the considerations set out in Section 9:

- set clear objectives for your plan (sub-section 10.2)
- identify and consider best value metrics (sub-section 10.3)
- identify your least-cost plan to provide a benchmark for your other programmes (sub-section 10.4)

- develop a decision-making approach (sub-section 10.5)
- appraise and compare different programmes (sub-section 10.6)
- undertake effective engagement (sub-section 10.7)
- consider whether an adaptive plan is appropriate (sub-section 10.8)
- test your plan (sub-section 10.9)
- present and justify your preferred plan clearly (sub-section 10.10)

10.1 Methodologies

You should consider the following methodologies in your decision-making:

- UKWIR (2002) Economics of balancing supply and demand (EBSD)
- UKWIR (2016) WRMP 2019 methods – decision making process guidance
- UKWIR (2020) Deriving a best value water resources management plan

Your problem characterisation assessment should inform your decision-making method. Any specific complexities can be examined through the UKWIR guidance on risk-based planning (2016) and through appropriate sensitivity analysis.

You should refer to the UKWIR Economics of balancing supply and demand (ESBD) when you produce a least cost plan as a benchmark to appraise your other programmes against.

The UKWIR decision making process guidance describes decision-making tools and supporting methods available to you as an alternative to EBSD. You should also consider whether an adaptive plan would be appropriate.

You may find the UKWIR Deriving a best value water resources management plan helpful in developing your best value planning

approach, but you do not have to use it. The guidance in this section sets out the expectations of regulators.

You should also consider the following supplementary guidance:

- adaptive planning (see also sub-section 10.8)
- environment and society in decision-making (England)
- environment and society in decision-making (Wales)

10.2 Set clear objectives for your plan

Your plan should clearly set out the objectives you aim to achieve in your best value WRMP or the regional plan. You should discuss these objectives with regulators and stakeholders during the pre-consultation of your plan. These objectives should be defined at the start of the planning process and be used consistently throughout the programme appraisal. You should explain your reasons for selecting your objectives. Your objectives should be informed by government and regulator policy and the aspirations of your company, customers and stakeholders. Your objectives may also be informed by the regional plan objectives, where applicable.

You can refine and update your objectives during the process of preparing your plan, but you should clearly explain your reason for any changes and the subsequent impact on the preferred programme.

Your plan should explain how your preferred programme delivers the outcome and meets your objectives.

10.3 Metrics

You should consider a broad range of best value metrics, monetised where possible for use in your decision-making, informed by your objectives. You can consider the list of factors in sub-section 9.2 when

compiling your metrics, although this list is not exhaustive and you can consider others.

Your metrics should be determined prior to beginning assessment of feasible options. You should consider the level at which it is appropriate to apply these metrics, for example at the individual option or programme level.

If your plan is affected by a regional plan which has specific metrics, you should use the same metrics in your WRMP, for transparency. You should consider whether any additional metrics are required in your WRMP. Using the same metrics is only relevant to those parts of your plan directly affected by a regional plan.

You are encouraged to consider a wide a range of metrics, risks and values, which should be supported by robust data and analysis. This will ensure that the delivery of long-term outcomes and objectives for regional and company plans can be measured over time. These objectives may be used to monitor your performance against the plan, where appropriate.

Your selected metrics should inform a programme that can deliver net benefits or value beyond meeting the minimum supply duty requirements in a least-cost manner. You should develop your portfolio of metrics over several planning cycles as better information becomes available.

In the selection and application of your best value metrics you should clearly identify where there is potential risk of double counting of benefits and how you have accounted for this in your plan development. If you apply weightings to your best value metrics, you should provide appropriate justification for the approach used to determine these. You should apply additional scrutiny to any metrics that you assess using a subjective approach to ensure they are robust and do not introduce any bias. The accuracy, uncertainty and sensitivity of the costs and metrics used should be clearly outlined. You should re-optimise the preferred programme if changes are made to the objectives or metrics.

Tables 4 and 5b include columns for you to report against metrics as values and profiles respectively. You should report against best value

metrics used to assess options here. You should clearly define the units you have used, including monetised where possible.

Not all elements of decision-making can be adequately captured through metrics. Where this is the case, you should ensure you set out how you will appraise these and capture them in your decision-making. You should also clearly set out any uncertainty or assumptions related to your chosen metrics. You could consider sensitivity analysis around your metrics when they are uncertain or subjective.

10.4 Least cost programme

You should produce a least cost programme as a benchmark to appraise your other programmes against.

The least cost plan should meet your statutory requirements and be informed by your SEA and HRA. The least cost plan should include policy expectations around demand management. You can, in addition, produce a least cost programme without these policy expectations. However, this should be clearly labelled as such.

It is important that you ensure your processes enable derivation of a 'true' least cost plan selecting from all feasible options. This will be supported by you having sufficient numbers of options in terms of type and size as described in Section 8. You should test your approaches and take care to ensure no inadvertent restrictions on choice or selection bias is present. You should be able to assure your boards and regulators that you have produced a 'true' least cost plan.

10.5 Your decision-making approach

You should develop a decision-making approach to appraise and select options for inclusion in the preferred programme in your best value plan.

Your decision-making approach should be clear and transparent and set out in your plan and should take account of the aspects of best value set out in Section 9.

Your plan should present clearly, robustly and transparently how your best value metrics have been considered and applied in the selection of the preferred programme to deliver your set objectives.

You should demonstrate that your decision-making approach is consistent with other areas of your business planning to ensure that all long-term decision making takes place through a consistent approach. Customers, interested parties and regulators should be able to understand how and why you have decided on your preferred programme and why you have discounted other solutions.

