

# National Water Resources Plan

## Phase 2 - Regional Water Resources Plan – South West Consultation Report

Uisce Éireann's 25-Year Plan for Our Water Assets in the South West  
Region



### **Data Disclaimer:**

This document uses best available data at time of writing. As data relating to population forecasts and trends are based on information gathered before the Covid-19 Pandemic, monitoring and feedback will be used to capture any updates. The National Water Resources Plan will also align to relevant updates in applicable policy. In December 2022, the Water Services (Amendment) (No. 2) Act, 2022 was signed into law. This act provides that, from the 31 December 2022, Irish Water will only be known as Uisce Éireann. It also provides that, from that date, all references in any enactment, legal proceedings or other document to Irish Water shall be construed as references to Uisce Éireann only. The consultation report reflects this transition from Irish Water to Uisce Éireann.

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## Glossary

Term	Description
AA	Appropriate Assessment
AESI	Adverse Effects to Site Integrity
AFU	An Fóram Uisce
ALC	Active Leakage Control
ASSAP	Agricultural Sustainability Support and Advisory Programme
BGI	Blue-Green Infrastructure
CAP	Climate Action Plan
CAP	Common Agricultural Policy
CARO	Climate Action Regional Offices
CDP	County Development Plan
CRU	Commission for the Regulation of Utilities
CSL	Customer Side Leakage
DAERA	Department of Agriculture, Environment and Rural Affairs
DAFM	Department of Agriculture, Food, and the Marine
DAU	Department of Tourism, Culture, Arts, Gaeltacht, Sport, and Media – Development Applications Unit
DECC	Department of the Environment, Climate and Communications
DHLGH-NPWS	Department of Housing, Local Government and Heritage – National Parks and Wildlife Services
DI	Distribution Input
DMA	District Metered Area
DSS	Decision Support Systems
DWD	Drinking Water Directive
DWI	Drinking Water Inspectorate
DWR	Drinking Water Regulations

Term	Description
DWSP	Drinking Water Safety Plan
DYAA	Dry Year Annual Average
DYCP	Dry Year Critical Period
EAP	Environmental Action Plan
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EM	Eastern and Midlands
EMRA	Eastern and Midlands Regional Assembly
EPA	Environmental Protection Agency
ESB	Electricity Supply Board
E&Y	Ernest and Young
FILLM	Framework for Integrated Land and Landscape Management
FPC	Future Proof Clare
GDA	Greater Dublin Area
GHG	Greenhouse gas
GMO	Genetically Modified Organisms
GSI	Geological Survey Ireland
GWDTE	Groundwater-Dependent Terrestrial Ecosystems
GWS	Group Water Schemes
HSE	Health Service Executive
IAH	International Association of Hydrogeology
Ibec	Irish Business and Employers Confederation
ICARUS	Irish Climate Analysis and Research Units
ICM	Integrated Catchment Management
ICMSA	Irish Creamery Milk Supply Association
IDA	Investment & Development Agency Ireland

Term	Description
IEN	Irish Environmental Network
IFA	Irish Farmers Association
IFI	Inland Fisheries Ireland
IPCC	Intergovernmental Panel on Climate Change
ISME	Irish Small & Medium Enterprise Association
IUCN	International Union for Conservation of Nature
UE	Uisce Éireann
IWA	International Water Association
IWAI	Inland Waterways Association of Ireland
KA	Kennedy Analysis
LAWPRO	Local Authority Waters Programme
LCC	Longford County Council
LCCC	Limerick City and County Council
LoS	Level of Service
LSE	Likely Significant Effects
LMS	Leakage Management System
MASP	Metropolitan Area Strategy Plan
MCA	Multi Criteria Analysis
MCC	Meath County Council
MUR	Meter Under Registration
NBS	Nature-Based Solutions
NDD	Non-Domestic Demand
NDP	National Development Plan
NFGWS	National Federation of Group Water Schemes
NICCAP	Northern Ireland's second Climate Change Adaptation Programme
NIEA	Northern Ireland Environment Agency

Term	Description
NIS	Natura Impact Statement
NPDWAG	National Pesticides and Drinking Water Action Group
NPF	National Planning Framework
NPO	National Policy Objectives
NPWS	National Parks & Wildlife Service
NSS	New Shannon Source
NUTS	Nomenclature of Territorial Units for Statistics
NTT	Not to transfer at this stage
NWRP	National Water Resources Plan
NYAA	Normal Year Annual Average
OCC	Offaly County Council
OFWAT	Water Services Regulation Authority
OPR	Office of the Planning Regulator
OPW	Office of Public Works
PAs	Preferred Approaches
PCC	Per Capita Consumption
PCE	Pre-Connection Enquiry Process
PCR	Public Consultation Report
PHC	Per Household Consumption
PPN	Public Participation Network
PS	Public Supply
PWSA	Project Works Service Agreement
RBMP	River Basin Management Plan
RCC	Roscommon County Council
RCP	Representative Concentration Pathways
RPO	Regional Policy Objectives

Term	Description
RSES	Regional Spatial Economic Strategies
RSPA	River Shannon Protection Alliance
RWRP	Regional Water Resources Plans
RCC	Roscommon County Council
QI	Qualifying Interest
SA	Study Areas
SAC	Special Areas of Conservation
SEA	Strategic Environmental Assessment
SELL	Sustainable Economic Level Leakage
SDB	Supply Demand Balance
SDGs	Sustainable Development Goals
SID	Strategic Infrastructure Development
SRA	Southern Regional Assembly
SDZ	Strategic Development Zone
STVGP	Small Towns and Villages Growth Programme
TCC	Tipperary County Council
T&IC	Transport and Infrastructure Council
UFW	Unaccounted-For Water
UL	University of Limerick
WAFU	Water Available for Use
WCC	Wicklow County Council
WCP	Winter Critical Peak
WmCC	Westmeath County Council
WFD	Water Framework Directives
WG	Water Group
WRZ	Water Resource Zone

Term	Description
WSP-EMR	Water Supply Group Eastern and Midlands Region
WSP	Water Supply Project
WTP	Water Treatment Plant

# 1 Introduction

## 1.1 Introduction

Uisce Éireann is developing its first National Water Resources Plan (NWRP). The NWRP is Uisce Éireann's 25-year strategic plan for Ireland's public water supplies. The NWRP allows us to move towards a safe, secure, reliable, and sustainable drinking water supply for all Uisce Éireann customers, whilst safeguarding the natural environment.

The preparation of the NWRP provides an opportunity to plan for delivery of water services at a national level. It allows Uisce Éireann to review all public water supplies in a consistent way and to develop a clear approach to address the current and future needs of our supplies. This approach in turn will allow Uisce Éireann to understand and prioritise the required investment in water services over the short, medium and long term.

Water resources planning plays an essential part in ensuring a safe, secure, sustainable, and reliable public water supply that supports Government policy and Uisce Éireann's policy.

The NWRP contains a large amount of detailed and technical information. To ensure the plan is clearly communicated, Uisce Éireann is delivering the NWRP in two phases:

**Phase 1 - NWRP Framework Plan:** The Framework Plan sets out the methodology we use to identify needs across our 539 existing water supplies in a uniform way, and to review options in order to develop a "Preferred Approach" for addressing "Need" in each supply or group of supplies. The Framework Plan was adopted in May 2021 following Strategic Environmental Assessment (SEA), Appropriate Assessment (AA) and extensive public consultation. The Framework Plan and supporting documentation are available at <https://www.water.ie/projects/strategic-plans/national-water-resources/>.

**Phase 2 – The Regional Water Resources Plans:** Phase 2 involves the development of four Regional Water Resources Plans that will apply the methodology in the Framework Plan. Each Regional Plan will summarise the Needs within the water supplies in the applicable region and develop a Preferred Approach to resolve them. Phase 2 is being delivered as four (4) Regional Plans for the Eastern and Midlands, South West, North West and South East regions. Each Regional Plan will undergo SEA and AA and will be subject to public consultation. The delivery of Phase 2 as four Regional Plans is to make the process more manageable and to facilitate public engagement in the consultation process. However, as each Regional Plan is delivered it will include a cumulative assessment of the Plans that have been developed and consulted upon previously.

The Eastern and Midlands Region (RWRP-EM) consultation took place between December 2021 and April 2022. Following the consultation the plan was adopted by Uisce Éireann on 30 September 2022. The consultation report, along with the updated documents including the RWRP-EM and associated environmental reports, are available to view at <https://www.water.ie/rwrp/eastern-midlands>.

The Regional Water Resource Plan for the South West (RWRP-SW) is the second of the four Regional Plans to be delivered. Uisce Éireann undertook public consultation on Phase 2 of the draft RWRP-SW between 1 June 2022 to 24 August 2022. This consultation report is a response to the submissions made as part of that public consultation process.

The public consultation Regional Water Resources Plans for the North West (RWRP-NW) region is currently underway. The public consultation process will allow any interested parties to provide feedback on the draft RWRP-NW including the SEA and AA, in the usual way.

The remaining public consultation, the Regional Water Resource Plan for the South East (RWRP-SE) Region, is expected to take place in 2023.

Once Phase 1 and Phase 2 of the NWRP comprising the Framework Plan and four Regional Water Resources Plans have been finalised, they will be treated as a unified Plan and the relevant four regional groupings South West, North West, South East, Eastern Midlands will have no ongoing application.

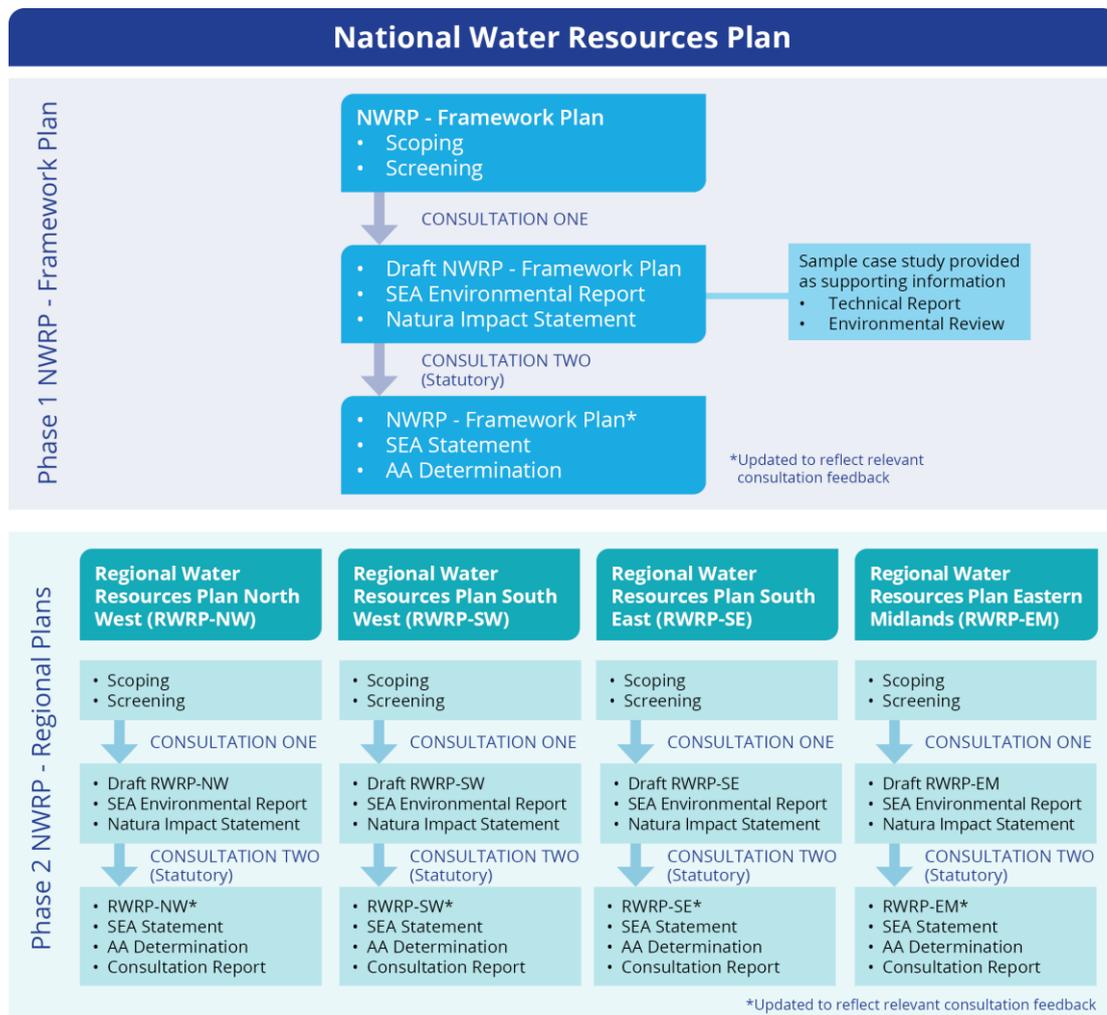


Figure 1.1 Components of the National Water Resources Plan

## 1.2 Benefits of the NWRP

Previously, the availability of water resources was mostly considered at a local or regional level. Undertaking a national plan now means that we can provide all our customers with a more consistent level of water supply that will ensure the best sustainable use of water resources for the benefit of all.

The NWRP sets out a standardised approach to water resources and services at national, regional and local levels, in the short, medium, and long-term. This means that in the future, wherever you are in the country, when you turn on your tap, you will have a safe, secure, sustainable and reliable public water supply.

The NWRP is a long-term plan, to ensure our water resources are sustainable for future generations. A robust and sustainable water resources plan will ensure that Ireland’s water supplies will have the capacity to support future growth and encourage investment.

## 1.3 Why do we need a NWRP?

Water is part of our everyday lives, we need it when we turn on the taps to get a drink, to wash our dishes and clothes, to have a shower and to flush the toilet. Businesses throughout the country also depend on a reliable water supply, from coffee shops and restaurants, to hairdressers, and farming enterprises right up to multi-national companies. It is essential to everything we do.

However, our water infrastructure is already under increasing pressure to meet the current demand for water as a result of population growth, climate change, and our changing environment. The quality of our drinking water can be affected in many ways including soil or rock types, land use practices, pollution, and even heavy rainfall. To prevent unplanned water outages, water conservation orders, reductions in water pressure, or restrictions to water supplies, we have to plan ahead. How we choose to plan our water resources today will determine the water supply we can provide now and into the future.

## 1.4 Consultation One

In Phase 2 each Regional Plan will undergo SEA and AA and will be subject to public consultation. Consultation One on the SEA Scoping Report for the RWRP-SW was held from 16 November to 22 December 2021. The SEA Scoping Report was provided to all environmental authorities as specified in the SEA Regulations, for the purposes of initial consultation on the scoping of the SEA for the South West Region. The feedback obtained was considered and reflected in the draft RWRP-SW, the associated SEA Environmental Report and the Natura Impact Statement (NIS).

Throughout 2022, ongoing stakeholder engagement took place with the environmental authorities, key stakeholders and local authorities respectively. This is further discussed in Chapters 3 and 4.

Members of the public, interested parties and environmental authorities were invited to contribute to the development of the draft RWRP-SW as part of the SEA and AA process through public consultation at key stages, as outlined in the RWRP-SW Consultation Roadmap in Figure 1.2.

## RWRP South West Public Consultation Roadmap

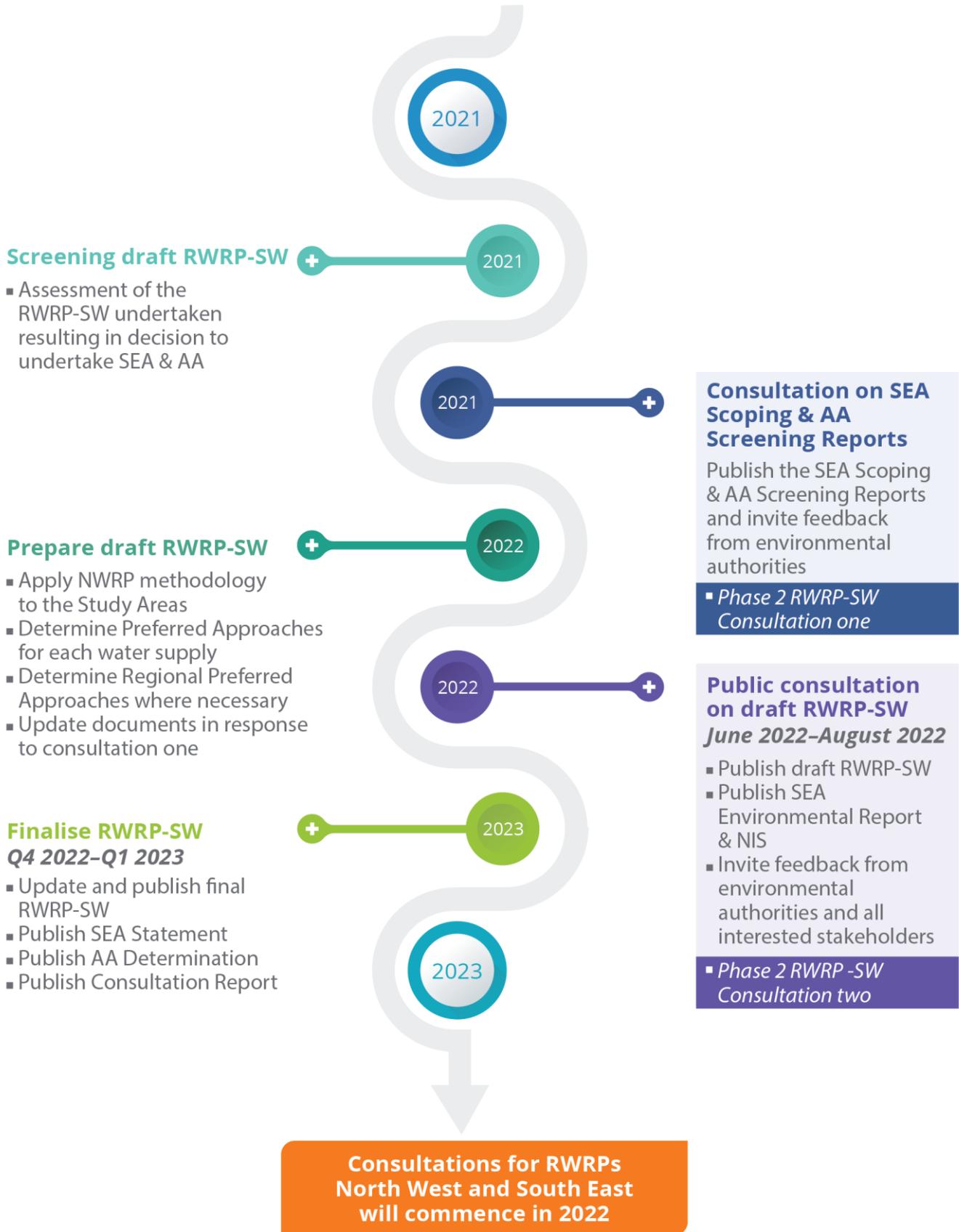


Figure 1.2 RWRP South West Public Consultation Roadmap.

## 2 Pre-Consultation Engagement

As part of the development of the Phase 2 RWRP-SW pre-consultation engagement phase was undertaken with key stakeholders including environmental authorities. These include the statutory stakeholders identified pursuant to the Strategic Environmental Assessment Regulations and the Birds and Habitat Regulations. Although not prescribed under the SEA Regulations, we have also included the Commission for Regulation of Utilities (CRU) due to the level of engagement required with our regulator and An Forum Uisce (AFU) due to their functions under the Water Services Act 2017.

A series of online briefings were facilitated by Uisce Éireann as part of pre-consultation on the draft RWRP-SW and associated environmental reports.

Emails offering pre-consultation briefings were issued to all stakeholder organisations detailed in Table 2.1 on 8 April 2022. The purpose of the briefings in 2022 was to update stakeholders on our progress and discuss any new information available.

### 2.1 Key Stakeholder and Environmental Authorities.

On 8 April 2022, Uisce Éireann launched a period of pre-consultation engagement with key stakeholders including environmental authorities. The stakeholders received an invitation to a briefing with the NWRP Project Team. The environmental authorities were:

- Environmental Protection Agency (EPA);
- Department of Housing, Local Government and Heritage (DHLGH);
- Department of the Environment, Climate and Communications (DECC);
- Department of Agriculture, Food and the Marine (DAFM);
- Northern Ireland Environment Agency (NIEA); and
- Commission for Regulation of Utilities (CRU).
- An Forum Uisce (AFU)

Inland Fisheries Ireland requested a pre-consultation briefing with Uisce Éireann and were facilitated.

Please see Table 2.1 for a list of all 6 pre-consultation briefings completed during summer 2022.

Table 2.1 Key Stakeholders (and environmental authorities) Pre-consultation Briefings

Stakeholder	Date
Environmental Protection Agency	4 May 2022
Commission for Regulation of Utilities	17 May 2022
An Forum Uisce	5 May 2022
Inland Fisheries Ireland	27 April 2022
Department of the Environment, Climate and Communications (DECC);	28 April 2022

## 3. Consultation Two

### 3.1 Introduction

Uisce Éireann undertook public consultation on Phase 2 of the draft RWRP-SW in accordance with the consultation requirements of the SEA Regulations. We have termed the Phase 2 draft RWRP-SW consultation as Consultation Two. Consultation Two also included an opportunity to make submissions on the accompanying SEA report, and on the NIS relative to AA matters that are required to be taken into account in the AA process as outlined in the Birds and Natural Habitats Regulations 2011.

Uisce Éireann's consultation and engagement processes are in line with the public participation requirements of the Aarhus Convention, along with the requirements for public consultation for the purposes of the SEA Directive and Habitats Directive. Our public participation process includes different phases with reasonable timeframes in excess of the statutory minimums under the SEA Regulations, allowing the public to be informed, and for the public to participate effectively during the decision-making process.

Uisce Éireann commits to continuing to provide communications and public consultation that are accessible, meaningful, transparent, proportionate and accountable for all stakeholders including those without a technical background. These principles have underpinned the approach Uisce Éireann has taken to the communications and public consultation for the NWRP to date relative to Phase 1 NWRP Framework Plan and Phase 2 NWRP, the four Regional Water Resource Plans.

Table 3.1 sets out Uisce Éireann's guiding principles for communications and public consultation that have been observed throughout the development to date of the RWRP-SW.

Table 3.1 Principles of Consultation

Principle	Explanation
Accessible	Information should be easy to access, it should be communicated in a manner that is appropriate to the stakeholder group and should avoid the use of industry jargon. The consultation process should be inclusive, and it should be straightforward to participate in the process. This includes making submissions, asking questions and attending events.
Meaningful	Consultation is a two-way process and should be viewed as a genuine opportunity for stakeholders to influence outcomes. The Project Team should be prepared to consider all submissions that are received through the consultation process. Consultation should take place at identified stages in the development process, in advance of key decisions being made and feedback should be used to inform those decisions.

Principle	Explanation
Transparent	Core to all engagement and communications in respect of a decision-making process is that the process is transparent, that people can understand and see the process by which decisions were made and how their input was considered. They may not agree with a decision, but they should have full access to the fair and objective process by which these decisions were made.
Proportionate	Undertaking communications activities that are appropriate for the specific project and circumstances. Ensuring Uisce Éireann provides value for money at all times, while using its resources to make a real difference. Being flexible in our approach in order to respond to the complexities of each individual project.
Accountable	Accountable project decision making ensures that the project has taken on board relevant feedback, has responded to the feedback provided in a fair and transparent manner and that the project only moves forward once each phase has been appropriately developed and reported on. Careful record keeping of submissions and the review process are features of this principle.

Throughout the development of the draft RWRP-SW, Uisce Éireann has consulted with members of the public and all interested stakeholders in accordance with the following legislative, planning and best practice requirements:

- Aarhus Convention requirements;
- Strategic Environmental Assessment (SEA) Directive requirements;
- Habitats Directive requirements;
- Irish legislation requirements; and
- International best practice including Gunning Principals and International Associations for Public Participation Guidelines (IAP2).

## 3.2 Phase 2 – RWRP South West

The draft RWRP-SW was issued for consultation on 1 June 2022, with consultation finally closing on 24 August 2022.

In order to assist stakeholders in making a submission as part of this public consultation, we invited feedback on the following consultation questions:

1. Within the South West Region we consider 174 water supplies (Water Resource Zones) represented across 3 Study Areas. Do you have any comments on the Study Areas?
2. In Section 2 of the draft RWRP-SW we set out information on the current situation in the Region in respect of the population growth and economic development and how we considered this in our water resource planning approach. Do you have any comments on this?
3. Section 3 of the draft RWRP-SW and each of the Study Area Technical Reports (Appendices 1-3) outline the Need in terms of water quality, quantity, sustainability and resilience across the region and in each of the Study Areas. Do you have any comment on the Need (Deficit)?
4. Section 4 and Section 7 of the draft RWRP-SW, and the Study Area Technical Reports (Appendices 1-3), set out solutions we can undertake to address some of these Needs in the interim, while we develop the Preferred Approaches. Do you have you any comments on this?
5. Section 6 and the Study Area Technical Reports (Appendices 1-3) of the draft RWRP-SW summarise our process for developing options to address the Needs in the SW Region. Do you have any comments on this process?
6. Section 7 sets out how we identify our Preferred Approach to addressing the Need at WRZ and Study Area level. The Study Area Technical Reports (Appendices 1-3) and the Study Area Environmental Reviews will set out how the Preferred Approach has been identified in more detail. Have you any feedback on this?
7. The draft RWRP-SW looks at a range of solutions to meet the need in a WRZ or Study Area. These solutions are not limited by distance, therefore some solutions for the WRZ or Study Area will involve interconnections across multiple supply systems. Have you any comments on the Regional Preferred Approach?
8. Do you have any comments on the Strategic Environmental Assessment (SEA), Environmental Report and Natura Impact Statement (NIS) which accompany the draft RWRP-SW?
9. We have produced a RWRP Consultation Roadmap. Do you have any comments on this?
10. How would you like Uisce Éireann to communicate with you as the RWRPs progress?

A number of communications tools were developed to promote the consultation and to raise awareness among the public, interested parties and environmental authorities and to encourage participation in the consultation process.

The following communications tools were used:

- RWRP-SW webpage on the Uisce Éireann website;
- Consultation two information leaflets available in English and Irish;
- RWRP-SW infographic;
- RWRP-SW consultation roadmap;
- Non-technical summary (NTS) of the draft RWRP-SW;
- Press releases to national and regional media;
- Media interviews;
- Newspaper adverts;

- Online Briefings;
- Online Public Webinars;
- Social Media;
- Animations, explaining water resource planning topics including population growth, balancing water supply, demand and climate change;
- Public display of hardcopy documents; and
- Correspondence and briefings with:
  - Environmental authorities;
  - Elected representatives;
  - Local authorities;
  - Interested parties;
  - Media; and
  - General public.

These communications tools and channels are discussed in more detail in Chapter 4.

## 4. Consultation Two Promotion

### 4.1 NWRP Webpage

An NWRP dedicated webpage was provided on the [water.ie](http://www.water.ie) website and went live on 13 October 2017 at [www.water.ie/nwrp](http://www.water.ie/nwrp). A dedicated webpage was created with details of the Phase 2 RWRP-SW consultation, i.e., Consultation Two on 1 June 2022. An Irish version of the webpage was also made available.

A consultation animation was created as a visual aid illustrating our approach to the RWRP-SW consultation. The animation aids communication, through an alternative format to text, assisting our efforts to effectively inform as broad a demographic as possible. An English and Irish version were created and available on the website.

The draft RWRP-SW, the SEA Environmental Report and the NIS were made available to view or download from the RWRP-SW dedicated webpage on 1 June 2022, along with all other relevant information, including the RWRP-SW consultation roadmap, the consultation information leaflet, the NTS and an RWRP-SW infographic.

Details on how to participate in the consultation were included on the RWRP-SW webpage. Submissions were invited via the following channels:

**By email:** [nwrp@water.ie](mailto:nwrp@water.ie)

**Or by Post:** National Water Resources Plan, Uisce Éireann, P.O. Box 13216, Glenageary, Co. Dublin

For the period of the initial draft RWRP-SW consultation (between 1 June and 24 August 2022) there were 4,370 page views and 3,590 unique page views of [www.water.ie/nwrp](http://www.water.ie/nwrp)

Those that visited the site spent on average 4 minutes and 55 seconds minutes on the page. The majority of pages on [water.ie](http://www.water.ie) are visited for less than a minute, showing the level of interest in the content and information provided. Table 4.1 outlines the number of opens of the consultation documents available on the webpage.

**Table 4.1 Consultation document opens**

Document	No. of openings
RWRP-SW draft Plan	603
RWRP-SW draft Plan Non-Technical Summary	100
RWRP-SW SEA Report	38
RWRP-SW NIS	31
RWRP-SW Consultation leaflet	22

The web page will continue to be regularly updated with the latest information as the project progresses.

## 4.2 Consultation Two Information Leaflet

A consultation information leaflet outlining the draft RWRP-SW, details of the consultation questions and information on how stakeholders could provide feedback on the draft RWRP-SW and associated environmental reports was published on the RWRP-SW webpage on 1 June 2022.

The leaflet provided a summary of the draft Regional Plan, how the Regional Plan will be delivered and the next steps.

The information leaflet was made available in both English and Irish and available on the website [www.water.ie/nwrp](http://www.water.ie/nwrp). A copy of the English version can be found in Appendix A.

## 4.3 RWRP-SW Infographic

An RWRP-SW infographic was produced to be used in printed materials and on the webpage. The infographic is a helpful visual aid, which clearly illustrates water resources planning and outlines our approach to Ireland's first NWRP. The infographic aids communication, through an alternative format to text, assisting our efforts to effectively inform as broad a demographic as possible. The infographic can be found in Appendix B.

## 4.4 Press Release

A press release announcing the commencement of statutory consultation on the Phase 2 draft RWRP-SW, was issued under embargo to national, regional, and local media on 31 May 2022 for release on 1 June 2022. It was issued to raise awareness of the consultation amongst the general public and to increase public participation. The press release included details of the draft RWRP-SW and information on the consultation, along with links to the documentation and all necessary information on how to participate.

A reminder press release was sent on 22 June 2022, to all national media and regional media in Cork, Kerry, Waterford and Limerick, as well as all elected reps in those counties, Uisce Éireann's social media channels and website. A final reminder, ahead of the close of consultation issued to all of the above on 10 August 2022.

The press release was also added to the news section of the Uisce Éireann website, [www.water.ie/news](http://www.water.ie/news).

Media coverage generated from the press releases and a copy of the press releases issued are available in Appendix D.

## 4.5 Media Interview and Press

Uisce Éireann spokespeople were made available for media interviews and press briefings throughout the consultation period. Two radio interviews were completed by the project team on regional radio stations in Kerry and Limerick.

A considerable amount of national and regional coverage was generated across all media channels throughout the consultation period. 9 articles were published about the Phase 2 draft RWRP-SW plan in national and regional newspapers their online editions and on radio websites.

Media briefings resulted in media coverage across a range of online, broadcast and print media in promoting the consultation as shown in Appendix D.

## 4.6 Newspaper Adverts

Statutory newspaper adverts were placed in the Irish Independent, The Irish Examiner and the Irish Times on 1 June 2022, and the Irish Farmers Journal on 2 June 2022. The advertisements were published in national newspapers to raise awareness of the consultation across the country and to encourage participation. The advertisements advised where copies of the documentation could be obtained or viewed, the dates of the consultation, as well as the various means of engaging with the NWRP project team.

Regional adverts were published in 2 newspapers, The Kerryman and The Corkman on 1 June 2022 advertising the online public webinars for the draft RWRP-SW.

Copies of the newspaper adverts are included in Appendix D.

## 4.7 Social Media

The launch of the draft RWRP-SW consultation was promoted on social media using the Uisce Éireann Twitter, Facebook and LinkedIn page, as displayed in Table 4.2 below. Promoting the consultation on these platforms enhanced the potential to inform a higher volume of people across a broad demographic.

A suite of engaging animations was developed for use on social media to explain many water resource planning topics including population growth, climate change and supply demand balance.

In total, 12 Facebook posts, 12 Twitter posts and 2 LinkedIn posts were shared, 12 of which were promoted to achieve optimum stakeholder reach. In total, 5,137,510 impressions were made.

Table 4.2 Social Media

Platform	No. of posts	Impressions
Facebook	12	3,199,922
Twitter	12	2,122,767
LinkedIn	2	4,821

## 4.8 Public Display of Documents

In order to ensure the draft RWRP-SW and associated environmental reports were readily accessible, hard copies of the draft RWRP-SW in English, including appendices, the SEA Environmental Report, the NTS and the NIS were provided for public display in 29 local authority offices and at two county libraries for the duration of the consultation period.

The availability and location of these documents at the planning counter in local authority offices and at the county libraries was promoted through the project website, social media and newspaper advertisements. An audit of all 31 displays was undertaken by the NWRP team during the consultation period where the team confirmed that all documents were received and available for the public as advertised. In addition, hard copies and electronic copies of these reports were available upon request through the project email and phone.

A full list of the planning counters and libraries where the documents were displayed is included in Appendix E.

## 4.9 RWRP Freephone Phonenumber

The NWRP team introduced a dedicated phonenumber during this period of consultation to improve accessibility due to Covid-19 restrictions or for those with limited or no internet access. The freephone number, 1800 46 36 76, was publicised in national newspapers, on all of the consultation documents, and on the website. The phonenumber was staffed by the NWRP team during office hours throughout the consultation period but no calls were received.

## 4.10 Direct Engagement

At Uisce Éireann, we take the nature and quality of our relationships with all of our stakeholders very seriously. We have worked closely to understand their views and interests, to deliver the RWRP-SW in partnership and respond to their interests as we progress our plan. Uisce Éireann engages with stakeholders through public consultation and ongoing engagement on our infrastructure projects and plans. We commit to continuous and responsive two-way communication, at every stage of the consultation process to ensure that information is accessible, meaningful, transparent, and accountable for all stakeholders.

### 4.10.1 Environmental Authorities

The environmental authorities have been engaged on numerous occasions throughout the development of the draft RWRP-SW Plan. These stakeholders play a key role in shaping and informing the development of the RWRPs.

As part of the development of the draft RWRP-SW, there has been pre-consultation engagement with the environmental authorities, which was undertaken as outlined in Chapter 2 of this report. On the commencement of the public consultation on the draft RWRP-SW and associated environmental reports, an email announcement was issued to all statutory stakeholders, including the environmental authorities as required by the SEA Regulations, on 1 June 2022.

Briefings were offered during the consultation period and hard copies of the documents were distributed to the environmental authorities on request. For a full list of the briefing dates with environmental authorities please see Appendix H.

#### **4.10.2 Elected Representatives**

Emails were issued to all elected representatives via the Uisce Éireann Local Representative Service Desk email channel, including to Ministers, TDs, Senators, MEPs, and Councillors on 1 June 2022. The correspondence included details of the consultation and invited feedback on the draft RWRP-SW, NIS, and SEA Report, with the consultation questions set out. The correspondence also included links to the above documents, outlined the next steps in the process for developing the RWRP-SW, as well as the offer of a dedicated online briefing with the NWRP team and included details of an online booking form to arrange this.

#### **4.10.3 Local Authorities**

To increase awareness and encourage participation in the draft RWRP-SW consultation, Chief Executives and Directors of Services for Water / Environmental Services of all 31 local authorities were notified of the consultation by email on 1 June 2022. Correspondence included details of the draft RWRP-SW, an outline of the consultation and the consultation questions, and all necessary information on how to participate.

A hard copy of each of the consultation documents was provided to each of the 31 local authorities planning counters to provide council employees and members of the public alike the opportunity to view the documents in person.

#### **4.10.4 Interested Bodies**

Interested bodies were identified through a stakeholder mapping process from existing stakeholders that Uisce Éireann engage with regularly on plans and projects and stakeholder groups who may have a valid interest in the development of the NWRP. This is to ensure that a wide range of stakeholder groups were made aware of the consultation and given the opportunity to engage and participate in the process.

An email was issued on 1 June 2022 to those identified, informing them of the details of the consultation and inviting them to give their feedback on the draft RWRP-SW Plan and associated environmental reports.

#### **4.10.5 Uisce Éireann National Stakeholder Forum**

Uisce Éireann hosts the Uisce Éireann National Stakeholder Forum quarterly, which has representations from the three pillars of sustainability: economic, social and the environment. Participants represent these sectors at a national level with effective two-way engagement occurring on specific themes.

On 1 June 2022, Uisce Éireann briefed the National Stakeholder Forum and gave an update of the public consultation on the draft RWRP-SW.

#### **4.10.6 Public Webinars**

A total of four public webinars were held over the month of June 2022 and 24 interested members of the public registered their attendance. Two of these webinars were held in the evening to facilitate workers and commuters.

The public webinars were promoted through press releases that issued to all regional media in the 4 counties (newspaper outlets, online media channels and radio stations), as well as to all elected representatives and on Uisce Éireann's social media channels. A copy of the press release is included in Appendix D.

was Updates were made to the Uisce Éireann website and an email update was issued to all stakeholders on the NWRP mailing list. A presentation on the draft RWRP-SW Plan was given at each webinar, followed by a Q&A session with the NWRP team. A pre-recorded webinar with auto captions was updated to the website and available for those that could not attend a webinar. See Appendix I for a copy of the Q&A document.

#### 4.10.7 Online Briefings

Extensive engagement with key stakeholders has been undertaken during the consultation period. Targeted consultation with these stakeholders ensures transparency and that all available data relevant to the draft RWRP-SW is gathered as early as possible in the process. In addition, it will help to ensure that concerns and queries raised can be addressed in a timely manner.

Table 4.3 Stakeholder Briefings RWRP-SW

Stakeholder Group	No of briefings
Local Authority Councillors	5
Interested Bodies	4
Elected Representatives	2
Key Stakeholders & Environmental Authorities	4
Public Webinars	4

#### Elected Representatives.

All national elected representatives (Oireachtas members) were offered a dedicated briefing on 15 June 2022.

An in-person launch day was also held on 8 June 2022, for all elected representatives in Buswells Hotel in Co. Dublin.

1-to-1 briefings were offered to all national elected representatives as an alternative, if they were not available to attend the Buswells Hotel event, or the online webinar.

#### Key Stakeholders and Environmental Authorities

Key Stakeholders and environmental authorities were each offered a dedicated briefing during the month of June 2022. A total of 4 briefings were held.

For a full list of Key Stakeholders and environmental authorities' briefings please see Appendix H.

#### Local Authority Councillors

186 Councillors within the RWRP South West region were emailed offering them a dedicated briefing for their constituency. A total of 5 briefings were held between June and July 2022. 30 councillors registered their attendance for a briefing.

For a full list of the briefing dates with Local Authority Councillors please see Appendix G.

## Interested Bodies

Interested bodies identified by Uisce Éireann were offered a briefing during the month of June 2022. A total of 4 briefings were held for interested bodies with 20 attending. For a full list of the briefings with Interested bodies please see Appendix H.

### 4.10.8 Q&A Document

All questions asked during the public webinars as discussed in section 4.10.6 were recorded and responded to by the NWRP team in a Q&A document and uploaded to the Uisce Éireann website. A copy of the Q&A document can be found in Appendix G.

## 4.11 Outcomes of the Consultation

All feedback received during this public consultation process on Phase 2 of the RWRP-SW was reviewed by the NWRP team and all relevant feedback has been incorporated into the RWRP-SW. A summary of the feedback received, our response to this feedback and any consequential changes made to the RWRP-SW is detailed in Chapters 5 - 15 of this report.

The SEA Statement and AA Determination adopted by Uisce Éireann outline how environmental considerations have been integrated into the RWRP-SW and how consultation influenced the development of the RWRP-SW.

## 4.12 Water Conservation Order

During the consultation period our operations team experienced on-going issues at thirty public water supplies in West Cork Area (the “WCA”). These issues resulted from below average rainfall in the area over a 9-month period and an increase in demand due to a recent heatwave. The conditions resulted in a depletion of water supplies and tankering of water to several supplies was required to reduce the impact to our customers. During the period Uisce Éireann ran a significant water conservation communications campaign (including stakeholder and media engagement, targeted social media, media engagement and press advertising), however, this did not result in a satisfactory reduction in demand.

As Uisce Éireann is required to take all reasonable steps to reduce risks to the public water supply and ensure that we limit any potential impact on the environment, a Water Conservation Order (WCO) was introduced for a 4-week period from the 30th August 2022 to 26th September.

Lessons learned and data gathered as a result of the dry weather experienced in the West Cork area during the summer of 2023, will inform future drought management plans.

## 5 Analysis of the Feedback

This section of the report outlines the approach taken to analysing the 35 submissions received during this period of statutory consultation, Consultation Two on the Phase 2 of the RWRP South West and associated environmental reports.

### 5.1 Methodology

Each submission received via email and post has been acknowledged but not responded to individually. Each submission was reviewed in its entirety by the NWRP team and summarised in this consultation report. The personal data of individuals who made submissions is not documented within this report and is being held in accordance with GDPR 2018.

Following a review of the feedback received, the key themes from the submissions which emerged were identified to assist consideration and review, and are as follows:

- Policy;
- RWRP- SW Regional Plan;
- Environment;
- Need;
- Solutions Methodology;
- Regional Plan Consultation Process;
- Plan Implementation;
- Option Types;
- Natura Impact Statement;
- Water Resource Planning; and
- Outside the Scope of the RWRP-SW.

The following Chapters of this consultation report comprise a summary of all submissions received under each theme followed by Uisce Éireann's response to the key points raised. Some feedback may be relevant to a number of themes and are addressed under several headings across several Chapters.

The views represent the views of those who made submissions as part of the public consultation process. The issues outlined in the feedback section are in the order in which they appear and there is no bias implied by the order in which they are addressed.

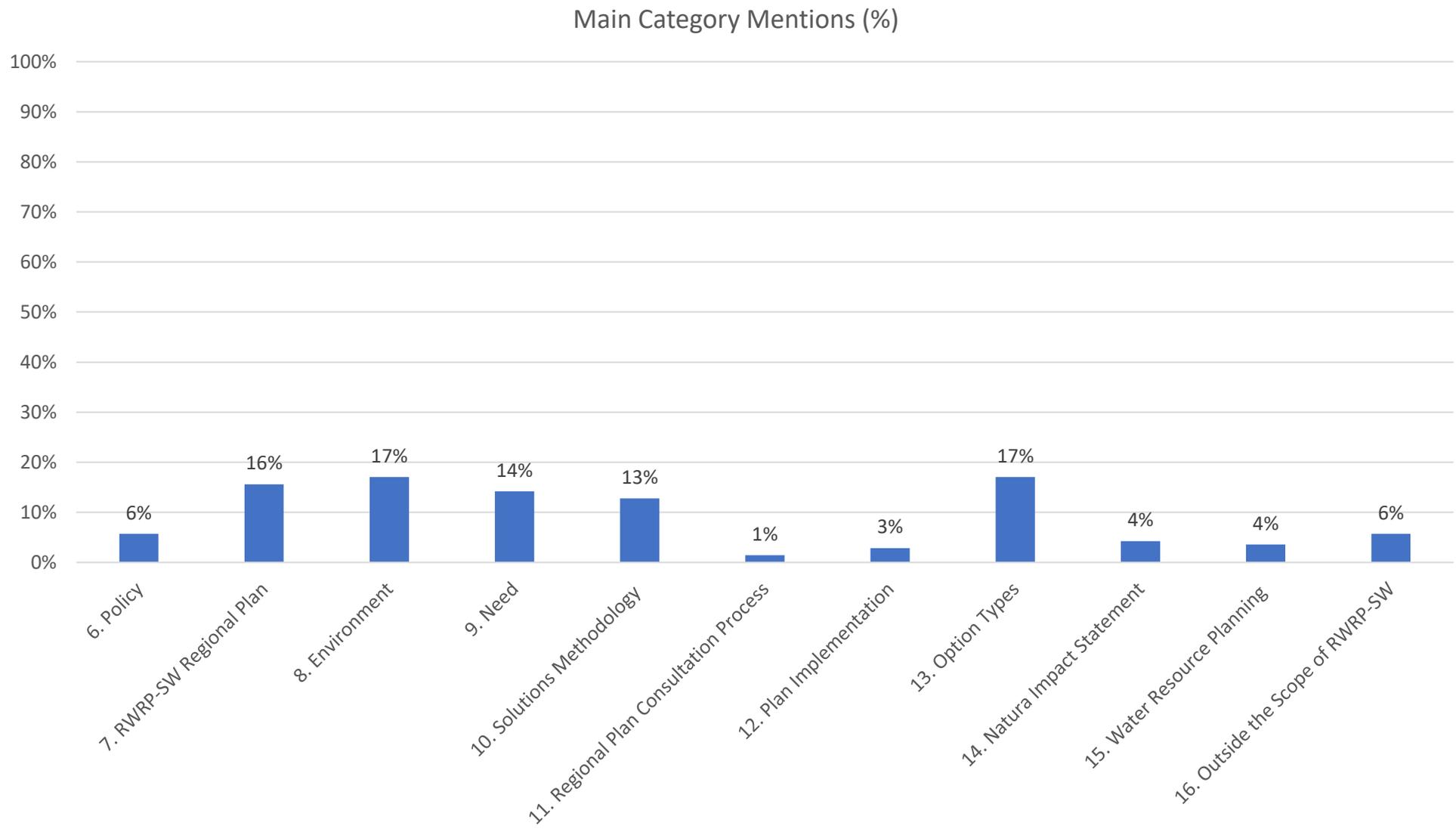
### 5.2 Out of Scope

There were several submissions received during the consultation that mentioned topics outside of the scope of the RWRP-SW. Although not directly related to this consultation, we have captured and summarised that feedback in Chapter 16 and have forwarded on any queries to the relevant teams in Uisce Éireann to respond.

Any feedback in relation to in-flight Uisce Éireann projects, or any other area of the Uisce Éireann business that does not relate to the RWRP-SW was shared with the corresponding project teams, details of which can be found on [www.water.ie](http://www.water.ie)

## 5.4 Submission Overview

The following figures present the results of the overall analysis of the 35 submissions. Figures 5.1 and 5.2 display the themes and sub-themes mentioned as a percentage of the overall mentions.



**Figure 5.1 Theme Mentions.**

## Sub-Theme Mentions (%)

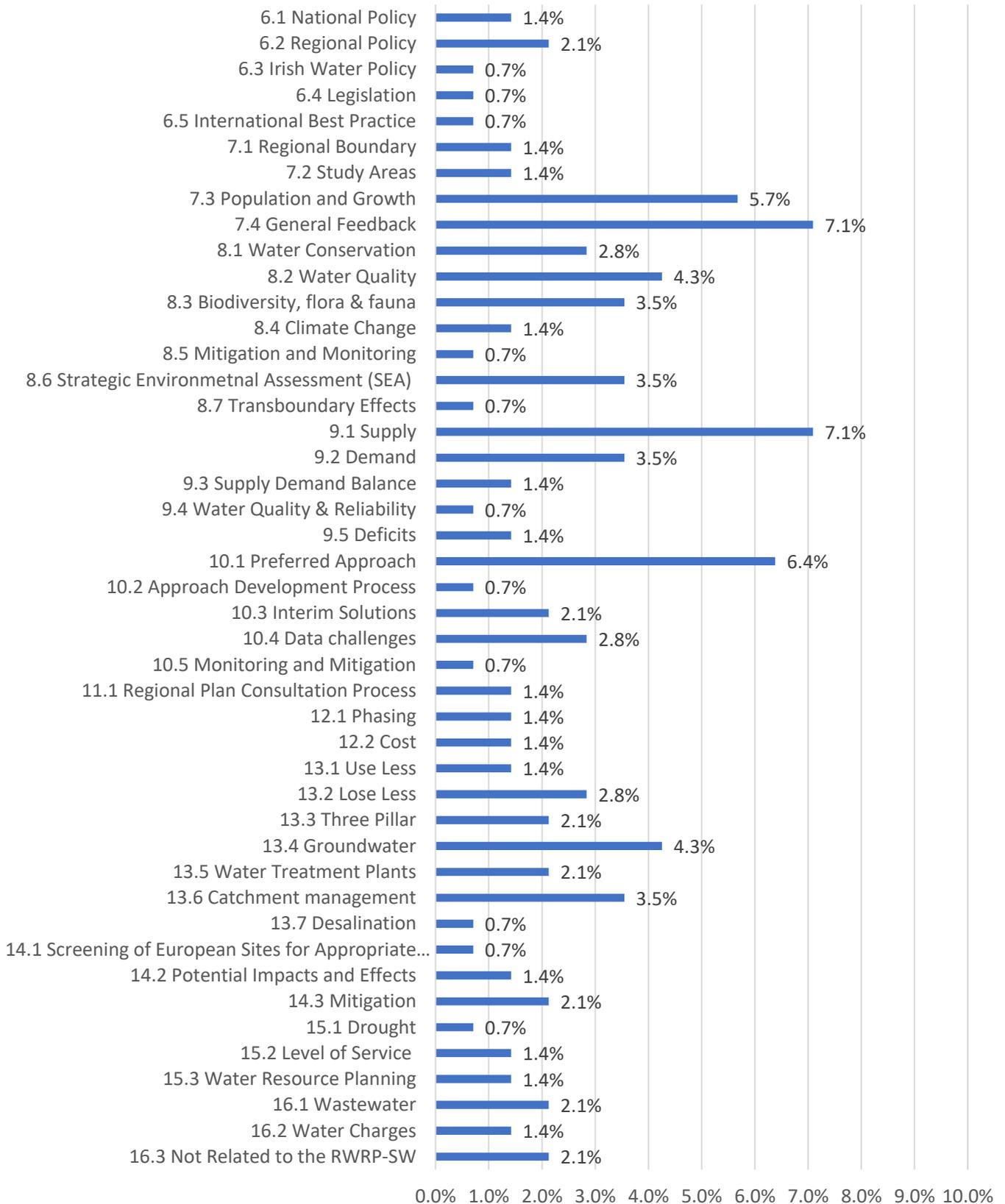


Figure 5.2 Sub-Theme Mentions

## 5.3 Submission Process

In the following Chapters, the key references from submissions to issues under each theme are summarised. Within the overall theme, several sub-themes are identified and a summary of the relevant mentions in the submissions are detailed under each sub theme followed by our response. A 'mention' does not imply the sentiment of the comment, whether it was positive or negative or to what extent it was discussed in a submission. The number of mentions may, in some cases, be greater than the number of submissions received if the sub-theme was mentioned more than once in a submission. It is the number of mentions recorded overall in all 35 submissions.

Our response is of necessity set out generally speaking on a broad basis. References to any consequential changes made to the draft RWRP-SW Regional Plan, any clarifications required, and any other actions considered appropriate have been included. Also included is a consolidated summary of those changes and flow-on actions in the "Conclusions" section at the end of each of the following Chapters.

It is acknowledged that there is a degree of repetition in some of the responses to the various sub-themes. This is to allow a reader interested in just one sub-theme to get a full picture of the response to it, without having to cross-reference the response given to other sub-themes.

Relevant feedback captured in the next section will be taken into account by the project team in the development of the remaining Regional Plans, North West and South East.

## 5.4 Review of Preferred Approaches Arising from Consultation

As set out in Section 9 of the RWRP-SW the RWRP will be formally updated every five years at which point there will be further opportunities for public participation. Baseline forecasts and data feeding into the NWRP will be reviewed as new information is made available. Our data is continuously improving, and it is important that we review our Preferred Approach further to the receipt of updated data. During the consultation period for the RWRP-SW we received updated data for a number of WRZs through consultation workshops and subsequent further assessment, which resulted in a review of the Preferred Approach for those WRZs.

Following the review, Uisce Éireann considers that no change to the Preferred Approach is required, however, text should be added to note potential further changes.

A summary of the updated data received and updates to the RWRP-SW are provided below.

### 5.4.1 Whiddy Island WRZ (Study Area I)

The WRZ preferred approach for Whiddy Island is to develop a new groundwater abstraction on the island to supply the required deficit. Three sites on the Island are considered potentially good locations for ground water supply and a trial well was developed on one of these sites. Results from the trial well test indicate that arsenic is evident in the groundwater and it would not be a suitable source of raw water for public water supply purposes. Trial tests will be carried out at the other two sites and if it is determined, further to these site investigations, that the groundwater supply is not suitable for public water supply the other feasible alternatives will have to be reconsidered.

In the draft RWRP-SW, the only alternative feasible option for the Whiddy Island WRZ is to develop a desalination plant. Due to the planning application process required for the desalination plant it will take several years to progress this project. However, there is a critical need on Whiddy and this year there was significant issues associated with the deterioration of raw water quality which has led to the supply going on a do not consume notice from 19 August 2022. An option to rationalise Whiddy Island to Bantry was considered as part of a Study Area grouped option in the draft RWRP-SW and it is

considered that this option could be delivered quicker than a desalination plant solution. Therefore, in the final RWRP-SW we have included the option to rationalise Whiddy Island to Bantry as a feasible alternative at WRZ level.

The Study Area I Technical Report has been updated to note the uncertainty associated with the WRZ Preferred Approach for Whiddy Island and the feasible alternative to rationalise Whiddy Island to Bantry, which was previously considered as a grouped option, has been considered as a feasible WRZ alternative option.

#### **5.4.2 Kenmare WRZ (Study Area I)**

The Kenmare supply is dependent on an import from a local group water scheme in dry weather when water levels at the existing lake source are low and there is an increase in demand associated with tourism in the area. During the consultation period it was noted that the group water scheme would not be able to continue providing supply to Uisce Éireann.

The preferred approach for Kenmare, to develop a new Surface Water abstraction from Kenmare River, will take several years to develop and obtain planning for the works, therefore in the interim there is a requirement to develop an emergency source to maintain supply during the summer period. Uisce Éireann are currently workshopping potential interim emergency supplies.

The Study Area I Technical Report has been updated to note the interim solution for Kenmare is to Upgrade the WTP to Uisce Éireann Standards to develop an emergency source.

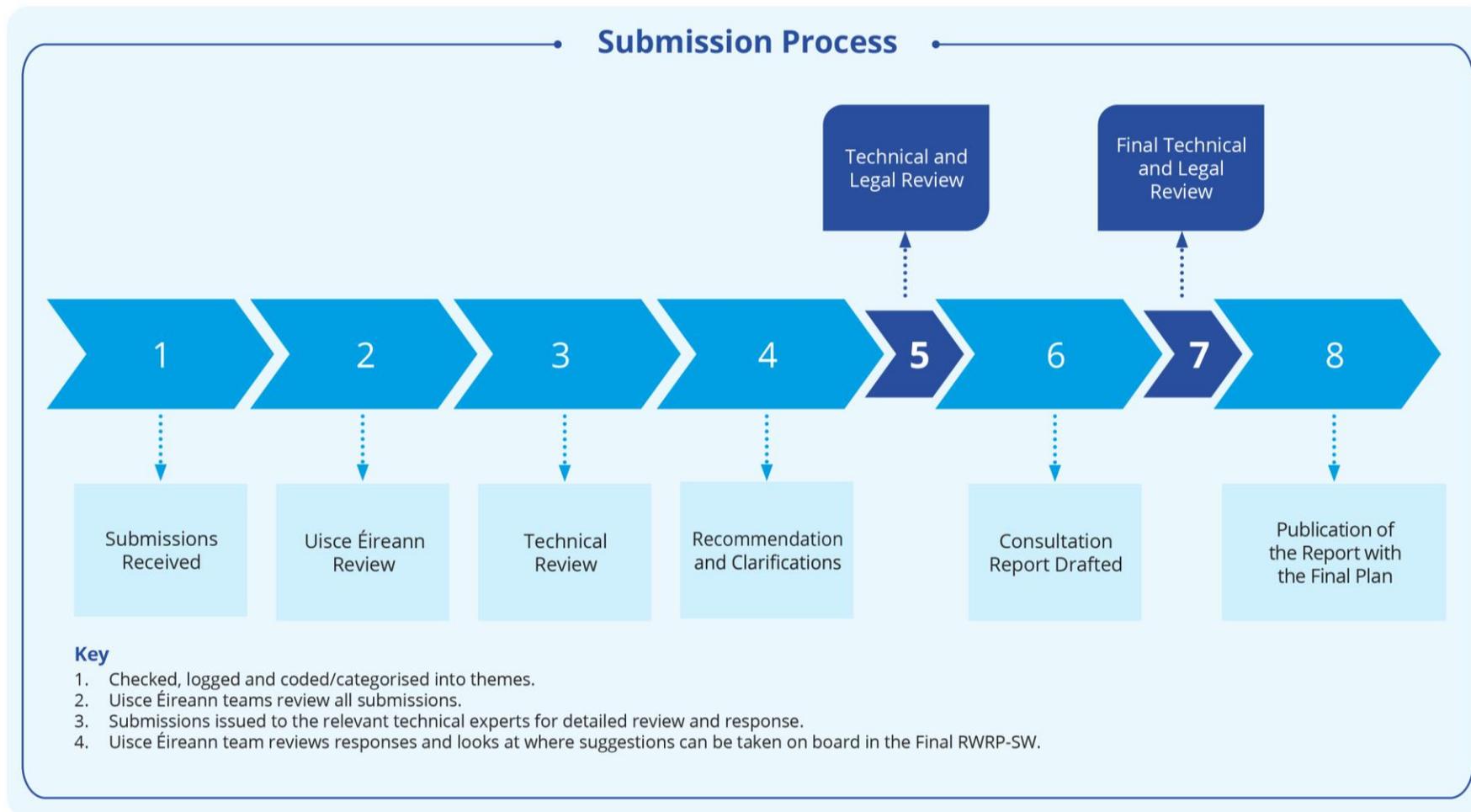


Figure 5.3 Submission Process

## 6. Policy

In this Chapter, we summarise the key references in submissions to issues under the broad theme of “Policy”. Within the overall Policy theme, we identified five sub themes, which we set out in Figure 6.1. We deal with each of these sub-themes in this Chapter, setting out first a summary of the relevant mentions in the submissions, followed by our response. The sub-themes are not dealt with in any particular order.

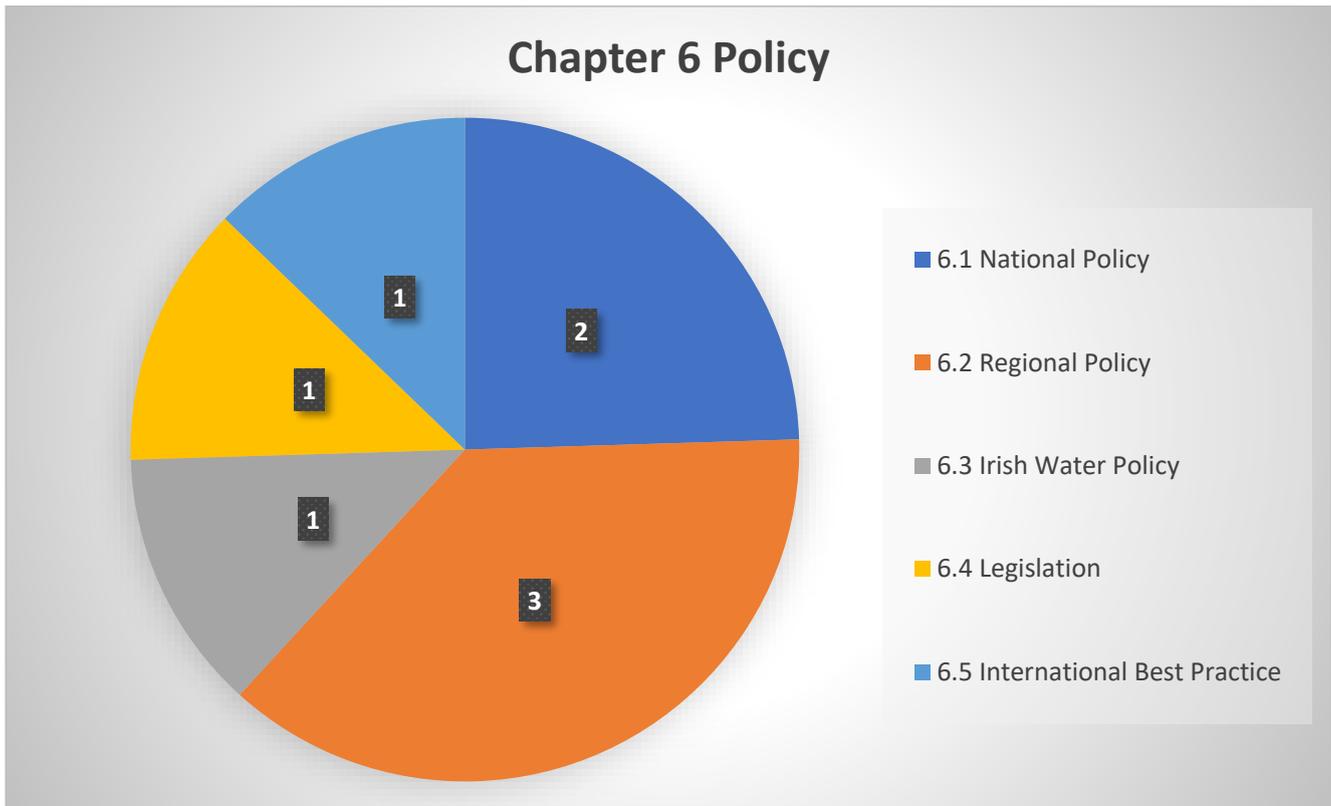


Figure 6.1 Policy Theme.

### 6.1 National Policy

#### 6.1.1 Summary of National Policy Feedback

The Environmental Protection Agency (EPA) advised that Uisce Éireann “should ensure there is consistency and alignment between the RWRP-SW and the environmental objectives in other regional and national plans”. They further requested that the RWRP-SW and implementation of it, be aligned with key relevant higher-level plans and programmes and take account the relevant objectives and policy commitments of the National Planning Framework (NPF), the Regional Spatial and Economic Strategies (RSES) and the River Basin Management Plan as appropriate.

Cork Chamber encouraged continued commitment from Uisce Éireann to deliver on Ireland 2040, ensuring alignment of water infrastructure and capital investment and Cork’s role within it. Cork Chamber further noted that Cork’s population is forecast to grow at least 50% by 2040, as highlighted in Ireland 2040. They emphasized it is essential that the RWRPs are infrastructure led and highlighted that enhanced investment in water infrastructure is key to meeting the targets set out in Ireland 2040.

Cork Chamber highlighted that Cork city was recently elected to be carbon neutral by 2030, as part of the Horizon EU Framework. Cork Chamber further noted that Cork city is inherently linked with waterways, harbour and ocean resources and emphasised it is essential the natural environment is

protected and enhanced and that all infrastructure is reinforced to create better places to live, work and play. Cork Chamber further highlighted that the alignment of Uisce Éireann's service and infrastructure delivery with the Sustainable Development Goals (SDGs) is "critical to supporting the carbon neutral objective and future proofing the region for decades to come".

### 6.1.2 Response to National Policy

A key objective of the RWRP-SW is to ensure that water infrastructure can support the proposed growth policies at national, regional and county level. Uisce Éireann will ensure that any future demand projections are informed by the most current national, regional and local demographic data available and revised appropriately, if required.

In response to Cork Chamber, Uisce Éireann acknowledges the importance of utilising up to date population projections when determining demand for water supply. Uisce Éireann confirms that growth projections used within our draft RWRP-SW were based on best available data from the NPF and RSES's at the time of compiling the draft RWRP-SW.

Uisce Éireann will update the Supply Demand Balance with the 2022 census data when the required household information is made available to us. Updated data and information, such as new census data, will continue to be incorporated via the monitoring and feedback process in section 8.3.8 of the Framework Plan.

The National Development Plan (NDP) 2018-2027 sets out the investment priorities that will provide the foundation for implementation of the National Planning Framework (NPF) and the commitment to public investment reform. Uisce Éireann has used the best available information from the NPF and three Regional Assemblies when developing our demand forecasts within the NWRP. Therefore, our Framework Plan directly aligns with national policy on growth and allows us to understand the role of the public water supply in supporting future growth and development. Further details on the Policy feeding into the NWRP is outlined in Chapter 1 of the Framework Plan.

One of the objectives of the RWRP-SW is to reduce our carbon output, therefore the carbon cost of each solution was considered and informed the decision of the preferred approach during the approach development stage, as set out in Section 7 of the RWRP-SW.

Uisce Éireann has considered the impact to climate change on our sources and on our water demands. Climate change is allowed for in the headroom allowance applied to our demand estimates to allow for any uncertainties in our understanding of the impact of climate change.

Climate change factors were applied to the estimated yield from our sources. These climate change factors were determined, further to our extensive research with the Irish Climate Analysis and Research Units (ICARUS) Department in NUI, Maynooth, under the Climate sensitive catchments project. This project has used the latest climate change projections and a best practice risk-based approach to assess the impacts of climate change on flows in 206 catchments in Ireland. Full details of how climate change factors were considered are outlined in Appendix F of the Framework Plan.

The impact of climate change on water usage has also been considered, we know from our meter readings, customers use more water during dry weather, such as droughts, and we considered this in a dry year critical period peaking allowance.

When considering the Preferred Approach, we assessed the resilience of each option to climate change by considering the available yields from the proposed new source in the future and considered the location of our infrastructure in relation to flood zones. The flood zones were informed by the OPW flood risk maps, which provide estimates of fluvial and coastal flooding and provide an overview of potential flood risk considering the impacts of climate change and sea level rise.

Further to this, the Preferred Approach was assessed against adaptability under the following headings - Sustainability, Climate Change, Demand Growth and Leakage Targets. The details of this sensitivity analysis are included in the Study Area reports and the SEA Environmental Report. Further assessment of the impacts of climate change will be carried out at project level through hydrological and hydrogeological modelling work.

## 6.2 Regional Policy

### 6.2.1 Summary of Regional Policy Feedback

The Southern Regional Assembly (SRA) recognised that water infrastructure is fundamental to service population and employment growth, and it plays a critical role in achieving the Regional Spatial and Economic Strategy (RSES) outcomes for Sustainable, Planned and Infrastructure-led development. The SRA highlighted the importance of the RSES planning policy context for the Southern Region for Phase 2 RWRPs. They listed the Regional Policy Objectives (RPOs) of direct relevance to the implementation of the National Water Resources Plan (NWRP) including: RPO 4 Infrastructure Investment, RPO 7-10 Investment and Delivering Infrastructure for Metropolitan Areas, RPO 11 Key Towns, RPO 26 Towns and Villages, RPO 68 Regional Investment for Enterprise Growth, RPO 110 Ecosystem Services, RPOs 111, 112, 121 for Water Quality and implementation of the Water Framework Directive and River Basin Management Plans, RPO 122 Sustainable Drainage Systems, RPO 124 Green Infrastructure and RPOs 208-210 for Water Supply and Water Protection.

The SRA advised that Uisce Éireann should coordinate with Local Authorities to determine the detail of demand for water across urban and rural settlements. In particular, where significant levels of population and employment growth are targeted and aligned with the objectives of the RSES and Metropolitan Area Strategic Plans (MASPs) for infrastructure-led regeneration and growth.

The SRA recommended that Uisce Éireann address on-going retrofitting and upgrades to the existing water supply networks to service the existing population and employment areas to a high standard and address current restrictions, capacity, quality and network efficiency issues.

The SRA also advised that Uisce Éireann should include the Core Strategies of each Local Authority City and County Development Plan in the RWRP-SW and work with the Local Authorities to deliver on infrastructure-led planning for all settlements, including the cities, key towns, other towns, villages, and smaller rural settlements.

As the Cork, Limerick-Shannon and Waterford Metropolitan Areas are a statutory part of the RSES through the Metropolitan Area Strategic Plans (MASPs), the SRA stated that they must be given recognition within the NWRP in terms of their growth targets. The SRA also noted that collaboration to plan services across Local Authority boundaries for each MASP will be required. The SRA welcomed the commitment in the draft RWRP-SW to align and deliver on the objectives of each RSES and coordinate with Local Authorities to invest in water infrastructure to service the Core Strategies of City and County Development Plans. The SRA considered that the themes of their previous recommendations are being addressed but recommended some further strengthening in the approach to ensure alignment to the RSES and their past comments.

In referring to the RSES RPO Towns and Villages and RPO 216 Servicing of Rural Villages, the SRA noted the importance of supporting compact growth and making towns and villages attractive for living and working. With capacity to accommodate appropriate levels of growth guided by Local Authority Core Strategies. The SRA advised that a specific commitment needs to be stated in the RWRP-SW in support of these initiatives and principles.

The SRA welcomed the statement that Uisce Éireann recognises the ongoing work between the Regional Assemblies and the Local Authorities over the process of Local Authority County/City

Development Plan reviews and that Uisce Éireann will incorporate the increasingly refined growth rates into demand forecasts. The SRA recommended that this commitment is reiterated as a key action under the NWRP.

In support for rural town and village regeneration for a strong rural economy, the SRA noted that it is important that support is provided to Local Authorities to implement Core Strategy distribution of growth to smaller settlements in addition to larger urban settlements, including services that support serviced sites and new homes in Small Towns and Villages initiatives.

The SRA added that their recommendations and observations align with RSES RPO 2 Planning for Diverse Areas, RPO 3 Local Authority Core Strategies, RPO 4 Infrastructure Investment, RPO 7-10 (infrastructure delivery and securing compact growth in cities and metropolitan areas), RPO 11 Key Towns, RPOs 12-25 (for each Key Town), RPO 26 Towns and Villages, RPO 34 Regeneration, Brownfield and Infill Development, RPO 35 Support for Compact Growth, RPO 68 Regional Investment, RPOs 111-112 Water Resources and Water Quality and RPOs 208-210 Water Supply.

In addition, these recommendations align with the objectives of the MASP for Cork, which identifies water infrastructure investment as a key enabler for growth (Cork MASP Objective 5).

Finally, the SRA stated that support for NWRP framework, when completed, through their Lose Less, Use Less and Supply Smarter policy and infrastructure planning and delivery will be important for RSES implementation. The SRA encouraged continued collaboration with Uisce Éireann to implement the NWRP framework going forward.

The Office of the Planning Regulator (OPR) also welcomed the commitment in the RWRP-SW to align and deliver on the objectives of the RSES for the SRA and coordination with local authorities to invest in water infrastructure to service the Core Strategies of City and County Development Plans. Additionally, the OPR welcomed the clear identification of the settlement hierarchy in national planning policy, including City, Metropolitan Area, and Key Towns.

The OPR provided some further comments to enhance the alignment between the RWRP-SW and national and regional policy. The OPR referred to the RSES, which sets specific population targets for Cork City and Metropolitan Area (50- 60% to 2040) in line with the NPF, with detailed projections set out in the Cork MASP. The Cork MASP identifies locations for strategic employment and residential development areas that are critical to the achievement of the population targets.

The OPR noted that the Cork MASP identified specific and general water network and storage upgrades detailed as enabling infrastructure for the following strategic residential development areas:

- Ballincollig – Water Supply upgrades
- Monard SDZ - Water supply infrastructure (pump station and trunk main from Churchfield reservoir plus 2 new reservoirs at Monard)
- North Environs- Kilbarry-Blackpool - Drinking Water supply infrastructure (new trunk mains, off-site reservoir and pump station required)
- Midleton (includes Water Rock Urban Expansion Area (UEA)) - Water Supply upgrade
- Cobh (includes Ballynoe Valley UEA) - Water Supply Upgrades
- Carrigtwohill (including Carrigtwohill North UEA) - Water Supply Upgrades
- Blarney (including Stoneview UEA) - Upgrade required to Water Supply infrastructure (network extension pump station and off site main from Blarney).

The OPR argued that it is unclear as to whether these growth factors have been taken into account in respect of the relevant RWRP-SW study areas, and if not, they recommended that this is specifically provided for given the key role of the areas in delivering the RSES.

## 6.2.2 Response to Regional Policy Feedback

Uisce Éireann's approach to population forecasts is set out in more detail in Section 4.3.2.1 of the Framework Plan. As set out in Section 2 of the RWRP–SW, a key objective of the RWRP–SW is to ensure that water infrastructure can support the proposed growth policies at national, regional and county level. Uisce Éireann confirms that growth projections used within our draft RWRP–SW were based on best available data from the NPF and RSES's at the time of compiling our draft RWRP–SW. Uisce Éireann also notes that a workshop was held with each local authority planning and water services section to review data and information in advance of the publication of the draft RWRP–SW.

Uisce Éireann will ensure that any future demand projections are informed by the most current national, regional and local demographic data available at the time of their making and revised appropriately, if required. Uisce Éireann will update the Supply Demand Balance with the 2022 census data. Updated data and information, such as new census data and the impact of Covid 19, will be incorporated via the monitoring and feedback process in section 8.3.8 of the Framework Plan.

In response to the SRA, Uisce Éireann recognises the ongoing work between the Regional Assemblies and the local authorities over the course of the development of the Local Authority Development Plans. As these plans are finalised, Uisce Éireann will incorporate the increasingly refined growth rates into our demand forecasts through the monitoring and feedback process set out in Section 8.3.8 of the Framework Plan.

The development of the NWRP will enable us to understand the scale of strategic investment required across our supplies, and to propose the right solutions and the appropriate level of investment needed within the context of the National Planning Framework. It also enables us to identify data gaps and commit to pilot projects and schemes to improve our information. This will not only help Uisce Éireann, but also Local Authorities, the Government, and other bodies in terms of coordinated thinking.

The Preferred Approaches identified through this process will be prioritised on a national basis and progressed through Uisce Éireann's Capital Investment Plans. The phasing and timeframes for delivery of individual projects will be determined through the capital investment process. When prioritising growth projects through Uisce Éireann's Capital Investment Plans, we will ensure that these decisions are based on dialogue with the Regional Assemblies and the Local Authority water, housing and planning functions.

We confirm that the four RWRPs are a mechanism for delivery of this iteration of the NWRP and that the outputs from the RWRPs for all supplies will be assessed nationally and prioritised on an equivalent basis for future investment plans. Uisce Éireann is regulated by the CRU, and one of the prioritisation criteria for our investment plans is Growth and Economic Development. We also recognise the obligations to comply with our regulator for water quality and the environment, the EPA, and the requirements stipulated in relevant legislation and regulations.

Where possible, investment plans are aligned with local authority housing and planning functions to support development. However, it should be noted that there are significant legacy issues across our supplies, and it will take many capital investment cycles to resolve these issues. The phasing and timeframes for delivery of individual projects will be determined through the capital investment process with continual dialogue with the Regional Assemblies and local authority housing and planning functions.

Whilst the lead-in time for our water supply measures in the draft RWRP–SW will typically take 7-10 years, Uisce Éireann's National Leakage Reduction Plan is already in place and through this programme, we are investing in our networks. Short and medium-term targets have been developed and, as these targets are approached and met, additional targets will be set. Leakage reduction is a key business priority and the reduction activities used, including, improved operational control, pressure management, calm networks, active leakage control and targeted mains replacement, are based on

industry best practice. We are also trialling innovative acoustic logging technology, data intelligence systems technology, the use of satellite imaging, sniffer dogs and non-destructive testing. The development of improved data on our distribution networks will allow us to optimise our leakage reduction activities, and to facilitate an expanded programme of targeted water mains replacement. These measures are set out in section 7.3.1 of the Framework Plan. Investment in leakage reduction is also a continuous activity and will endure beyond the delivery stages of major infrastructure projects.

A number of submissions referred to Municipal Area Spatial Plans, Strategic Development Zones and Regional hubs, noting that water services infrastructure would be required to facilitate development in these areas. The

The RWRP-SW determines a preferred approach to resolve need at Water Resource Zone (WRZ) Level. Metropolitan Areas and Strategic Development Zones form part of the WRZ. Uisce Éireann can confirm that growth projections for these areas are included in the WRZ growth projections. Details of local infrastructure required to service these areas will be considered in more detail at project level. To provide clarity on this point, in the final plan, we have provided reference to Metropolitan Areas and Strategic Development Zones in Section 2 and provided additional text in Section 6.4 in regard to project level assessments.

As identified in the Framework Plan, the NWRP is the framework for delivering the objectives set out in Uisce Éireann's Water Services Strategic Plan. Two of these objectives are "Support Social and Economic Growth" and "Invest in our Future". These objectives align our strategy with both the NPF and the NDP. By transforming our water supplies to ensure that they are safe, secure, reliable, and sustainable, we are striving to ensure that measures to support growth and economic development, incorporate protection of the natural environment and resilience to climate change. These objectives are part of the service measure framework for our regulated capital investment plans and are one of the factors considered in driving investment decisions.

In response to the SRA, Uisce Éireann also recognises the need for balanced development and the need to support rural communities. Uisce Éireann is committed to facilitating rural growth through the "Small Towns and Villages Programme." Details on the programme can be found on our website: <https://www.water.ie/news/green-light-for-21-additi/>. However, it should also be noted that all supplies from the largest to the smallest are considered within the NWRP, with needs assessments and Preferred Approach developments conducted for every one of the 539 supplies nationally.

## 6.3 Uisce Éireann Policy

### 6.3.1 Summary of Uisce Éireann Policy Feedback

The Construction Industry Federation (CIF) advised that it is important for residential developers to know which Uisce Éireann Infrastructure projects have planning, the required funding, and the project delivery schedule to organise their own future residential developments. The CIF also stated that a clear line of sight of upcoming projects is needed for Civil Construction companies to invest in the required plant, skills and equipment.

### 6.3.2 Response to Uisce Éireann Policy Feedback

The outputs from the RWRPs for all supplies will be assessed nationally and prioritised on an equivalent basis for future investment plans. Uisce Éireann is regulated by the Commission for the Regulation of Utilities (CRU), and one of the prioritisation criteria for our investment plans is Growth and Economic Development.

The phasing and timeframes for delivery of individual projects will be determined through the capital investment process with continual dialogue with the Regional Assemblies and the relevant local authority housing and planning functions, when prioritising growth projects through our Capital Investment Plans.

Uisce Éireann currently provides detailed information on water services and information regarding projects in our Capital Investment Plans. This information is used by the relevant local authorities when formulating their Development Plans. We have also developed a ten-year capacity register (<https://www.water.ie/connections/developer-services/capacity-registers/water-supply-capacity-register/>) that enables us to interface with the Regional Assemblies and the local authority planning departments during the delivery of the NWRP.

## 6.4 Legislation

### 6.4.1 Summary of Legislation Feedback

The Construction Industry Federation (CIF) stated that the Irish Government needs to be aware that the proposed new legislation, which will introduce abstraction licensing to align with the Water Framework Directive, could have a knock-on effect in the delivery of new housing. CIF further argued that Uisce Éireann “lacks comprehensive data to fully understand the impact of the new legislation on many of its current abstractions,” and that current water supplies could be restricted, thus impacting on the possible location of new residential developments.

### 6.4.2 Response to Legislation Feedback

Uisce Éireann will take into account any relevant new legislation that impacts water supply and will update the NWRP, if required, in accordance with the feedback and monitoring process set out in section 8.3.8 of the Framework Plan.

## 6.5 International Best Practice

### 6.5.1 Summary of International Best Practice Feedback

The Southern Regional Assembly (SRA) highlighted that Uisce Éireann is an important stakeholder for the SRA in a collaborative project under the Interreg Europe “Blue Green Cities” Project. The SRA noted the project is seeking to improve policy making and the implementation of projects that integrate Green and Blue Infrastructure (GBI) and Nature Based Solutions (NBS) at national, regional, and local levels. In collaboration with ARUP, the SRA have recently completed and published their GBI and NBS Framework for the Southern Region, ‘Our Green Region,’ which could be of assistance to Uisce Éireann projects as a toolkit and is available on the SRA website.

### 6.5.2 Response to International Best Practice.

Uisce Éireann recognises the increasing importance of nature-based solutions and catchment measures in relation to improving water quality and reducing risk across our supplies. As highlighted by the SRA, Uisce Éireann is an active participant in catchment-based initiatives and, where possible, will incorporate NBS at project level. We welcome the publication of the SRA’s ‘Our Green Region’ and will refer to the framework as one of the resources to guide the development of our solutions.

## 6.6 Conclusions on Policy Feedback

Having carefully reviewed the submissions received on the theme of Policy, Uisce Éireann considered that no updates or further recommendations to the RWRP-SW are required. For completeness, we note that any relevant clarifications and recommendations from the RWRP-EM consultation have also been considered in the development process and finalisation of the RWRP-SW.

## 7. RWRP-SW Regional Plan

In this Chapter, we summarise the key references in submissions to issues under the broad theme of “Regional Plan”. Within the overall Regional Plan theme, we identified four sub themes, which we set out in Figure 7.1. We deal with each of these sub-themes in this Chapter, setting out first a summary of the relevant mentions in the submissions, followed by our response. The sub-themes are not dealt with in any particular order.

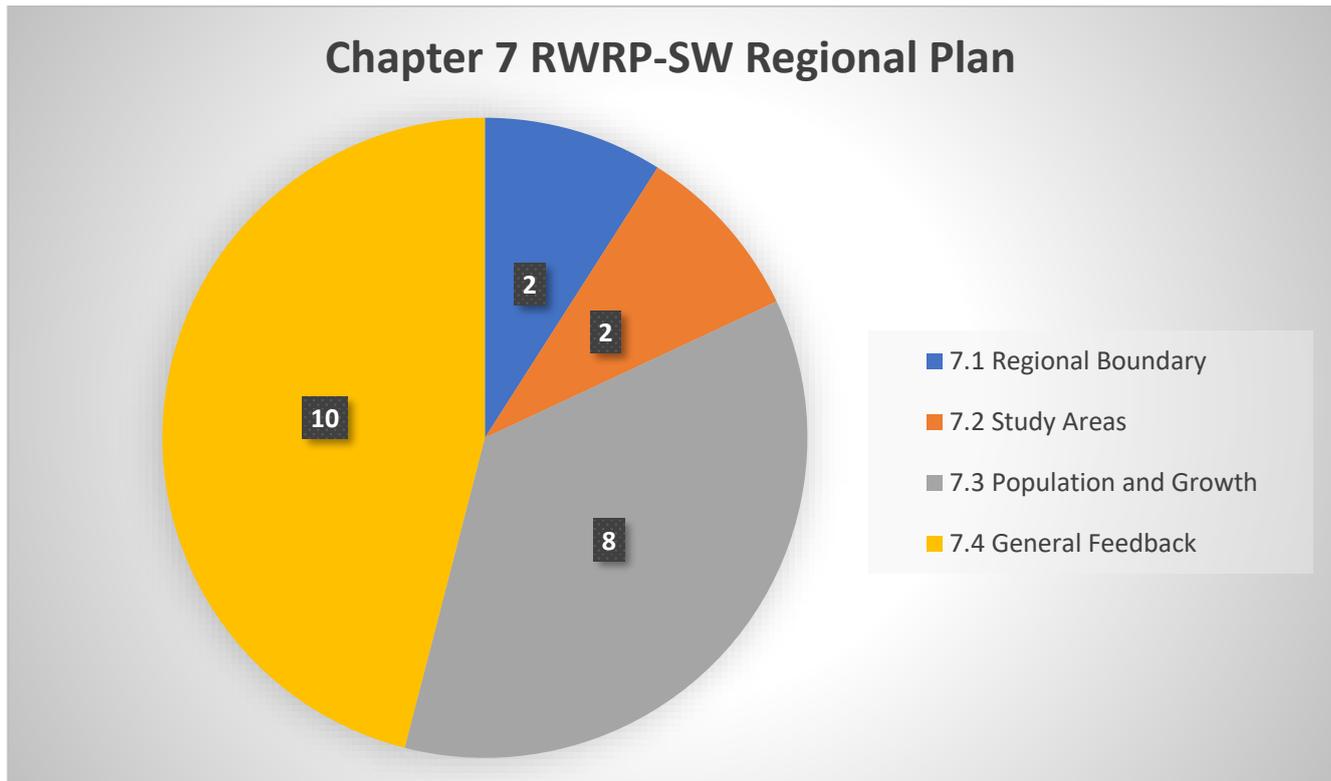


Figure 7.1 Regional Plan Theme.

### 7.1 Regional Boundary

#### 7.1.1 Summary of Regional Boundary Feedback

The Southern Regional Assembly (SRA) observed that the RWRP-SW boundary is entirely within the Southern Region and noted the RWRP-SW definition of the South West is a different configuration to the defined Nomenclature of Territorial Units for Statistics (NUTS III) (Strategic Planning Areas) regional boundaries. The SRA further noted the clarification that the boundary for the RWRP- SW is determined by the boundaries of Uisce Éireann Operational Regions, Water Resource Zone (WRZ) boundaries, water supply delivery areas, water body catchments and sub catchments.

Both the SRA The Environmental Protection Agency (EPA) welcomed the clarification that once the first NWRP has been finalised, while it is comprised of the Framework Plan and four (4) RWRPs, together they will be treated as a unified plan in an integrated manner. The relevant regional groupings will have no ongoing application.

#### 7.1.2 Response to Regional Boundary Feedback

Uisce Éireann welcome the feedback from the SRA and the EPA on the regional groupings. As noted by both parties, the regional boundaries will have no impact on the roll out of the Preferred Approaches and do not impact Uisce Éireann operations.

## 7.2 Study Areas

### 7.2.1 Summary of Study Area Feedback

Ibec highlighted that the study areas are pragmatically combined into three groupings consisting of 174 water supplies. They noted that such classification will support Uisce Éireann in managing the process of identifying potential water supply solutions for the Southern region. Ibec noted they understand the supply constraints are mainly local, so can be largely resolved by improving interconnection of the existing supplies in the South West region.

### 7.2.2 Response to Study Area Feedback

Uisce Éireann welcome the feedback from Ibec on the Study Area boundaries and reiterate that while solutions can be largely identified within Study Area boundaries, these boundaries do not constrain optioneering.

## 7.3 Population and Growth

### 7.3.1 Summary of Population and Growth Feedback

The Environmental Protection Agency (EPA) welcomed the alignment of the draft RWRP-SW with the objectives and commitments with the National Planning Framework (NPF) and Regional Spatial and Economic Strategies (RSEs). The EPA further advised that regional tourism strategies and plans such as the Wild Atlantic Way and Ireland's Ancient East should also be considered, in terms of potential implications for existing drinking water infrastructure and proposed future needs to service future tourism growth.

An Fórum Uisce (AFU) acknowledged that the link to the Overview of Water Treatment Plants (WTPs) provided with the consultation documents is very useful. They also stated their support for the water supply register available on Uisce Éireann's website, which gives an indication of the available capacity for water supply in each Local Authority area. AFU requested clarity on whether this information is used by Local Authorities in the review of planning applications, or if the responsibility lies with Uisce Éireann to assess whether new applications should be granted planning based on water supply capacity in a region.

AFU suggested that new connection enquiries submitted to Uisce Éireann should provide further detail regarding its role on regulatory control of growth, development, and expansion of activities to ensure there is transparency and accountability for water sustainability in the planning process. AFU acknowledged that Uisce Éireann has a role in economic growth and environmental protection, and therefore recommended more transparency where trade-offs are required between the two. AFU also advised that Uisce Éireann should consider working with planners in the application of restrictions on water use in developments where there is, or is likely to be, supply deficits in the future.

Ibec commented that Uisce Éireann needs to plan its future regional supply capacity in a manner consistent with the corresponding projections for population growth and household formation contained in Ireland's National Policy Objectives (NPOs); Regional Policy Objectives (RPOs) within the National Planning Framework (NPF), Regional Spatial and Economic Strategy (RSES) and National Development Plan (NDP).

Ibec noted that capacity constraints on the current water and wastewater infrastructure are already apparent in the Southern region. Ibec advised Uisce Éireann to prioritise housing and enterprise activity and noted that these will need investment to support the delivery of a more effective, responsive, and cohesive water supply plan for the region.

Ibec commented that “the consultation document states that settlements and associated growth rates are not exactly aligned with the existing water supply asset base but are served on interconnected asset base.” They noted that projected population growth and spatial economic changes will increasingly stress existing water resources, further increasing the need for better integration through interconnection of the distribution networks. Ibec acknowledged the importance of the South West region to national economic activity given its role in attracting foreign investment and nurturing indigenous enterprise. They noted that Uisce Éireann is aligning the needs of growing businesses with water services as the population expands.

The Construction Industry Federation (CIF) acknowledged that the draft RWRP-SW estimates the overall South West regional population is expected to grow by 33% from 2019 to 2044, with Cork City alone growing by 54% to 2040. However, the CIF stated that the RWRP-SW needs to take into account the latest census figures with regards population growth, as the census shows that the ESRI population predictions that were used in the NPF and RSES underestimated the actual growth in population that was experienced.

Cork Chamber highlighted Cork’s potential to be a national driver of economic and population growth. To facilitate this, they stated that it is essential that Foreign Direct Investment (FDI) and indigenous enterprise continue to be enabled, while ensuring the provision of sufficient housing with quality drinking water.

The Southern Regional Assembly (SRA) recommended that alignment to the relevant objectives and growth targets within the Southern Region RSES and subsequent City and County Development Plan (CDP) Core Strategies is a key consideration for the three relevant study areas in the RWRP-SW.

The SRA noted that the South West region’s priorities for investment are identified in the RSESs and MASPs for Cork as Limerick-Shannon and Waterford. The SRA highlighted that the Southern Region has the State’s “most significant proposition to achieve the aim of Regional Parity” as the NPF and RSES targets these key areas to grow by 50%-60% to 2040 as part of a structural realignment away from the Greater Dublin Area (GDA). They also highlighted that the RSES settlement strategy builds on the region’s metropolitan areas as engines of growth, supported by a network of 14 strategically located Key Towns and further supported by the Atlantic Economic Corridor and Eastern Economic Corridor for an economically resilient region. The SRA noted that in order to achieve regional and national population targets outlined in the NPF, an equally ambitious alignment in funding priorities and service delivery is required.

The SRA referred to the RSES Appendix 1, which delivers a projected uplift between 280,000 to 343,500 in the Region to 2031. They highlighted that the population projections for the South West to 2031 in this Appendix are directly relevant for the draft RWRP-SW. The SRA requested clarification that the growth projections have been taken into consideration in the study area population growth projections to 2044.

The SRA recommended consultation with Local Authorities and the relevant CDP Core Strategies to inform the growth projected for locations at sub-county level for Cork City, Cork County and Kerry and for parts of Tipperary, Limerick and Waterford are included in the study areas. The SRA noted that the population growth projection to 2044 in the draft RWRP-SW Table 2.3 for water services under the plan is lower than the population projection to 2031 in the RSES for the South West Strategic Planning Area and is lower still when the relevant portion of the Mid-West and South East SPA population targets are assigned.

The SRA stated that publication of Census 2022 preliminary data and final results will provide further clarity on growth rates over the last six years. But stated “the level of change required to deliver growth projections under the NPF and RSES for Project Ireland 2040 will take several Development Plan cycles to change patterns of development and allow the lead-in time for infrastructure delivery to service the level of change required for greater balanced regional development.” Furthermore, the SRA recommended that additional growth capacity and sufficient headroom to provide for the higher range of

RSES growth targets should be provided for to ensure the Region is planning ahead with ample capacity for infrastructure-led growth.

The SRA recommended that the draft RWRP-SW should directly support the growth of the Cork Metropolitan Area and refer to the Cork Metropolitan Area specifically in the plan.

The SRA commented on the framework set by the RSES for the sustainable growth of the Cork MASP where Cork City and suburbs is projected to grow by 36% to 2031, and the rest of the metropolitan area by 31% to 2031. However, the SRA highlighted that the draft RWRP-SW has assigned 54% growth to Cork City to 2044 (assumed to be the City and Suburbs), which is a lower rate of average annual growth than the RSES projects to 2031. The SRA welcomed the indication of higher growth rates for the City by 2044 but recommended the higher range of growth is taken into consideration for the City and Metropolitan Area to 2044.

The SRA highlighted that it is essential that water infrastructure has capacity to service existing and future industry and enterprise growth, Foreign Direct Investment and indigenous enterprise as highlighted in the Cork MASP.

The SRA also advised that the draft RWRP-SW should include Urban Regeneration and Development Funded regeneration, consolidation of the city suburbs, Urban Expansion Areas in the metropolitan area and strategic employment locations and enterprises as highlighted in the Cork MASP. The SRA stated that this is critical for RSES implementation and that the RWRPs need to give recognition to the City and Metropolitan Areas as the primary engines of population and employment growth in the State and Region.

The SRA welcomed Uisce Éireann's commitment for on-going assessment and revision to align with City and CDP targets in co-ordination with Local Authorities. The SRA specifically welcomed the support of Local Authorities for Key Towns in targeting growth of more than 30% from their 2016 population to 2040. They welcomed the recognition of the role of the Key Towns in the draft RWRP-SW but noted that this can be strengthened further in reference to the population growth, and the regional and sub-regional economic growth functions that Key Towns serve.

The SRA recommended consultation with Local Authorities should continue to ensure the actual growth rates targeted at local level for Key Towns and other settlements is infrastructure led with water services. In particular, the SRA advised that servicing the infrastructure-led growth of Tralee, Killarney, Mallow and Clonakilty as regional drivers of population and economic growth to 2040 needs to be underpinned by water services.

The SRA highlighted that an increased allocation is warranted for parts of the Mid-West and South West Strategic Planning Area allocation in Tipperary, Limerick and Waterford that fall within the draft RWRP-SW catchment. The SRA advised that additional growth capacity for Study Areas H, I and J should be provided for a robust assessment of future demand and capacity to service population and employment growth.

The Office of the Planning Regulator (OPR) noted that as part of its evaluation and assessment of statutory plans during the plan preparation process they seek to ensure that future housing and other development is aligned with existing and planned water supply infrastructure, including through direct engagement with Uisce Éireann.

The OPR stated that it is critical that the draft RWRP-SW, in planning for both the quantity and location of supply, is based on the population growth targets set out in the NPF and in the RSES for the Southern Regional Assembly, which encompasses the MASPs for Cork, Limerick/Shannon and Waterford

The OPR requested clarity on why the draft RWRP-SW bases growth projections for other areas on the draft NPF.

The OPR referred to detailed population growth projections produced by the Economic Social Research Institute for the Department of Housing Local Government and Heritage, based on the NPF targets, to inform local authorities in developing housing targets in accordance with the requirements under the section 28 guidelines. The OPR recommended that Uisce Éireann should consider whether these detailed projections would be of assistance to finalising its regional and national plans.

The OPR welcomed proposals to refine growth rates as development plans and the Cork MASP are finalised. The OPR advised that parts of the draft RWRP-SW will need to be updated in text and possibly in terms of population forecasts in the final document.

The OPR noted that Uisce Éireann will be aware that development plans for the Cork County, Kerry and Limerick are now adopted and set out the short-term population targets for their respective 'Key Towns', which ultimately will aim to meet the NPF target by 2040. The OPR noted that in each case, the core strategy was considered to be generally consistent with the population growth of the RSES.

The OPR advised for the draft RWRP-SW to provide for in excess of 30% growth to 2040 in the case of 'Key Towns', so that the timing and level of investment is aligned with the implementation of the NPF and RSES. They recommended to take account of the more detailed population and housing targets in those core strategies in the plan period and up to 2031, to ensure the appropriate alignment of water resource infrastructure over the medium and longer term.

The OPR cautioned that the spatial areas 'Cork city' and for 'Cork City and the surrounding area', for which growth targets have been determined, do not align with the spatial areas for which growth targets have been set under national and regional plans. The OPR noted in Table 3.8 that there is a target for 'Cork city' and for 'Cork city and surrounding area', whereas the NPF and RSES set targets for 'Cork city and suburbs' and for the Cork city metropolitan area. As the spatial areas differ, they stated it is difficult to determine whether Uisce Éireann has taken account of the full extent of population growth.

Furthermore, the OPR noted that the administrative boundary for Cork was significantly extended on May 31st, 2019, to encompass five times its previous area. The OPR commented that the figures in Table 3.8 are not consistent with the population within the city boundary. They advised proper alignment with the national and regional targets for the relevant spatial areas.

The OPR commented that Table 3.8 in the draft plan contains generalised assumptions and growth rates for the other settlements, based on the size of a settlement rather than its designation, which is not consistent with the RSES and risks assuming a 'business as usual' growth pattern. The OPR further recommended that Uisce Éireann should ensure that population forecasts align with the population's targets under the NPF to 2040 and the RSES, to 2026 and 2031, having particular regard to the spatial units applied in those documents.

Cork County Council (CCC) noted that whilst the timeframes of the County Development Plan (CDP) and the draft RWRP-SW are not the same, there is concern that the population target figures for water resource study areas are not reflective of the growth targets in the CDP and that could potentially lead to larger deficits than shown in the draft RWRP-SW. CCC stated that it is not clear if the assessment of need aligns with the growth planned for the county, which would have impacts on the supply demand balance planned for in the draft RWRP-SW. CCC highlighted the importance to utilise the most up to date, readily available population target information in this exercise

In section 2.2.3.2, CCC noted that the CDP provides a multiplier for jobs growth which may be of use in considering non-domestic growth. It also provides an analysis of jobs distribution and commuting patterns, which may be of use to Uisce Éireann in understanding the role of towns as employment locations and attractors in terms of non-domestic growth.

### 7.3.2 Response to Population and Growth Feedback

Uisce Éireann welcomes the feedback in relation to population and growth considered in the draft RWRP-SW. Uisce Éireann's approach to population forecasts is set out in more detail in Section 4.3.2.1 of the Framework Plan.

As set out in Section 2 of the draft RWRP-SW, a key objective of the RWRP-SW is to ensure that water infrastructure can support the proposed growth policies at national, regional and county level. Uisce Éireann confirms that growth projections used within our draft RWRP-SW were based on best available data from the National Planning Framework (NPF), Regional Spatial Economic Strategies (RSES's), Metropolitan Strategic Area Plans (MSAP's) and County Development Plans (CDP) at the time of compiling our draft RWRP-SW.

Uisce Éireann also notes that a workshop was held with each local authority planning and water services section to review data and information in advance of the publication of the draft RWRP-SW.

The OPR, SRA and CCC flagged that the growth projections in the draft RWRP-SW differ from those set out in the NPF, RSES, MASPs and CDP where applicable; and they noted that our growth projections appeared lower and provided examples. It should be noted that planning settlements are not exactly aligned with the existing water supply asset base, as our water supplies can serve large areas covering urban and rural settlements through an interconnected asset base. Where this is the case, we have attributed the differing growth rates to the proportion of the supply that is in the urban and rural settlements, in order to ensure that the overall growth is aligned with the figures obtained from the RSES and with the NPF. Therefore, it is not that our projections are lower necessarily, it is that they are distributed over a different area.

Uisce Éireann recognise the ongoing work between the Regional Assemblies and the local authorities over the course of the development of the Local Authority Development Plans. As these plans are finalised, we will incorporate the increasingly refined growth rates into our demand forecasts through the monitoring and feedback process set out in Section 8.3.8 of the Framework Plan. The methods for forecasting water demand utilising the population projections are detailed in the NWRP Framework Plan Section 4.

We also confirm that there are structured protocols and interface points for population growth updates through Uisce Éireann's Forward Planning Team. The team Lead manages the stakeholder interface with the OPR and there is an Uisce Éireann Forward Planning Lead assigned to interface with each of the three regional assemblies. In relation to the recommendation that consultation with local authorities continue, Uisce Éireann confirms that this will continue and we work closely with local authorities. It is Uisce Éireann's objective to ensure that water infrastructure and regulation has the capacity to meet existing and future customers' needs in line with growth rates and land zoning as set out in the RSES, NPF and Local Authority Development Plans. Uisce Éireann is satisfied that these growth projections represent the best available information at the time of writing, for the purposes of a plan level assessment.

In response to the OPR and CCC's submission on Key Towns and Growth rates. The population growth at a WRZ level is presented in Figure 2.5 of the draft RWRP-SW. The figure shows the higher growth rate projections of Cork City and surrounds and the Key Towns. It should be noted that settlements and associated growth rates are not exactly aligned with the existing water supply asset base, as our water supplies can serve large areas covering urban and rural settlements through an interconnected asset base. Where this is the case, we have attributed the differing growth rates to the proportion of the supply that is in the urban and rural settlements, in order to ensure that the overall growth is aligned with the NPF (and draft NPF where applicable). For example, a growth rate of 54% is applied in Cork City, whereas a growth rate of 15% is assumed for settlements with a 2016 population less than 1,500. Therefore, the overall population growth rate for Study Area I is 40% as shown in Table 2.2. A summary

of the population growth rates that we have assumed for the settlements in the draft RWRP-SW is presented in Section 3, which explains the demand forecast projections across the region.

Within our Framework Plan and draft RWRP-SW, we recognise that growth does not always result in an increase in non-domestic demand, and even though the population and economy are forecast to grow considerably over the coming years, we have limited non-domestic water demand to the regional Cities. We have also capped non-domestic growth within other settlements.

In these areas, we will try to facilitate growth in non-domestic water use via efficiency improvements and water conservation. We will review policy and trends in relation to this over the coming years and refine our forecasts as per the monitoring and feedback process set out in section 8.3.8 of the Framework Plan.

As outlined in Section 4.4 of the Framework Plan, we acknowledged there may be some uncertainty in our estimation of future growth. Therefore, we have included a headroom allowance in our estimation of demand. Headroom is the safety margin which is applied to demand forecasts to allow for uncertainties in our calculations on both the demand side and the supply side. The allowance is calculated and added to estimated demand to provide a buffer in the supply demand balance (SDB) and to ensure that the preferred approach is sized appropriately to meet future required needs. Furthermore, Uisce Éireann will update the SDB in line with the data received. This will allow Uisce Éireann to respond to growth and development needs and prioritise water supply investment in collaboration with local authorities and with reference to the County/City Development Plans and LAPs and MASPs.

In response to the OPR's submission on spatial areas, the RWRP-SW determines a preferred approach to resolve need at Water Resource Zone (WRZ) Level, Study Area and Regional level. Metropolitan Areas and Strategic Development Zones, such as the Cork City and Cork City Surrounding areas form part of these areas and therefore will be factored in when considering the need for the particular area. Details of local infrastructure required to service these areas will be considered in more detail at project level. To provide clarity on this point we have provided reference to Metropolitan Areas and Strategic Development Zones in Section 2 of the draft RWRP-SW and provided additional text in Section 6 with regard to project level assessments.

Further to the EPA's comment on tourist strategies such as the Wild Atlantic Way and Ireland's Ancient East, we note that these have been referred to in Section 2.2.4 of the draft RWRP-SW. We do acknowledge that tourism does impact demand and we need to allow for growth in the area in the future. We consider the increase in water demands resulting from the influx of tourists, particularly during summer months when local demand is elevated. We have accounted for the impact of tourism in our water demand forecasts which feeds into the SDB, however there is some uncertainty associated with our existing forecasts. As our data improves, we are gaining a better understanding of the annual demand across our WRZs, and we have noticed peaking for prolonged periods in summer at certain tourist destinations. We will use this improved data, as it is gathered, to update the SDB as set out in our monitoring and feedback process in section 8.3.8 of the Framework Plan.

In response to the query from AFU on the connections process, we note that through our Connection and Developer Services function, Uisce Éireann has an early engagement process in place (Pre-Connection Enquiry) to provide an early indication of the potential feasibility of connecting a development and what capital upgrades might be required to cater for this development. Once Uisce Éireann completes the review of an applicant's Pre-Connection Enquiry, a confirmation of feasibility is issued, which is a high-level assessment of feasibility (based on the information available at the time of issue) that will indicate if any capital upgrades are required. The local authority have access to the water capacity register available on Uisce Éireann's website, and it may use this, amongst other information, to assess the planning application.

To ensure the satisfactory completion of a development, the draft Water Services Planning Guidelines under section 28 of the Planning and Development Act 2000 (as amended) require that any grant of

planning permission or approval requiring direct and indirect connection(s) to water services infrastructure must include a condition requiring the applicant or developer to enter into a connection agreement(s) with Uisce Éireann prior to the commencement of development. In addition, section 55 of the Water Services Act, 2007 (as amended) obliges a person to obtain the consent of Uisce Éireann prior to connection to our infrastructure. Customers can apply for a connection once they have submitted an application for planning permission, however Uisce Éireann will only issue a connection offer once planning permission has been granted.

Uisce Éireann currently works with developers to determine if water efficiencies measure could be taken, and the developer can reduce the projected required water demand.

Ibec specified the need for Uisce Éireann to plan its future regional supply capacity in a manner consistent with the NPF, RSESs and the NDP. Uisce Éireann confirms that growth projections used within our draft RWRP–SW were based on best available data from the National Planning Framework (NPF) and Regional Spatial Economic Strategies (RSES's) at the time of compiling our draft RWRP–SW.

Uisce Éireann acknowledges the advice provided by Ibec in relation to key areas for prioritisation. In reference to the prioritisation of Preferred Approaches, these will be prioritised on a national basis and progressed through Uisce Éireann's Capital Investment Plans. The phasing and timeframes for the delivery of individual projects will be determined through the capital investment process. When prioritising projects through Uisce Éireann's Capital Investment Plans, we will ensure that these decisions are based on dialogue with the RSES and local authority housing and planning functions.

Uisce Éireann acknowledges the comment from Ibec that, given projected population growth and spatial economic changes, better integration through interconnection of distribution networks is required. Uisce Éireann fully agrees and a key feature of the NWRP is to identify the optimum solutions for the WRZ, Study Area and Region to look forward and ensure security of supply and level of service.

The Construction Industry Federation (CIF) said that the Plan needs to use the latest census figures with regards to population growth to account for underestimations made by the NPF and RSES previously. Uisce Éireann have aligned with the NPF and RSES growth for consistency with planning and development. Headroom has been built into the demand figures to allow for uncertainties such as underestimation. As new census data is integrated into planning policies, we will also update our demand figures.

Cork Chamber highlighted the importance of enabling Foreign Direct Investment and indigenous enterprise, sufficient housing and high-quality drinking water. Our Plan is aligned with the RSES for the Southern Region to ensure that key drivers enabling economic and population growth identified by this report are captured within our demand figures.

## 7.4 General Feedback

### 7.4.1 Summary of General Feedback

One stakeholder viewed that Uisce Éireann's assessment "does not respect the requirements of the Water Framework Directive, Drinking Water Directive, Wastewater Directive, and does not adequately allow for climate change".

The West Cork Environmental Health Department welcomed that exploration, discussion, and planning for water supplies for the next 25 years is taking place.

An Forum Uisce (AFU) welcomed the wide scope of work undertaken by Uisce Éireann to develop the draft RWRP-SW. AFU highlighted that the draft RWRP-SW is significant for both environmental and socio-economic development in the South West region over the coming decades. Population growth,

climate change, aging infrastructure and spatial-economic changes are increasingly stressing the water resources, and AFU noted the challenge for Uisce Éireann to reverse the results of previous approaches and support increasing needs with limited resources, while facing several data gaps.

Ibec noted that during last year's consultation on the draft NWRP Framework Plan, they facilitated a series of briefings for the members of its Transport and Infrastructure Council (T&IC). Ibec noted that their feedback indicated broad support for the approach then being proposed by Uisce Éireann.

The Construction Industry Federation (CIF) welcomed the development of the first ever National Water Resources Plan (NWRP), which will, for the first time, review water supply needs collectively over a 25-year period. The CIF noted that the construction industry has the capacity, skills, knowledge, and experience to build the required infrastructure projects as part of the plan, including trunk mains, new water treatment plants and the upgrading of existing water treatment plants.