Whichever decision-making method you choose, your final set of options should be justified economically, socially and environmentally. You should

- clearly describe how the decision on a preferred programme that delivers key priorities has been reached
- articulate how you have considered any necessary trade-offs
- describe and evidence how you engaged your Board with the process
- consider the aspects of the best value plan set out in Section 9

10.6 Programme appraisal

You should undertake an appraisal of alternative programmes to justify your chosen preferred programme. You should carefully compile and consider a range of programmes that demonstrate real differences in focus, but which still deliver your objectives.

You should undertake sensitivity testing and scenario testing of your programmes to understand any tipping points which might affect your decision-making and programme content. It is important you undertake a thorough programme appraisal and clearly own and justify the decisions regarding your preferred programme.

In your programme appraisal, you should consider the least-cost programme (sub-section 10.4) and a ‘best environment and society’ programme as alternative programmes as a minimum. The ‘best environment and society’ programme should be one that is formed using the relevant environment and society supplementary guidance and therefore takes into account the SEA and HRA and natural capital where appropriate. The number of alternative programmes you should consider will depend on the complexity of your problem and the options available to solve it.

You should consider the following when undertaking your programme appraisal:

- review your programmes against your objectives, your best value metrics, government policy and ambitions and other considerations set out in Section 9
- describe the impacts of programmes and clearly set out the costs and benefits of each programme. This should include the following:
    - a list of the options selected in the programme
    - monetised, quantitative and qualitative descriptions of the impacts of the programme
    - analysis and description of the significance of impacts
    - a total delivery cost of each programme including a profile of costs against time
- detail of the programmes including all costs and benefits. If you have used metrics to help you define programmes, you should look at the supporting data that informed these metrics. For example, if you have an environmental and social metric, you should consider the actual environmental and social costs and benefits of each programme, not just the metric in your programme appraisal. A carbon cost impact should be provided for each programme.

You should provide a summary table of the programmes you have considered which includes the cost and the result of assessing the options and programmes against each best value metric you have applied in your decision-making. This summary of programmes should be accessible for customers, stakeholders and regulators and enable them to understand your decision-making process.

The costs and benefits of your best value plan, least-cost programme and the other programmes you appraise, should be clearly identified and comparable. Where you are considering multiple benefits, you should be clear in your best value plan that these additional benefits identified could not be delivered more efficiently through other means.

10.7 Effective engagement

Your plan should demonstrate effective engagement with regulators, local planning authorities, risk management authorities, other stakeholders and customers at key stages throughout the development of the plan. Your proposed approach to best value planning should be part of the information you present at the pre-consultation phase. You should continue your engagement through the development of your plan. By working together with other stakeholders to manage water in a more integrated way, you can enhance the natural environment, deliver value for customers and help to improve the resilience of services and communities to all sources of flood and coastal risk.

The costs and benefits of the preferred programme and alternatives, including comparison to the least cost programme benchmark, must be clearly presented to regulators, stakeholders and customers. It should be clear how this engagement has informed the decisions made within the plan.

10.8 Adaptive planning

An adaptive plan is a framework which allows you to consider multiple preferred programmes or options. The adaptive plan should set out how you will make decisions within this framework.

You should consider an adaptive plan if you have significant uncertainty at any stage in the planning period that might lead to a different or additional options.

You should consider how your adaptive plan will affect your headroom allowance. You must make sure you are not double-counting uncertainty. You should make the differences between the costs, benefits and choice of solution choice and your adaptive pathways clear.

10.9 Testing your plan

While your preferred plan should set out the decisions you will take based on your best understanding of the future, the future is uncertain. Therefore, you should also clearly describe the biggest areas of uncertainty and define which could have the biggest influence on your plan. You should undertake scenario testing to demonstrate:

- the resilience of your plan to a range of risks including known risks to option yield and deliverability
- that you have considered these risks in developing your plan and the possible timings of these impacts, including possible future sustainability changes
- the plan is resilient to minor changes to supply and demand forecasts in the near future and moderate changes as the plan progresses

You should, as a minimum, test the sensitivity of your plan to changes in:

- population growth
- climate change
- sustainability changes
- resilience
- year in which the 1 in 500 level of drought resilience (where applicable) is achieved to identify if any cost savings could be achieved or whether earlier delivery could provide better overall value
- risk profile
- delivery of your preferred programme – both demand management and supply options

You should use scenario testing to help validate your preferred programme or to assess whether alternative programmes would be more appropriate. It could also inform whether an adaptive plan might be appropriate. Scenario testing could help to:

- justify a flexible or fixed approach
- justify an adaptive plan
- demonstrate when important decisions should be made
- identify what you should monitor to manage risk
- identify alternatives or how the plan may change in the future in response to new evidence

10.10 Presenting and justifying your plan

Your preferred best value programme of options should be robustly and transparently justified. You should;

- clearly describe how the decision on a preferred programme has been reached
- how key priorities are being delivered
- how you have considered any necessary trade-offs
- how you have reflected the regional plan (if applicable)
- describe and evidence how you engaged your Board with the process.

You should provide evidence that you have accounted for the impact of uncertainty and undertaken sensitivity analysis. You should consider ways to present information clearly so that regulators, stakeholders and customers can understand how the programmes compare.

Your plan should be efficient and affordable with distributional impacts, societal equity and intergenerational equity considerations transparently discussed.

You should provide a separate cost effectiveness assessment of your long-term environmental destination. You should discuss this with

regulators through the regional plan development (where applicable) and you should consult on it with stakeholders before it is presented in your WRMP.