As well as the long-term strategic approach, the CIF welcomed the news that interim short-term solutions will also be implemented to meet the current and short-term water infrastructure demand which is required to accommodate the growing population while the long-term plan can be implemented in full. The CIF also welcomed the fact that the NWRP will be formally updated every five years with baseline forecasts and data feeding into the NWRP being reviewed in line with the data received. .

The CIF acknowledged that Uisce Éireann have begun to try and address future demands in the South West with the construction of 11 new Water Treatment Plants (WTPs) and the upgrade of 36 WTP's in the South West region between 2014 and 2019. They acknowledged it will take a number of investment cycles to deliver the preferred approach to meet the water supply needs in the South West.

However, the ambition to build these critical infrastructure projects to facilitate the growing population needs to remain strong. The CIF stated that the Irish Construction industry has the capacity and skill set to build the required infrastructure in a shorter time frame to respond to the needs of the Country. They noted that the construction industry has built €3.9 billion in public water and wastewater infrastructure projects between 2014-2019 including the laying of 1,906km of new and rehabilitated water main. They finally noted that the industry also is ready to meet the challenge of building €5 billion worth of Uisce Éireann Capital projects by 2024.

The Marine Plan Team (MPT) DAERA – Marine and Fisheries Division - welcomed the opportunity to comment on the draft RWRP-SW. The MPT acknowledged Uisce Éireann's NWRP will be the first resources plan for the public water supply in the Republic of Ireland.

The Southern Regional Assembly (SRA) and Office of the Planning Regulator (OPR) both welcomed the publication of the draft RWRP-SW as part of the NWRP process and the opportunity to make a submission. They commended the depth of evidence-base analysis and scenario testing undertaken, including the identification of needs, status of infrastructure and supply, modelling for climate change, option developments across separate Water Resource Zones (WRZs) and the development of regional options, including technical reports for each study area in the appendices. The OPR also commended Uisce Éireann for preparing a non-technical summary of the draft RWRP-SW and an information leaflet. The SRA also stated their commitment as a stakeholder and key consultee for Uisce Éireann under the final NWRP and the Phase 2 RWRPs. They welcomed continued engagement between the SRA and Uisce Éireann on these phases.

They noted the preferred approach to the planning of regional water resources to 2044 as a "comprehensive and systematic review of the evidence base by Uisce Éireann, informed by SEA and AA." The OPR considered the preferred approach, to be a rational, strategic approach to providing a sustainable, secure, and reliable water resource for the region. The OPR acknowledged the potential benefits that would arise in terms of quality and quantity of water supply and the improved ability of water resources to support population growth and economic development across the South West region, which forms part of the Southern Regional Assembly area.

The OPR welcomed the draft RWRP-SW as investment in water services infrastructure is critical to the implementation of the National Planning Framework and the Regional Spatial and Economic Strategies. The OPR further acknowledged the positive working relationship between the OPR, and Uisce Éireann and the thorough assessments Uisce Éireann carries out of local authority statutory plans in its day-to-day work.

Cork County Council (CCC) welcomed the draft RWRP-SW and noted that many of the recommendations consistent with CCC's 25-year Water Strategy Study 2003 – 2028 (Cork Hinterland Zones 2 and 3).

#### 7.4.2 Response to General Feedback

Most respondents welcomed the opportunity to engage on the draft RWRP-SW and requested further stakeholder engagement and ongoing collaboration with Uisce Éireann. Uisce Éireann will continue to consult with stakeholders and interested parties throughout the development of the RWRPs.

Uisce Éireann would disagree with the submission from one party which claimed that Uisce Éireann's assessment does not respect the requirements of the Water Framework Directive (WFD). In the absence of Irish specific guidance on the assessment of flows, Uisce Éireann has been proactive and our assessment methodology is founded on UK Guidance for Abstractions based on ecological flows; our Study Area boundaries consider WFD catchment boundaries; our coarse and fine screening criteria have multiple questions specifically addressing WFD objectives (Section 6.2.2). Section 3.3 details how we incorporate the Recast Drinking Water Directive and water quality as part of identifying need.

One of the key objectives of the NWRP is to improve transparency. Although it is not a legislative requirement in this country, Uisce Éireann committed to the completion of a NWRP within its Water Services Strategic Plan. A search of published information from other jurisdictions, including publicly available water resource plans in the UK, shows the extent to which Uisce Éireann has sought to provide the correct level of detail as part of our first NWRP to ensure it is understandable such as to facilitate public consultation to the fullest extent possible.

The NWRP is a 25-year strategy to ensure we have a safe, sustainable, secure, and reliable drinking water supply for everyone. The NWRP has involved, and will continue to involve, extensive consultation with relevant authorities, stakeholders, and the public. Uisce Éireann will continually review all policies and consider the impact of these on Ireland's enterprise base.

Uisce Éireann has considered the impact to climate change on our sources and on our water demands. Climate changes is also allowed for in the headroom allowance applied to our demand estimates to account for any uncertainties in our understanding of the impact of climate change. Climate change factors were applied to the estimated yield from our sources. These climate change factors were determined further to our extensive research with the Irish Climate Analysis and Research Units (ICARUS) Department in NUI, Maynooth, under the Climate sensitive catchments project. This project has used the latest climate change projections and a best practice risk-based approach to assess the impacts of climate change on flows in 206 catchments in Ireland. Full details of how climate change factors were considered are outlined in Appendix F of the Framework Plan. The impact on climate change on water usage has also been considered as customers also use more water during dry weather such as droughts and we considered this in a dry year critical period peaking allowance.

## 7.5 Conclusion on RWRP-SW Regional Plan Feedback

Having carefully reviewed the submissions received on the theme of South West Regional Plan, Uisce Éireann considered that no updates or further recommendations to the RWRP-SW are required. For completeness, we note that any relevant clarifications and recommendations from the RWRP-EM consultation have also been considered in the development process and finalisation of the RWRP-SW.

## 8. Environment

In this Chapter, we summarise the key references in submissions to issues under the broad theme of “Environment”. Within the overall Environmental theme, we identified seven sub themes, which we set out in Figure 8.1. We deal with each of these sub-themes in this Chapter, setting out first a summary of the relevant mentions in the submissions, followed by our response. The sub-themes are not dealt with in any particular order.

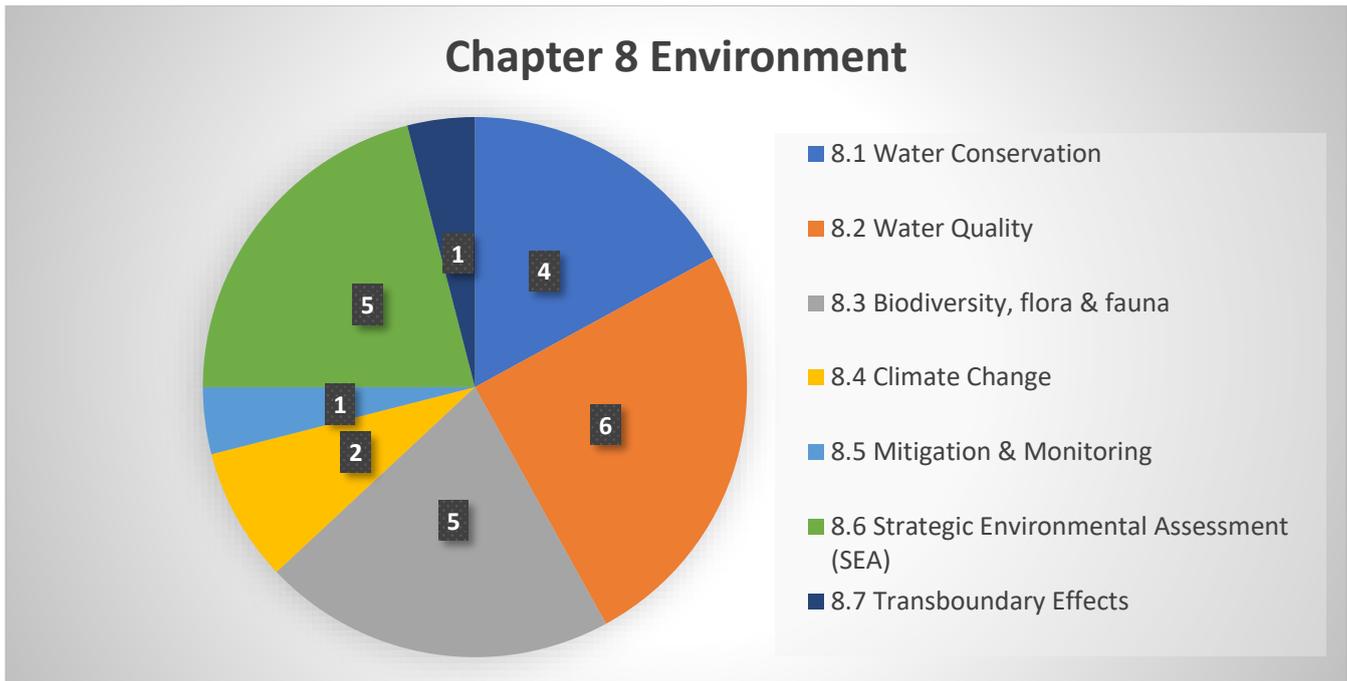


Figure 8.1 Environment

### 8.1 Water Conservation

#### 8.1.1 Summary of Water Conservation Feedback

The West Cork Environmental Health Department raised concerns over the scarcity of water and requested details on how it is going to be managed in the short term. They queried if there were proposals or plans to educate the public on conservation of water and recommended that such plans have meaningful engagement with communities on the urgency of the need to manage and conserve water due to climate change.

The Environmental Protection Agency (EPA) acknowledged the commitments to promote water conservation and ‘water- stewardship’ activities to support businesses becoming more efficient in their water usage and needs.

A Stakeholder detailed three suggestions to conserve more water;

- Uisce Éireann should embark on a massive programme of reservoir building in every part of the country to ensure we catch and retain our abundant rainfall, especially now we may have long dry periods with climate change.
- Implement a programme to replace or repair leaking pipes.
- Implement an education programme for all schools, primary and secondary, that instils how important a natural resource this is and how important it is to value it and not to waste it.

Cork County Council (CCC) noted and welcomed the proposals to reduce leakages, to promote water conservation measures and to implement Water Conservation Orders in drought periods in order to protect the environment. They further recommend that maximum resources and effort be put into these measures to minimise the need to abstract water particularly from the most environmentally sensitive sources.

### 8.1.2 Response to Water Conservation Feedback

Uisce Éireann recognises the strategic importance of water conservation and demand management. The 'Use Less' pillar is one of the three pillars that Uisce Éireann has used to develop solutions to address Need. This pillar focuses on activities to help understand water use habits, influence behaviour, encourage change and to promote the use of water efficient devices and appliances.

Uisce Éireann is actively promoting water conservation in schools, business, and communities through various activities. These include our partnership with An Taisce's Green-Schools Programme, our Water Stewardship Programme with non-domestic users and ongoing national and local water conservation campaigns. We also provide advice on reducing water usage in homes and businesses on our website <https://www.water.ie/conservation/>. This is supported by our new Conservation Calculator that will assist households to assess their water usage habits and find out how much water they are saving on a daily basis. It also offers useful and practical tips on how to reduce water usage and track their progress. The free tool was developed in response to research, which showed that consumers want additional tools to assist them in conserving water. It is available at [www.water.ie/calculator](http://www.water.ie/calculator).

Recent government policy has also allowed for the introduction of the Household Water Conservation Charge or Excess Use Charges to highlight high usage to our customers. This may also encourage further uptake of our First Fix Free Scheme, where customer side leakage is the main cause of excessive use. This scheme supports 'smart' functionality installations in almost 60% of domestic meter units. This includes automatic drive-by reading, month-end readings, and continuous-flow (leak) alarms.

In 2018 Uisce Éireann carried out a pilot study of sub-metering of apartments, where smart meters were used with fixed radio communications. This trial was primarily to confirm that it is feasible to sub-meter apartment buildings and retrieve usage data, however, it also demonstrated how water usage data can be made available to the occupants of the apartments. This work was funded by the Commission for Regulation of Utilities. <https://www.water.ie/about/research-and-innovation/CRU-Report-Pilot-Technology-Trials-of-Water-Metering-Systems-for-Multi-Unit-Development-30th-Sept-2019-Final-Website.pdf>. Uisce Éireann are currently running a 'smart network' trial in the South Dublin Area.

Uisce Éireann also works with stakeholders to support policy change, such as developing water efficiency standards in Building Regulations and social housing. We will continue to progress water conservation measures and will engage with other stakeholders in driving the need for policy to support water conservation measures.

More detail of our current activities can be found in section Chapter 4 of the National Water Resources Plan (NWRP) Framework Plan and on our website: <https://www.water.ie/conservation/>

The Lose Less pillar, relating to leakage reduction, is also one of the three pillars within which the NWRP solutions are defined. Leakage reduction is a key business priority for Uisce Éireann and includes improved operational control, pressure management, smart networks, active leakage control and targeted mains replacement.

Since 2018, Uisce Éireann has invested over €500 million to upgrade the underground water network across the country through the delivery of the Leakage Reduction Programme. We are investing a further €250 million every year up to the end of 2030 - fixing leaks and replacing pipes to provide a more reliable water supply. This additional investment planned will deliver further vital upgrades to the underground water network – reducing leakage, improving water quality and providing a more reliable water supply for

Irish homes and businesses. More information on our National Leakage Reduction Programme is available on the Uisce Éireann website: <https://www.water.ie/projects/national-projects/leakage-reduction-programme/>

Regarding the stakeholder suggestion that 'Uisce Éireann should embark on a massive programme of reservoir building', we acknowledge that reduced water availability resulting from climate change may require additional storages to manage supplies during more frequent and prolonged dry conditions. The Preferred Approach improves drought resilience by providing 80 new raw water and treated water storages across the South West Region. This provides carryover capacity for flows harvested during high flow periods and therefore assists in maintaining supply during dry conditions. Additional storage capacity also assists with meeting peak demands.

## 8.2 Water Quality

### 8.2.1 Summary of Water Quality Feedback

A Stakeholder raised concern over the lack of detail on pesticides and herbicides in the draft RWRP-SW.

Councillor John Paul O'Shea commented on the proposed rationalisation of some schemes in the South West region, noting some people may be moving from their current source which could be soft water to a hard source and queried how many areas will be affected by this plan? Has Uisce Éireann advanced the national discussions on water softeners with the Department?

The West Cork Environmental Health Department raised concerns about the potential threats to Public Health in West Cork if there were an absence of any available water, reduced supply or rationing due to 'boil water' or 'do not consume' notices.

Cork County Council (CCC) suggested it would be of benefit to have all the critical barriers listed in page 98, section 3.3.3 of the draft RWRP-SW and the term "lagging assessment" needs to be clarified.

The Local Authorities Water Programme (LAWPRO) suggested that clear public messaging with regard to the causes of water supply disruptions that require boil water notices is needed. They noted that press releases from Uisce Éireann concerning boil water notices normally do not identify the cause behind the notice especially with regard to catchment related issues.

They stated that from a Water Framework Directive perspective, media reports often blame heavy weather or climate for issues which LAWPRO described as misleading if there is an underlying problem with catchment management. They questioned if it would be possible to do an analysis on press releases to look at the messaging.

LAWPRO encouraged public agencies to refine messaging and suggested that where relevant, boil water notices should be linked back to the catchment pressures where they are known and to bring in a greater emphasis on Integrated Catchment Management and source protection. They said that this "should incentivise the relevant pressure owners to play their part in ensuring that raw water is protected".

They commented that the focus of the conversations in the media were on the water treatment plants (WTP's) and effectively managing risk at the WTP rather than on the actual cause between the WTP and the source. They stated that, in general, water literacy is low, and advised that collectively, Uisce Éireann need to inform and educate the public and relevant sectors and that presenting catchment relevant messaging will be important.

The Environmental Protection Agency (EPA) welcomed Uisce Éireann's commitment to fully adhere with the World Health Organisation of source protection and to establish drinking water safety plans across all supplies under Uisce Éireann's remit. They noted it as important for Uisce Éireann to continue to identify and implement actions and mitigations to address those risks identified through the drinking water safety

plan approach. Regarding stakeholder engagement, the EPA suggested it “may be useful to include a reference to LAWPRO and Teagasc with regards the role to assist in efforts to reduce agriculture-related sources of pollutants in waterbodies used as drinking water sources within the region”.

### 8.2.2 Response to Water Quality Feedback

All water supplied by the public water supply must comply with the Drinking Water Directive. Uisce Éireann takes a risk-based approach to our water supplies using the World Health Organisation’s drinking water safety plan methodology. This ensures that our water treatment plants are designed based on the type of water abstracted from any given source and the treatment processes put in place are designed to remove contaminants. Uisce Éireann is currently in the process of completing Drinking Water Safety Plans for all supplies. All public water sources, including groundwater and surface water, involve water treatment.

In addition, as provided for in the recast Drinking Water Directive and the soon to be transposed national drinking water regulations, risk assessment and risk management of the catchment will have to be carried out by 2027. Source protection is a big feature of the recast Drinking Water Directive and will help identify potential issues in the catchment with a view to resolving them. We have not had sight of the final regulations yet but Uisce Éireann will play a large role in this.

Uisce Éireann recognises that the implementation of the Preferred Approach for some Water Resources Zones may result in some customers moving from a soft water source to a hard water source. However, we consider that the robust option selection process applied to select the Preferred Approach, presents the solution that is best suited to address both quality and quantity needs into the future.

Hardness is a natural characteristic of much of Ireland's drinking water supply. Hard water contains high levels of natural minerals absorbed from rock and soil and is not harmful to health. In fact, the higher mineral content may offer health benefits above that of soft water.

Uisce Éireann does not chemically soften hard water for the following reasons:

- There are no health risks involved in drinking and using hard water
- Softening water removes beneficial minerals from hard water
- There is no legislative requirement to remove hardness from drinking water
- Depending on the technology used, artificially softened water may not be suitable for everyone to drink. For example, increased sodium levels caused by salt softening may not be suitable for infants or ‘at risk’ groups.
- Hard water can create an internal protective film on lead pipes or fittings. This can prevent metals such as lead leaching into drinking water supplies.

Uisce Éireann has published suggestions for managing hardwater in domestic appliances, which can be found at <https://www.water.ie/help/water-quality/hard-water/>.

Uisce Éireann acknowledges the need to continue to identify and implement actions and mitigations to address risks identified through the Drinking Water Safety Plan (DWSP) approach. As outlined in Section 9 – Ongoing Monitoring, Mitigation and Evolution of the draft RWRP-SW – we will progress Source Risk Assessments under the DWSPs and incorporate knowledge gained into our Preferred Approach.

As part of the rollout of the DWSPs, we will consider nature-based solutions and catchment measures to reduce source risk to our supplies, and we will actively engage as a stakeholder in catchment initiatives. Further information on our source risk assessment is included in Box 5.2 in Section 5.5 (and cross referenced in Section 5.9) of the Framework Plan.

Implementation of source protection measures will require further collaboration with several stakeholders including, riparian owners, industry groups, the agricultural, forestry and environmental sector and

Agriculture and Food Development Authority (Teagasc), especially in terms of enforcement and responsibility for the actions of third parties which are outside of Uisce Éireann's control. In recognition of the importance of multi-stakeholder engagement and collaboration in managing shared natural resources, Uisce Éireann are members of an expert group chaired by the Department of Housing Local Government and Heritage to make recommendations to the Minister regarding a new approach to drinking water source protection as part of the transposition of the recast Drinking Water Directive.

As suggested by the Environmental Protection Agency (EPA), we will include Teagasc to our list of key stakeholders in catchment management activities. We note Local Authority Waters Programme (LAWPRO) is already included as part of the stakeholder list provided in Box 2.4 in the draft RWRP-SW, which refers to source protection and catchment management activities.

In response to the concern raised by one stakeholder over the lack of detail on pesticides and herbicides in the draft RWRP-SW, we note that any risks associated with these contaminants would be identified and mitigated through the DWSP approach described in Section 5 of the Framework Plan and outlined in Section 3.3.2 of the draft RWRP-SW. Furthermore, Box 2.4 of the draft RWRP-SW, makes specific reference to the pilot drinking water source protection project to trial monitoring and management strategies to reduce the risk of pesticide contamination of drinking water. Since 2015, Uisce Éireann has been an active member of the National Pesticides and Drinking Water Action Group (NPDWAG). The NPDWAG is chaired by the Department of Agriculture, Food and the Marine (DAFM) and was formed to provide a coordinated and collaborative approach to prevent the ongoing prevalence of pesticides in catchments used for the abstraction of drinking water. Members include Teagasc, the Irish Farmers Association (IFA), Irish Creamery Milk Supply Association (ICMSA), Animal and Plant Health Association (APHA) and local authorities among others.

In addition, the risk assessment and management of drinking water catchment areas required under the recast Drinking Water Directive will help further identify and mitigate against pollutants in the catchment. The implementation of these measures will require coordination between multiple stakeholders. Uisce Éireann recognises that the poor condition of some of our current water supplies means that some of our customers receive a low level of service resulting in the issuing of Boil Water Notices or other interruptions. The National Water Resources Plan (NWRP) identifies solutions (the 'Preferred Approach') to improve the Level of Service (LoS) we provide to our customers in the short, medium and long-term. This includes an "interim solution" approach that allows shorter term interventions to be identified and prioritised when needed. More information on interim solutions can be found in Section 7.6 of the RWRP-SW. Specific solutions for the West Cork region are outlined for Study Area I in Appendix 2 of the RWRP-SW.

Within the Framework document, for this iteration of the NWRP, we have set a 1 in 50 LoS standard for all of our supplies. This equates to a 2% probability of failure or the reliability we require from our supply sources.

In response to Cork City Council's suggestion for clarification regarding the critical barriers considered in our assessment of water quality risks, we will amend the draft RWRP-SW to list all eight barriers identified by Uisce Éireann. We will also explain that in the context of assessing water quality risk, a 'lagging' assessment identifies an existing water quality risk at the customer's tap and hence does not allow the opportunity for preventative action. This is compared with a leading assessment that identifies a potential risk of contamination at source, enabling Uisce Éireann to take preventative action to mitigate the risk.

Uisce Éireann acknowledges LAWPRO's comment on clear public messaging regarding the causes of water supply disruptions that require boil water notices. Uisce Éireann information on Boil Water Notices and Do Not Consume Notices can be found at <https://www.water.ie/help/water-quality/boil-water-notice/> and <https://www.water.ie/help/water-quality/do-not-consume-notice/>

We will commit to reviewing our public messaging, including press releases. Following this review, where appropriate, we will refine future public messaging to identify known catchment pressures contributing to the water quality risk.

## 8.3 Biodiversity, Flora and Fauna

### 8.3.1 Summary Biodiversity Flora and Fauna Feedback

The Department of Fishing and Marine (DAFM) commented that commercial sea fishing is a long standing, pre-existing and traditional activity in the marine environment and is therefore essential that any negative impacts on fisheries are avoided. The evaluation of potential impacts on any commercial sea fishing activities as a result of the draft RWRP-SW needs to be given consideration as part of any planning or proposal process and during the development process itself. The DAFM noted it as imperative that engagement should be sought with the fishing industry and other relevant stakeholders at as early a stage as possible to discuss any changes that may affect them to afford a chance for their input. The DAFM commented that the Fishers' interests and livelihoods must be fully recognised, supported, and taken into account.

The Environmental Protection Agency (EPA) highlighted that in the proposals for additional reservoirs or impoundments in the draft RWRP-SW that there is potential for good or high-status rivers to be impacted. The EPA commented that "it will be important that any proposed development of reservoirs or impoundments ensure that the ecology of the area is not impacted and that flows are maintained to ensure there is no deterioration in water quality status".

Inland Fisheries Ireland (IFI) commented whereby the undertaking of emergency works in low flow situations to ensure supply continuance does not impact or impede fish passage or endanger fish life. The IFI noted it as essential they are consulted with in advance of any such works

IFI advised that uninterrupted fish movement continue to be a priority, along with spawning ground availability and egg oxygenation. They highlighted that "fluctuation in water levels can introduce migratory barriers and such barriers (including potential barriers) should be identified, along with corresponding mitigation measures". IFI recommended the phasing out of unsustainable existing schemes should be a priority to allow natural river forms function and remove barriers, in particular weirs built to facilitate outtakes.

IFI noted that while abstraction is assessed in the context of the Water Framework Directive "an equal emphasis should be on river hydro-morphology; weirs, river realignments and bank modifications have impacts on river forms and function and may reduce the status in conjunction with other modifications within a catchment".

The IFI further noted that there are currently several on the ground issues regarding pollution and barriers in the South West region that must be addressed on an individual basis and that national guidelines from IFI should be incorporated.

The Southern Regional Assembly (SRA) previously made recommendations for strengthening integration of Green Blue Infrastructure (GBI) and Nature Based Solutions (NBS) and Ecosystem Service Approaches as part of Developing Solutions and Supply Smarter infrastructure measures of the National Water Resources Plan (NWRP). They strongly advocate these approaches and recommend these should be elaborated upon. The SRA commended the positive commitment to adopt GBI, NBS, and Ecosystem Services and protect and enhance biodiversity through the Uisce Éireann Biodiversity Action Plan and commented that it needs to continue to be a priority action for the unified NWRP. The SRA outlined their support for Uisce Éireann's projects that integrate NBS, reduce energy usage, carbon sequestration and provide amenity use for local communities. The SRA further noted their support and encouraged further collaborative projects for Sustainable Urban Drainage Systems, wetlands, basins and ponds, reedbeds, buffer strips and hedges and forest riparian buffers inter alia with the relevant stakeholders.

The Department of Housing Local Government and Heritage – National Parks and Wildlife Services (DHLGH-NPWS) noted that the plan will result in the decommissioning of 90 Water Treatment Plants (WTPs). When decommissioning WTPs, DHLGH-NPWS noted that there may be scope to decommission weirs which are forming a barrier for fish migration. They highlighted that improvement of passage of migratory fish species is an action under the National Biodiversity Action Plan, the EU Biodiversity Strategy for 2030 and would also support Special Area of Conservation Site Specific Conservation Objectives for Qualifying Interest fish species. DHLGH-NPWS advised Uisce Éireann to include removal of barriers to fish migration due to weirs when decommissioning WTPs, where applicable.

The DHLGH-NPWS noted that the impact on Killarney shad, an endemic species to Lough Leane, also requires full assessment, as this species spawns during June, and low spring/early summer water levels could have an impact on this species. They further highlighted that the effects of drought conditions, exacerbated by abstraction on the mesotrophic lake habitat exposed on the shore, the potential encouragement to invasive species like fringed waterlily (*Nymphoides peltata*), and impacts on alluvial woodland soils, need further assessment.

### 8.3.2 Response to Biodiversity Flora and Fauna Feedback

The RWRP-SW was subject to plan level Strategic Environmental Assessment (SEA) and Appropriate Assessment (AA), with a SEA Environmental Report and a Natura Impact Statement (NIS) accompanying the draft RWRP-SW as part of the consultation process. The SEA process concluded at plan level the implementation of the National Water Resources Plan (NWRP) schemes can have both positive and negative potential effects on the water environment, biodiversity, and landscape and visual amenity, and potential significant combined negative effects for carbon emissions. To address the potential negative effects, mitigation measures and a monitoring framework at both plan and project level will be implemented alongside recommended developments. The mitigation measures for preferred approaches are summarised in Table 7.1 of the Study Area Environmental Reviews.

The SEA identified that in the long-term, the Plan will bring benefits in terms of greater security of water supply to the population, tourism industry and recreational amenities, human health and the local economy. Additionally, the newer, or upgraded, more reliable assets within the system will result in greater adaptability to the impacts of climate change. There are benefits to the water environment from the replacement of abstractions identified as potentially unsustainable for meeting Water Framework Directive (WFD) or protected area obligations and will give greater flexibility to respond to future sustainability reductions.

The AA process resulted in a determination at plan level that with implementation of appropriate mitigation for protecting European sites, the RWRP-SW would not give rise to adverse effects on the integrity of any European site(s). All options identified in the draft RWRP-SW, including the construction elements, are subject to SEA and AA.

As part of our options assessment process, we carry out desk-based assessments on the potential impacts on the environment. Environmental considerations represent 19 of the 33 assessment criteria that are considered in the options selection process. This is in addition to the options and cumulative effects assessment and in combination assessments undertaken as part of the SEA and AA. Further details on our assessment criteria can be found in Chapter 8 of the NWRP Framework Plan.

As plan level approaches progress to project level, we carry out the required environmental assessments at a site level, including surveys and investigations, as part of the statutory consenting process.

We acknowledge the comment from DAFM that potential impacts on commercial sea fishing activities should be considered in the development of the Regional Water Resource Plans and early engagement should be sought. Our assessment of desalination options has taken account of potential environmental

impacts from their associated brine discharge on the aquatic environment and biodiversity, including potential impacts on fisheries. For the draft RWRP-SW, there are no desalination options included in the Preferred Approach and therefore these have not been assessed further in terms of impact on commercial fisheries.

Uisce Éireann acknowledge the need to engage and consult with IFI when undertaking emergency works in low flow situations and confirm that appropriate methodologies will be agreed in advance of completing such works. Uisce Éireann are identifying all potential barriers that are associated with Uisce Éireann infrastructure, from internal information, and international research in this area (<https://amber.international/>) is also supporting this task. Where abstractions interdependent on barriers are determined by the EPA to be unsustainable Uisce Éireann will, in collaboration with the EPA, establish a programme to move away from such abstractions. For locations where the Preferred Approach is not to move away, UÉ is engaging with IFI to, to develop fish passage at weirs associated with our abstractions to address fish movement throughout the year.

We can confirm that river hydro-morphology has been assessed at the fine screening stage of the options assessment for the Plan level and will be reassessed at project stage in greater detail.

UÉ is aware of issues regarding pollution and barriers in the SW region and can confirm projects are being progressed to advance further site investigation works to inform solutions to address these issues. IFI Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters (2016) and Planning for Watercourses in the Urban Environment (2020) will be followed in the development of solutions<sup>1,2</sup>.

In response to the submission from the Environmental Protection Agency (EPA) and the Department of Housing, Local Government and Heritage – National Parks and Wildlife Services (DHLGH-NPWS), Uisce Éireann recognises the importance of minimising the potential for environmental impacts of all proposed developments, including the proposals for additional reservoirs and impoundments in the draft RWRP-SW. We will ensure the ecology of the area is protected by implementing appropriate mitigation measures to manage environmental risks at project level. We have outlined key mitigation measures for the Preferred Approach in Table 7.1 of the Study Area Environmental Reviews which are provided in Appendix H of the SEA Environmental Report.

Protection of the aquatic environment is a core part of the option assessment process, which has aimed to ensure all proposed options meet sustainable abstraction requirements in relation to the Water Framework Directive (WFD). The wider WFD and biodiversity objectives are also embedded in SEA objectives and are to be taken forward through the mitigation and monitoring framework outlined in Section 9 of the Plan. Where we have determined that existing abstractions may not meet sustainable flow thresholds, the Preferred Approach improves or avoids further deterioration at these sources by abandoning the abstraction, or where viable alternatives do not exist, by reducing the abstraction or developing additional sources to support growth. Further detail of the assessment of sustainable abstractions is provided in Section 7.4.5 and Appendix C and Appendix G of the Framework Plan.

Uisce Éireann will be required to apply for licenses for abstractions through Water Environment (Abstractions and Impoundments) Act, 2022. The EPA, as the licencing regulator, will review our existing and proposed abstractions and determine if they are feasible considering all other abstractions in the catchment and the impact of the abstractions on the ecology of the waterbody. Mitigation measure such as minimum compensation flows and variability of compensation flows may be required to ensure fish passage. These measures will be specific to each abstraction. The Supply Demand Balance will be

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<sup>1</sup> <https://www.fisheriesireland.ie/sites/default/files/migrated/docman/2016/Guidelines%20Report%202016.pdf>

<sup>2</sup> <https://www.fisheriesireland.ie/sites/default/files/migrated/docman/IFIUrbanWatercoursesPlanningGuide.pdf>

updated based on the outcome of the licensing process. This will be undertaken in accordance with the feedback and monitoring process set out in Section 8.3.8 of the Framework Plan.

The RWRP-SW determines the feasible Preferred Approach at plan level. It is acknowledged within the Plan that further site-based assessments will be required at project level. These detailed environmental assessments will take place prior to any planning permission application being made and therefore site-specific questions, such as the impact of abstractions from the lower Leane catchment on endemic species to the Loch Leane, such as Killarney shad, will be addressed at this stage. More information on project level assessments is provided in Section 6.4.

We welcome the Southern Regional Assembly's support for Uisce Éireann's Biodiversity Action Plan and projects that integrate Nature-Based Solutions (NBS) and Ecosystem Service Approaches. Uisce Éireann is committed to implementing NBS and will continue to work in partnership with catchment stakeholders and local authorities to develop these collaborative projects that deliver benefits for both our customers and the environment. Uisce Éireann is currently a stakeholder on the 'Blue Green Cities' project that is seeking to improve policy making and implementation of projects that integrate NBS and Blue-Green Infrastructure. For example, establishment of 5.27 hectares of riparian woodland at our Lough Guitane WTP site. More information on this NBS and additional NBSs in the South West region are provided in Section 2.3.9 of the RWRP-SW. At project level the options will be developed to ensure all potential opportunities that can be afforded by the solution are realised. This may include an augmentation of the option in line with our Biodiversity Action Plan or our Energy Efficiency Plan. Section 6.4 of the RWRP-SW outlines how the Biodiversity Action Plan will be considered at project level. More details on the plan can be found at <https://www.water.ie/projects/national-projects/biodiversity/>

## 8.4 Climate Change

### 8.4.1 Summary of Climate Change Feedback

A stakeholder noted that as a result of Climate Change and Carbon Footprint reductions more emphasis will have to be made of storage and use of the natural water cycle if demand and targets are to be achieved.

Local Authority Waters Programme (LAWPRO) noted that due to climate change whereby, we can expect more drought like conditions which can lower water levels in rivers and lakes and affect it ecologically, the safeguarding from any further impact from abstractions is hugely important. LAWPRO noted that abstraction pressure in high tourist amenity areas in summer increases substantially due to the seasonal demand coupled with impacts of climate change and the quantity of water supply becomes a risk.

LAWPRO highlighted that in some cases, the water utility must draw water from certain supplies to supplement other supplies that have gone dry. LAWPRO noted that these factors increase the pressure of the abstraction on the waterbody and should be given high weighting when abstraction threshold assessments are being undertaken.

### 8.4.2 Response to Climate Change Feedback

Uisce Éireann has considered the impact of climate change on our sources and on our water demands in the following ways:

- Climate change factors were applied to the estimated yield from our sources into the future. These climate change factors were determined further to our extensive research with the Irish Climate Analysis and Research Units Department in National University of Ireland, Maynooth, under the Climate sensitive catchments project. This project has used the latest climate change projections and a best practice risk-based approach to assess the impacts of climate change on flows in 206

catchments in Ireland. Full details of how climate change factors were considered are outlined in Appendix F of the Framework Plan.

- The impact on climate change on water usage has also been considered by applying peaking factors to represent demands in a dry year critical period. This accounts for the increased demand during dry weather, such as droughts. The demand estimates also consider increased usage during peak tourist seasons.

We have also applied a headroom allowance in our demand estimates to account for uncertainty in our understanding of the impact of climate change. The allowance provides a buffer in the supply demand balance and ensures that the Preferred Approach is sized appropriately to meet future estimated supply deficits.

When considering the Preferred Approach, we assessed the resilience of each option to climate change by assessing available yields from the proposed new source in the future and by considering the location of our infrastructure in relation to flood zones. We have identified solutions to secure supplies and reduce water shortfalls during drought conditions. These solutions include both raw and treated water storages to support increased abstractions during high flow periods and provide for higher demands during low flow periods.

Further to this, the Preferred Approach was assessed against adaptability under the following headings - Sustainability, Climate Change, Demand Growth and Leakage Targets. The details of this sensitivity analysis are included in the Technical Appendices to the RWRP-SW and the Strategic Environmental Assessment Environmental Report. Further assessment of the impacts of climate change will be carried out at project level through hydrological and hydrogeological modelling work.

Further to Local Authority Water Programmes comment regarding the impact of tourism on seasonal demands, we note that our demand estimates account for the increase in demand resulting from the influx of tourists, particularly during the summer periods when there is the combined impact of reduced supplies and increased local demands. We acknowledge there is some uncertainty associated with our existing forecasts, which is accounted for in the headroom allowance added to our demand forecast.

In developing the Preferred Approach, Uisce Éireann has considered the impact of abstractions on the aquatic environment and assessed sustainable abstraction thresholds during low flow periods. We have taken a conservative approach when conducting desktop assessments of the Preferred Approaches using the methodology set out in Appendix C of the Framework Plan. Further information on our approach to assessing abstraction pressures is provided in Section 2.3.5. Section 7.4 provides detail regarding the sustainability of our water abstractions under the Preferred Approach.

## 8.5 Mitigation and Monitoring

### 8.5.1 Summary of Monitoring and Mitigation Feedback

The Environmental Protection Agency (EPA) recommended that the Monitoring Programme should be flexible to take account of specific environmental issues and unforeseen adverse impacts should they arise during implementation of the Plan. As well as set out the various data sources, monitoring frequencies, responsibilities and reporting. EPA noted it should consider and deal with the possibility of cumulative effects and that monitoring of both positive and negative effects should be considered. The EPA recommended that “if the monitoring identifies adverse impacts during the implementation of the Plan, Uisce Éireann should ensure that suitable and effective remedial action is taken”.

Furthermore, the EPA noted the implementation of the RWRP-SW should include provisions for annual or bi-annual reporting on implementation of the Plan commitments. They recommended that the RWRP-

SW implementation, monitoring and reporting should be aligned with the environmental monitoring and reporting required under the Strategic Environmental Assessment (SEA) legislation which will assist in evaluating the environmental performance of the Plan. Guidance on SEA-related monitoring is available on the EPA website.

The EPA noted the proposed Mitigation Measures and monitoring measures are set out in Chapter 10 – Mitigation and Monitoring of the SEA Environmental Report and the inclusion of Table 10.2 Monitoring Plan: Indicators and Targets. They also welcomed the link between the Plan and SEA regarding monitoring the implementation of the Plan.

In relation to the Mitigation measures, they acknowledged that the identified SEA mitigation measures have been integrated into the Plan which shows a clear linkage between the Plan and SEA.

The EPA noted it as important that monitoring of the significant environmental effects of implementation of the Plan are carried out. “Bearing that in mind, we suggest for clarity, the information presented in Section 10 – Mitigation and Monitoring Plans, should be reorganised...in this context, there is merit in considering a tiered approach to presenting the monitoring information”.

They suggested that the key high-level environmental protection objectives of the SEA could be set out in one table, with the accompanying monitoring targets and indicators, monitoring frequencies and information sources. They further suggested a second table could be provided to show the more detailed environmental objectives, targets and indicators, more of relevance at a project level.

Additionally, the EPA highlighted there is merit in limiting the number of indicators currently presented. “The monitoring indicators should be meaningful, have a monitoring frequency associated with them and include thresholds/targets or triggers above which remedial action should be taken. While some of the environmental indicators described are applicable at a plan-level, others appear to be more applicable at a project level. These should be separated out for clarity purposes. The aim should be for the higher-level SEA-specific monitoring aspects to align and inform the Plan-specific monitoring”.

The EPA suggested that the more detailed project specific monitoring elements could be separated out and used to inform the development and implementation of future projects, that may arise out of the implementing the RWRP-SW. In this context, they noted, the key overarching environmental objectives to be taken at project level, identified in the SEA could be set out to help inform any project level monitoring that would be required. This they remarked, would help promote further good SEA practice, as promoted in the EPA guidance document ‘The Tiering of Environmental Assessment – The influence of SEA on Project-level Environmental Impact Assessment’ (EPA, 2021).

The EPA highlighted that this approach should assist in linking the SEA monitoring and Plan-monitoring and reporting aspects. The EPA suggested that interim monitoring reports (annual or bi-annual) be provided over the lifetime of the RWRP-SW which would allow for remedial action to be taken where significant adverse effects are identified and enable Uisce Éireann to adapt the monitoring programme as necessary.

### **8.5.2 Response to Monitoring and Mitigation Feedback**

The Strategic Environmental Assessment (SEA) monitoring plan references and takes account of good practice outlined in ‘Tiering of Environmental Assessment – The influence of SEA on Project-level Environmental Impact Assessment’ (EPA, 2021). The Monitoring Plan is therefore provided for in two parts. This has been clarified and explained further in SEA Environment Report section 10. Part 1 is plan level monitoring that addresses the high-level environmental protection objectives of the SEA; and Part 2 provides a monitoring framework for project level implementation that addresses more detailed environmental objectives. The monitoring indicators are relevant to the corresponding plan or project level context and are aligned with the indicators defined in the SEA to the National Water Resources Plan (NWRP) Framework Plan.

The Environmental Action Plan also includes a task to review and update the monitoring indicators and targets to allow new conditions to be taken into account and to ensure the Plan is sufficiently flexible to take account of environmental issues arising during implementation of the Plan and any unforeseen adverse impacts.

The Monitoring Plan and Environmental Action Plan has been designed to provide a basis for the identification and continuous review of the positive, negative and cumulative impacts of the RWRP-SW. The plan refers to monitoring targets and indicators, monitoring frequencies and review timescales, and information sources.

Reporting timescales are outlined for plan level monitoring in Part 1 of the Monitoring Plan. As outlined in Part 2 of the Monitoring Plan, reporting timescales across each project will be developed over the plan implementation period. Monitoring results on individual projects will be fed back to reporting for the Regional Plan and the SEAs.

## 8.6 Strategic Environmental Assessment (SEA)

### 8.6.1 Summary of Strategic Environmental Assessment Feedback

The Environmental Protection Agency (EPA) welcomed that the comments made in their previous submission at Strategic Environmental Assessment (SEA) Scoping Stage, have been considered, in preparing the draft RWRP-SW and associated SEA.

The EPA noted the strategic environmental objectives (SEOs) set out in Table 6.1 and acknowledged the detailed option and approach to the assessment as presented in section 6.2. They further noted the assessment methodology, comprising consideration of resilience, delivery, flexibility, progressivity, sustainability and cost criteria. The EPA welcomed “the comprehensive methodology undertaken during the consideration and selection of alternatives in the SEA and acknowledge that transboundary impacts have also been considered”.

The EPA noted that where “proposals for further impoundments are proposed, these should be carefully considered, designed and implemented to minimise any potential likely significant environmental effects”.

The EPA acknowledged the consideration of cumulative effects, as provided in Chapter 9 of the draft RWRP-SW, which looks at regional cumulative effects, both within the RWRP-SW and between the RWRP-SW and other plans and programmes. The EPA also welcomed that the EPA guidance ‘Good Practice Guidance Note on Cumulative Effects in SEA (EPA, 2020) has been considered.

The EPA noted the inclusion of Table 9.2 – Cumulative Effects with other plans and programmes and commented that the draft National Policy Statement on Geothermal Energy for a Circular Economy (Department of Environment, Climate and Communications) may also be useful to consider.

The EPA commented that in finalising the Plan and integrating the findings of the SEA into the Plan, the recommendations, key issues and challenges described in our State of the Environment Report Ireland’s Environment – An Integrated Assessment 2020 (EPA, 2020) “should be considered, as relevant and appropriate ...and should also be taken into account, in finalising and implementing the Plan and SEA”.

The EPA recommended that once the Plan is adopted, Uisce Éireann should prepare an SEA Statement that summarises:

- How environmental considerations have been integrated into the Plan;
- How the Environmental Report, submissions, observations and consultations have been taken into account during the preparation of the Plan;
- The reasons for choosing the Plan adopted in the light of other reasonable alternatives dealt with;
- The measures decided upon to monitor the significant environmental effects of implementation of the Plan; and

- A copy of the SEA Statement with the above information should be provided to any environmental authority consulted during the SEA process.

The EPA welcomed the extent to which the SEA has been integrated into the Plan, from providing an environmental summary of resources and pressures within the region, inclusion of references to the option assessment methodology and mitigation and monitoring considerations.

The EPA recommended that Uisce Éireann should continue to focus on addressing issues related to supplies currently on the EPA's Remedial Action List and any future additions, as applicable. The EPA noted that currently, there are 52 water supplies on the EPA's Remedial Action List in January 2022, some of which are present within the area covered by the Plan, including Cork City Water Supply, Whitegate Public Water Supply, Glashaboy, Mitchelstown North, Castletownbere, Cahersiveen, Mountain Stage 062A, Caragh Lake 022A, Kilgarvan, Ballyheigue and Aughacaslá supplies.

In terms of the SEA-related consultation process, the EPA acknowledged the consultation timeframe provided (3 months) for this stage of the SEA process.

The Department of Environmental Climate and Communication (DECC) welcomed the mention of their Bedrock, Irish Geological Heritage Sites, Groundwater Aquifer, Karst, Vulnerability and Source Protection Schemes within the draft RWRP-SW SEA Environmental Report.

DECC noted in the SEA Appendices document, Table B-1 'Fine Screening Sustainability (Environmental and Social Impacts) Criteria', the scoring question associated with the Geology and Soils topic "G1: Would any designated or non-designated geological features, valuable soils, or contaminated land sites be affected?". DECC recommended consultation of the following datasets in order to determine if there could be potential impacts; Groundwater, Geo Heritage, Geological Mapping, Geotechnical Database Resources, Geo Hazards, Historic Mines, Marine and Coastal Unit, Coastal Vulnerability Index.

### Groundwater

DECC noted that Geological Survey Ireland's (GSI) Groundwater and Geothermal Unit, provides advice, data and maps relating to groundwater distribution, quality and use, which is especially relevant for safe and secure drinking water supplies and healthy ecosystems.

DECC commented that proposed developments need to consider any potential impact on specific groundwater abstractions and on groundwater resources in general. They recommended using the groundwater maps on their Map viewer which "should include wells; drinking water source protection areas; the national map suite - aquifer, groundwater vulnerability, groundwater recharge and subsoil permeability maps". For areas underlain by limestone, DECC asked Uisce Éireann to refer to the karst specific data layers (karst features, tracer test database; turlough water levels (gwlevel.ie)). DECC noted that background information is also provided in the Groundwater Body Descriptions, and they recommend that all disclaimers are read carefully when using GSI data.

DECC explained that GW Climate is a groundwater monitoring and modelling project that aims to investigate the impact of climate change on groundwater in Ireland and is a follow on from a previous project (GW Flood) and the data may be useful in relation to Flood Risk Assessment (FRA) and management plans.

DECC highlighted that GSI has completed Groundwater Protection Schemes (GWPSs) in partnership with Local Authorities, and there is now national coverage of GWPS mapping. The Groundwater Protection Response overview and link to the main reports can be found on the GSI website.

## Geoheritage

DECC highlighted that GSI is in partnership with the National Parks and Wildlife Service in the Department of Housing Local Government and Heritage, to identify and select important geological and geomorphological sites throughout the country for designation as geological NHAs (Natural Heritage Areas). “This is addressed by the Geoheritage Programme in GSI, under 16 different geological themes, in which the minimum number of scientifically significant sites that best represent the theme were rigorously selected by a panel of theme experts”.

DECC went on to explain that County Geological Sites (CGSs) have been adopted in the National Heritage Plan and will form a major strand of geological nature conservation to complement the various ecological and cultural conservation measures. DECC highlighted it as important to note however, “that management issues for the majority of geological heritage sites may differ from ecological sites...CGSs are the optimal way of addressing the responsibility of each authority under the Planning and Development Act 2000 and its amendments, to protect sites of geological interest”.

DECC detailed that 29 Local Authority areas have completed geological heritage audits, with Cork County currently under way, and the audit for County Kerry has not yet been completed. DECC noted that the sites are listed in the ‘indicative list’ of unaudited sites, created by theme-specific panels of experts, and are presented on GSI’s Map Viewer as sites with buffer zones but no specific site boundary. Completed audits for the 29 Local Authority areas can be viewed and downloaded here.

## Geological Mapping

DECC highlighted that GSI maintains online datasets of bedrock and subsoils geological mapping that are reliable and accessible and would encourage Uisce Éireann to use this data in future assessments.

DECC have 3D models that can “help stakeholders visualize, understand and characterise geology, for deposit and resource mapping, for flooding and for urban geology applications including basement impact assessment, Sustainable Drainage Systems, and subsurface management”. The 3D models offer a key element of geotechnical risk management by identifying areas requiring further site investigation. Further information and download instructions for the Quaternary 3D model of County Cork are available on the Geological Mapping programme on the GSI website.

## Geotechnical Database Resources

GSI continues to populate and develop the national geotechnical database and viewer with site investigation data submitted voluntarily by industry. DECC encouraged the use of this database as part of any baseline geological assessment of the proposed development “as it can provide invaluable baseline data for the region or vicinity of proposed development areas”. The information DECC noted may be beneficial and cost saving for any site-specific investigations that may be designed as part of the project.

## Geohazards

DECC recommended that geohazards be taken into consideration, especially when developing areas where these risks are prevalent, and encourage the use of their data when doing so. DECC noted that GSI has information available on landslides in Ireland via the National Landslide Database and Landslide Susceptibility Map, both of which are available for viewing on their dedicated Map Viewer. Associated guidance documentation relating to the National Landslide Susceptibility Map is also available.

GSI has also engaged in a national project on Groundwater Flooding, DECC highlighted that data from this project may be useful in relation to FRA and management plans.

## Historic Mines

DECC highlighted a project entitled "Historic Mine Site - Inventory and Risk Characterisation" that the EPA, Geographical Information System (GIS) and the former Exploration and Mining Division undertook. DECC advised that this project carried out detailed site investigations and characterisation on priority historic mine sites in the country with a risk ranking methodology developed which categorised the sites according to the risks posed to human and animal health and the environment. A final report and a GIS geodatabase were produced on completion of the project.

## Marine and Coastal Unit

DECC highlighted that GSI's Marine and Coastal Unit in partnership with the Marine Institute, jointly manages Integrated Mapping for the Sustainable Development of Ireland's Marine Resource (INFOMAR), Ireland's national marine mapping programme; providing key baseline data for Ireland's marine sector. "The programme delivers a wide range of benefits to multi-sectoral end-users across the national blue economy with an emphasis on enabling our stakeholders". DECC noted it is used across a suite of mapping products include Shipping & Navigation, Fisheries Management, Aquaculture, Off-shore Renewable Energies, Marine Leisure & Tourism and Coastal Behaviour.

INFOMAR also produces a wide variety of seabed mapping products that enable public and stakeholders to visualize Ireland's seafloor environment with story maps developed providing a different perspective of some of the bays and harbours of the Irish coastline. DECC recommend use of the Marine and Coastal Unit datasets available on their website and Map Viewer.

DECC further noted the Marine and Coastal Unit also participate in coastal change projects such as CHERISH (Climate, Heritage and Environments of Reefs, Islands, and Headlands) and are undertaking mapping in areas such as coastal vulnerability and coastal erosion.

## Coastal Vulnerability Index

DECC noted that GSI is undertaking a new coastal vulnerability mapping initiative. They noted that maps produced by this project will provide an insight into the relative susceptibility of the Irish coast to adverse impacts of sea-level rise using a Coastal Vulnerability Index. The project, they explained, is currently being carried out on the east coast and will be rolled out nationally, detailed information and maps are available on their website. DECC commented that "these index-based maps will offer a simple, easy visual representation of sensitive areas based on robust methods and conceptualised metrics from latest research, adapted to the Irish context...this will enable coastal managers to prioritize or concentrate efforts on adaptation".

## Physiographic Units

Physiographic Units are cartographic representations of the broad-scale physical landscape of a region and are valuable for regional land-use planning and in studies of the influence of physical landscape on the ecological environment. DECC highlighted the availability of a Physiographic Unit map produced in support of the actions to be implemented in National Landscape Strategy for Ireland 2015 – 2025.

Cork County Council (CCC) suggested that Section 5.3.3 of the SEA could include areas outside of towns and villages and reconsider the baseline where it "has been assumed that there will be no significant increase in non-domestic demand". Furthermore, CCC commented that when looking at population growth, "one off rural housing should be included in the baseline assessment of the current situation in the Region and how cumulative impacts of abstractions and discharges from such developments have been included in the water resource planning approach for the region".

CCC recommended that the Human Health baseline in 5.3.5 of the SEA should include health data that ERSI have produced (based on the EPA's Secure Archive For Environmental Research Data data) on water borne illnesses in Ireland and in the southern region. They also noted The Irish Longitudinal Study on Ageing survey project linking areas to water and health data could be included as baseline data. CCC highlighted that Ireland has the highest rate of E. coli (VTEC) in the European Union and suggested that baseline maps for cryptosporidium hotspots would be useful in visualising the health impacts.

CCC requested that the list of local level plans in Appendix F.2 should be updated to list the new Cork County Development Plan 2022.

The Department of Housing Local Government and Heritage – National Parks and Wildlife Services (DHLGH-NPWS) commented that a more focused assessment of the proposed abstraction from the lower Leane catchment on Killarney shad and slender naiad is required for the SEA.

The DHLGH-NPWS also noted that the SEA needs to take account the current state of Lough Leane as a baseline habitat for aquatic biodiversity, in terms of potential future state change due to further eutrophication, sedimentation of the water column reducing light to the benthos, increased water temperature and the frequency of cyanobacterial blooms.

### **8.6.2 Response to Strategic Environmental Assessment Feedback**

We welcome the Environmental Protection Agencies (EPA's) feedback on the SEA process and the acknowledgment that Uisce Éireann has considered the transboundary impacts and cumulative effects in preparing the RWRP-SW.

Uisce Éireann has referred to the EPA State of the Environment Report Ireland's Environment – An Integrated Assessment 2020 (EPA, 2020) as relevant and appropriate in the SEA Environmental Report; and will consider the recommendations, key issues and challenges outlined in the report when implementing the Plan and SEA recommendations at project stage.

We acknowledge the EPA's recommendations relating to the SEA Statement and confirm that an SEA Statement and AA Determination will be issued following the adoption of the RWRP-SW. The Statement will outline how environmental considerations have been integrated into the RWRP-SW and how consultation influenced the development of the RWRP-SW. The SEA Statement also outlines the reasons for selecting the Preferred Approach and the measures to monitor the significant environmental effects. The SEA and AA set a framework for identifying mitigation and monitoring so that these can be a part of the decision-making and can inform option design and costing as schemes are developed.

We note the EPA's reference to the draft National Policy Statement on Geothermal Energy for a Circular Economy (Department of Environment, Climate and Communications). The SEA Environment Report has been updated to account for this draft policy statement in the cumulative effects assessment, and Table 9.2 has been updated to refer to this document. Uisce Éireann will consider this policy as part of the monitoring and feedback process outlined in Section 9. This process involves continual review of assumptions and data as new information becomes available, to ensure the National Water Resources Plan (NWRP) is up to date. A further review of data will take place at project development stage as outlined in Section 6.4 of the draft RWRP-SW.

In response to the EPA's recommendation that Uisce Éireann continue to focus on addressing issues related to supplies currently on the EPA's Remedial Action List we note that critical projects and programmes to address potential public health issues are on-going and not impacted or delayed by the delivery of the NWRP. Section 7.6 of the draft RWRP-SW outlines the process for developing interim options to address critical water quality and quantity issues while we deliver our Preferred Approaches through the coming investment plans. Using this process, interim, short-term capital maintenance

solutions have been identified for all Water Treatment Plants and these solutions are referred to in Section 6 of the Study Area Technical Reports.

We note the Department of Environmental Climate and Communication (DECC) recommendations on data sets that would support the fine screening assessment scoring question relating to geology and soils. In response to this, Uisce Éireann confirms that ‘Geological Heritage Audited Sites’ and ‘Geological Heritage Unaudited Sites’, ‘National Landslide Susceptibility Map’, ‘Irish Soil Information System’ and ‘MINES - Solid Waste Heaps’ maps were used for fine screening question G1.

In addition, the geological Natural Heritage Areas, Ireland’s Geological Heritage Sites, the Irish Soils Information System national soils map and Geological Survey Ireland (GSI) Groundwater Flooding maps and geology maps available on Map Viewer, and GSI’s online datasets of bedrock and subsoil geological mapping, were used to prepare descriptions of geology presented in the Study Area Technical Reports (Appendices 1 to 3 of the draft RWRP-SW) and the Study Area Environmental Reviews.

Uisce Éireann confirms that GSI’s advice, data and maps were utilised where available throughout the fine screening assessment, and that hydrogeological assessments of options were completed taking account of groundwater resources provided by the GSI, i.e. wells, drinking water source protection areas; national Aquifer, Vulnerability and Recharge map; subsoil permeability, karst features, tracer test database, turlough water levels (gwlevel.ie) and the Groundwater body descriptions database; and considered cumulative effects on WFD ground water status and interaction with existing Uisce Éireann abstractions. Uisce Éireann acknowledges the disclaimers associated with these datasets and communicates caveats with the datasets in the transition of plan to project level assessment approaches. These assessments supported the options assessment process and considered the following additional data sources: Uisce Éireann recognises the invaluable ongoing contribution of the GSI’s Groundwater and Geothermal Unit to the Irish groundwater knowledge base.

Uisce Éireann commends the GW Flood and GW Climate projects for their work in assessing climate change impact on groundwater. The outputs of these projects will inform Uisce Éireann’s Flood Risk Assessment and management plans where they are undertaken in the future.

Uisce Éireann is familiar with the GSI’s GW3D project and as outputs are developed as part of this project, Uisce Éireann will ensure consideration and integration as plans transition to project level and site-specific investigations occur.

Uisce Éireann acknowledges the recommendation from DECC to utilise additional datasets, i.e., Geotechnical Database Resources, Geo Hazards, Marine and Coastal Unit and Coastal Vulnerability Index and can confirm that further evaluation of options will take place at project level, at which stage the proposed datasets and any new information and data will be considered and incorporated via the monitoring and feedback process in Section 8.3.8 of the Framework Plan. This will include the following data sets identified by the DECC in their submission on the draft RWRP-SW:

- GSIs Groundwater Protection Scheme mapping
- ‘GW Climate’ maps and data
- County Geological Sites (available on GSI’s Map Viewer)
- National Geodatabase
- National Landslide database and Landslide Susceptibility map
- Historic Site project datasets
- GSI’s Coastal Vulnerability Index study
- Integrated Mapping for the Sustainable Development of Ireland’s Marine Resource and other GSI Marine and Coastal Unit datasets

The SEA Environment Report has been updated to reference these data sets in the Monitoring Plan provided in Section 10 of the report.

In response to Cork County Council's (CCC) comment regarding non-domestic growth outside towns and cities, we confirm that Uisce Éireann will try to facilitate growth in non-domestic water use via efficiency improvements and water conservation. Over the coming years, we will review policy and trends in relation to non-domestic use and refine our forecasts as part of the monitoring and feedback process set out in Section 8.3.8 of the Framework Plan.

Uisce Éireann confirms that growth projections used within our draft RWRP-SW were based on the best available data from the National Planning Framework, Regional Spatial Economic Strategies, Metropolitan Strategic Plans and County Development Plans at the time of compiling our draft RWRP-SW.

We recognise the ongoing work between the Regional Assemblies and the local authorities over the course of the development of the Local Authority Development Plans. Uisce Éireann will incorporate the increasingly refined growth rates into our demand forecasts through the monitoring and feedback process set out in Section 8.3.8 of the Framework Plan.

We note CCC's recommendation to consider ERSI health data, The Irish Longitudinal Study on Ageing survey project outputs and baseline maps for cryptosporidium hotspots in the baseline assessment of Human Health. Our assessment of human health impact has considered the risk to drinking water quality in the South West Region, through our barrier assessment. The assessment evaluates the risk against the existing controls we have in place for either source protection or within our water treatment plants and networks. Our barrier assessments will be updated to include any additional information as per the monitoring and feedback process set out in Section 8.3.8 of the Framework Plan.

Uisce Éireann have developed a specific *Cryptosporidium* source risk assessment methodology as part of the Drinking Water Safety Plan approach which considers the Source-Pathway-Receptor conceptual model. Sources of *Cryptosporidium* in the catchment (agricultural census data, wastewater treatment plants and septic tanks) and infection rates associated with each vector, are incorporated based on best available data (Health Surveillance Protection Centre data at Health Service Executive regional divisions for humans, and veterinary reports for animals) to calculate loadings to our sources. Under-ascertainment (uncertainty) has been incorporated in these figures to add conservatism.

In response to CCC's request, Appendix F.2 of the SEA has been updated to list the new Cork County Development Plan 2022.

We note DHLGH-NPWS comments on Killarney shad and slender naiad with respect to Lough Leane and confirm these species have been considered in the assessment of the Preferred Approach in the SEA Environmental Report. The species are referenced in the NIS in:

- Appendix C (Likely Significant Effects (LSEs) tables);
- Appendix D (Adverse Effects on Site Integrity (AESI) tables);
- Appendix F (Water dependent Qualifying Interest species and habitats); and
- Section 6.2, which provides a study area assessment of LSE leading to potential AESI.

The NIS has informed the assessment in the SEA Environmental Report as well as the fine screening scoring for European sites that is completed as part of the multi criteria assessment of options ps. The score identifies at a high-level, potential for Likely Significant Effects (LSEs) from an option. For the purpose of clarification, SEA Study Area H Environmental Review section 4.5.1, 6 and 7 will be updated to specifically reference the NIS appraisal of LSE for Study Area H (which includes the lower Leane catchment).

The identification of a Preferred Approach at a plan level does not confer any consent to develop a project, nor does it preclude other options being considered subsequently. Assessments at this stage are desk based and plan level. This is the approach as set out in our Framework Plan.

All Preferred Approaches are considered feasible at plan level; however, as outlined in Section 7.11 of the SEA, “Any options that are progressed following this Plan will require individual environmental assessments, including Environmental Impact Assessment and Appropriate Assessment (as required), in support of planning applications (for example, for new abstractions). Any such, applications will also be subject to public consultation’. Typical types of project level assessment are identified in the SEA Environmental Report. The list of assessments is non-exhaustive and must be reviewed at the project stage, taking into account project-specific survey information or studies. More detail on project level assessments is provided in Section 6.4 of the draft RWRP-SW.

If at project level it is determined that a Preferred Approach is not feasible, consideration will be given to other feasible options outlined in the draft RWRP-SW.

The feasible options that provide alternatives to abstraction from the lower Leane catchment to supply the Central Regional (Lough Guitane) and Mid Kerry WRZs are listed in Appendix 1, Table 5.2 and Table 5.4 of the draft RWRP-SW. These include an increased or new groundwater abstractions and new surface water abstractions from Muckross Lake, Lough Carragh or from River Flesk, and increased storage volume at Lough Guitane. No option will be progressed without further project level assessments to confirm their feasibility.

Given the Preferred Approach includes an abstraction from the lower Leane catchment, Uisce Éireann has taken account of the current state of Lough Leane as a baseline habitat for aquatic biodiversity. The SEA baseline assessment has used the best data available at the time of developing the draft RWRP-SW. Future project level assessments will use updated data (such as the most recent Water Framework Directive characterisation of water bodies) to reassess the baseline to inform potential future state changes, such as further eutrophication and other potential impacts from catchment abstractions.

## 8.7 Transboundary Effects

### 8.7.1 Summary of Transboundary Effects Feedback

The Department of Agriculture, Environment and Rural Affairs (DEARA) National Environment Division (NED) noted that no transboundary effects have been identified in the draft RWRP-SW and as such are content that given the geographical location of this plan it is unlikely to significantly impact on Northern Ireland. Should transboundary issues arise then the NED requested consultation with the relevant Northern Ireland bodies be undertaken.

NED agreed with the conclusions of the Natura Impact Statement (NIS) and agreed it is unlikely there will be significant effects on Northern Ireland European sites.

Furthermore, the Marine Plant Team in the DEARA Marine and Fisheries Division agreed that, based on the operational distance between the RWRP-SW and Northern Ireland, transboundary effects, at the Study Area level, are not predicted.

### 8.7.2 Response to Transboundary Effects

The RWRP-SW Strategic Environmental Assessment Environmental Report did not identify any scope for transboundary impacts from the plan proposals. Future RWRPs will also be subject to transboundary effects assessments, and should these arise, appropriate consultation will be undertaken with relevant stakeholders, including the Department of Agriculture, Environment and Rural Affairs National Environment Division.

## 8.8 Conclusions on the Environmental Feedback

Having carefully reviewed the submissions received on the theme of Environment, Uisce Éireann considered that more clarity on certain points should be provided in the RWRP-SW and the Strategic Environmental Assessment Environmental Report. This change is explained in section 8.8.1 “Clarifications” below. In addition, some of the points made in the submissions will be taken forward in other ways, as explained in section 8.8.2 “Recommendations” below.

For completeness, we note that any relevant clarifications and recommendations from the RWRP-EM consultation have also been considered in the development process and finalisation of the RWRP-SW.

### 8.8.1 Clarifications on Environmental Feedback

The following sections of the RWRP-SW has been updated to reflect feedback under the theme of Environment Feedback:

- Section 2 – Teagasc has been included in the list of key catchment management stakeholders in Box 2.4.
- Section 3 – The 8 key water quality ‘barriers’ have been listed and text has been provided to define ‘lagging’ assessment.
- The Strategic Environmental Assessment (SEA) Environmental report was updated to reflect feedback under the theme of Environment Feedback and more information on this can be found in the SEA statement.

In response to GSI Uisce Éireann will communicate the disclaimers and associated caveats with national mapping datasets in the transition of plan to project level assessment approaches.

Uisce Éireann will engage and consult with IFI when undertaking emergency works in low flow situations and that appropriate methodologies will be agreed in advance of completing such works. Where abstractions interdependent on barriers are determined by the EPA to be unsustainable Uisce Éireann will, in collaboration with the EPA, establish a programme to move away from such abstractions.

### 8.8.2 Recommendations on Environment Feedback

1. Utilise the outputs of the GW Flood and GW Climate projects in development of Flood Risk Assessments and Flood Risk Management Plans and incorporate into future iterations as set out in the feedback and monitoring loop where need is identified.
2. Utilisation of datasets currently in development by the Department of Environment, Climate and Communications and further evaluate of options at project stage with this new information.
  - Geological Survey Ireland’s (GSI) Groundwater Protection Scheme mapping
  - ‘GW Climate’ maps and data
  - County Geological Sites (available on GSI’s Map Viewer)
  - National Geodatabase
  - National Landslide database and Landslide Susceptibility map
  - Historic Site project datasets
  - GSI’s Coastal Vulnerability Index study
  - Integrated Mapping for the Sustainable Development of Ireland’s Marine Resource and other GSI Marine and Coastal Unit datasets

## 9. Need

In this Chapter, we summarise the key references in submissions to issues under the broad theme of “Need”. Within the overall Need theme, we identified five sub themes, which we set out in Figure 9.1. We deal with each of these sub-themes in this Chapter, setting out first a summary of the relevant mentions in the submissions, followed by our response. The sub-themes are not dealt with in any particular order.

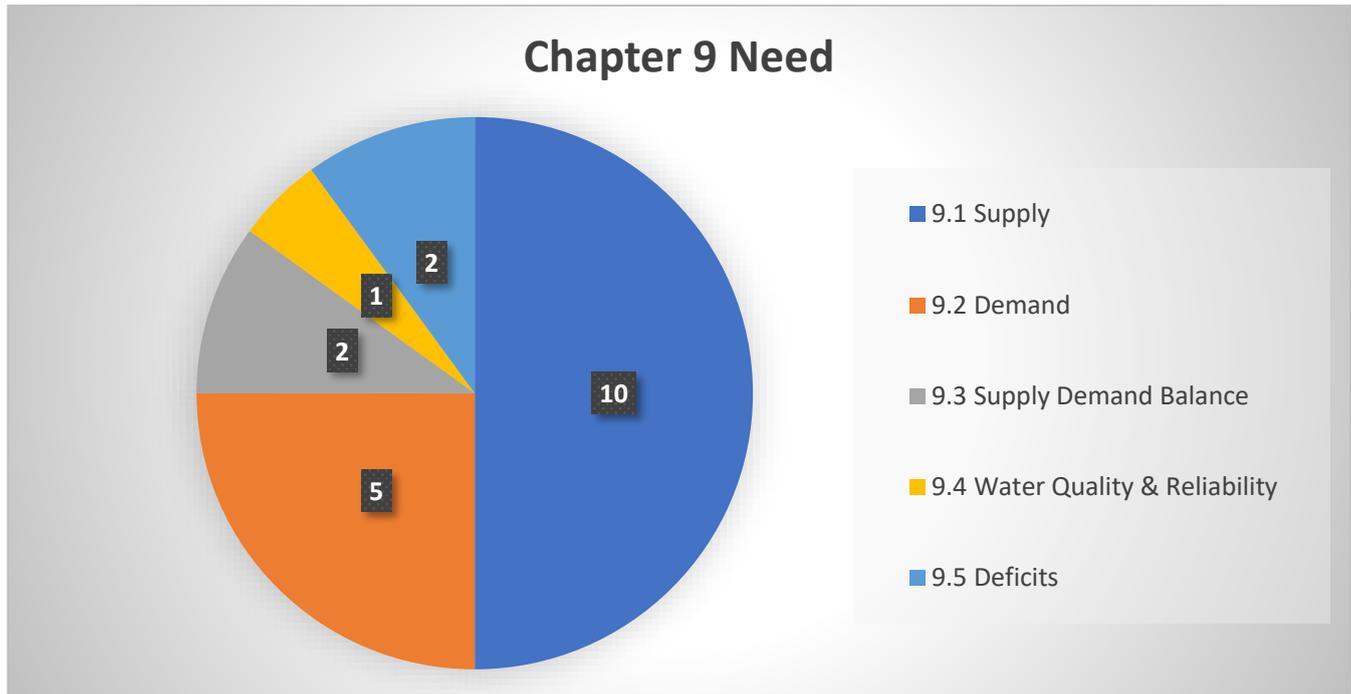


Figure 9.1 Need

### 9.1 Supply

#### 9.1.1 Summary of Supply Feedback

Councillor John Paul O’Shea raised concerns that the draft RWRP-SW rationalises too many sources and relies on only one or two water sources to supply a much bigger region. Cllr O’Shea queried whether Uisce Éireann have considered an alternative if one of those sources were to have issues.

Councillor Frank O’Flynn highlighted issues with several water supplies in Cork;

- For the Glanworth water supply a new water supply tower is needed. Cllr Flynn highlighted that at present there is only a capacity of 2 hours in the existing tower. If any issues arose, Cllr Flynn requested that the storage at the Dunmahon water source be increased urgently and a new tower with larger capacity be put in place to meet the present and future needs of the region.
- Kilworth Water Supply requires new water main from Douglas Cross to Kilworth village as the existing supply from Douglas Cross to Kilworth Cross to Kilworth village experiences frequent disruption.
- Ballynoe village water supply in Mallow requires new water mains from Newtown Cross to Ballynoe village as the existing supply is frequently breaking down due to old pipes.
- Killavullen water supply requires a new water main from Ballymagooly to the water tower at Ross Street, in Killavullen village. Cllr Flynn advised that water supply has been on a boiled water notice for the past 7 months.

- Kildorrery village water supply requires a new water tower to meet present and future needs. Cllr Flynn highlighted that the present tower has a limited supply of 3 hours capacity due to its size and that it is continuously leaking - an issue which has been ongoing since 2011.

The West Cork Environmental Health Department raised concerns that the rationalisation of supplies and reducing the number of supplies proposed in the draft RWRP-SW, which will serve greater geographical locations and larger populations, may have Public Health impacts for the geographically large West Cork Area.

Councillor PJ Carey raised issues with water supply in the Bruff/Uregare area Limerick. Cllr Cary highlighted that water outages are happening frequently and is a source of concern for local residents.

Cork Chamber raised concerns that the provision of water infrastructure, both in terms of supply, and wastewater management is a significant inhibiting factor in the rollout of new housing and strategic sites for commercial use. Cork Chamber referenced delays of over 5 years in the construction of new housing developments as a result of a lack of provision of critical water infrastructure.

Cork Chamber noted that delays in rollout of water infrastructure is also impacting investment and Foreign Direct Investment (FDI), and impeding talent attraction efforts to the region and that such trends impact the regions reputation internationally. Cork Chamber commented that employees in the South West region are facing difficulties finding suitable accommodation because of a lack of housing supply, the provision of which is dependent on water infrastructure being delivered as a key enabler.

Cork Chamber noted it as “essential that strategic development sites, both brownfield and greenfield, for housing and commercial use are adequately serviced by water infrastructure to avoid a situation where we cannot deliver on our economic and social goals as outlined in our National Development Plan”. Cork Chamber referred to previous engagement and feedback from stakeholders that highlighted water infrastructure as a key barrier to housing development in Cork. In particular where there is land zoned and brownfield sites, along with land that has been granted planning permission but that the necessary water infrastructure is absent, thus inhibiting development.

A stakeholder raised concerns about the water supply in North Kerry and Listowel. They commented that the water supply has been the subject of numerous problems for years and stated it is under analysed as a region. The Stakeholder summarised that the main supply through Dromin has very little mention of all the local group schemes. They further commented that the Listowel regional water supply is contaminated with herbicides such as MCPA, which is a potent endocrine disruptor, and more recently with Glyphosate. The Stakeholder noted that at Uisce Éireann meetings and in the media, they were told that these contaminants have no immediate effect, but the stakeholder stated that as a Biomedical Scientist themselves that this was not true.

The Stakeholder explained that North Kerry/West Limerick region is a traditional farming region where soils are gleys and there is currently an overuse of MCPA to control rushes. They referred to an example in Northern Germany where the water companies pay farmers to go organic to cut out all these herbicides and queried if this could be implemented in Ireland as part of a collaborative approach. The Stakeholder stated that the exceedances of Glyphosate were wrongly blamed on the farming community in the North Kerry and West Limerick regions. They commented that Kerry County Council have been spraying excessive amounts of Glyphosate into the River Feale to destroy Japanese Knotweed after they had undertaken to inject with Picloram instead, at the oral hearing for the Listowel Bypass scheme.

The stakeholder requested that it would be in the best interests of the people in North Kerry to immediately install facilities in all the Listowel region for filtering out these noxious herbicides.

The National Federation of Group Water Schemes (NFGWS) identified a total of five options assessed by Uisce Éireann as involving Group Water Schemes (GPWs) throughout the South West region. The

NFGWS noted that following recent meetings with Uisce Éireann on the RWRP-EM and draft RWRP-SW, Uisce Éireann explained how they intend to consult with GWSs and the NFGWS where options being assessed are identified as a 'preferred option'. The NFGWS reiterated it as important to recognise that GWSs are community owned, democratically controlled, private supplies. Furthermore, each individual GWS is owned and controlled by its members and in most situations, are extremely proud of the service provided and the achievements of their schemes to date. The NFGWS highlighted that it must not be assumed that individual GWSs will automatically agree and willingly participate in a preferred option identified by Uisce Éireann, without due consultation being undertaken between both Uisce Éireann and the schemes own members and shareholders. Any preferred options will have to be made democratically by the scheme's members, and any final decision must be respected.

The NFGWS argued that in the vast majority of situations nationally, privately sourced GWSs do not wish to be taken in charge by Uisce Éireann. This point was reiterated to the NFGWS by their members at Annual Delegate Conference, on the 7th of April 2022. The NFGWS acknowledged that in contrast, there are many publicly sourced GWSs located across the country including the South West Region that do wish to transfer ownership to Uisce Éireann. Such schemes are in the process of upgrading under the Multi-annual Rural Water Programme (MARWP) in advance handing over to Uisce Éireann. The NFGWS requested that in such instances Uisce Éireann should ensure that appropriate resources are in place to take over the operation of these distribution networks as part of the final RWRP for the South West.

The NFGWS noted that many of their GWS members are not explicitly mentioned in the draft RWRP-SW and are of the understanding that the proposed plan may impact numerous public and private sourced GWSs in the South West area. The NFGWS requested that where a GWS may be impacted by any of the works identified in the draft RWRP-SW that progress to preferred options, that a full technical assessment be completed to ensure any proposed pipelines, sources or ancillary works have minimal impact on GWS source(s) and infrastructure.

The NFGWS commented that the use of infrastructure as an interconnecting pipe between public supplies would have to be approved by members at a special general meeting. Without this consent they stated this would not be a feasible option for Uisce Éireann to consider.

Specific to the South West region, the NFGWS highlighted the Ballydonegan GWS, identified as part of a preferred option in the draft RWRP-SW. The NFGWS noted that while this GWS is not a member of the NFGWS, the understanding is that the necessary consent paperwork is in place for this scheme to transfer ownership to Uisce Éireann and therefore they do not foresee any issues with the proposed preferred option. The NFGWS would suggest that Uisce Éireann keep in regular contact with the rural water section of Cork County Council for an update on the results of ongoing raw water sampling being undertaken at the Ballydonegan GWS and in relation to their consent to the proposal.

The NFGWS noted the list of privately sourced GWSs from the South West region, who previously requested Uisce Éireann to take ownership. The NFGWS asked Uisce Éireann, where feasible, to facilitate their requests as part of the RWRP-SW. The NFGWS noted that given the length of time since these requests were submitted to Cork County Council, the NFGWS recommended direct consultation with the rural water section of Cork County Council and the schemes where such options are feasible. The schemes include;

- Clonpriest Ballymadog GWS (Youghal/Ballymacoda)
- Insemore Insebeg GWS (Ballingeary)
- Rossmore GWS (Clonakilty)
- Ballygurteen GWS (Clonakilty)
- Ballyglass GWS (Grenagh)

A Stakeholder highlighted the following existing water sources that are in urgent need of supplementation due to Uisce Éireann's rationalisation undertaken without, they commented, "the proper assessment of proposed increased demand on sources"; Clonakilty, Skibbereen, Bantry, Dunmanway, Castletownbere, Millstreet, Youghal, Mallow, Box Cross, Bweeng, Donoughmore, Durrus, Allihies, Crookhaven, Goleen, Kilcrohane, Toormore, Whiddy Island, Cape Clear, Coppeen, Johnstown, Roberts Cove, Bandon, Ballingearry, Ballymakeera, Carrignavar, Whitechurch, Glenville, Midleton.

The Stakeholder commented that little progress has been made in tackling high leakage levels in places such as Ballinatona (Newmarket), Millstreet, Fermoy, Doneraile, Bandon, Lashay and particularly Cobh.

LAWPRO requested that replacement or new water supplies do not impact on the integrity of the original sources, many of which they noted, will be sensitive to abstraction and will need to be managed without leading to any deterioration in water quality.

Cork County Council noted that in numerous places throughout the document it is mentioned that Inniscarra supplies Cork City, however CCC noted that this also supplies substantial parts of the Harbour area outside of the City boundary.

### 9.1.2 Response to Supply Feedback

Uisce Éireann acknowledges the concerns raised by Councillor JP O'Shea in relation to the source risk associated with dependency on a single supply. Uisce Éireann have carried out risk assessments on the individual sources and where it is deemed a more secure option, rationalisation is posed. Source risk assessments are carried out as part of DWSPs. These risk assessments consider the entire catchments and climatic, natural and anthropogenic risks are considered. The rationalisation where proposed, represents a lesser risk to the source than the individual sources.

Where solutions to rationalise WRZs are proposed, the existing water quality needs are also considered. Water Quality needs are identified through the Barrier Assessment and where risks to water quality are identified, treatment solutions/ upgrades are incorporated into the preferred approach. Risks do not indicate non-compliance, rather deterioration in quality which may eventually result in a non-compliance.

Uisce Éireann appreciate the concerns raised on outages and leakage and can confirm these specific issues have been forwarded to the relevant team working with our Councillor Clinics and are being examined through our general operational programmes of work, i.e., Mains Rehabilitation Programme, Rationalisation Programme and Leakage Reduction Programme. As Preferred Approaches are being developed a reduction in the number of concerns being raised is anticipated.

Uisce Éireann acknowledge the concerns raised by Cork Chamber. The 2044 DYCP has been chosen as the demand need for the SW RWRP. The demand values have been developed to ensure water infrastructure can support the proposed growth policies at national, regional and county level. Supporting the National Policy Objectives (NPOs) and Regional Policy Objectives (RPOs) within the National Planning Framework (NPF) and Regional Spatial and Economic Strategies (RSESs) is central to our NWRP. (Section 2.2.2).

Uisce Éireann acknowledges the concerns about pesticide in the Listowel supply. No local solutions were identified for the Listowel WRZ. The NWRP has identified a preferred approach for Listowel which will analyse the wider catchment and consider a regional solution. The risk of contamination of pesticides in raw water is captured through our interim barrier assessment report. Uisce Éireann has been working with a range of stakeholders in recent years to develop action plans for managing risks within catchments. Two trial projects specifically looking at pesticides are the Source to Tap Project and the Pilot Drinking Water Source Protection Project. We have also developed an Interim Pesticide Strategy for our drinking water sources which covers our collaboration with stakeholders in order to assess and manage the risk of pesticides in the catchment. See Box 7.3 in the Framework Plan.

The National Federation of Group Water Schemes (NFGWS) are a stakeholder in the NWRP and we have consulted with them in the development of the NWRP. As part of the consultation on the RWRP-SW, the NFGWS noted that Group Water Schemes (GWS) are community-owned, democratically controlled, private water supplies.

Each individual GWS is owned and controlled by its members (the community it serves) and in most situations, the GWSs are extremely proud of the service provided (which in many situations goes beyond the provision of drinking water services), as well as the achievements of their scheme to date. Therefore, it is not considered appropriate for Uisce Éireann to propose taking over GWSs as part of the Plan, and it is not assumed that an individual GWS is required to be taken in charge by Uisce Éireann.

Uisce Éireann has an “opt in” process for taking in charge GWSs and will identify GWSs looking to be taken in charge as part of the RWRPs. This will be considered in the development of the Preferred Approach and in future iterations of the NWRP.

Uisce Éireann currently provides supply and obtains supplies to a number of GWSs. As part of the option development process for the RWRP -SW, obtaining supply from adjacent GWSs was considered where appropriate. Uisce Éireann will consult with the NFGWS, on any preferred approach where we are proposing to obtain a GWS supply or utilise GWS infrastructure, through the consultation process and confirm consent would have to be given prior to advancing such an option.

Uisce Éireann confirms it is committed to considering the transfer of publicly sourced GWSs wishing to transfer ownership to Uisce Éireann. There will be sufficient headroom within our demand figures to accommodate these supplies once the necessary upgrading of these supplies has been complete under the Multi-annual Rural Water Programme (MARWP). The RWRP-SW is a Plan Level approach. Once the Preferred Approaches have been identified they will move to progress under prioritisation to Project level. At the Project Level stage multi-disciplinary technical impact assessments will be carried out to ensure any proposed pipelines, sources and/ or ancillary works have minimal impact on GWS sources and infrastructure.

In regard to Ballydonegan GWS, Uisce Éireann can confirm they are in contact with the Rural Water Section of Cork County Council with regard to initiating the process of Taking In Charge of this supply.

In relation to Clonpriest Ballymadog GWS (Youghal/Ballymacoda), Insemore Insebeg GWS (Ballingeary), Rossmore GWS (Clonakilty), Ballygurteen GWS (Clonakilty), and Ballyglass GWS (Grenagh), Uisce Éireann can confirm the following update. Cork CoCo, on behalf of the schemes, submitted Pre-Connection Enquiries (PCE) to the Uisce Éireann New Connections Team. The Design Team subsequently review the feasibility of connecting to the public supply and following which responses are issued to the applicants. In this case Insemore Insebeg GWS (Ballingeary) received an Uisce Éireann response of ‘feasible’ to the PCE submitted and are currently considering the Taking in Charge proposal. Rossmore GWS and Ballygurteen GWS received an Uisce Éireann response of ‘refusal’. Clonpriest Ballymadog GWS and Ballyglass GWS received a response of ‘Further investigation required.’ Once these schemes meet the requirements set out in the responses, they can then be designed and submitted to Uisce Éireann for review. Following a completed Connection Agreement, they can then be progressed through the IW Taking in Charge process. In relation to the Taking in Charge (TIC) process, the Uisce Éireann team have received 275 TIC applications (includes GWS and GSS) since the process started in July 2016 and have taken in charge 206 of these schemes (74.9%). The 206 schemes taken in charge account for 8,456 connections (8,363 water, 93 wastewater) and 706.42km of network (702.32km water, 4.09km wastewater).

Uisce Éireann confirms it would seek approval by GWS members prior to progressing any projects to interconnect pipe.

Uisce Éireann has ongoing engagement with the private GWS Sector. Uisce Éireann is made aware of GWS that want to have ownership transferred to Uisce Éireann and facilitates this as best it can with

given resources. Where it is known that schemes want to transfer, it has been worked into our demand calculations. Uisce Éireann is also made aware of GWS that do not wish to transfer. Many GWS are extremely proud of the service they provide to their communities and the achievements of their schemes to date. The NFGWS highlighted that it must not be assumed that individual GWSs will automatically agree and willingly participate in a preferred option identified by Uisce Éireann, without due consultation being undertaken between both Uisce Éireann and the schemes own members and shareholders.

Uisce Éireann can confirm that the deficits in the areas highlighted by this Stakeholder have been accounted for in the Supply Demand Balance calculations. The preferred approaches that have been identified to address these deficits will alleviate the demand being experienced by sources in these areas.

Uisce Éireann can confirm that the WFD status' was incorporated into our assessments and informed allowable abstractions and fine screen scoring.

In response to Cork City Council, it should be noted that settlements are not exactly aligned with the existing water supply asset base, as our water supplies can serve large areas covering urban and rural settlements through an interconnected asset base.

## 9.2 Demand

### 9.2.1 Summary of Demand Feedback

The West Cork Environmental Health Department queried how the draft RWRP-SW proposes to address the potential impact on the Government "Housing for All" Plan in the short term which includes providing a supply of new homes in towns and villages in West Cork considering the lack of availability of an adequate, resilient water supply.

Cork Chamber raised concerns that the forecasted domestic and non-domestic demand contained within the draft RWRP-SW is underestimated for water resources in the South West region and Cork. They highlighted that within the draft RWRP-SW it is noted that Cork's population is forecast to grow 50%-60% by 2040 but the modelling underlying the draft RWRP-SW domestic demand for water in Cork forecasts an increase of 30%. Cork Chamber further highlighted this contrasts with Dublin, where within the same period the population of Dublin is expected to grow by 26% and domestic demand for water resources to increase by 25%. They sought further clarity in the forecasts between the two cities and regions. Cork Chamber added that this "concentrated focus on Dublin is further mirrored on the Uisce Éireann website". Cork Chamber acknowledged that both leakage reduction and water efficiency programmes are contributing to offsetting some of this increased demand but noted that their concerns remain that the RWRP-SW will continue years of unbalanced development and investment focused on Dublin.

Cork Chamber strongly urged that Uisce Éireann re-evaluate the forecasted domestic demand to allow for balanced development and in support of their population goals, considering the current housing crisis, lack of housing developments in Cork along with the projected population growth. Cork Chamber deemed the forecasted demand for water resources in Cork by 2040 as too conservative and will not support their region's goals.

Cork Chamber noted that Cork's non-domestic demand is forecast to grow by 10% by 2044 and highlighted that Dublin's is forecasted to increase 66% by 2044. They argued that this is a significant difference in forecasted non-domestic demand for the two regions and if carried forward into the final plans Cork "will lose out on future investment from both multinationals and indigenous companies". They further commented that the regional balanced development that Project Ireland 2040 aim to achieve may not come fruition and that the historical development inconsistencies that have focused on Dublin will continue.

Cork Chamber advised Uisce Éireann “that the forecasted demand for non-domestic water use is re-evaluated and increased to match the significance of Cork and Southwest region’s current and future economic contribution to the country, so that we may continue to attract and accommodate both talent and investment”. Cork Chamber requested that “Cork’s economic potential must be recognised and proactively planned for by Uisce Éireann to ensure that infrastructure is an enabling rather than an inhibiting factor”.

The Southern Regional Assembly (SRA) highlighted that in the draft RWRP-SW that an allowance for non-domestic growth will be required for towns and cities identified as strong growth areas under the National Planning Framework (NPF) and that for other areas, it is assumed there will be no significant increase in non-domestic demand. The SRA requested that this position by Uisce Éireann should be revised with upward projections for domestic and non-domestic demand across smaller towns and rural areas to ensure there is built in capacity for servicing employment growth and factoring in increased levels of co-working hubs, research and enterprise in rural areas.

The SRA commented that domestic and non-domestic growth demand rates need to be robust to build capacity for population and employment growth and inward enterprise development into these settlements. They referenced the RSES Section 3.8 and Regional Policy Objective 30 which refers to settlement networks where towns combine to share assets, strengths and project collaborations to attract investment and growth. Whereby smaller scaled settlements within these networks, while having a smaller population level, can have a high employment level and higher than the national and regional average of jobs to resident worker ratios.

They cited an example of Killorglin in County Kerry which in 2016 had a population of 2,199 people and a jobs total of 2,038 and further listed example of towns working to attract inward investment and jobs; the Kerry Hub and Knowledge Triangle. North Kerry/Shannon Estuary, North Cork Agri Food and Tech Network and West Cork Marine Economy Network. The SRA further highlighted Gaeltacht area of the South West with successful examples of research and innovation centres and services required to support the growth of Gaeltacht Service Towns.

The SRA advised that Uisce Éireann consult with IDA Ireland, Enterprise Ireland and Údarás na Gaeltachta to factor a strengthened headroom for enterprise growth and non-domestic demand across both the larger scaled urban settlements and also rural towns where indigenous enterprise growth will continue to grow.

The SRA noted and welcomed the additional headroom that has been applied to factor in consumption demand from tourism and visitors to the South West Region. They encouraged the continued consultation with Failte Ireland on building headroom for tourism growth, international and domestic visitors to tourism services in Cork City, towns, visitor destinations and attractions, along with the three national tourism corridors in the South West Region namely the Wild Atlantic Way, Ireland’s Ancient East and Ireland’s Hidden Heartlands.

The SRA requested that domestic and non-domestic demand and future growth be supported with robust assessment and headroom to service economic growth, additional employment and underpin the role of Cork City and Metropolitan Areas and Key Towns in the South West as engines of national, regional and sub-regional economic growth respectively.

The SRA requested that Key Towns in the South West region that fall within the catchment of the RWRP- SW are appropriately serviced for increased water demand from population and employment growth. The SRA suggested that consultation with Local Authorities should continue to ensure the actual growth rates targeted at local level for Key Towns which service both domestic and non-domestic demand for population and employment growth in these towns, is infrastructure led with water services.

The SRA commented that the “assumption that for other areas beyond the cities and larger urban centres, there will be no significant increase in non-domestic demand for water services, warrants a

revision". The SRA recommended a more robust and upward projection for domestic and non-domestic demand across smaller towns and rural areas to ensure there is built in capacity for servicing local population, employment growth and factoring in enterprise growth between town networks, centres of research and innovation, co-working hubs, remote working, tourism demands and ingenious enterprise growth.

A Stakeholder commented that the draft RWRP-SW assessment appears to cover the existing public supply areas and their growth, with no allowance given for demands outside the Uisce Éireann demand areas or without consideration given to assimilative capacities and demand capacities of the full catchments. But they highlighted that Uisce Éireann have considered the full list of indicative catchments as being available. The Stakeholder further commented that the Rural Water Strategic Plans approved by the DOEHLG at the time (2000) allowed for these and complied with the Directives.

The Stakeholder further commented that Uisce Éireann have an over emphasis on average daily demand as against peak daily demand which they noted normally occurs when you have the most critical low yield conditions.

### 9.2.2 Response to Demand Feedback

Uisce Éireann acknowledges the West Cork Environmental Health Departments concerns about alignment of our plan with the Governments Housing For All initiative. The Governments 'Housing for All - A New Housing Plan for Ireland' projects housing output to 2030 and will receive capital investment from the NDP which is the investment plan for the National Planning Framework which along with the RSES and MAPS inform our growth projections. Our preferred approaches incorporate growth projections to accommodate demand need to the 2044 period and will be updated and define our growth forecasts as per the monitoring and feedback process set out in section 8.3.8 of the Framework Plan. To ensure we can support growth while transforming our supplies, we also include interim measures within our NWRP. These measures are intended to address critical need, as set out in Section 8.3.7.6 of the Framework Plan.

In response to Cork Chamber a 50-60% forecasted growth in population does not equate to a need for a projected increase in water for the same. Our model reflects the comparable forecasted demand in water to meet this 50-60% population increase, i.e. ~30%.

Within our Framework Plan and RWRP-SW we recognise that growth does not always result in an increase in non-domestic demand, and even though the population and economy are forecast to grow considerably over the coming years, we have limited non-domestic water demand to the regional Cities. We have also capped non-domestic growth within other settlements. In these areas we will try to facilitate growth in non-domestic water use via efficiency improvements and water conservation. We acknowledge concerns raised Cork Chamber and the SRA that this approach may result in a lack of available capacity to accommodate development. One of the benefits of the Preferred Approach for the region is that it facilitates an interconnected supply system which will allow flexibility in the location of future non-domestic demand.

Growth projections used within the RWRP-SW are based on best available data from the National Planning Framework (NPF) and Regional Spatial Economic Strategies (RSES's). We recognise the ongoing work between the Regional Assemblies and the local authorities over the course of the development of the Local Authority Development Plans which will include consideration of government policy such as Housing for All. Uisce Éireann will incorporate the increasingly refined growth rates into our demand forecasts through the monitoring and feedback process set out in Section 8.3.8 of the Framework Plan.

Uisce Éireann currently provides detailed information on water services and information regarding projects in our capital investment plans. This information is used by Local Authorities in the development

of the Local Authority Development Plans. We have also developed a ten-year capacity register that enables us to interface with the Regional Assemblies and the local authority planning departments during the delivery of our Plan. The capacity register enables growth based on no deterioration of the current Level of Service, which in most cases is below the target Level of Service.

It should be noted that planning settlements are not exactly aligned with the existing water supply asset base, as our water supplies can serve large areas covering urban and rural settlements through an interconnected asset base. Where this is the case, we have attributed the differing growth rates to the proportion of the supply that is in the urban and rural settlements, in order to ensure that the overall growth is aligned with the figures obtained from the RSES and with the NPF.

As noted in the Framework Plan the Per Capita Consumption (PCC) estimated in 2019 is maintained in our estimation of 2044 PCC, however, an allowance for population growth has been provided in our estimation of future demand. The population growth figures are in line with national forecasts, which have been taken from the NPF, RSES and the Local Authority National Development Plans. It should be noted that population growth is significant in Ireland and that household occupancy rates are falling which can in turn generate an upward pressure on PCC. More information on demand projections is provided in Section 4.3.2.1 of the Framework Plan.

We note the ongoing work between the Regional Assemblies and the local authorities over the course of the development of the Local Authority Development Plans. As these plans are finalised, Uisce Éireann will incorporate the increasingly refined growth rates into our demand forecasts.

It is Uisce Éireann's objective to ensure that water infrastructure and regulation has the capacity to meet existing and future customers' needs in line with growth rates and land zoning as set out in the RSES, NPF and Local Authority Development Plans. Uisce Éireann is satisfied that these growth projections represent the best available information at the time of writing, for the purposes of a plan level assessment.

We will review policy and trends in relation to this over the coming years and refine our growth forecasts as per the monitoring and feedback process set out in section 8.3.8 of the Framework Plan.

To ensure we can support growth while transforming our supplies, we also include interim measures within our NWRP. These measures are intended to address critical need, as set out in Section 8.3.7.6 of the Framework Plan.

As outlined in Section 4.4 of the Framework Plan, we acknowledged there may be some uncertainty in our estimation of future growth. Therefore, we have included a headroom allowance in our estimation of demand. Headroom is the safety margin which is applied to demand forecasts to allow for uncertainties in our calculations on both the demand side and the supply side. The allowance is calculated and added to estimated demand to provide a buffer in the supply demand balance and to ensure that the preferred approach is sized appropriately to meet future required needs. More information on demand projections is provided in Section 4.3.2.1 of the Framework Plan.

Furthermore, Uisce Éireann will update the SDB in line with the data received. This will allow Uisce Éireann to respond to growth and development needs and prioritise water supply investment in collaboration with local authorities and with reference to the County/City Development Plans and LAPs and MASPs.

Uisce Éireann acknowledges the SRA comments on growth projections and confirms it has made an allowance for non-domestic growth in towns and cities identified as strong growth areas in Project 2040. For other areas it has been assumed that there will be no significant increase in non-domestic demand as described in Section 4.3.2.3 of the Framework Plan. However, we commit to review policy and trends in relation to indigenous enterprise growth and growth in consumption demand from tourism and visitors over the coming years and refine our forecasts as per the monitoring and feedback process set out in Section 8.3.8 of the Framework Plan and Chapter 98 of this draft Plan.

While our draft RWRP-SW covers existing supply areas and their growth we can confirm that there is a headroom allowance conservative enough to allow for TIC of some small group water schemes within WRZs. We are aware that not all private schemes wish to be taken in charge and it would be an overestimation to factor this in at this stage of planning.

Uisce Éireann acknowledges that one Stakeholder's view is that there is an over emphasis on average daily demand as against peak daily demand which they noted normally occurs when you have the most critical low yield conditions. However, Uisce Éireann confirms that the WAFU and Total Demand have been assessed for four different weather conditions. The DYCP reports the largest deficit in the SDB owing to the drought conditions coinciding with increased demand. By taking the DYCP as our design parameter in order to reduce the risk of disruption to our customers.

## 9.3 Supply Demand Balance

### 9.3.1 Summary of Supply Demand Balance

Ibec commented that the supply demand balance in the draft RWRP-SW does not include the impacts of the pending abstraction regulations and reform, which could take out a large amount of the existing 316 Ml/d. They noted that the draft RWRP-SW document acknowledges that reductions in abstraction volumes will improve the environmental sustainability of the water supply in some locations. However, Ibec noted that this needs to be balanced against the needs of the population and business community and that temporary derogations might be required, pending achievement of the ambitious water leakage reduction targets.

Cork County Council (CCC) queried what the feedback loop for Supply Demand Balance (SDB) entails, as noted in Section 2.2.3.1 of the draft RWRP-SW. CCC commented that the SDB will need to factor in pre-planning and pre-connection enquiry information if it is to respond to growth and development needs as suggested in the plan. CCC commented that if the SDB is to be updated as new information is made available then formal structures for reporting and consulting should be considered and specified by Uisce Éireann.

CCC referenced Section 3.2.4.2 of the draft RWRP-SW and if it would be more robust in the consideration of options to include sustainable abstractions in SDB calculations as Irish regulations are unlikely to deviate significantly from UK standards.

### 9.3.2 Response to Supply Demand Balance

In response to Ibec; Section 2.3.7 of our RWRP-SW outlines our precautionary approach to the proposed abstraction legislation which we appreciate may suggest certain schemes could be subject to reduction in abstraction. In developing our Preferred Approach, we have considered the potential impact of the pending Abstraction Legislation on our Supply Demand Balance and used this information to consider opportunities to improve environmental outcomes through our plan solutions. Our Preferred Approaches are aimed at balancing the multiple challenges faced by Uisce Éireann over the coming years: growing populations, changes in land use, a changing climate and an environmental protection.

Uisce Éireann are developing out the enduring NWRP team and will transition towards integrating the monitoring and mitigation into Business As Usual (BAU). Our Supply Demand Balance audits and updates will be done in collaboration with our forward planning and Connection Developer Service (CDS) teams within Uisce Éireann to ensure alignment. See Section 8 of the Framework Plan.

Uisce Éireann has used UK Standards in the absence of Irish Standards in the calculation of sustainable 'allowable abstractions. Within our water resources planning process, we strive to improve environmental outcomes including the transformation of our existing supplies and migration to sustainable abstraction

through our investment plans. We take a conservative approach when conducting desktop assessments of Preferred Approaches using the methodology set out in Appendix C of the Framework Plan.

Any additional legislative and regulatory requirements will be incorporated into the NWRP based on the monitoring and feedback process set out in section 8.3.8 of the Framework Plan. This methodology is detailed in Appendix C of the Framework Plan. As there are no specific guidelines for water resource planning in this jurisdiction, Uisce Éireann investigated the approach taken in England, Scotland and Wales (countries with established practices and guidance on water abstractions).

## 9.4 Water Quality and Reliability

### 9.4.1 Summary of Water Quality and Reliability

An Fórum Uisce (AFU) acknowledged in Section 2.4.3 of the draft RWRP-SW that climate projections over the next century indicate an increased likelihood of river and coastal flooding in Ireland (EPA 2020, EPA 2021). AFU noted that the draft RWRP-SW refers to the Flood Risk Management Plans required by the Floods Directive and the responsibilities of the OPW with the Catchment Flood Risk Assessment and Management (CFRAM) Programme whereby “the OPW flooding maps, clearly indicate a high possibility of flooding in many areas across the South West region”.

However, AFU noted that the Flood management plans of the OPW referenced in the text, do not refer to any management relevant to Water Treatment Plants (WTPs) or disruption to water supplies. AFU recommended that Flood Management Plans, specific to the water resource zones (WRZ) and WTPs of the South West region, should be included in the South West Regional Plan.

AFU further recommended training should be provided to personal on requisite procedures. AFU suggested a level of futureproofing be considered into the RWRP-SW, particularly in the face of climate change as part of the design studies of those works. “This will have multiple benefits, economically and environmentally, and also related to the future resilience of the infrastructure assets” AFU recommended the consideration of sea level rise should be included in Uisce Éireann’s planning processes for upgrades of WTPs in coastal areas of the South West Region to support resilient water services in the long term i.e., >100 years.

AFU recommended that Sea Level Rise Management Plans specific to relevant WRZs should be included in the Regional Water Resources Plans and considered in the development of new capital projects.

### 9.4.2 Response to Water Quality and Reliability

When considering the Preferred Approach, we assessed the resilience of each option to climate change by considering the available yields from the proposed new source in the future and considering the location of our infrastructure in relation to flood zones. The flood zones were informed by the OPW flood risk maps which provide estimates of fluvial and coastal flooding and provide an overview of potential flood risk considering the impacts of climate change and sea level rise. The assessments at plan level are based on desktop information. All assessments are carried out in a uniform and consistent manner and the purpose of the assessments are to allow a comparison between solutions, rather than an absolute evaluation of a proposed solution, as further evaluations of solutions will be provided at project level.

As part of our DWSP we consider flood risk to our sources via our Source Risk Assessment Methodology. The Risk Mitigation pieces of this work will begin once the methodologies are complete and the risk assessment to existing sources has been carried out, these Flood Risk Management Plans were deemed necessary will feed into our Project level assessment. Subsequent iterations of the NWRP will include for Flood Risk Management Plans.

## 9.5 Deficits

### 9.5.1 Summary of Deficits Feedback

The Environmental Protection Agency (EPA) commended the comprehensive approach taken to looking at both aspects including quality and quantity and supply-demand balance across the South West region and within each study area. They noted that it provides a useful mechanism to inform prioritisation of works, as well as supporting sustainable land use planning considerations by local authorities. The EPA recommend it would be useful to work with local and regional planning authorities to ensure that this type of information supports their respective forward planning considerations.

EPA noted their awareness of water shortages being experienced in South West region. They highlighted that there are clear water deficits in the region which impact on the ability to meet demand, but also hinder upgrade works on Uisce Éireann's plants and networks because the capacity does not currently exist to facilitate supplies being out of commission for a long time. The EPA noted that the number of Uisce Éireann supplies at risk of being in deficit broadly aligns with the EPA's own assessments, but that the net water deficit is larger than predicted by Uisce Éireann. This they noted "will be addressed, and clarity will be provided to Uisce Éireann, as part of licensing process under the forthcoming abstraction legislation. The EPA will also be responsible for enforcing licences issued to water suppliers under these Regulations".

Ibec commented that Uisce Éireann's projections of Water Available for Use against likely future annual or peak period demand suggested a growing deficit out to 2044 across all the scenarios modelled. Ibec understands that Uisce Éireann is already being proactive in responding to local drought-related pressures, including tanker deliveries to alleviate local shortages. Ibec commented that "the recent requirement for tanker deliveries and night-time restrictions over a prolonged period in the West Cork area highlights the vulnerability of our existing sources to dry weather and it illustrates the pressing need for a more resilient source of supply to the area".

Ibec suggested that greater emphasis should be placed on water conservation, drought management and network development, thereby enabling the South West region to become more water resilient.

### 9.5.2 Response to Deficits Feedback

Uisce Éireann will develop Drought plans each WRZ, and it is planned to provide this detail in the next iteration of the NWRP. These drought plans will be developed in line with the abstraction legislation and note measures required for different water levels at our sources. The drought plans will be unique for each supply. Uisce Éireann's Use Less pillar focuses on activities to help understand water use habits, influence behaviour, encourage change and to promote the use of water efficient devices and appliances. Uisce Éireann is actively promoting water conservation in schools, business, and communities through various activities. These include our partnership with An Taisce's Green-Schools Programme, our Water Stewardship Programme and ongoing water conservation campaigns. We also provide advice on reducing water usage in homes and businesses on our website

<https://www.water.ie/conservation/>

## 9.6 Conclusions on Need Feedback

Having carefully reviewed the submissions received on the theme of Need Uisce Éireann considered that no updates or further recommendations to the RWRP-SW are required.

For completeness, we note that any relevant clarifications and recommendations from the RWRP-EM consultation have also been considered in the development process and finalisation of the RWRP-SW.

## 10 Solutions Methodology

In this Chapter, we summarise the key references in submissions to issues under the broad theme of “Solutions Methodology”, these are submissions about the methodology used to find a preferred solution. Within the overall Solutions Methodology theme, we identified six sub themes, which we set out in Figure 10.1. We deal with each of these sub-themes in this Chapter, setting out first a summary of the relevant mentions in the submissions, followed by our response. The sub-themes are not dealt with in any particular order.

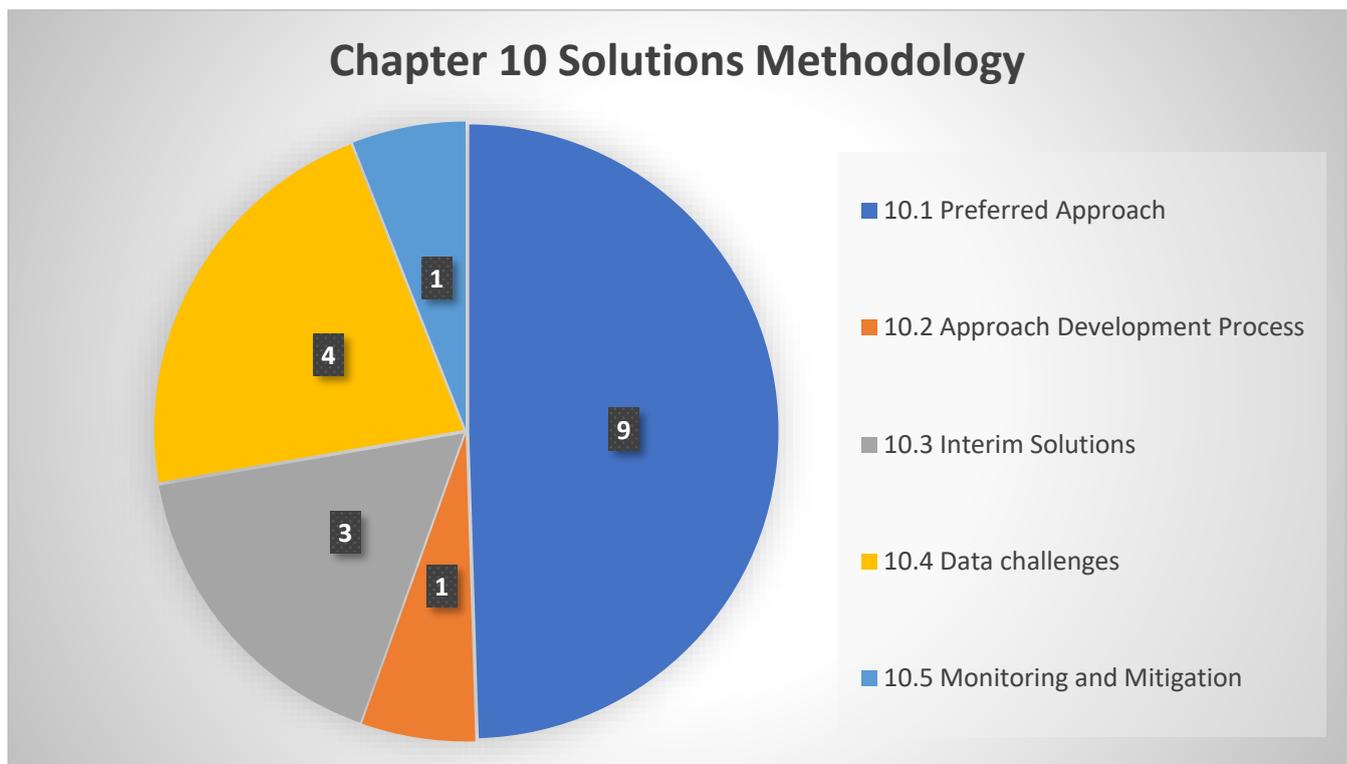


Figure 10.1 Solutions Methodology

### 10.1 Preferred Approach

#### 10.1.1 Summary of Preferred Approach

Cork County Council (CCC) commented that in relation to the new Inchybegga Impoundment near Bantry to serve Bantry, Glengarriff and the Beara Peninsula, CCC tried and failed to develop a similar dam and impoundment for Bantry in Ballylickey over 20 years. They stated that “the levels of public objections to such proposals were significant and are increasing.” CCC referenced the Uisce Éireann Capacity Register 2022, which notes that there is some capacity in these settlements for the projected increase in demand over ten years. CCC noted that the draft RWRP-SW stated that these projected increases in demand will be facilitated through leakage reduction. The draft RWRP-SW in Appendix 3 suggests that a new Water Treatment Plant (WTP) at Glenmore Lake in County Kerry would be a feasible option for Castletownbere. However, CCC noted that Fresh Water Pearl Mussel are present in both Glenbeg and Glenmore Lakes and so care should be taken in this decision.

In relation to Clonakilty Skibbereen, Ballyhilty, and Drimoleague, CCC referenced the Feasible Options in Appendix 3 Study Area I, which notes “No Local Solution” for both WRZs. They stated that proposed augmentation of Clonakilty from Bandon/Inniscarra could be designed to meet the needs in these areas (Option SAI 947 in Appendix 3). However, CCC commented that the Preferred Option to upgrade

Ballyhilty WTP does not address the over abstraction from the Ilen river source. CCC noted that critically low source levels were experienced in August 2022, and up to 14 tankers were required to augment 1,000m<sup>3</sup>/day to meet the summer peak demands in Clonakilty. CCC advised Uisce Éireann to consider carefully how current and future needs will be addressed. CCC expressed disagreement with the updated supply demand balance and the preferred option to upgrade Ballyhilty.

In relation to the Youghal Proposed Alternative Ground Source, CCC agreed that significant over abstraction is taking place on both the Glendine and Tourig sources (small tributaries of the Blackwater), and that an alternative source is required. CCC highlighted that they “carried out extensive ground water investigation in east Cork in the 1970s searching and failing to find any sources similar to the Dower Spring, under the advisement of Geological Survey Ireland and MC O’Sullivan (MCOS) Consulting Engineers.” CCC stated that the MCOS Report was forwarded to the Water Resource Plan team in Uisce Éireann after the workshop stage. CCC commented on the viable alternative of extending the Cork Harbour and City Water Supply Scheme from Midleton to Youghal for 30km has the hydraulic capacity and has the potential to rationalise further local supplies on route. They recommended that a corridor should be identified in conjunction with the proposed N25 bypassing of Castlemartyr and Killeagh.

CCC agreed with the option to increase the abstraction and provide a new WTP to meet future demand for Macroom and that the rationalisation of adjacent schemes is considered a feasible option. However, CCC noted their disagreement over the conclusion that the Macroom WRZ is no longer in deficit. They stated capacity for the Box Cross Mallow is 2,500 m<sup>3</sup>/day which CCC noted is too low. They stated that there are three wells available which previously noted a yield of 8,500 m<sup>3</sup>/day. CCC pointed out that two of the wells are in use at any one time and can produce up to 5,000 m<sup>3</sup>/day. CCC recommended that the Ketragh Springs abstraction should be re-visited. They commented that this new supply will be able to supply the Kanturk area allowing Ballinatona to serve Newmarket and the villages west of Ballinatona.

Additionally, CCC advised that the Banteer scheme should be interconnected with Ballinatona, and that the Banteer scheme also needs a reservoir. They also recommended that Freemount WTP should be decommissioned and an alternative new Ground Water abstraction and WTP in the Lisscarrol area should be advanced to supply the full deficit.

CCC advised that the proposal included in the draft RWRP-SW to increase levels of abstraction to supply the Glanworth/Ballykenley/Johnstown Water Resource Zones will require further detailed assessment and analysis at project stage to determine its viability and level of compatibility with the Water Framework Directive and Habitats Directive.

Cork County Council (CCC) noted and welcomed the proposed decommissioning of abstractions at eight sensitive locations in County Cork where abstractions are negatively impacting or have the potential to negatively impact on sensitive ecological receptors including EU sites and freshwater habitats and species. CCC recommended that the final South West Plan would include a timeline for the decommissioning of these abstractions. CCC advised those which are identified to be having significant adverse effects on EU sites and on freshwater habitats and species should be prioritised for decommissioning. They also recommended that the Plan would include a commitment to reduce abstraction levels at these sites to sustainable levels as quickly as possible as an interim measure. CCC noted the integration of ecological and environmental considerations which has been applied to the process of identifying preferred options. CCC acknowledged that Uisce Éireann proposed to continue abstracting water from 23 points in County Cork where current rates of abstraction are identified to be unsustainable. CCC further noted that some of these sites have hydrological linkages to EU sites

A stakeholder commented on the Castletownbere supply and source at Glenbeg Lake, where the draft RWRP-SW proposes to abandon the current abstraction at Glenbeg Lake and construct a new Water Treatment Plant (WTP) at Glenmore Lake in County Kerry. They also noted the proposals in the draft RWRP-SW to construct the Inchybegga Dam and impoundment near Bantry to serve Castletownbere.

This Stakeholder noted the concerns for the Fresh Water Pearl Mussel (FWPM) is one of the reasons to abandon abstraction at Glenbeg Lake. They commented that there “is no scientific evidence that the abstraction since 1970s is having a detrimental effect on the FWPM”. The stakeholder highlighted that the age profile of the FWPM at Glenbeg demonstrates that juveniles are being recruited over the last 50 years. The Stakeholder noted that the lifecycle of the FWPM is dependent on Salmon or Trout to act as host and carrier for the young FWPM to develop. They proposed that the demise of Salmon at Glenbeg and Glenmore Lakes may be a reason for any decline in the recruitment of FWPM. They stated that although Glenmore Lake is larger, it also has FWPM. The Stakeholder also commented that the WTP at Glenbeg has no discharge back into the lake. The Stakeholder further commented on the reductions in water demand in the Castletownbere supply and stated that it “can be expected to reduce further” for several reasons, including:

- The large investment in replacing the 12" Asbestos Cement - most of the cast iron in the distribution and resulting reduction in leakage
- The reduction in demand from the fish processing industry in Castletownbere. The Stakeholder stated that the fishing industry is currently going through a scrappage scheme due to Brexit which will result in reduced landings and less processing.
- The static population in Beara, as shown on the Census results.
- The additional leakage reduction that can be achieved from the current high levels of circa 50% compared to the 23% by 2033 proposed in the draft RWRP-SW.

The West Cork Environmental Health Department (EHD) commented on the rationalization of four Water Resource Zones (WRZ) (Castletownbere, Glengarriff, Adrigole and Reenmeen) to Bantry WRZ. The West Cork EHD noted that the geographical distance from Bantry to Allihies or Dursey island is approximately 80Km and when drought occurs and supplies need to be rationalised “it is likely that the areas with the largest populations will be prioritised.” The West Cork EHD queried if the WTP at Glenbeg Lake is to be maintained so that in the event of a drought, the rural population on the extremities of the large geographical area will continue to have access to potable water. They further questioned if Glenbeg lake water will be tankered to Bantry for treatment to ensure continuity and adequate potable supply.

The West Cork EHD highlighted that the Ballyhilty Skibbereen water supply is abstracted from the river Ilen and the area served by Skibbereen regional supply now includes the towns and surrounding areas of Skibbereen, Schull, Leap, Baltimore, Sherkin, Drimoleague and other areas. The West Cork EHD commented that recent weather changes have resulted in a low level of water in this river for several weeks this year and stated their concern for the immediate and long-term future that the water level will drop too low for water intake to continue. They also noted that breaches of abstraction limits may need to occur to ensure water supply is maintained and that the chemical demand required to treat the water will be much higher to ensure it is potable and does not breach Drinking Water Regulation mandatory limits as set out in Tables A, B and C in the draft RWRP-SW. They further advised a reconsideration of the recommissioning of three sources and associated WTPs (Drimoleague, Skeagh and Ballinlough). The West Cork EHD noted that the WTPs could be maintained as backup for extreme weather event impacts.

The West Cork EHD recommended interconnecting Drinagh lake source with Clonakilty WRZ. They stated that the distance is “much shorter than Inniscarra” and it would benefit the larger population and commercial activities in the Clonakilty area, as well as provide augmentation of the Clonakilty supply during periods of high demand in the short term. They argued that this lake source and WTP is currently under-utilised which brings its own challenges.

Ibec noted that the consultation has identified WRZ Options and Study Area Options that aim to perform well against criteria of resilience, deliverability, flexibility, and sustainability. Ibec welcomed input from technical and local experts through the workshops with Uisce Éireann and stated that such engagement

is particularly important. Ibec also highlighted that the long-term objectives should be an integrated national plan, but “the current bottom-up approach is appropriate at the current stage of knowledge.”

Ibec noted that as projects and options identified in the Regional Preferred Approach will be subject to their own planning and regulatory processes, existing uncertainties and delays within the planning and appeals system should not be allowed to obstruct the work of Uisce Éireann.

Ibec acknowledged that in contrast to the RWRP-EM, the draft RWRP-SW consultation does not identify any feasible options with the potential, in terms of quantity and distribution of supply, for a large-scale interconnection of multiple Water Resource Zones (WRZs) across the Study Area boundaries. They stated that the Preferred Approach within each Study Area does however comprise large, interconnected supplies. Ibec noted that these are beneficial for the future as the headroom allowance, that Uisce Éireann needs to plan for, is lower.

Ibec acknowledged that given the geographic terrain/limitations of the South West region in relation to abstractions, the approach presented by Uisce Éireann is sensible. They advised that stakeholder engagement and data transparency should be at the forefront. Ibec acknowledged that the solutions identified in the NWRP Framework Plan will be delivered on a phased basis and will progress based on a risk-based prioritisation of capital investment. However, they noted that given the historic legacy of fragmented water supply management, including source protection, the phased approach needs to minimize risks to population, environment, and enterprise activity. Ibec therefore advised that the new Framework for Future Delivery of Water Services should make the process less complex than it otherwise would have been.

The Environmental Protection Agency (EPA) noted that the preferred alternative consists of a combination of the preferred approaches in each of the study areas within the region. They advised Uisce Éireann to continue to work closely with the Southern Regional Assembly (SRA) to ensure proposed development and associated population growth in the region is reflected in the demand growth projections over the lifetime of the Plan and to ensure that land use planning and water resource planning are integrated and closely aligned within the respective local authority areas covered by the RWRP-SW. The EPA noted the approach set out regarding the preferred regional approach and stated that Uisce Éireann sets out the reasoning behind its selection clearly. The EPA suggested that Uisce Éireann should consider reviewing any relevant timelines for delivery of any relevant significant transport infrastructure from bodies such as Transport Infrastructure Ireland, to minimise any potential significant disruptions that may impact on the implementation of the RWRP-SW over its lifetime.

The Southern Regional Assembly (SRA) noted that the Regional Preferred Approach and identified benefits are supported and align with Section 8.1.1 of the Regional Spatial and Economic Strategy (RSES) for Water Supply. Regional Policy Objectives (RPOs) 208-210 support the development of the NWRP and seek strategic water services investment and a move towards a sustainable, secure, and reliable public water supply in the South West while safeguarding the environment.

Among the benefits of the Regional Preferred Approach cited in the draft RWRP-SW Section 8, the SRA cautioned the statement that lower headroom allowance and demand peaking factors represent an estimated 20% of the reduced Demand in the Supply Demand Balance (SDB) calculations for large supply systems. The SRA noted that the RSES seeks Uisce Éireann Investment Plans to align the supply of water services with the settlement and economic growth strategy of the RSES and the Cork Metropolitan Area Spatial Plans (MASPs).

They further requested that such infrastructure planning takes into consideration seasonal pressures on critical service infrastructure, climate change implications and leakage reduction. The SRA also noted that the final determination of the preferred approach going forward to next stages needs to ensure that robust headroom allowances have been taken into consideration within calculations for existing and future domestic and non-domestic demand. They stated that it is essential that the Study Areas have built in future service capacity and headroom to attract inward investment, population, and employment

growth across the South West region to meet national, regional, and local plan targets for sustainable growth.

The Irish Creamery Milk Suppliers Association (ICMSA) noted the proposal to reduce the number of WRZs in the South West region, given that these zones may impact on individual landowners in terms of the land use around specific abstraction points. ICMSA recommended that a clear statement and plan is required in terms of communication with landowners, and the management of lands around the abstraction points. They stated that it must be ensured that landowners who have a water source on their land that supplies water to the surrounding area are not negatively impacted by the draft RWRP-SW and it must be ensured that their land surrounding the water source is not sterilized from agricultural activity or if it is, the farmer must be compensated for their loss as part of the cost of supplying water (as per the National Federation Group Water Schemes new policies).

Kerry County Councils (KCC) submission to the draft RWRP-SW incorporated a background section detailing KCCs involvement in the NWRP process since 2018. This involvement included attendance at workshops and provision of feedback on the Unconstrained Options, through to the Coarse and Fine Screening Workshops.

KCC made the following observations on the Preferred Approaches: (Note KCC's feedback in relation to WTPs is provided in Section 13.5):

- An Baile Mór WTP - an interconnection with An Daingean should be considered.
- An Riasc (Baile an Fheirtearaigh) - WTP is to be rationalised depending on Tobar Bhreindain performance.
- Ardfert (Skrillagh) WTP - this will be rationalised as the location of the existing borehole is not suitable. There is currently a connection being made to the central region.
- Breanlee WTP - there is an adjacent hydroelectric station run by Rain power that would be interested in using its outlet water for our treatment process.
- Caragh Lake (Oolagh) WTP - this existing plant at Oolagh and source in Cummeramuck lake will be rationalised and possibly a new WTP developed using water from Caragh lake as a source.
- Lyracrompane WTP - it is unlikely that this existing WTP will be retained. A new WTP will be constructed at this site. Possibility of developing Smearla Dam should not be ruled out.
- Rathmore WTP – KCC noted that this is an excellent source and decommissioning should be reconsidered.
- Kenmare WTP – a new WTP was completed in 2019. A new source is required but KCC noted there is capacity with the new WTP to increase volume.
- Lauragh WTP - no WTP upgrade required in foreseeable future
- Waterville WTP - this is a new WTP. Maybe a new plant required if there is a connection to be made to adjacent WRZ such as Cahirciveen.
- In regards the Technical Report for Study Area H, KCC queried the location of Curracullenagh stream, Curracullenagh river, and Ballyarkane river sources.
- KCC noted that the preferred approach for a new abstraction from Lough Gill and upgrade to Castlegregory WTP is not an option as Lough Gill is a shallow brackish lake.
- In Annex B Rejection Register KCC requested for a WTP column in the table with associated Option References.
- KCC requested that in Annex B Rejection Register – NSS is in brackets after New Shannon Source and if not introduced elsewhere this needs to be explained.
- In the Annex B Rejection Register KCC queried why the new South West abstraction from Lough Cruite was rejected, which included a new WTP and network. This option did not meet the requirements of the Environmental, Resilience or Deliverability criteria as abstracting the volume of water required to make this a feasible option was likely to result in the waterbody not achieving good

WFD status. KCC CAPO disagreed with this and requested that the option should be reconsidered in the future.

The DHLGH – NPWS welcomed the practicality of the map 8.2 (p. 230 of the draft RWRP-SW), however they stated that it would aid clarity if there was a map of only the new sources and upgraded sources, with their source location (lake, river or groundwater body) marked with the maximum abstraction being proposed in the draft RWRP-SW over that already permitted.

### 10.1.2 Response to Preferred Approach Feedback

The Preferred Approach for all Water Resource Zones across the region has been selected using the robust Option Development and Assessment process outlined in Section 8 of the Framework Plan. If at project level, further investigations determine these solutions to be unfeasible, Uisce Éireann will consider the alternative feasible options identified through our optioneering process. These are listed in Table 5.5 of the Technical Appendices 1 to 3 of the draft RWRP-SW.

As noted in Section 8 of the RWRP-SW, the development of the Preferred Approach is progressed via a workshop attended by engineering, environmental scientists, ecology, hydrology, and hydrogeology experts, operational teams, and local authority operators to ensure the appropriate outcome for a given supply. All Preferred Approaches are considered feasible at plan level; however, it is noted that further project level site-based assessments will be required to determine if a Preferred Approach is feasible. These site-based assessments will include yield assessments of the proposed sources, as well as environmental assessments, including an Appropriate Assessment (AA) screening, Environmental Impact Assessment (EIA) screening and Water Framework Directive assessments. Further detail on project level assessment is provided in Section 6.4 of the draft RWRP-SW.

If at project level it is determined that a Preferred Approach is not feasible, consideration will be given to other Feasible Options outlined in the draft RWRP-SW. If there is a change to the Preferred Approach, but this impacts a single WRZ, then there is no variation to the RWRP-SW; however, the change will be assessed at project level. This envisages a situation where refinements to a single project, or closely related project within a WRZ, will be considered within their own environmental assessments. The change would not have any systemic impacts on the wider RWRP-SW.

Uisce Éireann acknowledges the previous history regarding stakeholder objection to the development of a new impoundment to support further growth and development for Bantry, Adrigole, Castletownbere, Glengarriff and Reenmeen West. This is a water constrained area and the proposed impoundment will provide significant resilience to the areas when compared to other feasible alternatives. The implementation of our NWRP will continue to be supported by customer and stakeholder consultation. This consultation will be undertaken and considered as the proposed solution is further developed at project stage. If this process determines the Preferred Approach is unfeasible, the alternative feasible options identified for the supplies that will be served by the proposed new Inchybegga impoundment will be considered.

We acknowledge CCC's concern regarding the updated Supply Demand Balance (SDB) and the Preferred Option to upgrade Ballyhilty, given the potential over abstraction from the Ilen river source. Uisce Éireann has ensured conservative estimates have been used within our SDB that account for potential reductions in water availability due to climate change and environmental impacts. However, we will continue to assess supply availability and modify the SDB appropriately as new data and information becomes available. This may be the case when the pending abstraction legislation comes into effect. Under the new legislation, Uisce Éireann will be required to apply for new abstraction licences. The EPA, as the licencing regulator will review our existing and proposed abstractions and determine if they are feasible considering all other abstractions in the catchment and the impact of abstractions on the ecology

of the waterbody. The SDB will be updated based on the outcomes of the licensing process, in accordance with the monitoring and feedback process in Section 8.3.8 of the Framework Plan and as set out in Section 9 of the draft RWRP-SW. If the EPA determines that abstractions should be reduced, Uisce Éireann will consider the alternative feasible options listed in Table 5.2 and Table 5.5 of Appendix 3 to the draft RWRP-SW. This will include the reassessment of the proposal to interconnect Skibbereen 1 (Ballyhilty and Drimoleague) and Skibbereen 2 (Baltimore and Schull) WRZs with Cork City (Option SAI-947). The re assessment of the feasible options will be supported by an update of the supply demand balance with any new data and information.

Additionally, drought plans will be developed for each Water Resource Zone (WRZ), and it is planned to provide this detail in the next iteration of the NWRP. These drought plans will be developed in line with the abstraction legislation and note measures required for different water levels at our sources. The drought plans will be unique for each supply and will include supplementary supplies for extreme weather events.

We acknowledge CCC's concern that the yield of the groundwater source around east Cork may not be adequate to meet the deficit for Youghal and surrounding WRZs. Our plan level assessment of the aquifer yield determined that the groundwater supply has the potential to deliver the required supply volume. If further project level site-based yield assessments determine the Preferred Approach is not feasible, we will consider the alternative feasible options for Youghal and the connecting WRZs (Ballymacoda, Kilcraheen, Knockadoon) identified through our Option Development Process and listed in Table 5.5 of Appendix 2 of the draft RWRP-SW. One of these options does include connection to the Cork Water supply system via Middleton (Option SAI-869) as suggested by CCC. All reports and previous studies provided by CCC have been considered in the RWRP-SW.

Uisce Éireann acknowledges Cork County Council's disagreement over the conclusion of the draft RWRP-SW that the Macroom WRZ is not in deficit and welcome the site-specific information provided on the capacity of the Box Cross WTP and available yields at three boreholes serving the WTP. We confirm that our capacity and yield assessments are based on the best available data at the time of writing the draft RWRP-SW. Further data collection will be carried out at project development stage, as explained in Section 6.4 of the draft RWRP-SW, which includes the determination of source yield assessments and alignment of demand forecasts with new data on population growth and non-domestic growth. Given the headroom allowance that is applied to the demand forecasts to account for uncertainty in components of the supply demand balance, we do not anticipate that any updates to data will impact the Preferred Approach.

In response to CCCs suggestion on solutions to serve Newmarket and Banteer WRZ, we note that the suggestions align with the Preferred Approach which interconnects Banteer with Newmarket and includes a new groundwater abstraction from Ketragh Springs that will also serve the Kanturk area (which is part of the Newmarket WRZ). Additionally, we note that CCC's recommendation to decommission Freemount WRZ and serve the Allow Region WRZ with a new groundwater source and WTP also aligns with the Preferred Approach. Further details are provided in Appendix 3 of the draft RWR-SW. The details of network upgrades and service reservoirs will be determined at project level.

Uisce Éireann acknowledges Cork City Council's advice that increased abstraction to supply Glanworth/Ballykenley/Johnstown Water Resource Zone will require further detailed assessment. As outlined in Section 6.4 of the draft RWRP-SW, the preferred approach is developed at plan level and the assessment of options are desktop-based. Any projects that are progressed following NWRP will be considered in more detail at project level. This will include further detailed assessment and analysis in relation to the Water Framework Directive outcomes and Habitats Directive requirements.

We appreciate Cork City Council's recognition of our commitment to achieving sustainability through the decommissioning of abstractions at sensitive sites. These measures will ensure that the water supply activities in the region support Ireland in meeting its obligations under the Water Framework Directive.

The timeline for decommissioning these abstractions will be determined through the capital investment process. When prioritising projects through Uisce Éireann's Capital Investment Plans we will ensure these decisions are based on dialogue with the EPA that will consider the delivery of the Water Framework Directive objectives.

Uisce Éireann acknowledges the impact unsustainable abstraction has and we will engage fully with the requirements of the new legislation on abstraction. It is envisaged that site-by-site assessments will be required as part of the proposed abstraction licencing regime. Uisce Éireann will initiate the process of obtaining licences for new abstractions and regulating the licensing position of existing abstractions once the abstraction legislation has been enacted and the applicable regulatory process is in place.

Any additional legislative and regulatory requirements will be incorporated into the NWRP based on the monitoring and feedback process set out in section 8.3.8 of the Framework Plan.

In response to the comment on the Castletownbere supply, we note the Preferred Approach proposes to supply the deficit from a new Inchybegga impoundment and Water Treatment Plant (WTP) near Bantry. The Preferred Approach does not include a new WTP at Glenmore Lake. This proposal is however, presented as an alternative feasible option to supply Castletownbere if the Preferred Approach is assessed as unfeasible following project level assessments. In this instance, before developing a new abstraction and WTP at Glenmore Lake, site specific investigations will be undertaken that will further consider the of impacts on the Fresh Water Pearl Mussel.

The demand forecast for Castletownbere is aligned with population and growth projections outlined in the Local County Development Plans and Regional Strategic and Economic Strategies. Uisce Éireann will continue to consult with the Regional Assemblies and local authorities to ensure the NWRP incorporates the increasingly refined growth rates. Baseline forecasts and data feeding into the NWRP will be reviewed as new information is made available. Changes to the demand forecasts will be incorporated through the monitoring and feedback process set out in Section 8.3.8 of the Framework Plan and Section 9 of the draft RWRP-SW.

The rationalisation of four WRZs (Castletownbere, Glengariff, Adrigole and Reenmeen) to Bantry WRZ aims to increase drought resilience through the interconnection of supply systems. The increased resilience is provided by seven new water storages that are proposed as part of the solution. The water storages will assist in maintaining supply during outages and dry conditions and support peak demands. Uisce Éireann operate our supply systems to ensure all interconnected demand centres receive the same Level of Service. This means that each demand centre will be subject to the same supply restrictions during a drought event. The drought measures (such as tankering and emergency supply sources) will be detailed in Drought Plans. Uisce Éireann will develop Drought Plans for each WRZ, and it is planned to provide this detail in the next iteration of the NWRP.

In response to the West Cork EHD's comment regarding abstractions from the river Ilen under the recently commissioned Skibbereen Regional Water Supply Scheme, we acknowledge, b that abstractions under the existing licence conditions may not meet sustainability guidelines. This is noted in Appendix 2, Section 2.4 of the draft RWRP-SW. The sustainable abstraction limit at the source will be determined once the forthcoming abstraction legislation is enacted. This will be adjudicated by the Environment Protection Agency (EPA). If the EPA determines that abstractions should be reduced, Uisce Éireann will consider supplementing the river Ilen abstraction with the feasible option identified through our Option Development Process that involves a new surface water abstraction from Rathruane River and a new WTP.

The recently commissioned Skibbereen Regional Water Supply Scheme involved an upgrade to the Ballyhilty WTP, which is served by the river Ilen abstraction, and a transfer pipeline from the Skibbereen 1 (Ballyhilty and Drimoleague) WRZ to the Skibbereen 2 (Baltimore and Schull) WRZ. The Lake Cross WTP that serves the Skibbereen 2 WRZ was also upgraded for water quality purposes. The interconnection of the two WRZs enabled the decommissioning of the inadequate WTPs serving

Drimoleague, Skeagh and Ballinlough. This resulted in the removal of the Skibbereen Regional Water Supply Scheme from the EPA's Remedial Action List.

As mentioned previously, drought plans will be developed for each Water Resource Zone (WRZ), and it is planned to provide this detail in the next iteration of the NWRP. These drought plans will identify alternative sources that can be used to supplement supplies during extreme water shortages.

The proposal put forward by the West Cork EHD to interconnect the Drinagh lake source (Curraghlicky Lake) with the Clonakilty supply was identified as a potential supply option and assessed as part of the Options Assessment Process outlined in Section 8 of the Framework Plan. This option was rejected at the coarse screening stage of the process, as it does not address the full deficit estimated for Clonakilty. The sustainable abstraction from the lake was assessed to represent just over half of the supply volume that is required to meet the target Level of Service during the dry year critical period planning scenario. For this reason, the option did not meet the Resilience, Deliverability or Environmental assessment criteria used in our assessment of options. Further information is provided in Rejection Register Summary in Appendix 2 of the draft RWRP-SW.

We welcome Ibec's support for Uisce Éireann's collaborative approach to identifying and assessing Water Resource Zone and Study Area Options, achieved through our technical workshops. We agree that long-term objectives should be delivered through the national level plan, with the regional level plans serving to facilitate the identification of water supply solutions in an efficient and timely manner.

Uisce Éireann welcome the support of Ibec, Southern Regional Assembly (SRA) and the Environment Protection Agency (EPA) for the Regional Preferred Approach presented in the draft RWRP-SW.

We recognise the ongoing work between the Regional Assemblies and the local authorities over the course of the development of the Local Authority Development Plans (LADPs) and as advised by the EPA, we will continue to work closely with the SRA and local authorities over the lifetime of the NWRP. As the LADPs are finalised, Uisce Éireann will incorporate the increasingly refined growth rates into our demand forecasts through the monitoring and feedback process set out in Section 8.3.8 of the Framework Plan and Section 9 of the draft RWRP-SW. This will support the integration of land use planning and water resources planning as promoted by the National Planning Framework. The interaction between the planning system and Uisce Éireann's plans and programmes is outlined in Figure 2.4 of the draft RWRP-SW.

We will also continue to liaise with other key stakeholders, such as Transport Infrastructure Ireland, throughout the implementation phase of the NWRP to minimise risks and disruption to the public.

In response to Ibec's concern regarding delays resulting from the planning and regulatory process, Uisce Éireann recognises the importance of effective collaboration with our statutory consultees, including planning authorities and regulators (EPA and CRU), to ensure the successful implementation of the NWRP. We commit to working together with our stakeholders to deliver the proposed water infrastructure developments, with the aim of minimising delays within the planning and appeals system.

As acknowledged by Ibec, although our Regional Preferred Approach does not involve a large-scale interconnection of Water Resource Zones across Study Area boundaries, the Preferred Approach creates large-scale interconnected supplies within Study Area boundaries offering increased resilience to our customers through operational flexibility.

The solutions identified in the NWRP will be delivered on a phased basis. The phasing and timeframes for the delivery of individual projects will be determined on risk-based prioritisation through the capital investment process. Uisce Éireann welcomes the new Framework for Future Delivery of Water Services and will refer to the framework during the implementation of the NWRP to ensure risks to population, the environment and enterprise activity are minimised.

Regarding the SRA's comment on the estimated 20% reduction to the Supply Demand Balance achieved through the interconnection of supplies, we clarify that this percentage does not only represent reductions in headroom and peaking factors but also includes reductions in leakage levels. Uisce Éireann has set leakage targets that aim to reduce leakage levels to 21% of average demand for large Water Resource Zones (WRZs) and this contributes to the estimated 20% reduction in the SDB upon delivery of the Preferred Approach. Our sensitivity analysis has stressed tested the Preferred Approach against the possibility that leakage targets are not met and confirmed our Preferred Approach to be robust and adaptable. Further details of the Sensitivity Analysis are provided in Section 7.7 of the draft RWRP-SW.

As outlined in Section 4.4 of the Framework Plan, we acknowledged there may be some uncertainty in our estimation of future growth. Therefore, we have included a headroom allowance in our estimation of demand. Headroom is the safety margin which is applied to demand forecasts to allow for uncertainties in our calculations on both the demand side and the supply side. The allowance is calculated and added to estimated demand to provide a buffer in the supply demand balance and to ensure that the preferred approach is sized appropriately to meet future required needs.

The resilience of the Preferred Approach to climate change is considered by assessing the available yields from the proposed new or upgraded source in the future and by considering the location of our infrastructure in relation to flood zones. The headroom allowance applied to our demand forecasts accounts for uncertainties in the climate change estimates.

The Supply Demand Balance (SDB) includes leakage targets for priority supplies including Listowel regional Public Water Supply, Central Regional – Lough Guitane and Mid-Kerry WRZ, Cork City, Clonakilty, Charleville/Doneraile, Millstreet and Newmarket. As noted above, Uisce Éireann has also committed to additional leakage reduction that will reduce leakage to 21% of total demand for larger WRZs by 2034. These reductions will be considered at project level. Further details are provided in Section 5.2 of the draft RWRP-SW.

Seasonal pressures are accounted for in the supply demand balance through the application of peaking factors to our demand estimates. Further information on our approach to demand forecasting is provided in Section 4 of the Framework Plan.

Uisce Éireann acknowledges ICMSA's concern regarding the potential impact of source protection measures relating to abstractions on surrounding landowners. We recognise the importance of working in partnership with key stakeholder when developing and implementing catchment management activities for drinking water source protection and will continue to work with local landholders and consider implications on the surrounding land use.

Any projects that are progressed through the implementation of the NWRP will require various project level environmental assessments in support of planning applications or in support of licencing applications. These applications will be subject to public consultation.

We value Kerry County Council's contribution to the development of the NWRP and option assessment through the consultation workshops that have formed a key part of the development of the Preferred Approach. A culmination of this involvement was a submission by Kerry County Council of a document titled NWRP Feedback ((Appendix A – NWRP Feedback).

Uisce Éireann made efforts to incorporate this feedback as much as practicable and this was stated at the time to KCC. In Workshop 4 and Workshop 5 additional options were added to the Screening Sheets; a note of which was made in the Control tab of the Screening Sheet. In Workshop 3, actions were noted, and the presentation given was a second additional workshop Uisce Éireann conducted setting out updates to the Preferred Approach based on KCCs feedback.

It is the objective of the RWRP-NW to resolve need at WRZ level. Therefore, the lowest level of assessment for feasible options and Preferred Approaches is WRZ level and rejected solutions are considered at WRZ level. Preferred Approaches are summarised in Section 7 and 8 of the RWRP-SW

and Appendix 1, 2 & 3. The WTP overview shows the consolidated Water Treatment Plant data for the region and does not provide details of the Preferred Approach. This spreadsheet was provided for the EPA to understand future proposals on water quality and quantity upgrades at WTPs. In response to Kerry County Council's comments relating to specific projects, we note:

- An Baile Mór WTP and An Daingean are already connected as they are in the one WRZ. Supply to the An Daingean WTP is provided from the Garfinny River and the current abstraction is considered potentially unsustainable. Therefore, the existing sources would not be able to meet future requirements and allow for growth. The Preferred Approach for the An Baile Mór WTP/Daingean WRZ as set out in the Appendix 1 Study Area H Technical Report is to provide a new supply from the Milltown River.
- The “Baile An Fheirtearaigh / Tir Abhainn Thoir / Cill Maoilcheadair / An Ghraig/Cloichear” WRZ comprises 7 WTPs including the An Riasc (Baile An Fheirtearaigh) WTP and the Tobar Bhreandáin. The Preferred Approach for the WRZ is to increase GW abstraction from Tobar Bhreandáin WTP. We note that the An Riasc (Baile An Fheirtearaigh) WTP has now been rationalised. The WTP was present at the commencement of the optioneering process. We will update Appendix 1 Study Area H Technical Report to note that the WTP is now out of service.
- Ardfert WTP and Rathmore WTP are part of the Central Regional WRZ and the Preferred Approach for this WRZ is a new surface water abstraction from Lough Leane and WTP at the abstraction to meet the deficit in the Central Regional and Mid Kerry area. It is proposed to maintain the existing Ardfert WTP as part of this Preferred Approach, however the new Lough Leane source will facilitate a reduction of output at the WTP. If it is determined at project level that the existing source is not sustainable, we will consider the potential to decommission the WTP. It is proposed to decommission the Rathmore WTP as part of this Preferred Approach due to reliability issues during the 2018 drought.
- The Breanlee WTP and Caragh Lake (Oolagh) WTP are part of the Mid Kerry WRZ. There is a significant deficit in this WRZ in the order of 10MI/d. The Preferred Approach for this WRZ is to interconnect the WRZ with the Kerry Central WRZ and develop a new surface water abstraction from Lough Leane and WTP at abstraction to supply the interconnected WRZs. It is proposed to keep all existing WTPs however the new supply from Lough Leane will facilitate a reduction of output at the WTPs. If it is determined at project level that the existing source is not sustainable, we will consider the potential to decommission the WTP.
- Lyracrompane WTP lies within the Listowel WRZ. The Preferred Approach for this WRZ is a new GW abstraction and interconnection of Abbeyfeale and Listowel. Construction of impounded storage at River Smearlagh to supply Abbeyfeale and Listowel is considered as a feasible alternative. If at project level it is determined that the Preferred Approach will not provide the supply required the feasible alternatives will be considered as set out in Section 6.4.
- The proposed Preferred Approach for Kenmare WRZ is to develop a new surface water source and new WTP at the location of the proposed abstraction. We note immediate water supply issues in Kenmare and we are working with the Local Authority to develop an interim source as set out in Section 4.12 of this report. The interim measure for the Kenmare WTP will be updated in the Final RWRP-SW.
- It is not considered feasible to increase the existing sources in the Lauragh PWZ WRZ to allow for growth in the WRZ. The Preferred Approach is to develop a new surface water source and a new WTP at the location of the new source.
- The Preferred Approach for Waterville WRZ is to interconnect the supply with the Caherdaniel/Castlecove and increase abstraction from Lough Currane and upgrade the existing WTP to allow for increased output. Curracullenagh River and Lake and Ballyarkane River are

existing Uisce Éireann abstractions for the Camp Water Supply Zone (WSZ) and Inch WSZ, respectively. Both supply zones are part of the Central Regional Water Resource Zone (WRZ). The Curracullenagh River and Lake feed the Camp (Knockglassmore) WTP and the Ballykarne River feeds the Inch WTP.

- The Preferred Approach for the Castlegregory WRZ, which involves a new surface water abstraction from Lough Gill, is based on a desk-based plan level assessment using data available at the time of the assessment. The project level assessment of the proposed solution will include further site-specific investigations. If these investigations determine the Preferred Approach is unfeasible, the alternative feasible options will be further assessed. These include supplying the deficit from the Central Regional WRZ via Aughacaslá.
- The Preferred Approach to supply the deficit for the An Clochan WRZ is an increased ground water abstraction. An alternative option involving a new abstraction from Lough Cruite to supply the An Clochan WRZ, was screened out on the basis that the Lake is a priority fresh water pearl mussel (FWPM) sensitive catchment within the Mont Brandon SAC. The new lake abstraction would require new network to be constructed through blanket bog. Given the likely associated environmental risks, alternative options to meet the supply deficit were selected in preference. If at project level, site specific assessments determine the Preferred Approach is not feasible, screened out options will be revisited.

Regarding DHLGH-NPWS's suggestion to map the new and upgraded sources and report the maximum proposed abstraction volume and the existing 'permitted' (licence) volume, we refer to Figure 7.15 and Figure 7.17 of the draft RWRP-SW. These figures display surface water and groundwater abstractions respectively; and present the proposed approach outcome for each abstraction i.e., whether the abstraction is maintained, upgraded, new or decommissioned. The maximum abstraction volumes and other licencing details will be determined once project level studies are completed.

## 10.2 Interim Solutions

### 10.2.1 Summary of Interim Solutions Feedback

The Environmental Protection Agency (EPA) noted that the draft RWRP-SW sets out the reasoning behind the need for interim solutions to be provided prior to full implementation of all the aspects of the RWRP-SW. While implementing these interim solutions, the EPA advised that human health and environmental protection should continue to be critical components during this phased move to implementing the preferred approaches. The EPA welcomed the proposed interim measures as they should ensure that solutions are in place while the preferred water supply and network options are being developed. However, the EPA recommended that although the solutions may be temporary, any new abstractions and/or increases at existing abstractions still need to be required to get permissions through the legislative licensing process and the appropriate planning process before they can proceed.

Ibec advised that "Uisce Éireann's ultimate goal should be to have a holistic, resilient, integrated national network capable of being fine-tuned using suitable simulation software, relying on real-time telemetry." They commented that continued capital investment in both physical and human capital is necessary. Ibec recommended that Uisce Éireann receive additional revenue to hire skilled personnel with expertise in science, planning, quality control and catchment management.

Ibec argued that the delivery of Preferred Approach for each Water Resource Zone (WRZ), Study Area and Region should not be undermined by budgetary and regulatory constraints. As decisions to progress any interim solution will be based on urgent or priority measures. Given that the draft RWRP-SW does not confer funding availability for any project, and that any interim measures will be subject to budget availability, uncertainty over multiyear funding could endanger the investment programme. They also

advised that Uisce Éireann should be fully supported by the Government and other oversight bodies. They further recommended the establishment of a communication forum for water management stakeholders, including Uisce Éireann, the EPA, the Department of Housing Local Government and Heritage and An Fórum Uisce would be beneficial.

Cork County Council (CCC) noted that the interim measures suggested in the draft RWRP-SW appear to focus on leakage reduction and improvements and upgrades at existing Water Treatment Plants.

## 10.2.2 Response to Interim Solutions Feedback

As it will take a number of investment cycles to deliver the Preferred Approach across all Water Resource Zones, Uisce Éireann must continue to deliver safe, secure, and reliable water supplies to meet customers' needs and enable growth in the region. Therefore, within our draft RWRP-SW we have identified interim options for all Water Treatment Plants that will be utilised when needed. These options will allow Uisce Éireann time to deliver the Preferred Approach, while at the same time, maintaining a sustainable water supply. They are generally smaller in scale and rely on existing infrastructure. A decision to progress an interim option will be based on urgent or priority need to address water quality risk or supply reliability. Further information on interim options is provided in Section 7.6 of the draft RWRP-SW. The specific options for each study area are listed in the corresponding technical reports in Table 6.1.

We welcome the Environmental Protection Agency (EPA) support of the proposed interim measures and acknowledge the requirement to obtain permission through the legislative licensing process and the appropriate planning process before proceeding with any new or increased abstractions.

Uisce Éireann appreciates Ibec's support for continued capital investment in the provision of water services. We will continue to collaborate with regulators and key stakeholders such as the Department of Housing Local Government and Heritage and An Fórum Uisce to facilitate priority investment in water infrastructure and secure supplies across Ireland.

As explained in Section 7.6 of the draft RWRP-SW, the interim options that have been identified for each WRZ are focused on shorter term interventions that make the best use of already existing infrastructure. In most cases, these options will only be used to allow time to deliver the longer-term solution under the Preferred Approach. The interim options are determined in line with the Preferred Approach and as such, are considered "no regrets" infrastructure investment.

## 10.3 Data Challenges

### 10.3.1 Summary of Data Challenges Feedback

A stakeholder commented on the "lack of maintenance of existing instrumentation and telemetry for water quality and leakage control by Uisce Éireann." They argued that it makes it very difficult to maintain adequate data and guaranteed quality.

An Fórum Uisce (AFU) recommended that measures to increase the transparency in data available to or used by Uisce Éireann, in the assessment of their proposed plans for the South West Region, are included in the final RWRP-SW. AFU commented that in order to make more transparent and informed decisions, current data limitations need to be addressed, including gaps around catchments and water bodies, with the consideration of the broader environmental capacity (catchment-based assessments), rather than just the infrastructure capacity. Furthermore, AFU recommended an assessment of the accumulative impacts of abstractions in a catchment for greater resilience and environmental protection. AFU argued that an alternative estimate of the hydrological balances in Water Resource Zones (WRZs) would allow the perspective of the water quantity management to change from "Water Quantity that

Uisce Éireann can provide (page 5 of the assessment of need in the draft RWRP-SW), to Water Quantity that each water body can provide”.

AFU advised that Uisce Éireann should include scheduled actions in the RWRP-SW to address current data gaps to accurately assess hydrological balances and supply-demand estimates, with a clear outline of tangible goals and timelines. AFU added that details should be included of the relevant external cooperation requirements such as a formal collaboration between Uisce Éireann, Environmental Protection Agency, and Geological Survey Ireland and ongoing projects such as the Ground Water 3D project.

Ibec noted that data transparency and accuracy is crucial when assessing regional needs in the South West region. They requested further data should be incorporated in the final RWRP-SW as it becomes available, and that “any emerging data relating to catchment-based assessment, supply-demand estimates, and hydrology would be of particular value.”

Geological Survey Ireland (GSI) highlighted that they provide independent geological information and advice and gather various data as they are the national earth science agency and are a division of the Department of the Environment, Climate and Communications. They referred to their website for data availability and recommended using these data sets when conducting the Natura Impact Statement, Environmental Impact Assessment Reports (EIAR), planning and scoping processes, and Strategic Environmental Assessments (SEA), as it can “add to the content and robustness of the SEA process.” GSI requested that use of their data or maps should be attributed correctly to ‘Geological Survey Ireland’. GSI attached a list of their publicly available datasets in their submission that may be useful to Uisce Éireann and provided further detail in the remainder of their submission.

### 10.3.2 Response to Data Challenges Feedback

In reference to the submissions outlining the data gaps, a further review of data will be carried out at the project development stage outlined in Section 6.4. Baseline forecasts and data feeding into the NWRP will be reviewed as new data is made available. Section 8.3.8 of the Framework Plan sets out the process for reviewing and responding to new data as it becomes available.

Existing abstractions are considered in the cumulative assessment undertaken by Uisce Éireann of their abstractions and proposed new abstractions. The potential in-combination effects from surface and groundwater abstraction on European sites, are considered in the in-combination assessment undertaken in the NIS (Section 7 and Appendix E). As outlined in Section 6.4 of the RWRP-SW, yield assessments will be carried out at project level prior to the development of any new source and outputs from the hydrological and hydrogeological assessments will be a key factor in the determination of the level of environmental assessments required, as these will provide more information on the boundary of any potential environmental impacts and the availability of water across the catchment.

Uisce Éireann recognises that currently there are gaps within our data sets and that greater certainty in our estimates can be gained through improved data for our baseline supply assessments and forecasts. Uisce Éireann is committed to the development and delivery of a 5 to 10-year data and intelligence improvement strategy on data related to the Supply Demand Balance, water quality, asset registers, outage allowances, headroom and performance of assets, including network models. These improvements will include regular maintenance of instrumentation to ensure the accuracy of data. New data will be used to modify our Supply Demand Balance as appropriate and feed into Preferred Approaches.

Uisce Éireann will incorporate information from the GSI regional assessments into our options assessments as it becomes available. Emerging data and information will be incorporated into the NWRP through the feedback and monitoring process set out in section 8.3.8.

To facilitate data sharing on groundwater source protection, Uisce Éireann will continue to engage with the EPA Hydrometrics Team and GSI, as part of the development of further studies on existing and potential future groundwater supplies.

In certain circumstances, monitoring and feedback will identify the need for a variation of the NWRP - Framework Plan or a RWRP. This assessment will be carried out on a case-by-case basis depending on the materiality of the impact of the relevant new data or change in circumstances

In response to the submission from AFU recommending that Uisce Éireann include scheduled actions to address current data gaps, we refer to the commitments to data improvements set out in Section 9 of the draft RWRP-SW and discussed above.

In terms of data gathering, as set out in Section 9.4 of the RWRP-SW we are committed to; Development of a strategy to improve understanding of supply risk including Source Risk Assessment studies, supply assessments, source surveys, source monitoring, and source models to facilitate greater understanding of supplies and roll-out of appropriate studies.

Integration of Geological Survey of Ireland, Regional Groundwater Availability Assessments into the NWRP desktop studies as the information becomes available. The GSI data that has been considered in the development of the Preferred Approach is outlined in our response to feedback on the Strategic Environment Assessment (SEA) in Section 8.5.2 of this report.

## 10.4 Monitoring and Mitigation

### 10.4.1 Summary of Monitoring and Mitigation Feedback

The West Cork Environment Health Department commented that an Emergency Management Plan for the provision of water to affected communities, Drought Management Plan or Flood Risk Management Plan has not been proposed or included in the draft RWRP-SW or for the immediate future within one to five years and for the five to ten years plus period.

### 10.4.2 Response to Monitoring and Mitigation Feedback

Uisce Éireann will develop Drought Plans for each WRZ, and it is planned to provide this detail in the next iteration of the NWRP. These drought plans will be developed in line with the abstraction legislation and note measures required for different water levels at our sources. The drought plans will be unique for each water supply system.

As part of our Drinking Water Safety Plans (DWSPs) we consider risks to our sources via our Source Risk Assessment Methodology. The Risk Mitigation pieces of this work will begin once the methodologies are complete and the risk assessment to existing sources has been carried out. The risk assessment will consider both natural events (such as floods, high winds, and waterborne diseases) as well as human caused events (such as vandalism, chemical spills and construction accidents). Where risks are identified, Flood Risk Management Plans and Emergency Management Plans will be developed and will identify mitigation measures and response actions. These plans will feed into our Asset Management Plans.

## 10.5 Conclusions on Solutions Methodology Feedback

Having carefully reviewed the submissions received on the theme of Solutions Methodology, some of the points made in the submissions will be taken forward as explained in sections below. For completeness, we note that any relevant clarifications and recommendations from the RWRP-EM consultation have also been considered in the development process and finalisation of the RWRP-SW.

### **10.5.1 Clarifications on Solutions Methodology Feedback**

The following section of the RWRP-SW has been updated to reflect feedback under the theme of Solutions Methodology:

- Appendix 1, 2 and 3: Section 2.1 - text was added on the WTPs which were decommissioned after the optioneering was completed and during the South West Regional Plan public consultation.

### **10.5.2 Recommendations on Solutions Methodology Feedback**

1. Flood Risk Management Plans and Emergency Response Plans will be developed following the completion of the source risk assessments undertaken as part of the development of Drinking Water Safety Plans, as appropriate.
2. To facilitate data sharing on groundwater source protection, Uisce Éireann will continue to engage with the EPA Hydrometrics Team and GSI, as part of the development of further studies on existing and potential future groundwater supplies.

## 11 Regional Plan Consultation Process

In this Chapter, we summarise the key references in submissions to issues under the broad theme of “Consultation Process.” We deal with the theme in this Chapter, by setting out first a summary of the relevant mentions in the submissions, followed by our response. There were two submissions in relation to the Regional Plan Consultation Process.

### 11.1 Regional Plan Consultation Process

#### 11.1.1 Summary of Regional Plan Consultation Process Feedback

The Southern Regional Assembly acknowledged the positive process of engagement with stakeholders during the consultation and highlighted the positive collaboration with Uisce Éireann on a number of initiatives. They commented that they look forward to continued consultation during Phase 2 of the National Water Resources Plan (NWRP).

#### 11.1.2 Response to Regional Plan Consultation Process Feedback

Uisce Éireann commits to continuing to provide communications and public consultations that are accessible, meaningful, transparent, proportionate, and accountable for all stakeholders, including those without a technical background. These principles have underpinned the approach Uisce Éireann has taken to the communications and public consultation for the NWRP to date relative to Phase 1 NWRP Framework Plan and Phase 2 NWRP, the four Regional Water Resource Plans.

### 11.2 Conclusions on Regional Plan Consultation Feedback

Having carefully reviewed the submissions received on the theme of Regional Plan Consultation Feedback Uisce Éireann considered that no updates or further recommendations to the RWRP-SW are required.

For completeness, we note that any relevant clarifications and recommendations from the RWRP-EM consultation have also been considered in the development process and finalisation of the RWRP-SW.

## 12 Plan Implementation

In this Chapter, we summarise the key references in submissions to issues under the broad theme of “Plan Implementation.” Within the overall Plan Implementation theme, we identified two sub themes, which we set out in Figure 12.1. We deal with each of these sub-themes in this Chapter, setting out first a summary of the relevant mentions in the submissions, followed by our response. The sub-themes are not dealt with in any particular order.

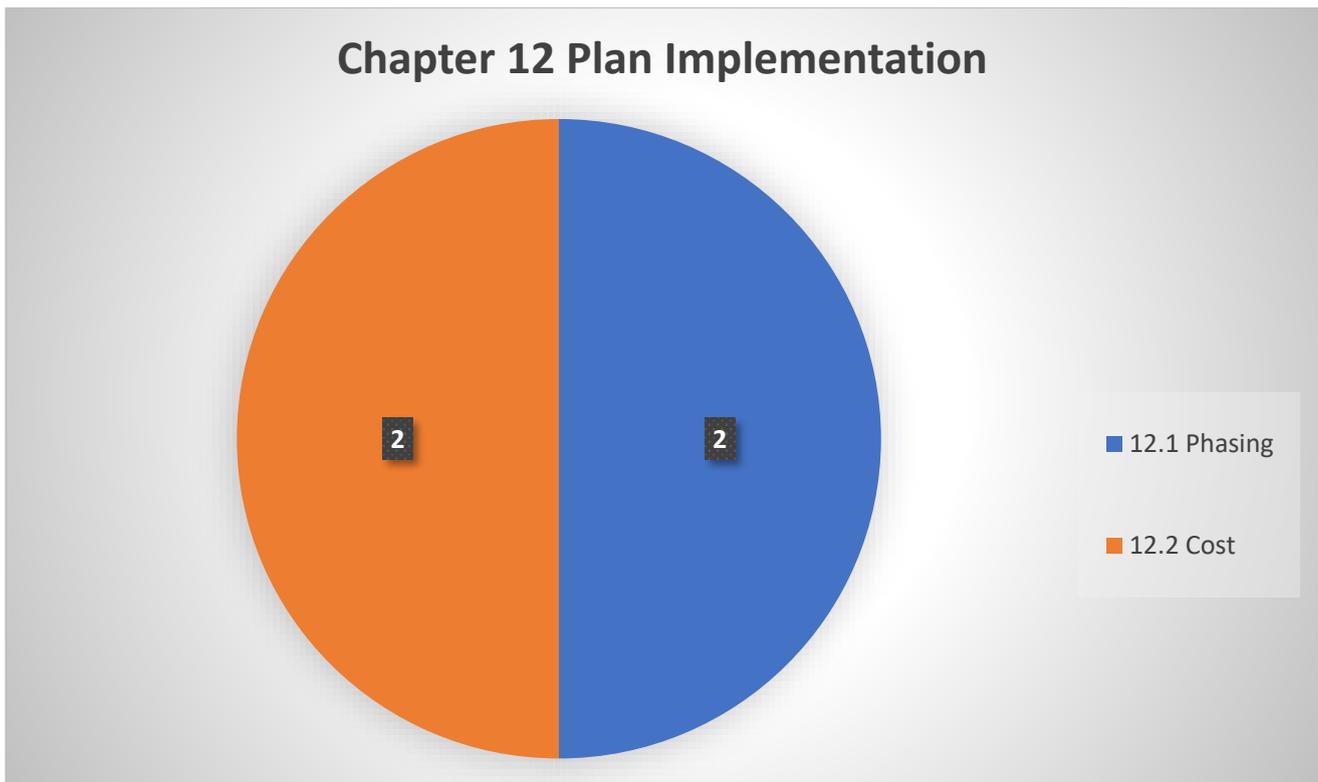


Figure 12.1 Plan Implementation

### 12.1 Phasing

#### 12.1.1 Summary of Phasing Feedback

The Southern Regional Assembly (SRA) noted that it will take a number of investment cycles to progress the Regional Water Resources Plan South West (RWRP-SW) and that it may change in later iterations of the National Water Resources Plan. The SRA encouraged the continued partnership approach with Local Authorities to ensure that optimal infrastructure is phased and delivered to guarantee a quality supply to service Core Strategies through the final agreed Regional Approach.

A stakeholder stated that the draft RWRP-SW is not supported by accurate figures. They voiced their concern in relation to recent levels of tankering and water shortages, and what they termed “the lack of scope to comply with the requirements of the Cork County Development Plan and the Regional Planning Guidelines”.

The stakeholder requested a fair and critical appraisal of the draft RWRP-SW that would enable the development of a more comprehensive plan that complies with the European Directives and the impacts of Climate Change.

## 12.1.2 Response to Phasing Feedback

The Preferred Approaches identified through this process will be prioritised on a national basis and progressed through Uisce Éireann's Capital Investment Plans. The phasing and timeframes for delivery of individual projects will be determined through the capital investment process. When prioritising growth projects through Uisce Éireann's Capital Investment Plans, we will ensure that these decisions are based on dialogue and continuing partnerships with the Regional Assemblies and the Local Authority housing and planning functions.

Critical projects and programmes to address potential public health issues and supply deficit issues are on-going and not impacted nor delayed by the delivery of the NWRP. Section 7.6 of the RWRP-SW outlines the process for developing interim options to address critical water quality and quantity issues while we deliver our Preferred Approaches through the coming investment plans. Using this process in the interim, short term capital maintenance solutions have been identified for all Water Treatment Plants (WTPs) and these solutions are referred to in Section 6 of the Study Area Technical Reports.

As it will take a number of investment cycles to deliver the Preferred Approach across all Water Resource Zones (WRZs), Uisce Éireann must continue to deliver safe, secure and reliable water supplies to meet customers' needs and enable growth in the region. Therefore, within our draft RWRP-SW we have identified interim solutions that will be utilised when needed. These solutions will allow Uisce Éireann time to deliver the Preferred Approach, while at the same time, maintain a sustainable water supply. These interim solutions are generally smaller in scale and rely on existing infrastructure.

In our calculations of the Supply demand Balance (SDB), Uisce Éireann has used the most up to date data and information available at the time of developing the draft RWRP-SW. Where there are uncertainties associated with the available data, we have addressed these by applying a headroom allowance to our demand estimate. The headroom allowance is a safety margin that is calculated to account for current and future uncertainties in supply and demand components. This includes accuracy of supply-side data and variation in the demand forecast. As new data and information becomes available, the SDB will be updated in accordance with the feedback and monitoring process outlined in Section 9 of the draft RWRP-SW. A key aspect of the NWRP is the monitoring and feedback process set out in section 8.3.8 of the Framework Plan. This process involves continual review of assumptions and data as new information becomes available, to ensure the NWRP is up to date.

Uisce Éireann has committed to improving the reliability of supply that our customers can expect to receive across all our water supply systems. This means that incidents of water shortages resulting from droughts will be less frequent. When the solutions identified in the NWRP are delivered, customers would only experience a supply shortage due to low water availability, on average, once every 50 years. That is, there would be a 2% chance of experiencing a supply failure in any given year. This is referred to as a 1 in 50-year Level of Service (LoS). Further information on the LoS across the South West Region is provided in Section 3.2 of the draft RWRP-SW.

Uisce Éireann has considered the impact of climate change on the water cycle and the resultant impact of water services. This has been accounted for in our estimates of future sustainable source yields and the location of our infrastructure in relation to flood zones. The RWRP-SW was subject to plan level Strategic Environmental Assessment (SEA) and Appropriate Assessment (AA). This process has ensured compliance with the European Directives. Further information regarding these assessments can be found in the SEA Environmental Report and the Natura Impact Statement (NIS) accompanying the draft RWRP-SW.

## 12.2 Cost

### 12.2.1 Summary of Cost Feedback

A stakeholder questioned whether the Regional Water Resources Plan South West (RWRP-SW) could be fully achieved in the current economic climate especially when it is using a cost/benefit approach. They explained this “leaves less populated areas at a disadvantage and compounds the socio-economic deprivation of these areas”.

The Southern Regional Assembly (SRA) encouraged Uisce Éireann to make a business case to Central Government on the critical need to invest in water infrastructure and to deliver the recommendations under the National Water Resources Plan and final approach through capital investment. The SRA stressed that the delivery of infrastructure to provide a safe, secure, reliable and sustainable water supply in the South West, in particular to service those parts of our Region in Study Areas H, I and J in the draft RWRP-SW, is critical for Regional Spatial and Economic Strategy implementation.

### 12.2.2 Response to Cost Feedback

A key aspect of the National Water Resources Plan (NWRP) is understanding the current and future need across all our supplies. The NWRP Framework Plan sets out a methodology used to determine need across our supplies. This methodology was developed through consultation with stakeholders and further to consideration of government policy and legislation on domestic and economic growth, climate change, water quality and the environment. Through the application of this methodology, the NWRP has identified significant need across all our supplies. This need is associated with the lack of historical investment in water supply. All Water Resource Zones (WRZ), regardless of socio-economic status, are assessed with the same methodology. Cost benefit is incorporated into our methodology as a factor between feasible options rather than between WRZ, so that all customers benefit from the NWRP and all WRZ receive a Preferred Approach to address deficit in their area.

The Preferred Approaches identified through this process will be prioritised on a national basis and progressed through Uisce Éireann’s Capital Investment Plans. The phasing and timeframes for delivery of individual projects will be determined through the capital investment process.

The scale of investment required to transform our water supplies is undoubtedly considerable. The development of the NWRP will enable us to understand the scale of strategic investment required across our supplies, and to propose the right solutions and the appropriate level of investment needed within the context of the National Planning Framework.

The methodology Uisce Éireann used for developing our supply demand balance is set out within the adopted NWRP Framework Plan which is viewable at [www.water.ie/NWRP](http://www.water.ie/NWRP). Within the Framework Plan, for this iteration of the NWRP, we have set a 1 in 50 LoS standard for all of our supplies. This equates to a 2% probability of failure or the reliability we require from our supply sources. In practical terms, a large abstraction from a small supply source would have a lower LoS than a small abstraction from a large supply source. In most European Countries, and UK utilities, the Level of Service (LoS) ranges from 1 in 100-year to 1 in 500-year for large urban supplies. Therefore, Uisce Éireann is satisfied that the initial target to improve the resilience of all of our supplies is not inflated and can be relied upon

The National Development Plan, which outlines the Government’s investment strategy for public capital investment, specifies Water Infrastructure as one of the ten Strategic Investment Priorities. Additionally, the need for the development of water resources and water infrastructure is identified under National Policy Objective 63 of the National Planning Framework.

Uisce Éireann is funded through central government and submits business plans to the Commission for the Regulation of Utilities (CRU) for both operating and capital costs for our revenue controls periods,

which typically cover 5-year periods. The outputs of the NWRP will be used in future submissions for funding. It is envisaged that it will take several funding cycles to deliver all works required, so the proposed works will need to be prioritised over future funding cycles.

Critical projects and programmes to address potential public health issues and supply deficit issues are on-going and not impacted or delayed by the delivery of the NWRP. Section 7.6 of the RWRP-SW outlines the process for developing interim solutions to address critical water quality and quantity issues while we deliver our Preferred Approaches through the coming investment plans. Using this process in the interim, short term capital maintenance solutions have been identified for all Water Treatment Plants and these solutions are referred to in Section 6 of the Study Area Technical Reports.

### **12.3 Conclusions on Plan Implementation**

Having carefully reviewed the submissions received on the theme of Plan Implementation Uisce Éireann considered that no updates or further recommendations to the RWRP-SW are required.

For completeness, we note that any relevant clarifications and recommendations from the RWRP-EM consultation have also been considered in the development process and finalisation of the RWRP-SW.

## 13 Option Types

In this Chapter, we summarise the key references in submissions to issues under the broad theme of “Option Types.” Within the overall Option Types theme, we identified seven sub-themes, which we set out in Figure 13.1. We deal with each of these sub-themes in this Chapter, setting out first a summary of the relevant mentions in the submissions, followed by our response. The sub-themes are not dealt with in any particular order.

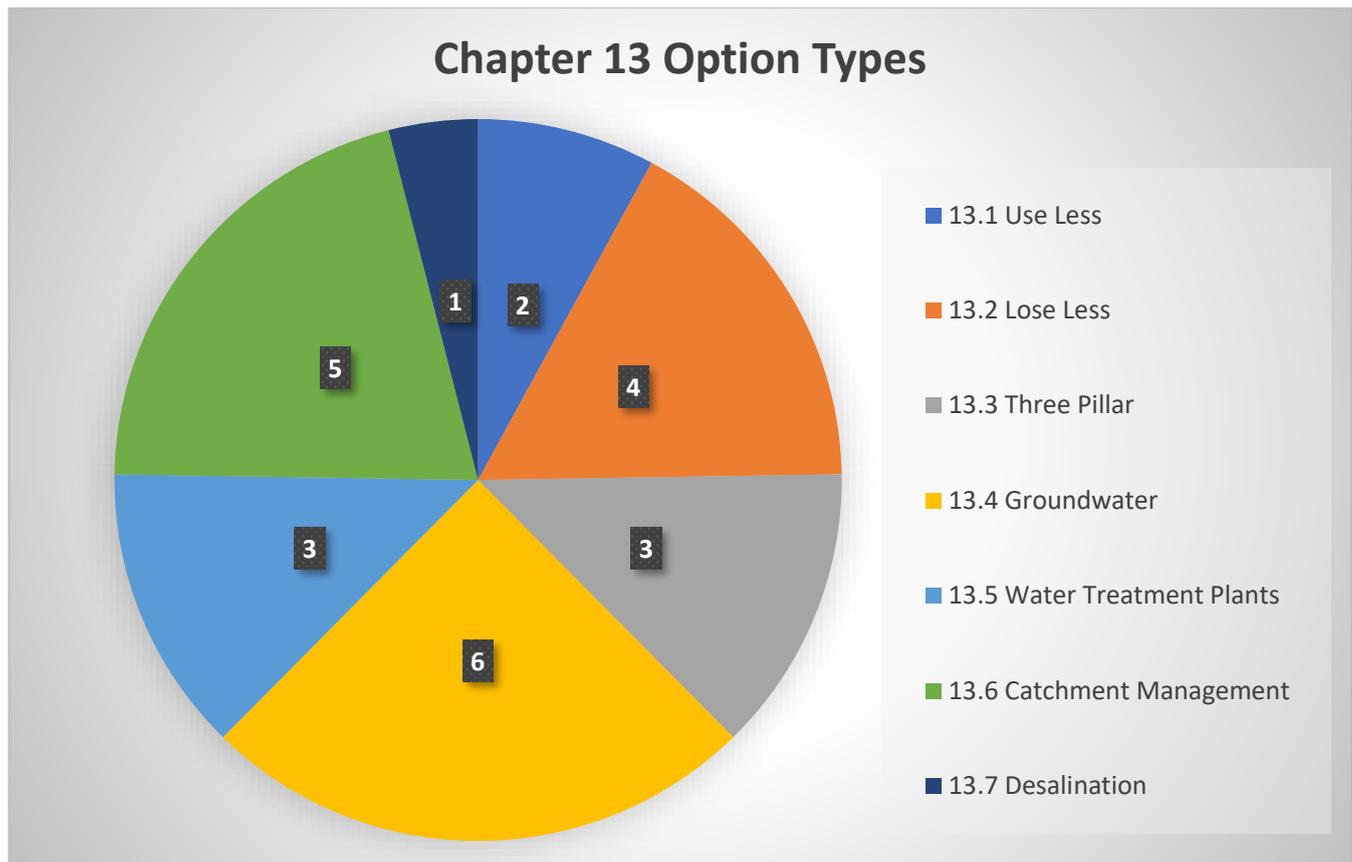


Figure 13.1 Option Types

### 13.1 Use Less

#### 13.1.1 Summary of Use Less Feedback

An Fórum Uisce (AFU) recommended that Uisce Éireann “place a stronger emphasis on water conservation in the South and West Regional Water Resources Plan (SW RWRP), given the deficits in the supply demand balance (SDB), the future challenges (climate change, population growth, exploitation of nearest resources, inadequate infrastructure) and the current levels of energy used by Uisce Éireann”. AFU acknowledged that Section 5.3 in the draft RWRP-SW mentions the Use Less Pillar and water conservation, they found that that Section is short and not substantial enough. “Despite ‘Use Less’ being one of the three pillars proposed in the NRWP, there is little focus on water conservation measures” within the draft RWRP-SW. AFU supported the statement “the Use Less pillar focuses on activities to help us to understand water use habits, influence behaviour, encourage change and to promote the use of water efficient devices and appliances.”

However, AFU commented that the six bullets on page 124 of the Plan outlining the current water

conservation activities, “lacks detail and ambition to support this statement and drive the Use Less Pillar of the Plan”. AFU recommended that efforts to improve water conservation should occur simultaneously to the proposed increases in interconnectivity between the water resource zones (WRZs) in the South West region.

In 2021 AFU commissioned research on A Framework for Improving Domestic Water Conservation in Ireland, (Cotterill and Melville-Shreeve, 2021); the research introduced issues around water scarcity in Ireland and the common misconceptions about water availability. They noted that Ten policy recommendations were proposed as part of this research where a number of recommendations are relevant to Uisce Éireann and the Use-less Pillar and AFU recommended they are incorporated into the RWRP-SW:

- Strengthen water education to support a bottom-up understanding of water (from the processes that underpin treatment and supply, to the energy and resources required to produce drinking water), to bring the necessary behavioural change around a more reasonable water resources management.
- Initiate an awareness campaign to highlight water scarcity in Ireland and potential future threats on our water supply. Educational campaigns can lead to a longer and deeper change in behaviour than traditional policy instruments, so they are considered necessary for the public to understand the challenges and the seriousness of the situation, as well as the benefits for changing certain perceptions and habits.
- The research recommended that a National Water Conservation Team is established, comprised of all agencies and partners responsible for water, to share best practice, skills and knowledge in Ireland. The Forum suggests Uisce Éireann will have a leading role in this team once established, along with the Water Forum.
- Introduce smart metering as a non-pricing strategy to raise awareness of how and where water is used – this could be considered for a pilot project for a community in Ireland to determine if it has a positive impact on water use.
- Identify funding for retrofittable water-saving kits which should be provided free of charge to all domestic households – this could be considered for regions in the South West which already have supply demand issues.

Furthermore, AFU commented that there is little communication around water scarcity and droughts in Ireland. Research commissioned by AFU analysed how drought and water scarcity were communicated by different bodies in Ireland, which found that “water scarcity” and “shortage” in describing drought impact on Ireland's water resources were rarely used. AFU noted one of the key recommendations from this research is for Uisce Éireann to improve their coverage of drought events to increase public interest and conservation action.

AFU recommended that Uisce Éireann “increase their communications and education strategies to increase awareness of water scarcity and drought in Ireland, as a proactive measure rather than in crises management” and is willing to support Uisce Éireann in these efforts.

In order to increase efforts on community engagement and demand management, AFU recommended Uisce Éireann should increase investment in community engagement through the inclusion of community liaison officers across the country, which will support awareness campaigns and allow two-way communication between Uisce Éireann and the public. This, they noted, would allow communities to be involved and co-create community projects for water conservation, supporting an integrated approach to water management and source protection initiatives. Furthermore, AFU recommended that Uisce Éireann develops local community plans to increase knowledge around water scarcity issues in the

region and ways the community can support water conservation measures in the plan.

AFU gave the following recommendations in regards Demand Management and Water Conservation;

- Enhance water education to support a bottom-up understanding of water (from the processes that underpin treatment and supply, to the energy and resources required to produce drinking water).
- Initiate an awareness campaign to highlight water scarcity in Ireland and potential future threats on our water supply as a proactive measure for demand management, rather than crises management.
- Uisce Éireann should establish community engagement liaison officers who could lead community engagement, increasing communication between Uisce Éireann and the public and supporting water conservation measures.
- Pilot a smart metering programme as a non-pricing strategy to raise awareness of how and where water is used in the home, this data could also be very valuable to Uisce Éireann in planning and developing future information campaigns.

Ibec agreed with Uisce Éireann's philosophy of 'use less, lose less' to prevent outages and quality problems and suggested that this should be accompanied by:

- identifying the need for additional investments across a multitude of WRZs
- upgrades to selected WTPs
- extensions to the distribution system

### 13.1.2 Response to Use Less Feedback

Uisce Éireann agrees that water conservation and demand management is extremely important. "Use Less" is one of the three "pillars" that Uisce Éireann has used to develop options to address identified need. Under the 'Use Less' pillar, conservation activities are underway at present, and Uisce Éireann is committed to helping our customers become more efficient in their water use. Presently Uisce Éireann is actively promoting water conservation in schools, business and communities through activities including:

- National and Local Media Campaigns;
- Targeted Sectoral campaigns;
- Green Schools;
- Water Stewardship Scheme;
- First Fix Free Scheme; and
- Uisce Éireann's new Conservation Calculator.

The new Conservation Calculator will assist households to assess their water usage habits and find out how much water they are saving on a daily basis. It also offers useful and practical tips on how to reduce water usage and track their progress. The free tool was developed in response to research, which showed that consumers want additional tools to assist them in conserving water. It is available at [www.water.ie/calculator](http://www.water.ie/calculator)

Uisce Éireann's existing domestic metering network, with coverage of almost 60% of domestic units, has smart functionality, such as automatic drive-by reading, month-end readings, and continuous-flow (leak) alarms. This functionality has been used in our 'First Fix Free' programme.

In 2018 Uisce Éireann carried out a pilot study of sub-metering of apartments, where smart meters were used with fixed radio communications. This trial was primarily to confirm that it is feasible to sub-meter apartment buildings and retrieve usage data, however, it also demonstrated how water usage data can

be made available to the occupants of the apartments. This work was funded by the CRU. <https://www.water.ie/about/research-and-innovation/CRU-Report-Pilot-Technology-Trials-of-Water-Metering-Systems-for-Multi-Unit-Development-30th-Sept-2019-Final-Website.pdf>. Uisce Éireann are currently running a 'smart network' trial in the South Dublin Area.

Uisce Éireann also works with stakeholders to support policy change, such as developing water efficiency standards in Building Regulations and social housing- \_

<https://www.water.ie/conservation/business/business-conservation-tips/construction/>

The RWRP-SW has been updated to provide reference to the fact that reducing demand will result in a reduction of our carbon output and the research carried out by AFU on a Framework for Improving Domestic Water in Conservation in Ireland.

Recent government policy has also allowed for the introduction of the Household Water Conservation Charge or Excess Use Charges to highlight high usage to our customers. This may also encourage further uptake of our First Fix Free Scheme, where customer side leakage is the main cause of excessive use. More detail of our current activities can be found in section Chapter 4 of the NWRP Framework Plan and on our website: <https://www.water.ie/conservation/>.

Uisce Éireann is active in seeking to incentivise customer-side greywater usage initiatives. However Non-potable water supplies, such as greywater, must be kept separate to treated drinking water in distribution networks and domestic-plumbing systems. Therefore, greywater cannot be introduced to the public water supply, to prevent contamination and a parallel network of pipeline would be required to deliver a non-potable water supply.

Therefore, greywater and rainwater harvesting are private side measures, that can potentially result in a reduction in demand (greywater) or a reduction in some peaking in dry conditions. However, the storage volume required particularly to address peaking in drought conditions for greywater and rainwater solutions, can be substantial.

Due to the seasonality of rainfall in Ireland, a significant amount of storage would be required to ensure that rainwater harvesting is a viable option to address demand, particularly during dry periods. The space for the storage required to maintain supplies during dry weather would not be available at a typical domestic property.

Uisce Éireann is supportive of initiatives to improve the use of greywater and rainwater harvesting. Uisce Éireann will progress pilot projects to assess the potential outcomes and benefits of rainwater harvesting over the coming years. We will progress studies through our Innovation team to review the potential outcomes and benefits for conservation measures such as rainwater harvesting and grey water reuse. Consideration must also be given to the operational and maintenance costs of such measures.

We will continue to progress water conservation measures and will engage with other stakeholders in driving the need for policy to support water conservation measures.

Uisce Éireann have committed to becoming more ambitious with regard to this pillar and this is demonstrated in the SEA Environmental Action Plan, Table 10.1 and EAP6 Options and Approach Development Process and Supporting Measures:

- EAP6.2 Consider customer research on the water supply and demand management including water efficiency options development along with local community and stakeholder views.
- EAP6.3 As data is developed to support understanding on water conservation, develop water conservation/water efficiency options to be considered as part of the Options Assessment Methodology for future plan cycles.

## 13.2 Lose Less

### 13.2.1 Summary of Lose Less Feedback

A Stakeholder remarked that the draft RWRP-SW is based on reducing leakage to low levels which, based on their experiences with Uisce Éireann, and the age, condition and topography of the pipelines is not sustainable. They also cited the existing technology in use and commented that there is a reluctance in Uisce Éireann to investigate newer technologies.

Irish Creamery Milk Suppliers Association (ICMSA) supported this goal of annual leakage reduction of treated water from 38% to 23% as it is essential to reduce the amount of leakage as much as possible and perhaps, the target should be more ambitious.

Cork County Council (CCC) commented that the proposed reduction in leakage to 23% by 2033 is very ambitious and will require significantly increased resources. They highlighted that the current Unaccounted-for Water (UFW) in County Cork is 43%, compared with 38% nationally. CCC further highlighted that the 43% UFW in County Cork is a reduction of 6% in 9 years since 2013 and the proposed further reduction from 43% to 23%, is a 20% reduction in 11 years.

### 13.2.2 Response to Lose Less Feedback

In respect of observations number 1 and 3 **above**, Uisce Éireann acknowledge CCCs appreciation of the scale of the leakage reduction target given the age, condition and topography of the pipework and agree that significantly increased resources will be required to meet these targets.

In 2018 (following the roll out of the Leakage Reduction Programme), the rate of leakage annually was 46%; by the end of 2020 it was 40%. By the end of 2021, we had reduced leakage further to 38%. This equates to approximately 2,000 leaks being fixed every month and 166 million litres of water saved every day by the end of 2021.

Leakage reduction requires significant funding and resources, permissions (including road opening licences and land access), excavation works, pipeline construction, investigative works, traffic disruption and effective stakeholder engagement throughout.

Leakage reduction activities are prioritised through using the supply demand balance and delivered via the National Leakage Reduction Programme. Short and medium-term targets have been developed, and as these targets are approached and met; additional targets will be set. Leakage reduction is a key business priority, and the reduction activities used, including, improved operational control, pressure management, calm networks, active leakage control and targeted mains replacement are based on industry best practice. We are also trialing innovative acoustic logging technology, data intelligence systems technology, the use of satellite imaging, sniffer dogs and non-destructive testing. The development of improved data on our distribution networks will allow us to optimise our leakage reduction activities, and to facilitate an expanded programme of targeted water mains replacement. These measures are set out in section 7.3.1 of the Framework Plan.

Uisce Éireann acknowledges the remark from a stakeholder on targets for leakage reduction. Our RWRP is based on three pillars, Lose Less, Use Less and Supply Smarter. The Lose less pillar considers Uisce Éireann's activity to reduce leakage. The target leakage reduction for the South West Region is 57 MI/d by 2034. Uisce Éireann appreciates the scale of data improvements necessary to improve visibility of active leakage control efficiency and recognises the technology and innovation improvements necessary to support meeting the target. Data improvements are continuously being made through the Leakage Reduction Programme. A number of trials in areas such as permanent acoustic sensors/smart networks, may offer more cost-effective solutions in the near future and our Environmental Action Plan has recommendations to support this Section 10.2 of our Environmental Action Plan.

In respect of observation number 2 above. Uisce Éireann welcome the Irish Creamery Milk Suppliers Association (ICMSA) in supporting our leakage reduction targets. Uisce Éireann can confirm as we approach the 2034 targets, our knowledge of the condition and responsiveness of our networks to leakage reduction activities will have improved and as we move towards 2034, we will set further leakage reduction targets based on Appropriate Level of Leakage (ALL) for each supply. This will require WRZ Level and site-specific assessments. These assessments will require data which is not yet available to Uisce Éireann and as such, these targets will be developed as we move closer to 2034 (Section 5.2.1.3 of this Plan).

## 13.3 Three Pillar

### 13.3.1 Summary of Three Pillar Feedback

An Fórum Uisce (AFU) raised concerns about sufficient inclusion of the Use Less Pillar in the draft RWRP-SW. They commented that “approaching these pillars in a more holistic way, could result in simultaneous improvements at many levels”.

Local Authorities Waters Programme (LAWPRO) commented that while Uisce Éireann are addressing the abstraction thresholds and aiming to ensure continuity of supply to consumers, the message would “be strongest towards water conservation at the high-pressure times (climate change – more extended dry periods, droughts) and that message could include cognisance/education that maintaining adequate water quantity implicates water quality by virtue of its potential to impact the physical aquatic environment (ecological status) at the abstraction source and downstream”.

The Southern Regional Assembly (SRA) commented that the NWRP principles of Lose Less, Use Less and Supply Smarter, which align with the RSES, need to be delivered through the final approach to ensure sustainable supply, protect water resources and transition to a smarter, climate resilient region.

### 13.3.2 Response to Three Pillar Feedback

Uisce Éireann-welcomes the observations from AFU and LAWPRO and can confirm that we are committed to developing out our Use Less pillar. Our Use Less pillar focuses on activities relating to water conservation and from the outset we need to improve our understanding of water use habits, and how we can influence behaviour, encouraging change and promoting the use of water efficient devices and appliances. Uisce Éireann are committed to a behavioural change campaign that includes national and local media campaigns and Green Schools among others. Analysis of these campaigns will help us to continuously improve our messaging and communication around water conservation.

In response to the SRA Uisce Éireann can confirm that as a preferred approach is being delivered data on demand analysis will be reconsidered to ensure sustainable and resilient supply.

## 13.4 Groundwater and Surface Water

### 13.4.1 Summary Groundwater and Surface Water Feedback

The Environmental Protection Agency (EPA) commented that the abstraction of waters for drinking water purposes needs to continue to be carefully considered, effectively implemented and monitored, where those waters support protected species and designated habitats within the RWRP-SW region. The EPA commented that the abstraction of water resources should be carried out in accordance with any abstraction licensing legislation, which is currently in draft by the Department of Housing, Local Government and Heritage (DHLGH).

The EPA requested that Uisce Éireann should be mindful of the Water Framework Directive (WFD) related environmental objectives for surface waters and groundwaters in particular proposed further abstractions and new abstractions. They cited the Inniscarra reservoir, for example, as currently at "moderate" status (2013-2018) and at risk of failing to meet the objectives of the WFD. EPA stated that "any increased abstraction should not cause deterioration of water quality status". EPA highlighted that Lough Leane, Muckross Lake, and Ross Bay are at "high to moderate" status and as these lakes are all connected "any further abstraction should be mindful of this connectivity and potential to impact on these lakes, or on the downstream river and/or any hydromorphological impacts arising from development of water treatment plants".

The EPA welcomed the adoption of a national long-term strategic approach to prioritise investment and ultimately to deliver sustainable solutions. However, they noted that the forthcoming abstractions legislation and associated licensing regime will identify the sustainable abstraction yield(s) and will conclude on the conditions that should be met for each abstraction. The EPA recommended that "any decisions made by Uisce Éireann on their abstractions arising from this planning process may be subject to change / conditionality to satisfy the legislative requirements".

The EPA noted that while Uisce Éireann have indicated their modelling has identified abstractions that may be subject to further conditions under the forthcoming licensing regime, "it is possible that the current abstraction volume at other abstractions may also be subject to a reduction in volume abstracted/conditions".

The EPA further noted that a number of existing abstractions are to be decommissioned under the draft RWRP-SW and that it may be advantageous not to fully decommission supplies until the alternative solutions are operational.

The Malting Company of Ireland noted their primary concern is that "future high yielding wells if installed locally, may change flow direction and the water source and such changes may impact water quality and our existing process". Whilst they understand that future third parties should be able to access groundwater reserves, they suggested that groundwater modelling or similar may need to be considered for high yielding wells to assess impacts if any on adjacent wells.

Inland Fisheries Ireland (IFI) noted in relation to groundwater abstractions sustainability assessment should include the impacts of the abstraction on surface water recharge capabilities of any given aquifer. IFI recognised the strategic significance of the proposed RWRP-SW however, they noted it as essential the RWRP-SW and its individual elements are compatible with the maintenance of sustainable fisheries. IFI highlighted that unsustainable abstraction is "likely to result in concentration of pollutants, temperature increases, oxygen decreases, increased risk of fish disease, greater vulnerability to predation and decreased wetted area".

The IFI noted that the draft RWRP-SW proposes for surface waterbodies to apply an allowable abstraction standard of 10% of Q95, except for waterbodies requiring 'High' status where a higher threshold of 5% of Q95 is applied. Allowable abstraction standards for lakes are set at 10% or 5% of Q50, however, the IFI commented that in natural systems a 'one size fits all approach' is not applicable and that "the scale of impact on fisheries of a set abstraction percentage will vary from catchment to catchment depending on a multitude of factors including fish species present, channel morphology and abstraction design to mention just a few".

The IFI stated that a detailed impact assessment approach for each individual abstraction is needed and the assessment should be based on the impact of an abstraction in preventing the fishery resource achieving its full potential for a given water body and other risk-based factors.

IFI noted that the assessment of abstraction impacts on a river basin should include consideration of existing abstractions over the entirety of the catchment as opposed to flows immediately upstream of the abstraction point. They noted that consideration, should also be given to both historical and most

recently available flow data and the duration of various flow ranges for a given system. They further suggested that a scheduling of water provision enhancement measures should prioritise the phasing out of unsustainable existing schemes where there is a current volumetric deficit.

IFI noted that a significant number of existing abstractions are occurring either without the benefit of a Water Abstraction Order as required by the Water Supplies Act 1942 or contrary to the terms of an existing Water Abstraction Order. IFI considered that all abstraction should be regularised without delay in this regard and noted it as essential that Abstraction Orders granted historically must be assessed against present day sustainability standards.

IFI noted that incorporating current flow data is essential, as water levels continue to change driven by climate and land use in many areas; low flow rates, can occur in winter months as well as summer. IFI highlighted that high river and lake temperatures, with their associated risk to fish health, are recorded more frequently and during such periods levels of abstraction must be monitored and adjusted to compensate as necessary.

IFI recognised the business and service benefits to be obtained from the rationalisation and interconnection of various water schemes. However, the noted that these benefits cannot be achieved at the expense of the maintenance of sustainable water volumes in any given catchment. IFI commented that “increased or new water abstractions, be it from ground or surface sources, should not occur in the absence of a Water Abstraction Order and a detailed impact assessment”.

The IFI commented that in reducing the number of Water Resource Zones the abstraction requirement of the supply sources increases. They further commented that abstraction pressures on surface water supply waterbodies such as lakes (and their associated rivers) and rivers, can potentially impact them achieving and maintaining their WFD objectives.

IFI noted that draft RWRP-SW states that review of surface water sites to determine the abstraction thresholds and where they might be exceeded is being undertaken. They raised concerns, that during low flow (95%ile) scenarios when water levels naturally decrease the abstraction pressures can impact on waterbodies and become a potentially significant pressure. They cited an example whereby “in the scenario of a significant abstraction volume from a lake which affects flow levels in the immediate downstream river waterbody and particularly if there is an extended period of little rainfall with high summer temperatures (lower oxygen availability in water), the river biota is impacted as the supporting physico/chemical conditions are affected due to the low water levels. The abstraction pressure in that case may be enough to tip the balance in an already stressed aquatic environment. As river biology and its supporting physico/chemical conditions are used to determine ecological status, and often assessed during summer, the abstraction pressure becomes a very relevant if not ‘significant pressure’ that may determine whether the waterbody can achieve or maintain its WFD objective. This becomes even more critical for high status objective/blue dot waterbodies which are typically more sensitive to such environmental and anthropogenic related stressors”.

IFI noted that while the draft RWRP-SW shows cognisance of this through the necessary assessment of abstraction thresholds, “it’s emphasis can’t be understated or underestimated particularly in light of the legal obligation for all waterbodies to achieve and maintain their WFD objectives but also because of the high importance given to high status waterbodies in the WFD and considering their decline”.

IFI commented that the use of structures or other methods for maintaining water levels in a lake or river used for abstraction cause alteration of natural flow in the downstream waterbody which can and will impact the downstream river biota and supporting conditions, particularly in times of low flow conditions which is now exacerbated by climate change. While these structures or level altering measures control quantity, they can also impact the waterbody in achieving its WFD objective.

A Stakeholder commented that there are deficiencies in the monitoring and treatment of Drinking Water, particularly those from groundwater sources and karst sources, combined with minimal testing information on yield assessment and blockage from iron and manganese in sources.

Cork County Council (CCC) noted that in the draft RWRP-SW that both Inniscarra and the Bandon River are identified as sources where increases in abstraction could take place. CCC noted that this is in line with the findings of the CCC Water Strategy Study 2003 -2028. CCC welcomed the proposed expansion of Inniscarra as they noted it has been underutilised since the Scheme commenced in 1979 and will “meet significant growth in the city and satellite towns; augment Clonakilty and West Cork where rivers are small and being over abstracted; interconnect with the city supply; integrate with the 21 adjacent supplies, and possibly supply Youghal”.

LAWPRO highlighted that they are working with the Department of Housing Local Government Heritage (DHLGH) and others on the development and roll out of Nature Based Solutions (NBS) to treat surface water in urban areas. They noted that this is particularly relevant to Uisce Éireann and the impact of heavy or episodic rainfall events can overwhelm networks where shared surface and sewer systems occur. LAWPRO further highlighted that they are working with Local Authorities (LAs), DHLGH and Department of Rural Community Development to promote Nature Based SuDS (raingardens, swales, bioretention/tree pits etc) to treat and reduce the volume of pluvial water from paved areas entering the networks. LAWPRO noted that “a key action is the promotion of these techniques in public realm, active and other projects led by LAs but also private development”.

LAWPRO commented that it is important that Uisce Éireann “advocate for, facilitate and ideally co-finance projects that could provide a benefit in terms of CSOs and interacts with the above projects at the earliest phases to maximise to benefits to the Uisce Éireann network”. LAWPRO commented that public realm type projects offer a rare opportunity to retrofit and integrate these techniques and this opportunity should be taken and facilitated such as provide drainage plans and work with LAs reworking around underground water services to maximise the benefits to Uisce Éireann.

### **13.4.2 Response to Groundwater and Surface Water Feedback**

Uisce Éireann can confirm that all relevant legislation and regulatory requirements will be taken into account for progression of Preferred Approaches under the RWRP-SW region.

Uisce Éireann acknowledges the importance of the WFD related environmental objectives for surface and groundwater and these criteria are built into the Fine Screening questions as part of options assessment methodology in the Framework Plan. Scores have considered the WFD status of Inniscarra reservoir, Lough Leane, Muckross Lake and Ross Bay at plan level and furthermore, at Project level. Assimilative capacity will be considered in site specific environmental assessments of Preferred Approaches.

Uisce Éireann acknowledges that the licensing regime will identify sustainable abstractions / yields and have called out that we foresee requirements for modifications to the way that UÉ currently abstract from our individual water sources. The effects of the anticipated abstraction legislation are likely to be wide ranging, such that it is not possible to assess them fully until the legislation is published in its final form. Uisce Éireann notes the benefits raised by not decommissioning a source fully until alternative solutions are operational and will develop internal guidance in relation to ensuring that decommission sources is conducted in a strategic way.

Uisce Éireann-can confirm that Preferred Approaches progressing to Project level will consider potential impacts to other water users and information on existing private local wells will be sought as part of key stages of project development.

Uisce Éireann can confirm that Preferred Approaches progressing to Project level will consider water resource assessments as part of a key stage of project development.

Uisce Éireann acknowledges the impact unsustainable abstraction has on aquatic life and we will engage fully with the requirements of the new legislation on abstraction. It is envisaged that site-by-site assessments utilising historical data will be required as part of the proposed abstraction licencing regime. Uisce Éireann will initiate the process of obtaining licences for new abstractions and regularising the licensing position of existing abstractions once the relevant abstraction legislation is in force and the applicable regulatory process is in place.

Within our water resources planning process, we strive to improve environmental outcomes including the transformation of our existing supplies and migration to sustainable abstraction through our investment plans. We take a conservative approach when conducting desktop assessments of Preferred Approaches using the methodology set out in Appendix C of the Framework Plan. Any additional legislative and regulatory requirements will be incorporated into the NWRP based on the monitoring and feedback process set out in section 8.3.8 of the Framework Plan. Uisce Éireann appreciates the concerns raised by IFI in relation to alignment with sustainable fisheries and we are committed to working with the relevant organisations to scope and conduct the required investigations to determine the degree of sensitivity of river waterbodies 'At Risk' of over abstraction which may lead to alterations in water management at these sites.

Uisce Éireann also applied the EPA's National River typology characterisation map for a '7.5%' standard on certain typologies at set times of the year. This approach has been adopted for options assessment purposes, but Uisce Éireann acknowledges the inadequacy of resolution of such mapping at Project level and can confirm that more sensitive methodologies/ datasets will be utilised when progressing Preferred Approaches to Project level. Uisce Éireann abstractions and Private GWS abstractions were considered in cumulative assessments of allowable abstraction insofar as existing datasets allowed. However, a greater emphasis will be placed on more thorough/ in depth investigations to other water users and better site-specific flow data at progression of Preferred Approaches to Project Level.

It is envisaged that Drought Management Plans will be developed for Water Resource Zones which will consider water provision enhancement measures.

The Abstraction Order requirements under the Water Supplies Act 1942, are associated with securing water rights and agreeing compensation with local landowners who may be impacted by the loss of water and does not consider any ecological needs. This legislation also only applies to surface water sources. Constraints on Uisce Éireann's abstractions are more commonly set through Planning Applications. The conditions in the planning applications may govern total volumes abstracted, compensation flow requirements or other aspects which affect the way a source is operated.

In response to the IFI and the scheduling of phasing out sustainable supplies further to consultation with the EPA, we have assumed that the default position for any new abstractions, developed after the licensing regime is in place, will be the issue of licences only for quantities within the limit, which is considered appropriate for the flow and ecological status of the watercourse. Furthermore, where an abstraction is identified as potentially causing an impact to a waterbody's status, further studies will be undertaken in conjunction with the EPA and other stakeholders as appropriate. Following these investigations, if an abstraction is confirmed to be affecting a waterbody status, solutions will be delivered through the next cycle of RBMPs and future NWRPs, which could include ceasing certain abstractions.

Uisce Éireann acknowledges the potential impact of in-river structures to impound water and can confirm that Preferred Approaches considering increase/ new abstractions utilising such structures will have detailed environmental assessments considering any potential impacts on WFD objectives.

Uisce Éireann welcomes CCCs support of the Preferred Approach for Clonakilty and West Cork.

In response to NFGWS Uisce Éireann recognises the increasing importance of nature-based solutions and catchment measures in relation to improving water quality and reducing risk across our

supplies. Uisce Éireann is an active participant in catchment-based initiatives and where possible will incorporate NBS solutions at project level. One of the key objectives of Uisce Éireann's Biodiversity Action Plan is the promotion of nature-based solutions (NBS) for water protection and wastewater treatment, which have significant potential to deliver biodiversity. Some examples of NBS being utilised by Uisce Éireann in the South West Region are detailed in Section 2.3.9. Uisce Éireann welcomes collaboration from external stakeholders on research and innovation in relation to NBS.

Uisce Éireann acknowledge the deficiencies in current monitoring and treatment of drinking water. We are continuously improving data collection through improved utilisation of existing monitor equipment, identifying gaps and installing new monitoring equipment. Through our groundwater programmes we are improving our information on yield assessments from groundwater sources. Through our raw water monitoring programme we will be developing a better understand of the requirements for operational monitoring and maintenance plans for our groundwater sources especially in relation to blockage from iron and manganese.

## 13.5 Water Treatment Plants

### 13.5.1 Summary of Water Treatment Plants

A Stakeholder commented that since Uisce Éireann took charge there has been a very large amount of rationalisation towards larger Water Treatment Plants (WTP) and that in many cases the sources have been extended beyond their sustainable yields.

Cork County Council (CCC) commented that given the scale of de-commissioning WTP's proposed, it would be important that the RWRP-SW provides some clarity on what is planned for the decommissioned WTPs or other water infrastructure that will no longer be required. CCC noted that for those schemes where new infrastructure is to be provided, CCC would encourage early engagement in the development of project proposals.

KCC carried out a review of the WTP Overview and Technical Reports relevant to their functional area and provided relevant feedback based on this review. A collation of this feedback is as follows: (Note KCC's feedback in relation to Preferred Approaches is provided in Section 10.2 of this Consultation Report)

- An Ghraigh Cloichear WTP - KCC noted this WTP has not been rationalised and water is now sourced from Tobar Bhreindain.
- Ballyheigue (Ardfert) WTP - these upgrade works are completed and currently providing data to the EPA to remove from Remedial Action List.
- Brosna / Knocknagoshel WTP - source protection important as highlighted in feedback to Uisce Éireann in December 2020
- Fenit WTP - this plant has been rationalised and the WRZ is now using Central Regional water

### 13.5.2 Response to Water Treatment Plants Feedback

Uisce Éireann acknowledges that many supplies are currently operating at unsustainable levels. The RWRP-SW aims to address need for all WRZs across supply, demand and water quality. Uisce Éireann notes the benefits raised by not decommissioning a source fully until alternative solutions are operational and will develop internal guidance in relation to ensuring that decommission sources is conducted in a strategic way.

Uisce Éireann welcomes KCC's review and submission on the RWRP-SW. Feedback specifically on the WTP Overview acknowledges some rationalisations that have already taken place owing to the time lag between publication of the draft RWRP and progression of work components for some WRZs. These

WTPS were in operation at the start of the optioneering process. We will provide a reference in Appendix 1 to 3 of the RWRP-SW, where appropriate, to note that these WTPs are now decommissioned and we will also note that source protection works should be considered for the Brosna / Knocknagoshel WTP. The WTP Overview details specifically the individual WTPs and not the WRZ, Preferred Approaches for WRZs are detailed in the Appendix 1 and 3.

## 13.6 Catchment Management

### 13.6.1 Summary of Catchment Management Feedback

An Fórum Uisce (AFU) recommended that a more holistic, integrated approach is adopted in the context of Integrated Catchment Management and Framework for Integrated Land and Landscape Management (FILLM), and to include source protection measures. This they noted could reduce dependencies on infrastructural and treatment solutions to achieve adequate water quality. AFU recommended that Uisce Éireann outline the necessary engagement with leading agencies to address these source protection measures, with more consideration of 'front of pipe solutions.' AFU commented that this transition will require skilled personnel; and AFU therefore recommended the Uisce Éireann increase their staff capacity to include scientists with expertise in integrated catchment management.

Inland Fisheries Ireland (IFI) highlighted that in Study Area H, the Finnow river downstream of Lough Guitane is a catchment of interest and they raised concerns regarding Lough Guitane fish pass have been highlighted to Glan Agua and Kerry County Council over several years as the compensation flow causes issues. IFI commented that they still await confirmation that fish have freedom of movement throughout the year, and measures such as a temporary fish counter should be included in remedial proposals where such issues arise.

IRD Duhallow detailed their history of working to improve and maintain water quality in the Duhallow region. This includes

- LEADER-funded environmental projects such as the Duhallow Anaerobic Digester Hub Feasibility Study, Duhallow Water Biodiversity Training Project (which saw community groups formed and trained in water biodiversity from eight Duhallow sub-catchments) and Communities Planting for Biodiversity (where training and plans were provided to several community groups such as local Tidy Towns groups to enable them to maximise nature in their towns and public spaces).
- IRD Duhallow have also successfully coordinated two LIFE Nature projects, the SAMOK LIFE project (2010-2014) and the Raptor LIFE project (2015-2019), both of which focussed on the Upper Munster Blackwater and some of its tributaries.
- At present IRD Duhallow is coordinating a five-year (2019-2023) €1.47m EIP-Agri project, the Duhallow Blue Dot EIP Project, which focusses on the Rivers Allow, Dalua, Ensnare, Owenkeal, Glenlara and Glashawee, all of which are within the Water Framework Directive (WFD) sub-catchments DALUA\_SC\_010 and DALUA\_SC\_020.
- IRD Duhallow is also presently coordinating a one-year €198,000 EIP-Agri project, the Owentaraglin River EIP, which focuses on the River Owentaraglin within the Water Framework Directive sub-catchment Blackwater (Munster)\_SC\_020. Both EIP-Agri projects use a results-based approach, coupled with a capital actions approach, to work alongside the farming community to protect rivers within Blue Dot Catchments.

IRD Duhallow highlighted that much of the Duhallow Blue Dot Project focusses on the River Allow with many participating farmers implementing measures on farmland adjacent to this river to improve water

quality. This is particularly important for human health on rivers such as the Upper River Allow where surface water is currently abstracted for drinking water.

IRD Duhallow recognised that the river Allow Water Treatment Plant (WTP) will be decommissioned under the proposals in the draft RWRP-SW which may reduce some of the pressure facing WFD Waterbodies Allow\_050 and Allow\_060, where abstraction is a significant pressure under the third cycle of the River Basin Management Plan. IRD Duhallow noted that the River Allow is classified as a Margaritifera Habitat and surveys commissioned by IRD Duhallow have demonstrated that the River Allow is an important habitat for Freshwater Pearl Mussel. They requested the decommissioning of this WTP should be of high priority and a date should be provided in the RWRP-SW.

Cork County Council supported the integrated catchment management approach to protection of water quality across the South West region generally.

LAWPRO highlighted recent incidents at a number of Uisce Éireann WTPs in the South West have occurred where Sludge discharges have taken place and come to their attention via the public. On follow up with both the EPA and Local Authority in question, LAWPRO noted it as evident that these are not an isolated issue and need to be addressed immediately. LAWPRO understands that the EPA previously instructed Uisce Éireann to address these plants in Freshwater Pearl Mussel catchments with immediate effect. In particular, they noted the incidents relating to Mallow and Freemount are of particular concern, the latter having been subject to a very high-profile incident that was rectified with a management plan put in place. LAWPRO noted that ongoing management at these sites by Uisce Éireann has been highlighted as a key issue requiring addressing.

LAWPRO welcomed the recent involvement by Uisce Éireann in utilising Nature Based Solutions to address wastewater discharges we encourage greater use of these solutions, especially for sensitive and vulnerable catchments areas – high status objective (Blue Dot), shellfish waters and Freshwater Pearl Mussel catchments.

LAWPRO suggested that greater involvement and collaboration by Uisce Éireann in addressing issues affecting the quality of raw water reaching drinking water plants – i.e., deeper involvement in catchment management. They cited an example where “upcoming Agri-environment schemes and Water EIP – where Uisce Éireann might highlight high risk areas in drinking water supply catchments and in source protection areas, thereby positively supporting the targeting of appropriate measures in a time effective manner might be explored”.

### **13.6.2 Response to Catchment Management Feedback**

In 2021, Uisce Éireann published our first source protection strategy for pesticides (Available to view here: <https://www.water.ie/projects/strategic-plans/interim-pesticide-strategy/>). Conventional treatment processes are not designed to remove pesticides from raw water sources, therefore the risk from pesticide use activities needs to be understood and managed in the catchment. The aim of the strategy is to protect drinking water sources from pesticide contamination and to improve the quality of sources, in order to safeguard human health and the aquatic environment. We plan to achieve this by working collaboratively with all relevant stakeholders (including the National Pesticides and Drinking Water Action Group (NPDWAG)), who share the common goal of reducing the risk of pesticide contamination to public drinking water sources.

Uisce Éireann is also actively involved in pilot source protection projects in Ireland to trial catchment scale interventions to reduce the risk of pesticides causing exceedances in water supplies. The two key projects are the Source to Tap Project and the Pilot Drinking Water Source Protection Project. More information on these projects is provided in Box 2.4 of the RWRP-SW. Further testing has been provided in Section 5.4 to provide more information on Source Protection.

As part of the Recast of the Drinking Water Directive transposition an Expert Group has been established by the DHLGH to make recommendations to the Minister regarding a new approach to drinking water source protection. This will be a holistic approach for risk assessment and risk management of water supplies that recognises the catchment is the first line of defence for source protection.

Uisce Éireann are working to implement the proposed new regulations and guidelines for drinking water source protection that includes a review of resources and expertise in this area and will be keen to collaborate with Cork County Council in the South West region. As part of this, we are also developing risk assessments for our drinking water abstraction catchments through the Drinking Water Safety Plan approach. Once completed we will be happy to share these with LAWPRO and other stakeholders to help prioritise drinking water catchments and areas within them requiring catchment management measures.

Uisce Éireann is engaging with IFI to develop a national programme of works, to prioritise fish passage at weirs associated with our abstractions to address fish movement throughout the year. We work collaboratively with stakeholders who share the common goal of reducing the risk of pesticide contamination to public drinking water sources. The role of such EIP projects is vital in this. Implementation of Preferred Approaches will be progressed on a phased basis in consultation with our stakeholders and reflecting the greatest need.

The timeline for decommissioning these abstractions will be determined through the capital investment process. When prioritising projects through Uisce Éireann's Capital Investment Plans we will ensure these decisions are based on dialogue with the EPA that will consider the delivery of the Water Framework Directive objectives.

As part of our risk-based approach, incident plans are also being developed for our supplies. The purpose of the Drinking Water Safety Plans (DWSPs) and inclusion of water quality risk in our NWRP, is to take a proactive approach to reducing the incidence and risk of non-compliance in our water supplies. We will also seek to reduce risk through catchment measures and source protection. Uisce Éireann is an active participant in catchment protection and will proactively engage in this process over the coming years. Further information on our source risk assessment is included in Box 5.2 in section 5.5 and cross referenced in section 5.9 of the Framework Plan. Implementation of source protection measures will require further collaboration with several stakeholders including, riparian owners, industry groups and the agricultural, forestry and environmental sectors and Teagasc. This participation will include source risk assessments for all our supplies, progression of DWSPs and integrated catchment management measures.

Uisce Éireann is aware of issues at Mallow WTP and can confirm that a project is being handed over to delivery to advance further site investigation works to inform solutions to address these issues. A facility to address sludge discharges was installed in Freemount in 2019. However, the capacity of this system in question will be investigated as a forthcoming project on this site advances.

Uisce Éireann is fully supportive of nature-based catchment management solutions to protect and improve drinking water sources and have expressed interest in being involved in the RBMP proposed multi-agency National Technical Implementation Group. Examples of our NBS in the SW region can be found in Box 2.4 of Section 2 of the RWRP-SW.

Uisce Éireann is supportive of efforts to protect and restore Ireland's high status objective water bodies and is represented on the Blue Dot Catchments Programme steering committee.

## 13.7 Desalination

### 13.7.1 Summary of Desalination Feedback

The Department of Agriculture Farming and Marine (DAFM) commented that while they noted desalination plants are not included in the preferred option, they are concerned they are included as a possible option in the draft RWRP-SW.

DAFM highlighted the possible impacts the outflows of desalination plants may have on fisheries and coastal nursing/spawning species. They commented that “the hypersalinated outflows would need to be treated appropriately to avoid any adverse impact on fish stocks ... in the event that there were large losses of fish and fish eggs, this would be a major cause for concern ... and any other general impacts on commercial sea fisheries would need to be screened into the environmental assessment”.

### 13.7.2 Response to Desalination Feedback

The purpose of option development is to investigate the full range of potential solutions that can address the identified need of the WRZs within the region. Given the scale of deficits and the regional climatic shortages around of freshwater around Ireland, desalination, as an increasingly utilised technology, cannot be ignored.

Uisce Éireann can confirm that high level environmental assessments, by way of the fine screening assessment stage have considered the potential impact of backwash water and this would be investigated extensively should any options progress to project level. However, there is currently no desalination Preferred Approach for the South West Region.

## 13.8 Conclusions on Option Types Feedback

Having carefully reviewed the submissions received on the theme of Option Types, Uisce Éireann considered that no further recommendations to the RWRP-SW are required. For completeness, we note that any relevant clarifications and recommendations from the RWRP-EM consultation have also been considered in the development process and finalisation of the RWRP-SW.

### 13.8.1 Clarifications on Option Types Feedback

Uisce Éireann will update Appendix 1-3 with any Water Treatment Plants that have been decommissioned and will reference the Source Protection works required for the Brosna and Knocknagoshel WTP.

## 14 NIS

In this Chapter, we summarise the key references in submissions to issues under the broad theme of “NIS.” Within the overall NIS theme, we identified three sub themes, which we set out in Figure 14.1. We deal with each of these sub-themes in this Chapter, setting out first a summary of the relevant mentions in the submissions, followed by our response. The sub-themes are not dealt with in any particular order.

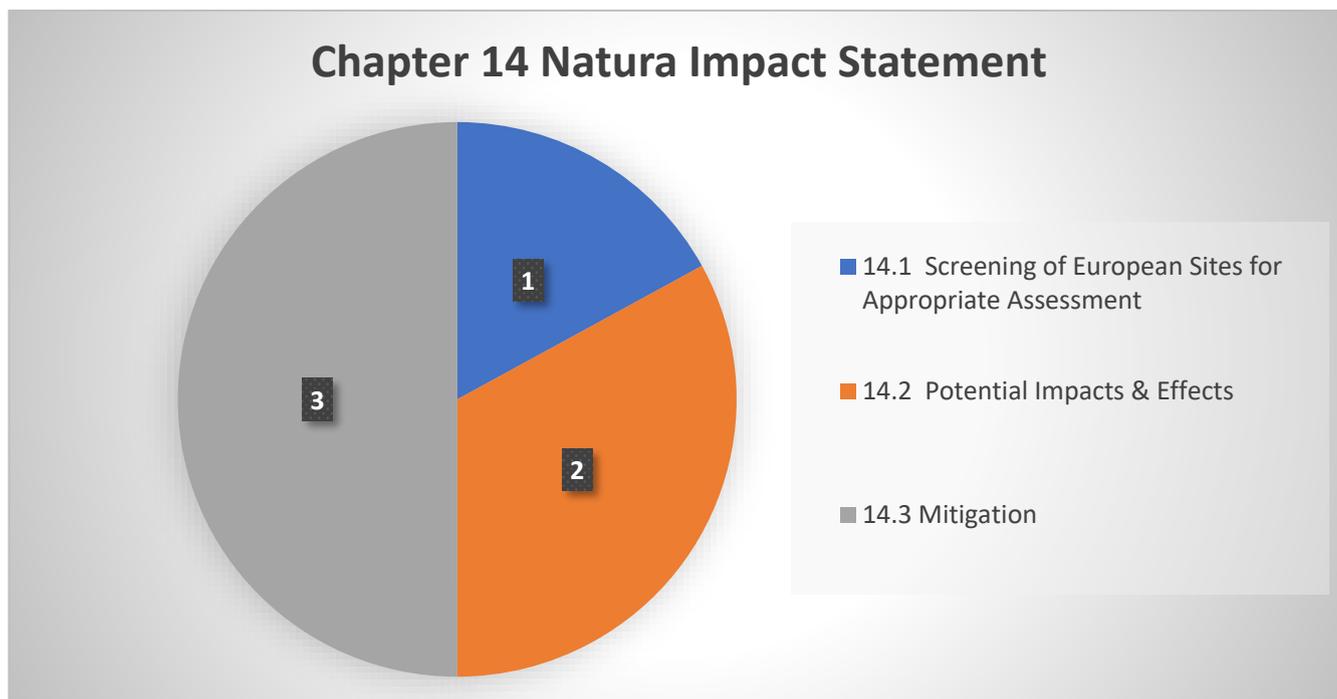


Figure 14.1 NIS

### 14.1 Screening of European Sites for Appropriate Assessment

#### 14.1.1 Summary of Screening of European Sites for Appropriate Assessment Feedback

The Marine Plan Team (MPT) from the Department of Agriculture, Environment and Rural Affairs (DEARA) Marine and Fisheries Division agreed with the Natura Impact Statement conclusion for the draft RWRP-SW that, based on a plan-level assessment and with implementation of appropriate mitigation for protecting European sites, there will be no adverse effects on the integrity of any European site(s), either alone or in-combination with other plans or projects as a result of progressing Preferred Approach options within the draft RWRP-SW.

#### 14.1.2 Response to Screening of European Sites for Appropriate Assessment Feedback

We welcome DEARA’s Marine Plan Team’s support of the Natura Impact Statement conclusion for the draft RWRP-SW. The Appropriate Assessment (AA) process resulted in a determination at plan level that with implementation of appropriate mitigation for protecting European sites, the RWRP-SW would not give rise to adverse effects on the integrity of any European site(s). We confirm that any options that are progressed to project level will be subject to individual environmental assessments, including Environmental Impact Assessment and Appropriate Assessment (as required).

## 14.2 Potential Impacts and Effects

### 14.2.1 Summary of Potential Impacts and Effects Feedback

The Department of Housing, Local Government and Heritage – National Parks and Wildlife Services (DHLGH – NPWS) commented that the draft RWRP-SW, specifically the proposed abstraction from Lough Leane within a National Park Special Area of Conservation (SAC) and a Biosphere designation, should be further assessed. They stated that “it cannot be scientifically ruled out that the draft RWRP-SW proposal to abstract up to 26,000 m<sup>3</sup>/day from Lough Leane will not adversely affect the integrity of the Killarney SAC”.

The DHLGH-NPWS were critical about leaving over the assessments to project stage citing the last clause of Article 6(3) of the EU Habitats Directive and recommended that the draft RWRP-SW is not adopted until the preferred option is revised or this option is fully assessed in sufficient site-specific detail.

The DHLGH – NPWS referenced the new Water Treatment Plant (WTP) with >10,000 m<sup>3</sup>/day (up to 26 Ml/day) capacity proposed for Killarney, to abstract water from Lough Leane. They commented that Lough Leane “has been designated for a range of habitats and species, of which the fish Killarney shad, the aquatic plant slender naiad, and the habitat types of mesotrophic lakes and alluvial woodland are of particular importance in Lough Leane.”

In addition, DHLGH – NPWS noted that Lough Leane is part of Killarney National Park a Category II National Park, and the Kerry Biosphere, a UNESCO designation. They highlighted that the NIS does not specifically mention Lough Leane (the target of the preferred 26,000 m<sup>3</sup>/day abstraction) in the detailed assessment of the impact, and in particular, the issues being experienced in the lake at low summer water levels in drought years (such as 2018).

In the Office of Public Works (OPW) flow data from Laune Bridge, the DHLGH – NPWS noted that it appears that “abstraction of 24,000 m<sup>3</sup>/day would amount to 4-5% of the low flows during October 2021 and June 2022.” However, they stated that this figure does not take into account cumulative effects of abstraction throughout the year, and in particular, the low flows during a drought year such as 2018. They noted that this 2018 flow data is available but is not referenced in the Natura Impact Statement (NIS).

The DHLGH – NPWS commented on the slender naiad is an aquatic plant listed in Annex II of the EU Habitats Directive and protected under Section 21 of the Wildlife Acts 1976-2021. They referred to Roden et al. (2021: 61) who stated that the species is “near extinction compared to surveys in 2013.” The DHLGH – NPWS noted that this may be due to the in-combination effects of waste-water discharge at low lake levels during summer drought, and climate-change increases in labile phosphate from agricultural sources, as water column algal sedimentation has also increased since 2018 in Ross Bay. They commented that the species would be at further risk by proposed water abstraction from Lough Leane.

The DHLGH – NPWS acknowledged that the NIS lists slender naiad as a recipient of potential impact due to lower water levels (p. 151 of the draft RWRP-SW). However, they requested further assessments on the species from the effects of both water abstraction and waste-water discharge during drought years. They further noted that the effects of increased summer droughts due to the effects of climate change should also be considered regarding impacts on this species.

Cork County Council (CCC) noted the plans in the draft RWRP-SW to maintain and increase current rates of groundwater/surface water abstraction at several sites, and to develop new abstraction points at some locations in the county. CCC noted proposals to develop new abstraction points and to increase abstraction within sensitive catchments such as the Blackwater and other locations. CCC acknowledged in the NIS that some of these proposals have the potential to give rise to significant negative effects on European sites, such as likely effects associated with the construction of new infrastructure, or the

upgrading of existing infrastructure and the impacts associated with the operational phase (i.e., impacts on water levels, water quality and hydrology).

CCC commented that potential effects associated with the operational stage, are less certain when “abstractions from surface water and/or groundwater can have the potential to affect hydrology and water quality which can have significant and adverse consequences for aquatic habitats and species.” CCC noted that in the NIS it is stated that such projects will be subject to further assessment including Yield Assessment, Hydrological and Hydrogeological Modelling and the examination of lake/groundwater catchment at detailed design stage. They acknowledged the requirement for these assessments to determine whether individual projects are viable and the extent of groundwater/surface water which can be sustainably abstracted at individual locations. However, CCC commented that until this work is completed for projects within sensitive zones, there is uncertainty as to the level of abstraction which can be achieved and whether these projects will be viable and sustainable.

They noted the conclusion of the NIS is subject to the implementation of mitigation measures and further assessment, and there will be no adverse effects on the integrity of any EU site. CCC recommended however, that projects which require further detailed analysis to inform whether their development is compatible with the requirements of the Water Framework Directive (WFD), Habitats, and Birds Directives should be clearly indicated as such in the final RWRP-SW.

#### **14.2.2 Response to Potential Impacts and Effects Feedback**

With reference to the DHLGH-NPWS’ comments regarding the proposed abstraction from Lough Leane, we clarify the Preferred Approach considers an abstraction from the lower Leane catchment. The draft RWRP-SW will be amended accordingly.

The identification of a Preferred Approach at a plan level does not confer any consent to develop a project, nor does it preclude other

options being considered subsequently. Assessments at this stage are desk based and plan level. This is the approach as set out in our Framework Plan. Environmental impacts and costing of projects are further reviewed at project level where alternatives will need to be considered as part of the Environmental Impact Assessment process in the usual way.

Preferred Approaches are assessed at plan level using the best data and information available at the time. This data is used in the fine screening scoring for European sites that is completed as part of the multi-criteria assessment of options. The score identifies at a high-level, potential for Likely Significant Effects (LSEs) from an option.

A fine screening score of -3 was assigned to the abstraction from the lower Leane catchment in recognition that the option has potential for LSEs and there remains uncertainty around the potential impacts. As explained in Table 2.2 of the NIS, although deemed feasible through Stage 2 of the Appropriate Assessment (AA) process, the option will require detailed site investigations if it is progressed to project level.

Slender naiad has been considered in the assessment of the potential impact of abstractions from the lower Leane catchment. Reference is made to the species in Appendix C, D and F as well as Section 6.2.2 of the NIS. For clarification, Section 6.2.1, which describes the appraisal of LSE for Study Area H (which includes the lower Leane catchment), will be updated to specifically refer to slender naiad and Killarney shad as potentially impacted species.

Sections 6.3.3.2 and 6.3.5 of the NIS, which outlines mitigation measures for species and habitats (this would include slender naiad) explains that site-specific investigations will involve environmental assessments and modelling of the impact of proposed abstractions during drought conditions and will consider the potential increased frequency of the droughts due to the effects of climate change. The

adoption of the Plan is on the basis that project level assessments confirm the project will not adversely affect the integrity of the site. Further information regarding project level assessments is provided in Section 6.4.3 of the draft RWRP-SW.

In assessing the feasibility of the proposed abstraction from the lower Leane catchment, we have used the OPW flow data from Laune Bridge. Further assessments of the potential impact of abstractions on the Lough Leane water level will be undertaken once standards are developed under the new legislative requirements for abstractions. The abstraction limits will be adjudicated by the Environmental Protection Agency, as the environmental regulator.

Uisce Éireann recognises that a more detailed site-specific assessment undertaken at project level may result in the Preferred Approach being assessed as unfeasible. If this is the case, alternative feasible solutions identified through the Option Development Process will be considered. The feasible options that provide alternatives to abstraction from the lower Leane catchment (to supply the Central regional (Lough Guitane) and Mid Kerry WRZs) are listed in Appendix 1, Table 5.2 and Table 5.4 of the draft RWRP-SW. These include increased or new groundwater abstractions and new surface water abstractions from Muckcross Lake, Lough Carragh or from River Flesk, and increased storage volume at Lough Guitane. No option will be progressed without further project level assessments to confirm their feasibility.

We acknowledge Cork City Council's comment regarding the potential adverse consequences for aquatic habitats associated with abstractions. As stated in Section 7.4.5 of the draft RWRP-SW, when developing our Preferred Approach across the region, we considered solutions to improve the sustainability at the sites that were assessed to potentially exceed sustainable abstraction thresholds. Uisce Éireann's assessment identified 54 existing sites where potential abstraction reductions may be required under the forthcoming abstraction legislation. Our commitment to achieving sustainable abstraction thresholds is demonstrated by the abandonment of nine (9) of the 54 sites and the proposal of solutions that will facilitate the reduction of supplies or reduce pressure on sites by supplying projected increases in demand with alternative sources. We recognise that further work may be needed with regard to sustainable abstractions under the new legislative requirements with some sensitive sites requiring alternative supply solutions.

As stated in Section 6.3.3.2 of the NIS "Where preferred approach options are within or hydrologically/hydrogeologically linked to European sites, detailed surveys of habitats within the affected area will be undertaken to locate and avoid sensitive habitats to ensure there is no loss of QI Annex I habitats or Annex II species". Section 6.3.5 also states that "this list of assessments is non-exhaustive and must be reviewed at the project stage, taking into account project-specific survey information or studies."

Regarding Cork City Council's recommendation that the RWRP-SW should indicate projects that require further detailed analysis to confirm compatibility with the Water Framework Directive and Habitat and Birds Directives, we refer to Table 4.3, Table 4.6 and Table 4.9 in the NIS of the draft RWRP-SW. These tables list the fine screening score against the Biodiversity (European sites) criteria for each option across the three study areas. A -3 score identifies projects that have been assessed to have Likely Significant Effects (LSEs) that may be harder to mitigate or require significant project level assessment. Additionally, Figure 7.14 of the draft RWRP-SW displays the surface water abstractions sites where potential abstraction reductions may be required in the future to meet the WFD requirements. As explained in Section 7.4.5.1, these assessments are high-level and based on a conservative estimate of sustainable flow requirements.

## 14.3 Mitigation

### 14.3.1 Summary of Mitigation and Monitoring Feedback

The Department of Housing, Local Government and Heritage – National Parks and Wildlife Service (DHLGH – NPWS) noted that NWRP implementation is an action of the National Biodiversity Action Plan 2017-2021 (Action 4.2.2 - Uisce Éireann implement its Water Services Strategic Plan (2015-2040)). The DHLGH – NPWS advised that the performance indicator ‘environmental monitoring of the plan’ must be provided for in the RWRP-SW and must monitor the effects of the plan implementation on the environment.

The DHLGH – NPWS emphasised that there is an implicit obligation under Article 6.3 of the EU Habitats Directive and the Aarhus Convention to ensure that assessments are understandable by the public. They stated that the wording of some of the tables in the NIS, critical to the reasoning required for the assessment, are difficult for a non-technical person to comprehend (e.g., Table 6.2.6: “Summary of potential Likely Significant Effects (LSEs) from option SAH-Group 531 (page 181, 182, 204) on SACs with the potential to give rise to Adverse Effects on Site Integrity (AESI)”).

The DHLGH – NPWS further noted that Section 6.3.2 and 6.3.3, critical to reasoned decision-making, are not easy to understand in the absence of site-specific reasoning (pp. 169-170 of the NIS).

Cork County Council (CCC) commented that potential effects on European sites associated with the construction stage, where new Water Treatment Plants (WTPs) or upgrades to WTPs are proposed are generally of lower concern compared with the operational phase. CCC noted that usually, such impacts can be avoided or mitigated through good siting and design of physical infrastructure, the implementation of environmental controls during construction stage and the control on timing of works to minimise risk of causing disturbance to certain species. CCC have a high level of confidence that such mitigation measures can be implemented and will be successful.

The EPA recommend that Uisce Éireann should screen any future amendments to the RWRP-SW for likely significant effects, using the same method of assessment applied in the “environmental assessment” of the RWRP-SW.

### 14.3.2 Response to Mitigation and Monitoring Feedback

The Mitigation and Monitoring Plan for the draft RWRP-SW is outlined in Section 10 of the Strategic Environmental Assessment (SEA) Environmental Report and includes Mitigation Measures, an Environmental Action Plan and an Environmental Monitoring Plan. Performance against the monitoring plan targets will also inform the next cycle National Water Resource Plan and SEA process. Commitment to implement the Environmental Action Plan and the Monitoring Plan is provided in Section 9 of the draft RWRP-SW.

The Natura Impact Statement (NIS) has been prepared to support the Appropriate Assessment (AA) of the implications of the draft RWRP-SW for relevant European site(s). Accordingly, the NIS presents data and information on the proposed projects as assessed at plan level, and reports on the scientific examination of the draft RWRP-SW and the potential effects on the European site(s).

The NIS has been prepared in accordance with the requirements set out under Article 6.3 of the EU Habitats Directive, with due consideration given to the presentation and discussion of the analysis to ensure the outcomes are understandable by a non-technical person. For example, a complete glossary is included to explain terminology that is specific to an Appropriate Assessment. This includes definitions for the Likely Significant Effects (LSEs) and Adverse Effects on Site Integrity (AESI). To assist understanding of the types of mitigation measures that could be employed to avoid Likely Significant Effects, the NIS provides examples of avoidance measures, best practice construction measures and operational regimes in section 6.3.3. Additionally, option specific measures have been identified for

options with highly sensitive Qualifying Interests (QI) species. Specific mitigation measures will be identified for all options at the project level, whereby further detailed assessments will determine the most appropriate mitigation requirements.

As outlined in Section 6.3.3.2 of the NIS to the draft RWRP-SW, the assessment of potential effects on European sites associated with the construction stage recognises impacts can be avoided or mitigated through good siting and mitigation measures. All options will be subject to project level environmental assessments, including the potential to affect European sites during construction. These assessments will consider or identify best practice construction measures that need to be incorporated into scheme design and/or planning to avoid or mitigate potential effects.

Uisce Éireann confirms that any future amendments to the RWRP-SW will be screened for Likely Significant Effects to European sites using the same method of assessment applied in the environmental assessment of the draft RWRP-SW.

## 14.4 Conclusions on NIS Feedback

For completeness, we note that any relevant clarifications and recommendations from the RWRP-EM consultation have also been considered in the development process and finalisation of the RWRP-SW.

### 14.4.1 Clarifications on NIS Feedback

Section 7 of the RWRP-SW and Section 5 of the SAH Study Area Technical Report have been updated to refer to the abstraction from the lower Leane catchment as the Preferred Approach for the Central Regional (Lough Guitane) and Mid Kerry WRZs.

With reference to the DHLGH-NPWS' comments regarding the proposed abstraction from Lough Leane, we clarify the Preferred Approach considers an abstraction from the lower Leane catchment. The RWRP-SW NIS will be amended accordingly.

Section 6 of the RWRP-SW NIS has been updated to specifically refer to slender naiad and Killarney shad as species potentially impacted by the proposed lower Leane catchment abstraction following comments from DHLGH-NPWS.

Additional text defining the Preferred Approach at plan and project level has been added to Section 2.5.4 in the RWRP-SW NIS as requested by DHLGH-NPWS.

The WFD statuses of the relevant waterbodies within the RWRP-SW have been updated in Section 4 of the RWRP-SW NIS to reflect the 2016-2021 assessments as requested by DHLGH-NPWS.

Additional text has been added to Section 6.3.3 in the RWRP-SW NIS to highlight the importance of the monitoring and feedback loop for preventing impacts to European sites following feedback from DHLGH-NPWS.

### 14.4.2 Recommendations on NIS Feedback

Uisce Éireann will consult with DHLGH – NPWS at project level stage on preferred approaches that have been assigned a -3 score for the Appropriate Assessment fine screening criteria.

## 15 Water Resource Planning

In this Chapter, we summarise the key references in submissions to issues under the broad theme of “Water Resources Planning.” Within the overall Water Resources Planning theme, we identified three sub themes, which we set out in Figure 15.1. We deal with each of these sub-themes in this Chapter, setting out first a summary of the relevant mentions in the submissions, followed by our response. The sub-themes are not dealt with in any particular order.

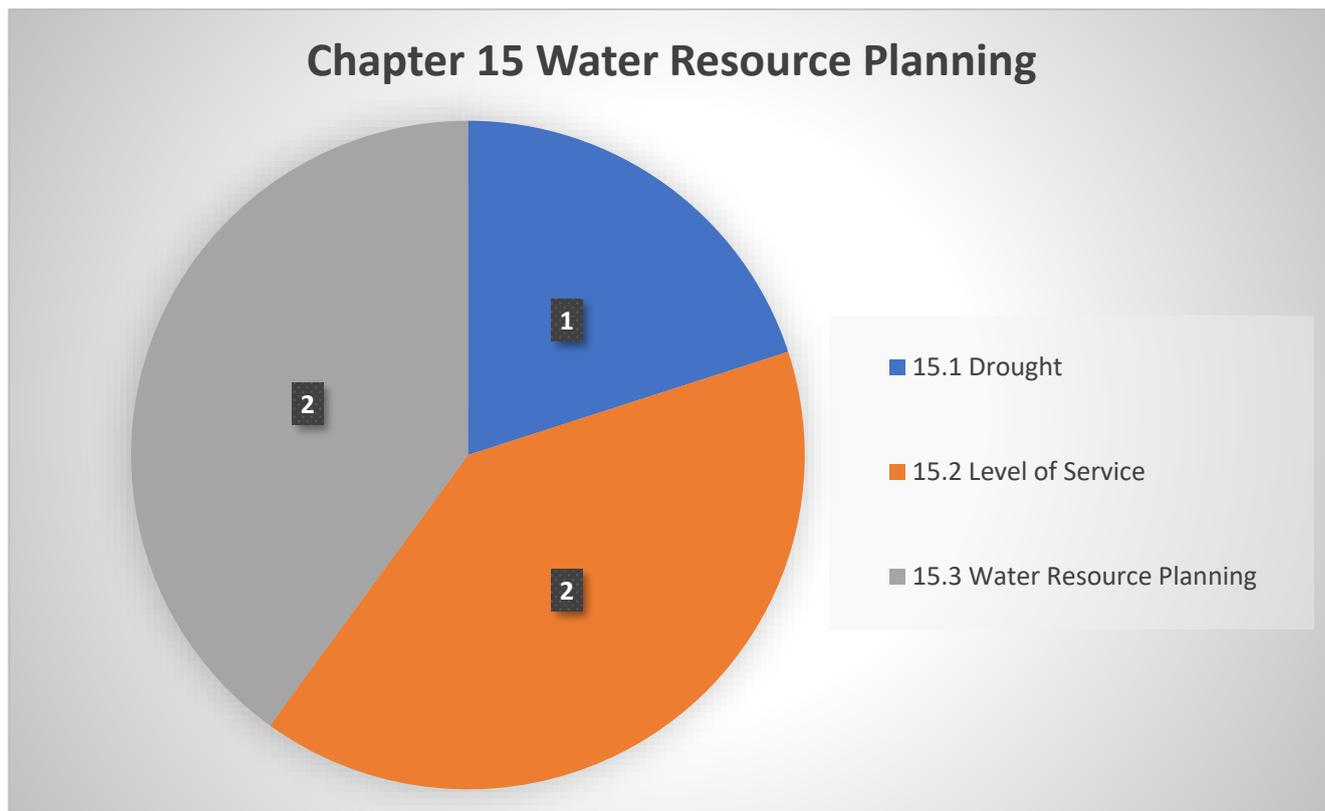


Figure 15.1 Water Resource Planning

### 15.1 Drought

#### 15.1.1 Summary of Drought Feedback

An Fórum Uisce (AFU) noted the low rainfall events of 2018 and 2020 where a number of supplies in the South West Region were severely impacted. AFU also acknowledged that Uisce Éireann have been closely monitoring and implementing measures to ensure continued water supply for supplies at risk from drought conditions, five of which are in Cork and three in Kerry.

AFU stated that in 2019 the Department of Housing, Local Government and Heritage developed a sectoral climate change adaptation plan for water, which outlined the future projections of climate change in Ireland. They mentioned that this report projected decreases in summer precipitation, with increased frequency of summer drought periods. AFU emphasized that it is crucial that Uisce Éireann develop detailed Drought Management Plans, specific to different regions, to increase resilience to supply for the future.

AFU accept that there is a high-level overview of drought management in Appendix E of the National Water Resources Plan (NWRP) but, they are of the view that “there should be a detailed Drought Management Plan specific to each South West water resource zone (WRZ), included in the Regional Water Resources Plan – South West (RWRP-SW)”. AFU recommended that Uisce Éireann add an

urgent action to develop publicly available Regional Drought Management Plans and indicate how much capacity there is throughout the region during extended drought periods.

AFU recognised that Uisce Éireann have outlined the learnings from the 2018 and 2020 drought events in the draft RWRP-SW but commented that the learnings presented in Section 2.4 of the draft RWRP-SW are more crises management as opposed to proactive measures to reduce the impact of the crises. AFU expressed their support for tracking drought indicators and planning responses and activities as outlined in Box 2.5 (Page 48) of the draft RWRP-SW. In addition, they recommended early intervention in response to these indicators to reduce the extent of the crises. AFU proposed that communication campaigns to promote water conservation should be initiated early to inform the public about potential water shortages and should be targeted at communities, industries and stakeholders who will be most affected.

### 15.1.2 Response to Drought Feedback

Uisce Éireann acknowledges the development of the sectoral climate change adaptation plan for water in 2019. IW has also carried out a lot of research with the Irish Climate Analysis and Research Units (ICARUS) Department in NUI, Maynooth, under the Climate sensitive catchments project. This project has used the latest climate change projections and a best practice risk-based approach to assess the impacts of climate change on flows in 206 catchments in Ireland. Full details of how climate change factors were considered are outlined in Appendix F of the Framework Plan. The objective of the Preferred Approach for the RWPR -EM is to provide the 1 in 50 level of service in a DYCP. Therefore, we are proposing to move away from vulnerable sources which we struggle to maintain supply from to more resilient sources of supplies which will be less vulnerable to dry weather events. This will reduce the impact to customers during the droughts and periods of dry weather.

Drought plans will be developed for each WRZ, and it is planned to provide this detail in the next iteration of the NWRP. These drought plans will be developed in line with the abstraction legislation and note measures required for different water levels at our sources. The drought plans will be unique for each supply and will address specific capacity in the case of drought.

Uisce Éireann acknowledges that many of the measures presented in Box 2.5 are crises management as opposed to proactive measures. Data is currently being developed with a view to have proactive measures set out in the DMP and over time the need for of crises measures will be reduced and replaced by Drought Management Plans.

Uisce Éireann conducted an extensive media campaign nationally in Summer 2022, to inform customers of the impact the dry weather was having on supplies and to encourage consumers to conserve water throughout the summer. This media campaign commenced in June 2022 and continued until early September.

## 15.2 Level of Service

### 15.2.1 Summary of Level of Service Feedback

An Fórum Uisce (AFU) supported that Uisce Éireann will “invest in their human asset base to improve their Level of Service (LoS) such as having sufficiently trained personnel to manage infrastructure and to provide the best possible services”. In the transition to Uisce Éireann becoming a single public utility, AFU recommended that Uisce Éireann outline their planned quality control of the production of drinking water, in particular the quality control for the operation of water treatment plants.

Cork County Council asserted that the proposed 1 in 50-year LoS is considered too aspirational. They cited that “a 1 in-50 LoS means that customers would only expect to experience a supply failure, on average, once every 50 years”. However, Cork County Council maintain that the age and condition of the

watermains in County Cork are such, that improved levels of service cannot be achieved for many decades. They also commented that the average annual mains replacement of 20km/yr. since 2014 at 0.4%, is far too low and is resulting in reduced LoS. They further highlighted that approximately 4,000 burst repairs are carried out each year in County Cork and that the 5,230 km of watermains in the South West Region is too low.

Cork County Council referenced the Recast Drinking Water Directive (2020/2184 EU) which will be transposed into national regulations in January 2023 and noted the additional regulatory constraints which will come into force in the coming years. They suspected that this would impact on the LoS that can be provided where there are difficulties with water treatment plants meeting new and more stringent limits, in turn impacting on the quality and reliability of supply that customers can expect to receive.

Cork County Council encouraged the consideration or evaluation of sources/supply schemes to include the relevant risk assessments and risk management of the supply system as required under the new Directive.

### **15.2.2 Response to Level of Service Feedback**

The target level of service is required to ensure continuity of supply to our customers in the area during drought periods.

Uisce Éireann undertook a review of how we respond to incidents across our assets and how we effectively manage and communicate to limit disruptions to our customers. In response to this review, we have initiated 'Project Connect' which has established organisational structures, designed, and implemented processes and introduced regular reporting and ways of working to ensure a safe clean and secure supply of water for our customers.

Uisce Éireann appreciate CCC's viewpoint, however the target level of service is required to ensure continuity of supply to our customers in the area during drought periods. Uisce Éireann acknowledges that it will take many decades to achieve this LoS and that substantial investment will be required.

Uisce Éireann acknowledges that the Recast Drinking Water Directive will have an impact on the Level of Service and can confirm that the NWRP has considered the more stringent limits through its DWSP and Interim Barrier Approach. Uisce Éireann's DWSP approach has been developed and expanded in the last few years with the Recast Drinking Water Directive in sight. Furthermore, through the Environmental Action and Monitoring Plan set out in the Strategic Environmental Assessment continuous monitoring of legislative changes and impacts on the Plan will be monitored.

## **15.3 Water Resource Planning**

### **15.3.1 Summary of Water Resource Planning**

The West Cork Environmental Health Department suggested it may be necessary to breach abstraction limits in order to maintain supplies. They questioned how breaches of abstraction limits, and the resulting impacts would be managed in the immediate future and beyond.

Cork County Council (CCC) noted that private well sources and abstractions from private wells do not appear to be calculated or included in the hydrological yield assessments in the draft RWRP-SW. They claimed that private businesses such as carwashes that use private wells have not been included in the draft RWRP-SW. CCC further advised that rural businesses and farming need to be accounted for in the RWRP-SW under economic growth and their impacts should be taken into account in water resource planning.

### 15.3.2 Response to Water Resource Planning

As Abstraction Regulations are still being developed, Uisce Éireann does not have full visibility of the future regulatory regime. It has therefore not progressed through a theoretical licencing process on a site-by-site basis and cannot reliably include an estimation of sustainable abstraction within the SDB calculations. Instead, Uisce Éireann uses the hydrological yield, water treatment capacity and bulk transfer limitations in its calculation of deployable output. Uisce Éireann also uses the sustainable abstraction assessment to assess the sensitivity of the Preferred Approaches (solutions) it develops as part of the NWRP.

Therefore, Uisce Éireann's Framework Plan assumes that existing abstractions can continue on a transitional basis, subject to the registration and/or licensing requirements as outlined in the Water Environment (Abstractions and Associated Impoundments) Act 2022, the provisions of which have not yet been commenced.

For these existing abstractions, further studies will be undertaken in conjunction with the EPA and appropriate stakeholders. Following investigation, if an abstraction is confirmed to be affecting a waterbody status the SDB will be updated, and solutions will be delivered through future cycles of the River Basin Management Plans and/or RWRPs.

Uisce Éireann can confirm it used all available data at plan level, i.e., public abstractions and private Group Water Schemes abstractions as shared by the NFGWS; planning data for industrial abstractions, in order to calculate available yield. We acknowledge the importance of considering private abstractions in the hydrological and hydrogeological assessments and can confirm that at the project stage a strengthened emphasis will be placed on obtaining as many of these as possible for site specific investigations of water balance.

### 15.4 Conclusions on Water Resource Planning

Having carefully reviewed the submissions received on the theme of Water Resource Planning, Uisce Éireann considered that no updates or further recommendations to the RWRP-SW are required. For completeness, we note that any relevant clarifications and recommendations from the RWRP-EM consultation have also been considered in the development process and finalisation of the RWRP-SW.

## 16 Outside the Scope of the RWRP-SW

In this Chapter, we summarise the key references in submissions to issues under the broad theme of “Outside the Scope of the RWRP-SW.” Within the overall Out of Scope theme, we identified three sub themes, which we set out in Figure 16.1. We deal with each of these sub-themes in this Chapter, setting out first a summary of the relevant mentions in the submissions, followed by our response. The sub-themes are not dealt with in any particular order.

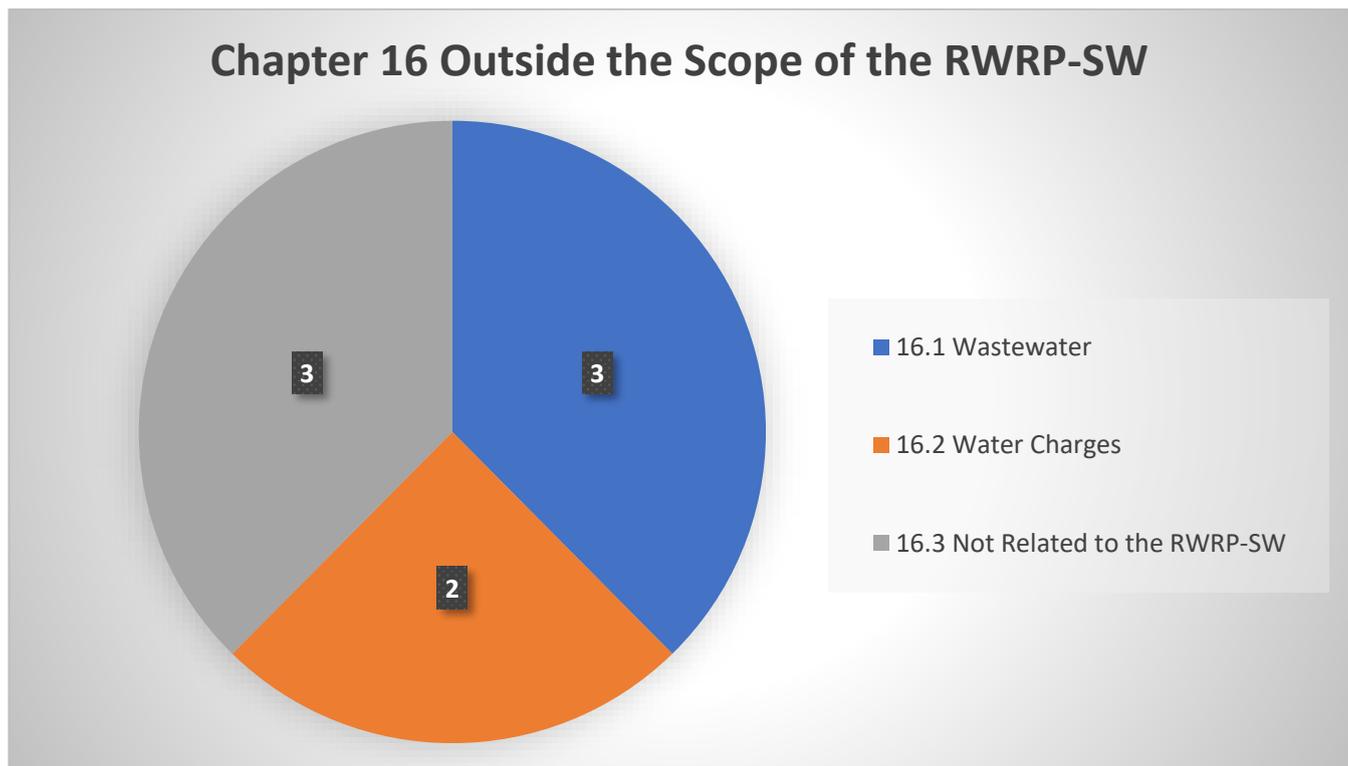


Figure 16.1 Outside the Scope of the RWRP-SW.

### 16.1 Wastewater

#### 16.1.1 Summary of Wastewater Feedback

Councillor Gerard Mitchell commented that the Climate Action Plan and the Limerick Development Plan, which must be ratified, are restricting once-off planning permissions in rural Limerick. Councillor Mitchell stressed that the wastewater treatment plant in the town of Hospital is over capacity and that Government and Chamber officials have been made aware of this issue. Councillor Mitchell detailed a number of amenities in the town of Hospital and described it as a “great business hub”. Councillor Mitchell further highlighted that there are new businesses and homeowners looking to become established and live in that area. Councillor Mitchell also noted that he wants to promote a business and enterprise park to sustain and develop Hospital. Councillor Mitchell emphasized the immediate need for a sewerage plant upgrade to meet the growing needs of the town.

A stakeholder stressed that sewerage systems cannot be ignored and that it is pointless to aim for clean drinking water with polluted oceans. As a way forward, they suggested a holistic approach consisting of quick wins, pilot projects, independent testing of water quality and sewerage treatment plants for every blue flag beach resort.

A stakeholder commented on the absence of proper sewerage treatment plants for a number of beaches and resorts in Ireland. They stated that the treatment of wastewater is an intrinsic part of water treatment

and that addressing the issue would comply with the Water Framework Directive. The stakeholder listed a number of economic benefits to local development and referenced Rosstown in County Donegal as a working example where a modern wastewater treatment plant has been built.

This stakeholder suggested a 5-year plan to improve sewerage systems for beaches and resorts in Ireland, starting in the South West region and provided a number of key points to consider in the plan;

- They suggested carrying out a survey of the existing sewerage systems of all the beaches and resorts in the South West. They advised identifying the beaches where there is presently inadequate sewerage treatment.
- They recommended selecting an 'easy win' location where a modern system can be easily developed within five years.
- They also encouraged doing a preliminary costing of the emerging needs in the South West and to provide a small annual budget to begin dealing with the issue.
- They advised learning from the completed sewerage system in Rosstown, County Donegal.

Councillor Frank O'Flynn made specific reference to sewerage treatment plants in Mitchelstown, Glanworth and Conna Village in County Cork. Councillor O'Flynn stressed the need for new sewerage treatment plants in these areas to meet current and future housing and industrial development. At present, he noted that house building and planning permissions have ceased because of the lack of capacity in the present sewerage systems in these locations.

### 16.1.2 Response to Wastewater Feedback

Although wastewater considerations are outside the scope of the NWRP, Uisce Éireann acknowledges that both water and wastewater treatment capacity are essential for growth and economic development. Uisce Éireann has a wastewater asset planning team, which develops short, medium, and long-term projects and programmes to address our wastewater asset base through the Drainage Area Plans programme. This programme targets critical wastewater networks that require a detailed performance assessment and improvement strategy as a result of a number of factors including planned development growth, reported flooding issues and poor environmental performance.

Since 2014, we have built new wastewater infrastructure for 21 towns and villages across the country, ending the discharge of raw sewage into the environment. 65% of the raw sewage in Ireland has now been eliminated. Uisce Éireann is on track to eliminate the majority of raw sewage discharges by the end of 2025 with a total investment of over €750 million. This year, we currently have 14 locations under construction across the country. There are plans for the rest, prioritising the areas where it can make the biggest impacts first. More details on completed projects and projects in the pipeline are available on our website <https://www.water.ie/projects/national-projects/eliminating-raw-sewage/>

The growth figures from the regional assemblies and the local authority development plans are used to inform both the NWRP and the intervention plans for our wastewater treatment plants and networks. Significant funding will continue to be required to transform our wastewater treatment facilities and networks through the regulated capital investment planning process. Every wastewater treatment project is fully considered for environmental assessment and requires consent from both the planning authorities and the Environmental Protection Agency before it can operate. The National Wastewater Sludge Management Plan sets out a nationwide standardised approach to ensure that treated wastewater sludge across the country is effectively managed, stored, transported, and re-used or disposed of in a sustainable way, to the benefit of the public and the environment we all live in.

All comments received on wastewater treatment will be shared with the relevant Uisce Éireann team for their review.

## 16.2 Water Charges

### 16.2.1 Summary of Water Charges Feedback

A stakeholder suggested that water should be paid for and that property charges should be dropped.

The Irish Creamery Milk Suppliers Association (ICMSA) noted that significant investment will be required to implement the draft Regional Water Resources Plan – South West (RWRP-SW). They commented that as there is no tariff on domestic water use, it is essential that commercial users, including farmers, are not burdened with the substantial investment required in the draft RWRP-SW. The ICMSA advised that a clear commitment is required that there will be no additional charges imposed on commercial users in order to implement the plan.

### 16.2.2 Response to Water Charges Feedback

Issues such as taxation and water charges are a matter of Government policy and Uisce Éireann has no remit to make commitments on charges.

## 16.3 Not Related to the RWRP-SW

### 16.3.1 Summary of Not Related to the RWRP-SW

Another stakeholder highlighted they are currently living near an alleged toxic dump in County Limerick and claimed that the Department of Environment, Climate and Communications, the Environmental Protection Agency and Limerick County Council have taken no action to fix the issue. Similarly, they noted the issue was brought to the attention of the Green Party, but that nothing was done to resolve the issue. They claimed that illegal dumping is taking place at night and that it could cause serious water pollution. They made an urgent request for someone to assess the situation.

A stakeholder considered the Water Supply Project (WSP) to be against the principles of balanced regional development.

This stakeholder commented that the assumption that the Greater Dublin Area (GDA) is set to grow to two million people in the coming decades needs to be questioned in the context of balanced regional development with regards to the western half of the country. They advised that the development and enlargement of the cities of Cork, Limerick and Galway represent a more sustainable pattern of development for the state outside the GDA. This stakeholder stated that fresh water, as a natural resource of the midlands and west of Ireland, should be used as a resource for the sustainable development of this region, and that it shouldn't be extracted to facilitate the continued unsustainable growth of the GDA. They suggested bringing industry, employment and development to the Midwest Region which has the water, instead of taking water from it and transferring it to the GDA, which they noted is already facing congestion and overdevelopment.

The stakeholder also expressed that this project is a wasteful use of public funds and that the remedy to water shortages in the GDA is to address the water leaks in the current water pipe network of the GDA. They explained that water extracted from the Shannon is going to be wasted in the leaks of the water pipes in the GDA.

In addition, this stakeholder mentioned that the laying of a pipeline across farming land and the permanent wayleaves that are expected will have a negative impact on the value of the farmland

affected into the future. They stressed this in light of not being able to build in the area near the pipe or being able to consider farm forestry as an alternative land use option.

They highlighted that the construction phase of the WSP would be a disruption and that it would cause permanent damage to the soil profile of the land affected. Finally, they advised that the alternatives to this pipeline, as already investigated, should be reconsidered as a matter of urgency.

### 16.3.2 Response to Not Related to the RWRP-SW

A submission under this section relates to the Water Supply Project (WSP) involving transfers of water from the Shannon River to the Greater Dublin Area (GDA). This proposal is identified as a preferred approach in the Regional Water Resources Plan for the Eastern and Midlands Region (RWRP-EM) adopted in September 2022, which was subject to extensive public consultation. The RWRP-EM and supporting documents, including the applicable Consultation Report are available at <https://www.water.ie/projects/strategic-plans/national-water-resources/rwrp/eastern-midlands/>.

The submission also relates to the impact of the WSP and timeframe for delivery. This Consultation Report summarises the consultation conducted between June 1, 2022, and August 24, 2022, for the RWRP-SW. It was not a consultation on either the WSP or the RWRP-EM.

For completeness, however, the RWRP-EM applied the methodology, as adopted in the Framework Plan, and through that process identified preferred approaches at water resource zone, study area and regional level for the Eastern and Midlands region. Environmental considerations including biodiversity are reflected in the options assessment methodology.

All options identified in the RWRP-EM, including the construction elements, were subject to Strategic Environmental Assessment and Appropriate Assessment. As part of our options assessment process, environmental considerations represent 19 of the 33 total assessment criteria that are taken into account. The impacts of pipeline construction are factored into the environmental and social cost aspect of our feasible options' whole life costing. Further details on our assessment criteria can be found in Chapter 8 of the National Water Resources Plan (NWRP) Framework Plan.

The NWRP assesses future demand based on population growth projections set out in the National Planning Framework, Regional Spatial and Economic Strategies (RSEs) and the Local Authority Development Plans. This estimated future demand informs the size and scale of feasible solutions required and thus informs the Preferred Approach.

The RWRP-EM identified a significant deficit for the GDA and a pipeline from Shannon to Dublin was identified as the Preferred Approach for Study Area 9 (GDA) and subsequently at a Regional Level. This New Shannon Source option, when compared to 11 other feasible combinations of solutions, was determined as the solution with the least impact to the environment. More information can be found in Appendix 9 of the RWRP-EM.

Our development of the NWRP aims to complement the growth and economic development of RSEs and Local Development Plans. In this way, water service infrastructure development proposed in the NWRP is aligned with the NPF's aim to support growth in the four cities of Cork, Limerick, Galway and Waterford by at least 50% to 2040.

Allegations of illegal dumping are an issue for the Environmental Protection Agency and the relevant Local Authority.

## 16.4 Conclusions on Outside the Scope of the RWRP-SW

Having carefully reviewed the submissions received on the Out of Scope theme, Uisce Éireann RWRP-SW are required. considered that no updates or further recommendations to the

For completeness, we note that any relevant clarifications and recommendations from the RWRP-EM consultation have also been considered in the development process and finalisation of the RWRP-SW.

## 17 Next Steps

Following on from the public consultation, submissions and observations received will be taken into consideration, and the RWRP-SW updated. The final RWRP-SW will then be produced, accompanied by a Strategic Environmental Assessment Statement and an Appropriate Assessment Determination.

The RWRP-North West is the third of the four (4) Regional Plans to be delivered, it will be followed closely by the Regional Plan for the South East over the next 12 months.

Once Phase 1 and Phase 2 of the NWRP have been finalised, comprising the Framework Plan and four (4) Regional Water Resources Plans, together they will be treated as a unified Plan and the relevant regional groupings will have no ongoing application.

[water.ie/nwrp](http://water.ie/nwrp)



# National Water Resources Plan

## Phase 2

Draft Regional Water Resources Plan  
South West Region  
Statutory Consultation

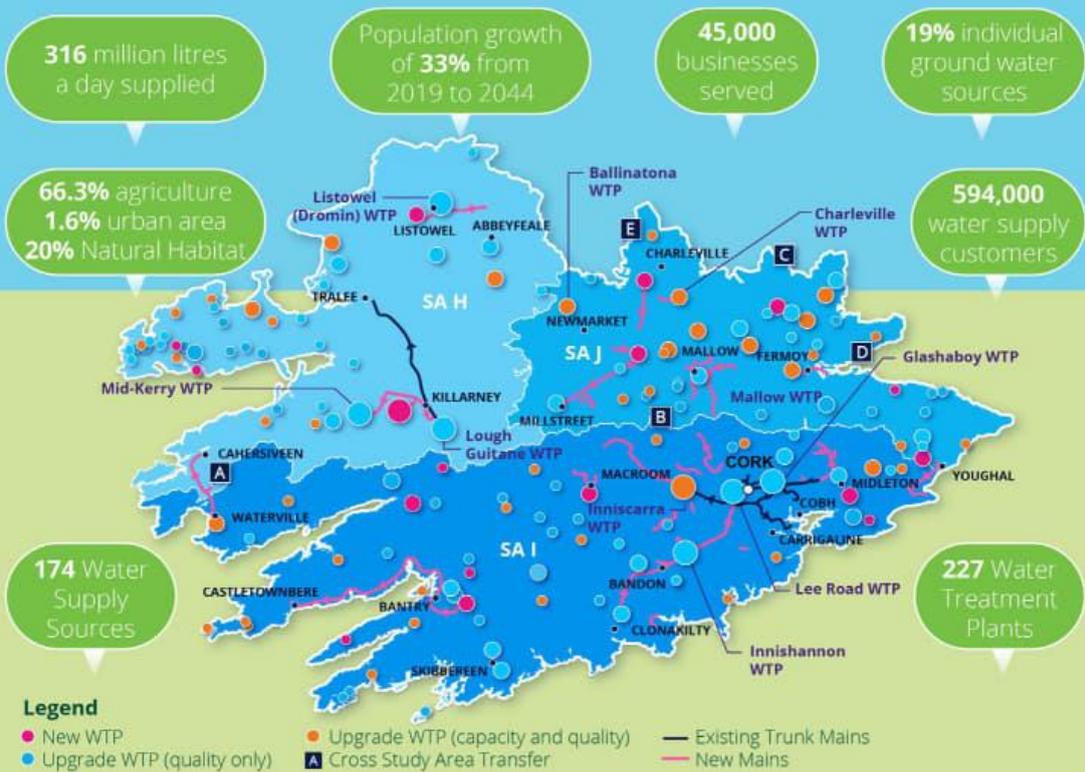


Part of **ervia** group

# Regional Water Resources Plan (RWRP) South West Region

UISCE  
ÉIREANN : IRISH  
WATER

The plan will set out how we can **balance the amount of drinking water we can supply with the demand for water that is needed over the short, medium and long term.**



## Key Positive Outcomes of the RWRP South West

**Reducing leakage to 23%** of regional demand through pressure management, active leakage control, find and fix and asset replacement.

We will **improve the level of service** provided to all customers in the Region for all-weather events significantly reducing the risk of outages and water restrictions.

93% of customers in the region will obtain the water from an **interconnected supply**

**Upgrades to 137 existing water treatment plants** in terms of size and barrier performance.

We will provide **17 new WTPs**

We will **decommission 90 WTPs**

Our three pillar approach will ensure we have a safe, secure, reliable and sustainable drinking water supply for everyone



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## Introduction

The National Water Resources Plan (NWRP) is Irish Water's 25-year strategic plan for the public water supply in Ireland.

The NWRP allows us to plan for our water supplies in a consistent way and to transform the public water supply in Ireland over the next 25 years. It allows us to identify the needs within our existing supplies, and to consider the challenges and opportunities that will arise. These include, changing policy and legislation, climate change, environmental sustainability, growth and economic development.

Within the NWRP we will assess all of the 539 individual supplies that form the national public water supply and develop a clear approach to address the current and future needs across these supplies.

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## What is the objective of the National Water Resources Plan?

The objective of the NWRP is to meet our customer and communities needs over the short, medium, and long term, by ensuring safe, secure, sustainable, and reliable water supplies.



National Water Resources Plan | Phase 2 Consultation | 3

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## What is happening now?

As this is the first NWRP, the preparation of the plan has been divided into two distinct phases, the combination of which will become the final NWRP.

In Phase 1 of the Framework Plan, we set the standards we would like our supplies to achieve and processes we will follow to address needs across our supplies. Following public consultation in early 2021, the Framework Plan is now complete and can be found at [www.water.ie/nwrp](http://www.water.ie/nwrp)

In Phase 2 of the NWRP, we summarise the needs across the 539 individual water supplies and identify the solutions to address these needs. Due to the large number of supplies in Ireland, we will deliver Phase 2 as four Regional Water Resources Plans:

- Regional Water Resources Plan: North West
- Regional Water Resources Plan: South West
- Regional Water Resources Plan: South East
- Regional Water Resources Plan: Eastern and Midlands



Figure 1. Regional Areas of the NWRP

Each of the four draft RWRPs and associated environmental reports will have their own public consultation phases, which will be carried out over the course of 2021/2022.

As part of each Regional Plan we will:

- Apply the Framework methodology to the water supplies in the region
- Develop regional solutions for all water supplies within these areas

The first Plan to be consulted on was the draft Regional Water Resources Plan: Eastern and Midlands (RWRP-EM). A thirteen-week statutory consultation on the draft RWRP-EM and associated SEA Environmental Report and Natura Impact Statement took place from the 14 December 2021 to 14 March 2022. Irish Water subsequently facilitated two extensions to this statutory public consultation at the request of key stakeholders, with consultation finally closing on Friday 08 April 2022.

Following that process, all submissions will be taken into consideration and responses to the issues raised will be summarised in a Post Consultation Report, which will be published in Summer 2022.

The second Plan to be consulted on is the Regional Water Resources Plan: South West.

At the end of Phase 2 the outcome of the four plans will be combined and prioritised collectively.



National Water Resources Plan | Phase 2 Consultation | 5

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## Regional Water Resources Plan South West Region

The below map outlines the area which is covered by the RWRP-SW. A full list of townlands, towns, settlements, and counties included in the RWRP-SW can be found

<https://www.water.ie/projects/strategic-plans/national-water-resources/rwrp/south-west/>

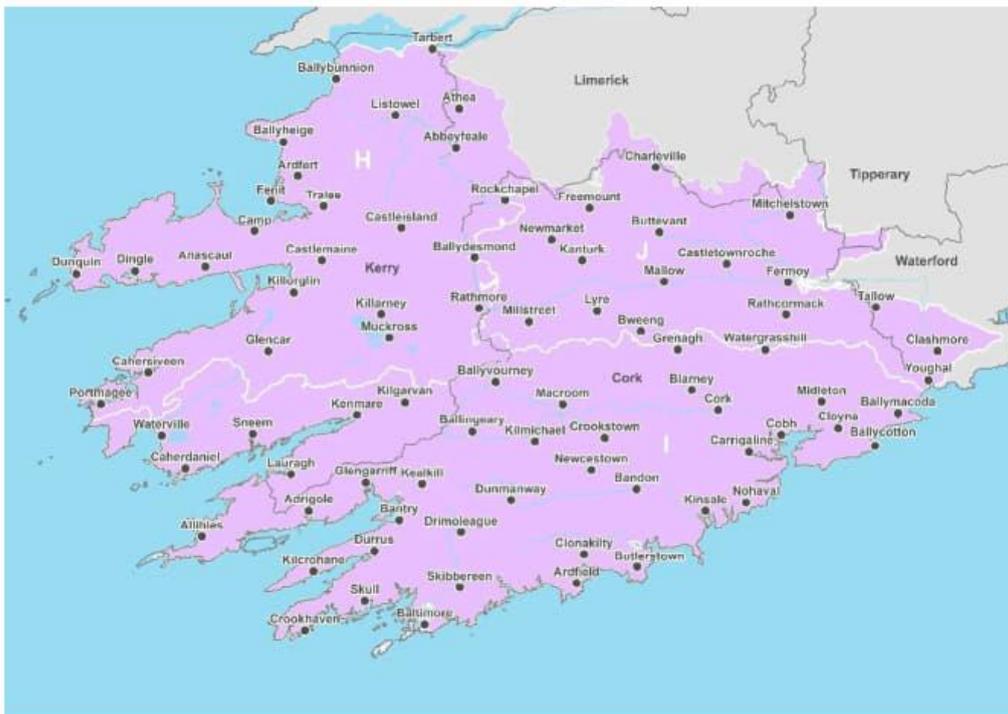


Figure 2. Key towns of the South West region

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## What is the South West Region?

The South West Region includes five (5) counties: Cork, Kerry and parts of counties Limerick, Tipperary and Waterford. It covers approximately 13,000 square kilometres (representing about 20% of the Republic of Ireland) and extends from the southern tip of the country, from the Iveragh Peninsula in the

south west of County Kerry, north to the Shannon Estuary, and south east passing through county Cork and into county Waterford to the Celtic Sea at Youghal.

Irish Water supplies around 316 million litres of water per day to a population of 594,400 people and 45,000 businesses in the South West Region. This represents more than 18% of our total supply nationally. The South West Region has a population of 594,400, 14% of the national population.

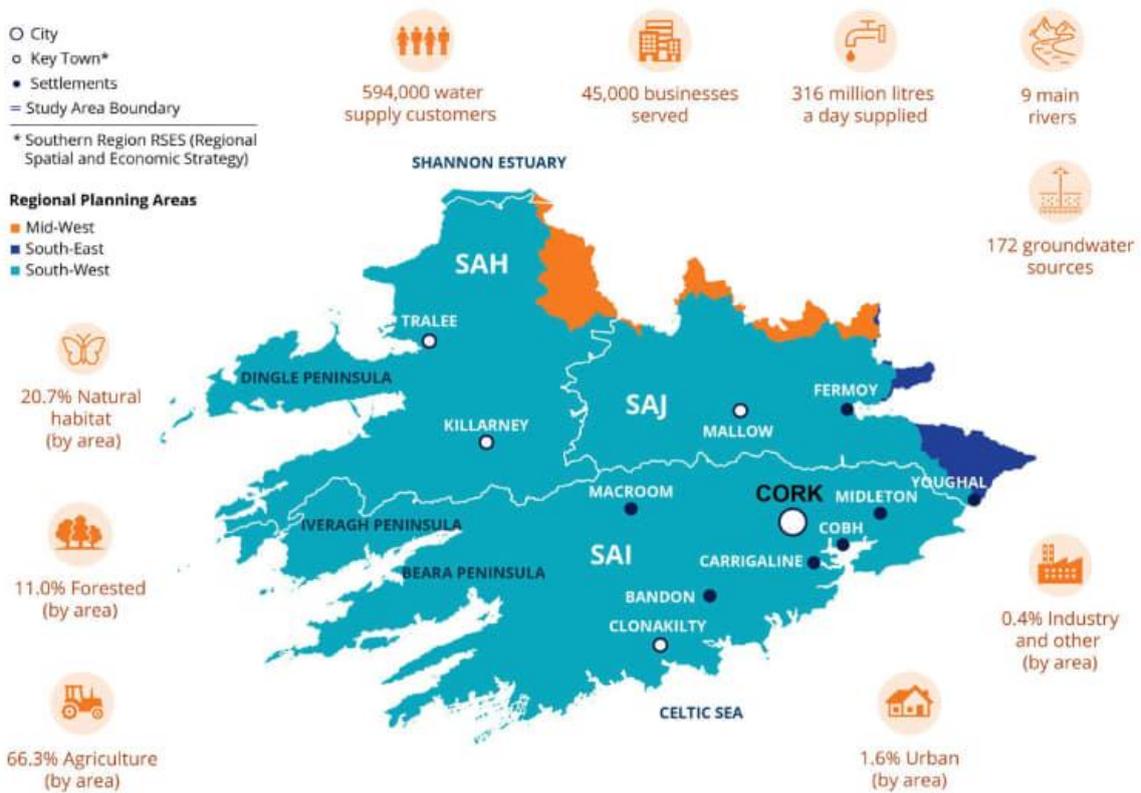


Figure 3. Key characteristics of the South West Region

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## What are the issues in the Region?

In the South West Region there are 227 Water Treatment Plants that feed water into 174 stand-alone water supplies known as water resources zones (WRZs). These WRZs provide water to all the cities, towns, villages, and rural properties in the region that are connected to the public water supply.

When we view these supplies using the Irish Water risk factors, we set out in the Framework plan, we have identified the following needs which must be addressed as part of the draft RWRP-SW:

- 52% of the WRZs are in supply Deficit, which means the volume of water available from our supply system is not sufficient to meet the full unrestricted demand in a normal year.
- 158 of the 227 Water Treatment Plants need some form of investment to reduce risk to water quality.
- Levels of service across the South West Region are below the standard we are aiming to achieve. Until we reach our target level of service, there is a higher risk of interruptions to supply.
- Some of our water abstractions may be unsustainable.

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## How do we review this in our draft regional plan?

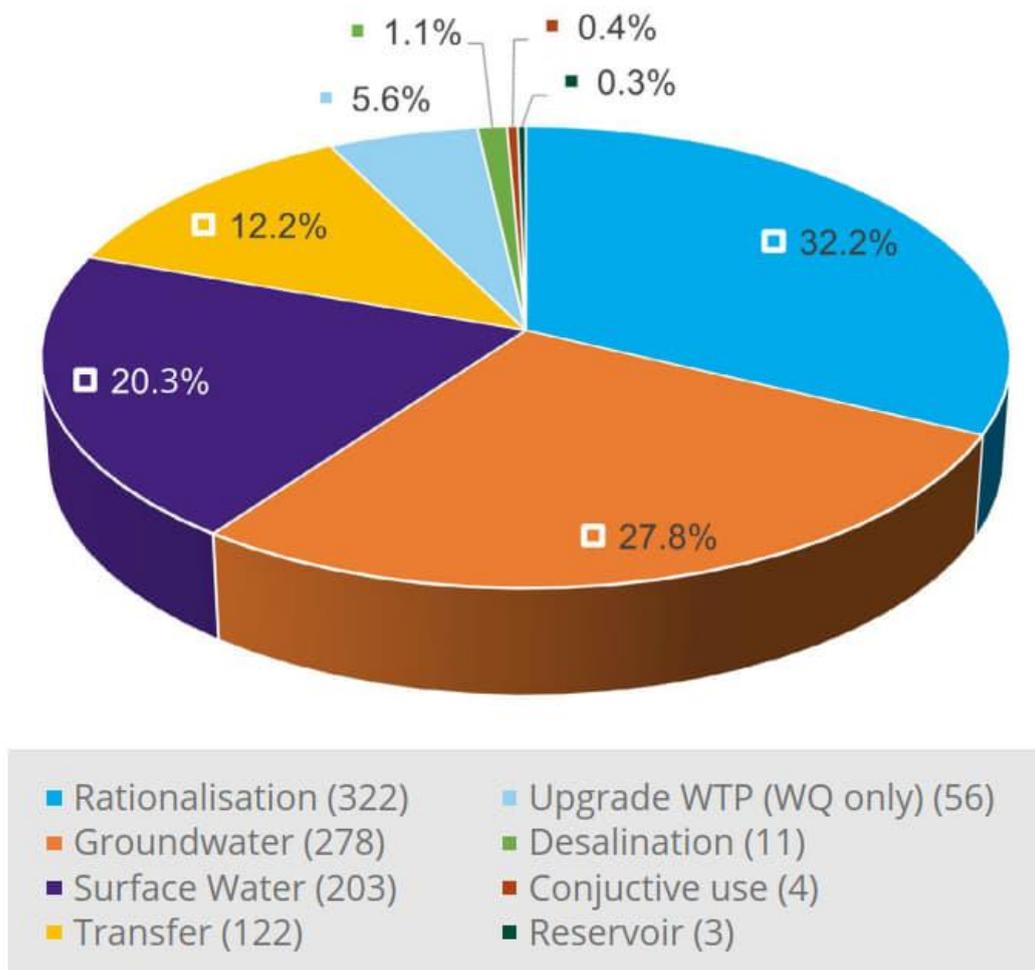


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Within the Plan we identify solutions to address these needs, under three pillars, Use Less (water conservation), Lose Less (leakage reduction) and Supply Smarter (sustainable water supplies).

As part of the draft RWRP-SW we reviewed 1,676 unconstrained options and developed 999 feasible options to address the needs we identified in the Region.

These feasible options included an extensive list of option types, including, groundwater and surface water sources, reservoirs, and water transfers.



We then assessed these to develop a preferred approach for each of the water supplies.

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## What is the outcome of our plan?

The development of the draft RWRP-SW has for the first time allowed Irish Water to collectively assess needs across all of the 174 water supplies in the region, in terms of quality, quantity, reliability and sustainability. The regional plan allows us to consider local options to resolve identified needs within individual supplies and also larger regional options that can address needs across multiple supplies.

The preferred approach for the region, once delivered, involves:

- Reduction of the number of WRZs in the South West Region from 174 to 92.
- Development of larger interconnected WRZs for the urban areas in the region.
- Development of 17 new water treatment plants (WTPs).
- Eventual decommissioning of 90 WTPs.
- Upgrades to 137 existing water treatment plants in terms of size and barrier performance.
- Interconnecting supplies via 644 kilometres of trunk mains.
- Reducing leakage to 23% of regional demand through pressure management, active leakage control and targeted asset replacement.

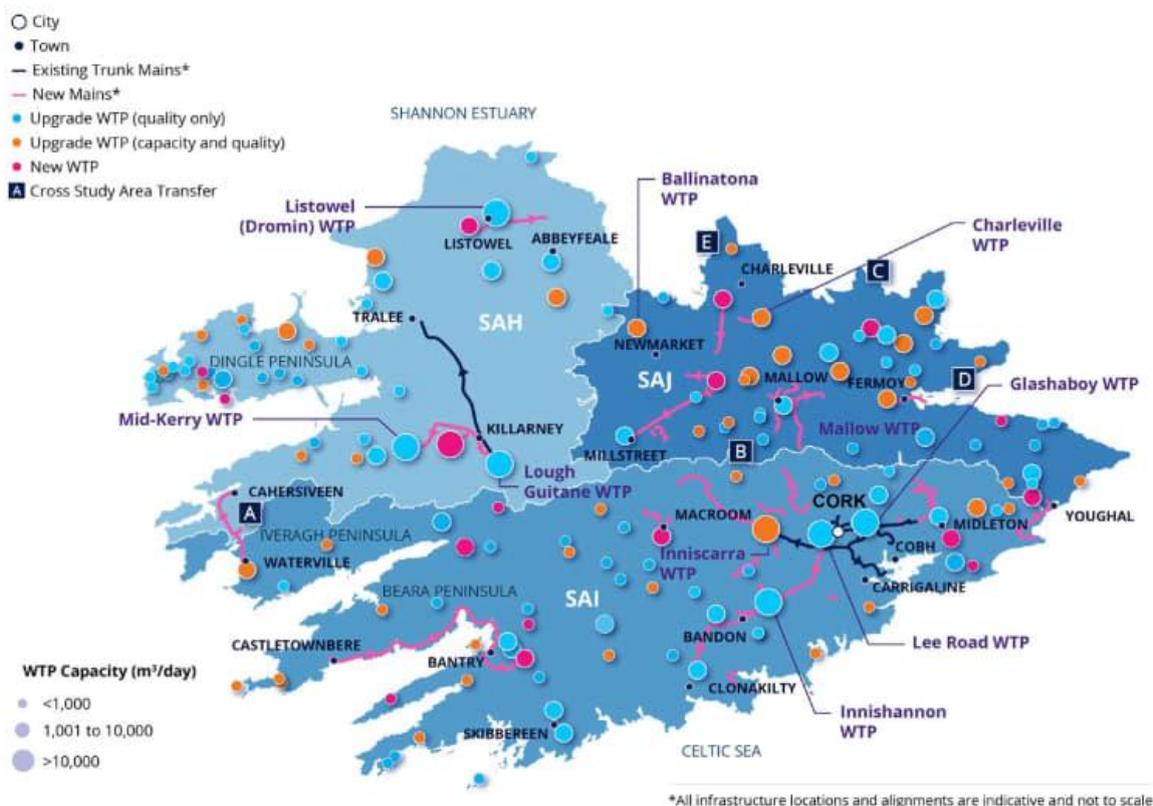


Figure 4. Regional Preferred Approach

## What does this mean for consumers in the region?

The preferred approach will provide the best overall outcome for the region, particularly in relation to environmental, ecology and resilience outcomes. This will result in:

- Improved performance across all of the water supplies in terms of quality and quantity.
- Strategic transformation from the existing fragmented supply to a more resilient and sustainable interconnected supply. All 92 of the remaining/new water resources zones in the South West Region will be able to provide improved reliability and meet a minimum 1 in 50 Level of Service during normal, dry, drought and winter conditions.

- All Water Resource Zones will be resilient with improved environmental sustainability.
- Customer benefits in terms of increased reliability and reduced occurrence of outages across our supplies.
- Customer benefits in terms of reduced water quality risk and the instances of boil water notices.
- Improved resilience, with 93% of the population supplied via sources with impounding storage or aquifer storage that will allow us to better manage seasonal variation in water availability and drought events.
- Sources that are more environmentally sustainable and allow us to adapt to climate change and align with the requirements of the Water Framework Directive and Habitats Directive.
- Improved operational control across our water supplies, and ability to react to adverse events.
- Improved efficiency of our distribution networks in terms of leakage, pressure and strategic storage.
- Ability to facilitate growth and economic development.



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## How can I get involved?

**Irish Water are now seeking feedback on the public consultation for the draft RWRP: South West and associated SEA Environmental Report and Natura Impact Statement.**

A 11.5-week statutory public consultation will run from the 1 June 2022 to 23 August 2022 during which time the draft RWRP South West and associated environmental reports can be viewed and downloaded at <https://www.water.ie/projects/strategic-plans/national-water-resources/rwrp/south-west/> or at your local authority's planning office or County Library (depending on the local authority) during their normal opening hours.

This is your opportunity to feed into the process of how we identify the issues and determine what the opportunities are for water supply in your area. We are also seeking your feedback on how we will develop options to address any problems identified, before applying them to specific areas.

All submissions will be taken into consideration and responses to the issues raised will be summarised in a Post Consultation Report, which will be published on <https://www.water.ie/projects/strategic-plans/national-water-resources/rwrp/south-west/>

Individual submissions will be reported anonymously and feedback from organisations will be attributed to them.

Feedback received outside the scope of the draft RWRP-SW and the associated environmental reports will not be considered as part of this public consultation process and will not be reported on. Any feedback in relation to in flight Irish Water projects, or in reference to any other area of the Irish

Water business should be sent directly to those project teams, unless applicable to how they are included in the RWRP-SW. Information on Irish Water projects and contact details can be found on [www.water.ie](http://www.water.ie)

In line with the General Data Protection Regulations (GDPR) effective from 25 May 2018, Irish Water's updated Privacy Notice, is available to view online at [www.water.ie/privacy-notice](http://www.water.ie/privacy-notice)

## Have your say

Any member of the public wishing to make a submission can do so by email or post by **23 August 2022** as follows:

Email: **nwrp@water.ie**  
Post: **National Water Resources Plan,  
Irish Water, P.O. Box 13216,  
Glenageary, Co. Dublin**  
Freephone: **1800 46 36 76**

A dedicated helpline is available for anyone who would like to discuss any aspect of the consultation prior to making a submission. Freephone: 1800 46 36 76

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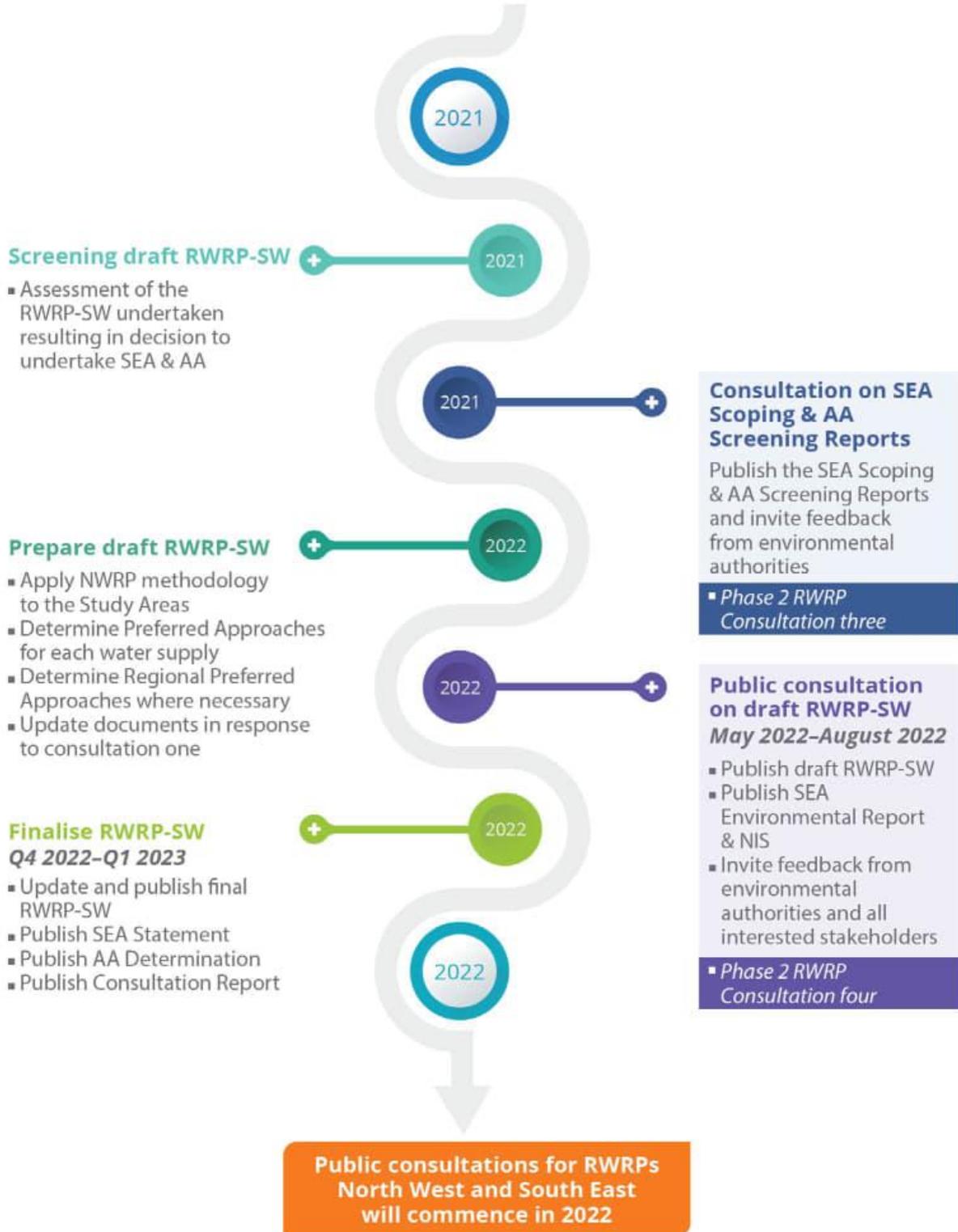
## Scope of the Consultation Questions

In order to guide members of the public or organisations in making a submission, Irish Water is inviting submissions on the following questions. However, this is just an aide and all relevant submissions received in response to the consultation will be considered:

1. Within the South West Region we consider 174 water supplies (Water Resource Zones) represented across 3 Study Areas. Do you have any comments on the Study Areas?
2. In Section 2 of the draft RWRP-SW we set out information on the current situation in the Region in respect of the population growth and economic development and how we considered this in our water resource planning approach. Do you have any comments on this?
3. Section 3 of the draft RWRP-SW and each of the Study Area Technical Reports (Appendices 1-3) outline the Need in terms of water quality, quantity, sustainability and resilience across the region and in each of the Study Areas. Do you have any comment on the Need (Deficit)?
4. Section 4 and Section 7 of the draft RWRP-SW, and the Study Area Technical Reports (Appendices 1-3), set out solutions we can undertake to address some of these Needs in the interim, while we develop the Preferred Approaches. Do you have you any comments on this?

5. Section 6 and the Study Area Technical Reports (Appendices 1-3) of the draft RWRP-SW summarise our process for developing options to address the Needs in the SW Region. Do you have any comments on this process?
6. Section 7 sets out how we identify our Preferred Approach to addressing the Need at WRZ and Study Area level. The Study Area Technical Reports (Appendices 1-3) and the Study Area Environmental Reviews will set out how the Preferred Approach has been identified in more detail. Have you any feedback on this?
7. The draft RWRP-SW looks at a range of solutions to meet the need in a WRZ or Study Area. These solutions are not limited by distance, therefore some solutions for the WRZ or Study Area will involve interconnections across multiple supply systems. Have you any comments on the Regional Preferred Approach?
8. Do you have any comments on the Strategic Environmental Assessment (SEA) Environmental Report and Natura Impact Statement (NIS) which accompany the draft RWRP-SW?
9. We have produced a RWRP Consultation Roadmap. Do you have any comments on this?
10. How would you like Irish Water to communicate with you as the RWRPs progress?

## RWRP South West Public Consultation Roadmap



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## Next Steps

1. Once the public consultation period has concluded, all feedback received during public consultation will be reviewed by the National Water Resource Plan team and all relevant feedback will be incorporated into the Post Consultation Report and, where appropriate, incorporated into the final Regional Water Resources Plan South West.
2. Consultation on the Strategic Environmental Assessment (SEA) Scoping Report for the third Regional Water Resource Plan: North West (RWRP-NW) will take place in May 2022. The SEA Scoping Report will be provided to specified environmental authorities, for the purposes of initial, non-statutory consultation on the scoping of the SEA for the North West Region. Following this process, the feedback obtained will be considered and reflected in the documents published for public consultation in 2022 comprising the draft RWRP-NW and associated SEA Environmental Report and Natura Impact Statement.
3. The remaining Regional Water Resource Plan: South East, will be consulted on in the same way, comprising both non-statutory screening and scoping consultation with environmental authorities, followed by statutory public consultations in 2022.
4. The submissions and observations received from the public consultation outlined above will be taken into consideration before adopting all four RWRPs. Once the complete NWRP has been finalised, comprising the Framework Plan and the four Regional Water Resources Plans, they will be treated as a unified single plan.

## Contact details

To make a submission on the RWRP South West or for further information please contact:

Email: [nwrp@water.ie](mailto:nwrp@water.ie)      **National Water Resources Plan,  
Irish Water,  
P.O Box 13216,  
Glenageary, Co. Dublin**

Web: [www.water.ie/nwrp](http://www.water.ie/nwrp)

Freephone: **1800 46 36 76**

### General Irish Water queries

9am-5.30pm, Mon-Fri

Telephone:    **Callsave 1800 278 278**

Minicom:      **LoCall 1890 378 378** (for hearing impaired customers with their own minicom equipment).

Please note that the rates charged for 1800 (Callsave) and 1890 (LoCall) numbers may vary across different service providers. Calls made using mobiles may be more expensive.

This publication is available in Braille, on CD and in large text format on request by calling **1800 278 278**.

# ervia



Gas  
Networks  
Ireland



# Appendix B RWRP-SW Infographic

## Regional Water Resources Plan (RWRP) South West Region

UISCE  
ÉIREANN : IRISH  
WATER

The plan will set out how we can **balance the amount of drinking water we can supply with the demand for water that is needed over the short, medium and long term.**

316 million litres a day supplied

Population growth of **33%** from 2019 to 2044

45,000 businesses served

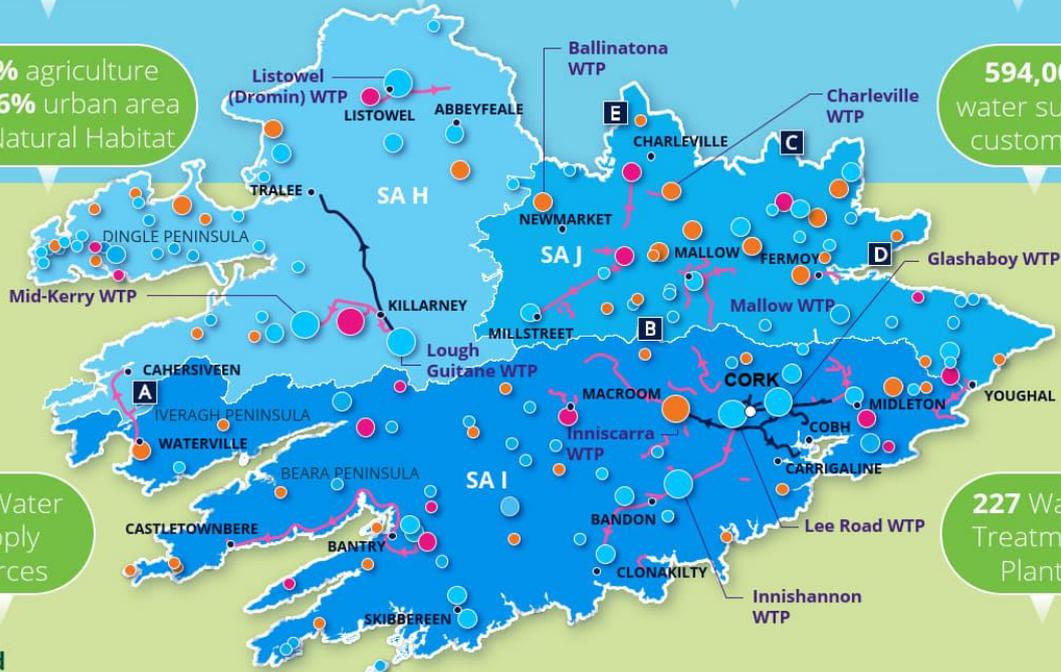
19% individual ground water sources

66.3% agriculture and 1.6% urban area  
20% Natural Habitat

594,000 water supply customers

174 Water Supply Sources

227 Water Treatment Plants



### Legend

- New WTP
- Upgrade WTP (capacity and quality)
- Upgrade WTP (quality only)
- Existing Trunk Mains
- New Mains
- A Cross Study Area Transfer

### Key Positive Outcomes of the RWRP South West

Reducing leakage to **23%** of regional demand through pressure management, active leakage control, find and fix and asset replacement.

We will **improve the level of service** provided to all customers in the Region for all-weather events significantly reducing the risk of outages and water restrictions.

**93%** of customers in the region will obtain the water from an interconnected supply

Upgrades to **137** existing water treatment plants in terms of size and barrier performance.

We will provide **17 new WTPs**

We will decommission **90 WTPs**

Our three pillar approach will ensure we have a safe, secure, reliable and sustainable drinking water supply for everyone

Lose Less

Reduce leakage

Use Less

Improve water efficiency

Supply Smarter

Improve infrastructure

## Appendix C Press Release

### **Public reminded to submit feedback on Irish Water's plans to supply water to homes and businesses in the South West region as deadline nears**

#### ***Public Consultation ends on 24 August 2022***

**10 August 2022:** - Irish Water's public consultation on the draft Regional Water Resource Plan – South West (RWRP-SW) is closing in two weeks' time, on 24 August 2022. The plan sets out options for providing a more secure, reliable and sustainable water supply for approximately 594,000 customers in the South West region over the next 25 years. A 12 week public consultation on the plan began early in June and will close on Wednesday 24 August.

Irish Water's National Water Resources Plan will be the first resources plan for the entire public water supply in Ireland. The National Plan will identify the needs across our existing supplies and the challenges and opportunities that we face over the coming years including legislation, climate change, the environment, growth and economic development.

Given the scale of the area to be covered, the National Plan is being rolled out in 2 phases. The National Plan was first adopted in the summer of 2021 and Irish Water has since moved into phase 2, which has 4 separate Regional Water Resources Plans.

The four regions are:

- Regional Water Resources Plan: North West
- Regional Water Resources Plan: South West
- Regional Water Resources Plan: South East
- Regional Water Resources Plan: Eastern and Midlands

Each Regional Plan is subject to its own consultation and, once adopted, all of the Regional Plans and the Framework Plan will be treated as a unified National Plan.

Public consultation on the draft Regional Water Resources Plan - South West will continue until 24 August 2022.

The draft RWRP-SW describes the South West Region and the current challenges faced now and into the future in terms of delivering a safe, secure and resilient water supply. It identifies progress made to date for instance, leakage reductions, capital investment works, and works in progress.

There are 227 Water Treatment Plants (WTPs) in the South West Region, which collectively serve approximately 594,000 people or 14% of the population of Ireland, via approximately 7,923 kilometres of distribution network and 174 Water Resource Zones. These treatment plants also serve 45,000 businesses. The region itself covers approximately 13,000 square kilometres, extending from the southern tip of the Iveragh Peninsula in the south-west of County Kerry, north to the Shannon Estuary, and south-east where it meets the Celtic Sea at Youghal in County Cork.

Speaking ahead of the final two weeks of the public consultation, Mairéad Conlon, Asset Planning Water Specialist, for Irish Water said, “We would like to thank those who have engaged with us on the plan so far. We received valuable feedback throughout the consultation from individuals, groups and organisations. We would like to remind those who are interested in sending their submissions in response to the public consultation to do so before Wednesday, 24 August.

“The development of a draft plan on how Irish Water will supply water across the South West region is an important step. The draft Regional Plan will offer key benefits in terms of transformation of our supplies, including the ability to cater for growth and economic development in a sustainable way, improved interconnectivity between our supplies to ensure balanced regional development, and new sustainable water sources that are adaptable to climate change.

“The draft plan sets out how we envisage water will be supplied to homes and businesses across Cork, Kerry and parts of Limerick and Waterford over the next 25 years. Our team compiled a list of Questions and Answers from public webinars held earlier in the consultation and they are now available on our website to help those who wish to send their feedback on the draft plan. A recorded webinar is also available on our website for anyone interested,” explained Mairéad.

Irish Water is seeking feedback on the public consultation for the draft RWRP- SW and associated SEA Environmental Report and Natura Impact Statement. The documents are available to view at [www.water.ie/rwrp/southwest](http://www.water.ie/rwrp/southwest)

A 12-week statutory public consultation will continue until 24 August 2022.

Submissions can be made by post or email by 24 August 2022.

**Email:** [nwrp@water.ie](mailto:nwrp@water.ie)

**Post:** National Water Resources Plan, Irish Water, PO Box 13216, Glenageary, Co. Dublin

This public consultation is everyone’s opportunity to feed into the process of how Irish Water identifies the water supply issues in the region and determines what the options are to provide a more resilient water supply to customers within the region.

A list of Questions and Answers from our Public Webinars, as well as a recording of a webinars, are available at [www.water.ie/rwrp/southwest](http://www.water.ie/rwrp/southwest)

All submissions will be taken into consideration and responses to the issues raised will be summarised in a Consultation Report which will be published on [www.water.ie/nwrp](http://www.water.ie/nwrp).

### Study Area Technical Reports

To deliver the draft Regional Water Resources Plan South West, Irish Water subdivided the region into smaller units to help manage the process of identifying potential water supply solutions (options) and the selection of our Preferred Approaches to resolve our water supply and water quality deficits. These smaller units are referred to as Study Areas (SA).

A detailed Technical Report is provided for each SA describing the solution types at SA level and providing a summary of the detailed Option and Approach Development process and resulting outcomes for each SA. The SA technical reports are provided as appendices to the draft Regional Water Resources Plan South West document.

The South West Region comprises three Study Areas as shown in figure below.

### **What was considered in the development of the RWRP-SW:**

- The draft Regional Water Resources Plan South West assesses the needs within the 174 public water supplies (Water Resource Zones) in the region in terms of quality, quantity, reliability and sustainability.
- The draft Regional Water Resources Plan South West when delivered, will provide a strategic transformation from the existing fragmented supply to a more resilient and sustainable interconnected supply.
- The identified solutions will support growth and economic development across the South West Region
- Reducing leakage in the regions from the existing baseline of 38% of regional demand to 23% of regional demand.

### **Future plans outlined in the RWRP-SW include:**

- Reducing the number of Water Resource Zones (WRZ) in the South West from 174 to 92 and developing larger interconnected WRZs for the urban areas in the region. This will allow a move away from a fragmented supply, with large variations in levels of service, to an interconnected supply with better outcomes for all water users.
- Upgrades to 137 existing water treatment plants, in terms of quantity and quality performance.
- Development of 17 new water treatment plants (WTPs).
- Eventual decommissioning 90 WTPs.
- Interconnecting supplies via 644 kilometres of trunk mains.
- Reducing leakage from the current level to 23% of regional demand through find and fix, pressure management, active leakage control and asset replacement

### **We are now inviting feedback from the public**

In order to help members of the public or organisations in making a submission, and to ensure clarity on the scope of what we would like consultees to consider in their feedback, Irish Water is inviting submissions on the following questions. However, this is just an aide and all relevant submissions received in response to the consultation will be considered.

1. Within the South West Region we consider 174 water supplies (Water Resource Zones) represented across 3 Study Areas. Do you have any comments on the Study Areas?
2. In Section 2 of the draft RWRP-SW we set out information on the current situation in the Region in respect of the population growth and economic development and how we considered this in our water resource planning approach. Do you have any comments on this?
3. Section 3 of the draft RWRP-SW and each of the Study Area Technical Reports (Appendices 1-3) outline the Need in terms of water quality, quantity, sustainability and resilience across the region and in each of the Study Areas. Do you have any comment on the Need (Deficit)?
4. Section 4 and Section 7 of the draft RWRP-SW, and the Study Area Technical Reports (Appendices 1-3), set out solutions we can undertake to address some of these Needs in the interim, while we develop the Preferred Approaches. Do you have any comments on this?
5. Section 6 and the Study Area Technical Reports (Appendices 1-3) of the draft RWRP-SW summarises our process for developing options to address the Needs in the SW Region. Do you have any comments on this process?
6. Section 7 sets out how we identify our Preferred Approach to addressing the Need at WRZ and Study Area level. The Study Area Technical Reports (Appendices 1-3) and the Study Area

Environmental Reviews will set out how the Preferred Approach has been identified in more detail. Have you any feedback on this?

7. The draft RWRP-SW looks at a range of solutions to meet the need in a WRZ or Study Area. These solutions are not limited by distance, therefore some solutions for the WRZ or Study Area will involve interconnections across multiple supply systems. Have you any comments on the Regional Preferred Approach?
8. Do you have any comments on the Strategic Environmental Assessment (SEA) Environmental Report and Natura Impact Statement (NIS) which accompany the draft RWRP-SW?
9. We have produced a RWRP Consultation Roadmap. Do you have any comments on this?
10. How would you like Irish Water to communicate with you as the RWRPs progress?

All submissions will be reviewed and categorised under key themes. The feedback relevant to the South West region will then be summarised and responded to in a consultation report as outlined below.

All feedback received will be reviewed in a post-consultation submissions workshop with the NWRP technical team and relevant feedback incorporated into the final RWRP-SW and associated SEA Statement and Appropriate Assessment Determination. How feedback from the consultation has influenced the final RWRP-SW will also be detailed in the consultation report and SEA Statement. Individual submissions will not be individually responded to but will be responded to in the consultation report, which will be published on [www.water.ie/nwrp](http://www.water.ie/nwrp)

View our updated Privacy Notice at [www.water.ie/privacy-notice](http://www.water.ie/privacy-notice) which is in line with the General Data Protection Regulation (GDPR) effective from 25 May 2018.

## Appendix D Sample Newspaper Advertisements

### Foilsíonn Uisce Éireann an Dréachtphlean Réigiúnach um Acmhainní Uisce do Réigiún an Iardheiscirt le haghaidh Comhairliúcháin Phoiblí

D'fhoilsigh Uisce Éireann an Dréachtphlean Réigiúnach um Acmhainní Uisce do Réigiún an Iardheiscirt (PRAU-ID). Is é an PRAU-ID an dara plean Réigiúnach um Acmhainní Uisce as ceithre cinn a foilsíodh le haghaidh comhairliúcháin phoiblí agus leagfaidh sé amach straitéis Uisce Éireann chun an córas poiblí um sholáthar uisce a chlaochú agus a fheabhsú sa réigiún. Bainfidh na nithe seo a leanas le toradh an dréachtphlean PRAU-ID:

- Feidhmíocht fheabhsaithe trasna na n-acmhainní uisce ar fad, agus de bharr sin níos lú cur isteach ar sholáthar nó riosca níos lú d'fhógraí 'Fiuch an tUisce'
- Claochlú straitéiseach ón soláthar ilroinnte atá ann cheana chuig soláthar idirnasctha atá níos athléimní, níos inbhuanaithe, agus níos solúbtha d'athrú aeráide

Tá comhairliúchán poiblí ar siúl faoi láthair ar feadh 12 seachtain chun eolas a dhéanamh d'fhorbairt an PRAU-ID. Mairfidh an comhairliúchán ó 1 Meitheamh go dtí 24 Lúnasa 2022. Tá Liosta iomlán na mbailte fearainn, na mbailte, na lonnaíochtaí agus na gcontaetha a chuimsítear sa PRAU-ID ar fáil ag [water.ie/rwrp/southwest](http://water.ie/rwrp/southwest)

Cuireann Uisce Éireann fáilte roimh aiseolas ar an dréachtphlean PRAU-ID agus an Measúnacht Straitéiseach Timpeallachta (MST) agus an Ráiteas Tionchair Natura (RTN) a bhaineann leis, atá ar fáil ag [water.ie/rwrp/southwest](http://water.ie/rwrp/southwest).

Is féidir nótaí tráchta agus aiseolas a chur chuig Uisce Éireann faoin dé **Céadaoin 24 Lúnasa 2022**:

**Ríomhphost:** [nwrp@water.ie](mailto:nwrp@water.ie)

**Post:** Plean Náisiúnta um Acmhainní Uisce, Uisce Éireann, Bosca Oifig Poist 13216, Gleann na gCaorach, Co. Bhaile Átha Cliath

Déanfar gach aighneacht a bhreithniú agus glacfar aiseolas ábhartha isteach sa PRAU deiridh do réigiún an Iardheiscirt, a fhoilseofar in 2022, in éineacht leis an Ráiteas MST agus an Cinneadh MC.

**Óstálfaidh Uisce Éireann sraith seiminéar gréasáin le haghaidh an phobail i Meitheamh 2022** chun an dréachtphlean PRAU-ID agus na tuairiscí bainteacha timpeallachta a chur i láthair. Le clárú, tabhair cuairt ar [water.ie/rwrp/southwest](http://water.ie/rwrp/southwest)

Ag cosaint ár n-uisce don saol atá romhainn



### Irish Water publishes the draft Regional Water Resources Plan South West for Public Consultation

Irish Water has published the draft Regional Water Resources Plan for the South West Region (RWRP-SW). The RWRP-SW is the second of four Regional Water Resources Plans launched for public consultation and it will set out Irish Water's strategy to transform and improve the public water supply system in the region.

The outcome of the draft RWRP-SW will involve:

- Improved performance across all of the water supplies resulting in fewer interruptions to supply or risk of boil water notices
- Strategic transformation from the existing fragmented supply to a more resilient and sustainable interconnected supply that is adaptable to climate change

A 12-week public consultation is now underway to inform the development of the RWRP-SW. The consultation will run from 1 June to 24 August 2022. A full list of townlands, towns, settlements and counties included in the RWRP-SW can be found at [water.ie/rwrp/southwest](http://water.ie/rwrp/southwest)

Irish Water is inviting feedback on the draft RWRP-SW and associated Strategic Environmental Assessment (SEA) Environmental Report and Natura Impact Statement (NIS), which are available at [water.ie/rwrp/southwest](http://water.ie/rwrp/southwest).

Comments and feedback can be sent to Irish Water by **Wednesday 24 August 2022**:

**Email:** [nwrp@water.ie](mailto:nwrp@water.ie)

**Post:** National Water Resources Plan, Irish Water, P.O. Box 13216, Glenageary, Co. Dublin

All submissions received will be reviewed and relevant feedback will be incorporated into the final RWRP-SW, which will be published in 2022, alongside the SEA Statement and AA Determination.

**Irish Water will host a series of webinars for members of the public in June 2022** to present the draft RWRP-SW plan and associated environmental reports. To register visit [water.ie/rwrp/southwest](http://water.ie/rwrp/southwest)

Safeguarding our water for our future



## Appendix E Planning Counters and Libraries

Local authority	Location	Address
Carlow County Council	Planning Department	Carlow County Council, Athy Road, Carlow R93 E7R7
Cavan County Council	Planning Department	Cavan County Council, Cavan Courthouse, Farnham Street, Cavan H12 R6V2
Clare County Council	Planning Department	Clare County Council, Áras Contae an Chláir, New Road, Ennis, Co. Clare V95 DXP2
Cork City Council	Planning Department	Cork City Council, City Hall, Anglesea Street, Cork T12 T997
Cork County Council	Planning Department	Cork County Council, County Hall, Carrigrohane Road, Cork T12 R2NC
Donegal County Council	Central Library	Donegal Central Library, St Oliver Plunkett Rd, Letterkenny, Co. Donegal F92 R273
Dublin City Council	Planning Department	Dublin City Council, Civic Offices, Wood Quay, Dublin 8 D08 RF3F
Dun Laoghaire-Rathdown County Council	Planning Department	Dun Laoghaire Rathdown County Council, Civic Hub, Dundrum Office Park, Main Street, Dundrum, Dublin 14 D14 YY00
Fingal County Council	Planning Department	Fingal County Council, County Hall, Main Street, Swords, Co. Dublin K67 X8Y2
Galway City Council	Planning Department	Galway City Council, City Hall, College Road, Galway H91 X4K8

Local authority	Location	Address
Galway County Council	Planning Department	Galway County Council, Áras an Chontae, Prospect Hill, Galway H91 H6KX
Kerry County Council	Planning Department	Kerry County Council, Co Buildings, Rathass, Tralee, Co. Kerry V92 H7VT
Kildare County Council	Planning Department	Kildare County Council, Áras Chill Dara, Devoy Park, Naas, Co. Kildare W91 X77F
Kilkenny County Council	Planning Department	Kilkenny County Council, County Hall, John Street, Kilkenny R95 A39T
Laois County Council	Planning Department	Laois County Council, Áras an Chontae, JFL Ave., Portlaoise, Co. Laois R32 EHP9
Leitrim County Council	Planning Department	Leitrim County Council, Áras An Chontae, St. Georges Terrace, Carrick on Shannon, Co. Leitrim N41 PF67
Limerick City & County Council	Planning Department	Limerick City & County Council, Dooradoyle Road, Dooradoyle, Limerick V94 WV78
Longford County Council	Planning Department	Longford County Council, Áras An Chontae, Great Water Street, Longford N39 NH56
Louth County Council	Planning Department	Louth County Council, Town Hall, Crowe Street, Dundalk, Co. Louth A91 W20C

Local authority	Location	Address
Mayo County Council	Planning Department	Mayo County Council, Áras an Chontae, The Mall, Castlebar, Co. Mayo F23 WF90
Meath County Council	Planning Department	Meath County Council, Buvinda House, Dublin Road, Navan, Co. Meath C15 Y291
Monaghan County Council	Planning Department	Monaghan County Council, 1 Dublin Street, Monaghan H18 X982
Tipperary County Council	Planning Department	Tipperary County Council, Civic Offices, Nenagh, Co. Tipperary E45A099
Offaly County Council	Planning Department	Offaly County Council, Áras an Chontae, Charleville Road, Tullamore, Co. Offaly R35 F893
Roscommon County Council	Planning Department	Roscommon County Council, Áras an Chontae, Roscommon Town, Co. Roscommon F42 VR98
Sligo County Council	Planning Department	Sligo County Council, Sligo City Hall, Quay St, Abbeyquarter North, Sligo F91 PP44
South Dublin County Council	Planning Department	South Dublin County Council, County Hall, Tallaght, Dublin 24 D24 A3XC
Waterford City & County Council	Carrickphierish Library	Carrickphierish Library, Gracedieu Rd, Carrickphierish, Co. Waterford X91 NN9F
Westmeath County Council	Planning Department	Westmeath County Council, Áras an Chontae, Mount Street, Mullingar, Co. Westmeath N91 FH4N

Local authority	Location	Address
Wexford County Council	Planning Department	Wexford County Council, Customer Service Unit Block B, County Hall, Carricklawn, Wexford Y35 WY93
Wicklow County Council	Planning Department	Wicklow County Council, County Buildings, Whitegates, Wicklow Town, Co. Wicklow A67 FW96

## Appendix F Sample Stakeholder Emails

Dear Inland Fisheries Ireland,

Irish Water would like to thank you for your engagement to date on the development of the National Water Resources Plan (NWRP).

Phase 1 of the NWRP Framework Plan was adopted in May 2021 following a 13.5-week statutory consultation period with accompanying Strategic Environmental Assessment (SEA) Statement and Appropriate Assessment Determination. The NWRP Framework Plan is available at [www.water.ie/nwrp](http://www.water.ie/nwrp).

We are now in **Phase 2 NWRP - Regional Water Resources Plans (RWRPs)**. The first draft Regional Water Resources Plan for the Eastern and Midlands Region (draft RWRP-EM) was issued for consultation on 14 December 2021 and closed on 08 April 2022. Progress on the draft RWRP-EM is available at: [www.water.ie/nwrp](http://www.water.ie/nwrp)

During our consultation on the RWRP-EM, representatives of Inland Fisheries Ireland asked our team to send them information on our consultation that they could share with community groups and members of the public they are engaging with through their networks, who may be interested in hearing our plans and submitting their feedback to us.

We have attached an information brochure and slide with details of our public webinars and would be grateful if you could share these details with your networks, including community groups and members of public, who you think would be interested in getting involved in our consultation.

**Irish Water are now seeking feedback on the second region, the draft RWRP South West (draft RWRP-SW) and associated SEA Environmental Report and Natura Impact Statement.** A 12-week statutory consultation will run from the 1 June 2022 to 24 August 2022, during which time the documents will be available to view on our website at [www.water.ie/rwrp/southwest](http://www.water.ie/rwrp/southwest) and at your local authority's planning office during their normal opening hours.

Submissions, or observations can be made up to the closing date of the consultation period, by email or post to:

**Email:** [nwrp@water.ie](mailto:nwrp@water.ie)

**Post:** National Water Resources Plan, Irish Water, PO Box 13216, Glenageary, Co. Dublin.

The following consultation questions have been prepared in order to guide you in making a submission. However, this is just an aide and all submissions received in response to the consultation will be considered.

1. Within the South West Region we consider 174 water supplies (Water Resource Zones) represented across 3 Study Areas. Do you have any comments on the Study Areas?
2. In Section 2 of the draft RWRP-SW we set out information on the current situation in the Region in respect of the population growth and economic development and how we considered this in our water resource planning approach. Do you have any comments on this?
3. Section 3 of the draft RWRP-SW and each of the Study Area Technical Reports (Appendices 1-3) outline the Need in terms of water quality, quantity, sustainability and resilience across the region and in each of the Study Areas. Do you have any comment on the Need (Deficit)?
4. Section 4 and Section 7 of the draft RWRP-SW, and the Study Area Technical Reports (Appendices 1-3), set out solutions we can undertake to address some of these Needs in the interim, while we develop the Preferred Approaches. Do you have you any comments on this?
5. Section 6 and the Study Area Technical Reports (Appendices 1-3) of the draft RWRP-SW summarises our process for developing options to address the Needs in the SW Region. Do you have any comments on this process?
6. Section 7 sets out how we identify our Preferred Approach to addressing the Need at WRZ and Study Area level. The Study Area Technical Reports (Appendices 1-3) and the Study Area

Environmental Reviews will set out how the Preferred Approach has been identified in more detail. Have you any feedback on this?

7. The draft RWRP-SW looks at a range of solutions to meet the need in a WRZ or Study Area. These solutions are not limited by distance, therefore some solutions for the WRZ or Study Area will involve interconnections across multiple supply systems. Have you any comments on the Regional Preferred Approach?
8. Do you have any comments on the Strategic Environmental Assessment (SEA) Environmental Report and Natura Impact Statement (NIS) which accompany the draft RWRP-SW?
9. We have produced a RWRP Consultation Roadmap. Do you have any comments on this?
10. How would you like Irish Water to communicate with you as the RWRPs progress?

All submissions made on the draft RWRP-SW and associated environmental reports will be reviewed and relevant feedback incorporated into the final RWRP-SW and associated SEA Statement. Submissions from individuals will be reported anonymously and feedback from organisations will be attributed to them. Submissions will not be individually responded to but will be summarised in a Consultation Report which will be published in 2022.

View our updated Privacy Notice at [www.water.ie/privacy-notice](http://www.water.ie/privacy-notice) which is in line with the General Data Protection Regulation (GDPR) effective from 25 May 2018.

Consultation on the SEA Scoping Report for the second RWRP North West is underway. The SEA Scoping Report was provided to specified environmental authorities and key stakeholders, for the purposes of initial non-statutory consultation on the scoping of the SEA for the North West Region. Following this process, the feedback obtained will be considered and reflected in the documents published for public consultation later in 2022.

The remaining regional plan RWRP South East will be consulted on in the same way, comprising both non-statutory screening and scoping consultation, followed by statutory public consultation over the next 12 months.

**Irish Water will be in contact in regards a briefing over the coming weeks to discuss the draft RWRP–SW plan and associated environmental reports**, and to answer any questions you may have that will assist you in making your submission.

We look forward to engaging with you further on the development of the NWRP in the coming months

Yours sincerely,

## Appendix G Public Webinars Q&A Document

### **Public Consultation on the draft Regional Water Resources Plan – South West**

### **Questions and Answers from Public Webinars**

#### **Introduction**

This document is a record of both questions raised (during or shortly afterwards), and answers given at public webinars that Irish Water held in relation to the National Water Resources Plan: Regional Water Resources Plan-South West (RWRP-SW) from the 28th of June to the 30th of June. This document is being provided in the interests of transparency, and to assist stakeholders with preparing their submissions on the draft RWRP-SW, which are due by 24 August 2022.

The questions and answers are set out in as verbatim a way as possible. We believe we have captured them accurately, although the webinars were not recorded. The answers given here are as given at the webinars and, where we have more information, we have added that in as well.

A small number of questions were determined to be out of scope of the consultation process that Irish Water (IW) is currently undertaking. If a question submitted is not on the list below, IW confirms that the question was considered to be out of scope.

In some cases, the responses will provide references to sections of the draft RWRP-SW or the Framework Plan, which can be downloaded from the following websites:

RWRP-SW and appendices - <https://www.water.ie/projects/strategic-plans/national-water-resources/rwrp/south-west/>

Framework Plan and appendices - <https://www.water.ie/projects/strategic-plans/national-water-resources/>

In relation to submissions to date, Irish Water received 83 submissions on the Framework Plan. The closing date for submissions on the draft RWRP-EM is 24 August 2022.

1. Would Irish Water ask the government for Capital Budget to replace the antiquated leaking water pipes?
2. At what percentage rate are water main pipes being replaced? 0.3 would take 300 years to replace the water pipes network.
3. Does Irish Water feel it is getting enough capital budget from the government?

Irish Water is funded by the Irish Government through the Exchequer, and by revenue from non-domestic tariffs. Under the National Development Plan the Government has included investment in public water services of €6 billion to 2026. In the Government's policy for water services in Ireland (the Water Services Policy Statement) investment is to be allocated under the themes of Quality, Future-Proofing and Conservation (Leakage Reduction). So, there is a clear commitment to investment in reducing leakage. Investment in our networks and assets is allocated through our Capital Investment Plans which are produced in advance every 5 years. These plans are submitted to the Commission for the Regulation of Utilities who undertake an independent assessment of the plans before approving.

Under our Capital Investment Plans, Irish Water (IW) has a national programme of leakage reduction and is increasing the spend on leakage reduction measures over the coming years. Our investment in this area started at €100 million per year and is currently at €120 million per year. IW plans to increase this expenditure to €150 million per year in our next investment plan. We have also applied for further funding for leakage reduction measures as part of the National Development Plan. Currently 40% of our leakage reduction investment is spent on mains replacement with the remaining budget focused on pressure management, active leakage control and 'Find and Fix' measures and this annual spend will increase as the budget increases. That rate of mains rehab will increase over time, as our funding increases and our knowledge of the areas we need to target increases. Our expenditure in terms of leakage reduction is approved by the Commission for the Regulation of Utilities (CRU).

To tackle leakage, the existing networks have to first be analysed using a combination of methods to understand the network and the causes of leakage. That is the first step in tackling leakage strategically.

More generally, wholesale mains replacement is not recommended as a stand-alone solution to reduce leakage. As set out in the European Commission's EU reference document 'Good Practices on Leakage Management (Water Framework Directive Common Implementation Strategy Working Group Programme of

Measures Case Study)', there are no records of countries or jurisdictions that use largescale watermain replacement programmes as a stand-alone method to reduce leakage (even those with low leakage levels).

#### 4. What percentage of domestic water is leaked into the ground every day?

Every day we currently lose about 38% of our treated water through leaks before it even reaches our taps. (<https://www.water.ie/projects/national-projects/leakage-reduction-programme/>)

IW is committed to addressing the current level of leakage across our supplies. In 2018, the rate of leakage nationally was 46%; by the end of 2020 it was 40%. By the end of 2021, we had reduced leakage further to 38%.

As part of the preferred approach for the South West region, we are proposing to reduce leakage to 21% of total demand across supplies, with an average daily demand greater than 1.5Mega litres (MI). This equates to a total leakage reduction of 96MI/day across the region, which will bring average demand to 23%.

Leakage reduction will always be intrinsic to our resources planning process and will always be funded as part of each investment plan. We have a multitude of issues to address across our water supplies. We must transform our water supplies (abstractions and treatment plants), improve interconnectivity between supplies by upgrading our treated water storage and trunk main network, as well as continue leakage reduction.

#### 5. Do data centres pay for water?

Yes, data centres are non-domestic customers and pay for water.

Water usage nationally for data centres is less than 0.2% of overall total demand and, due to the use of advanced technology in this area, we don't envisage this level of demand significantly increasing.

We have strategies in place to mitigate demand from data centres, such as limiting peak flows to the development and ensuring the developer provides adequate private storage to manage needs during periods of peak demand.

## 6. Is the water pipe from Limerick to Dublin going ahead?

Irish Water estimates that we will need 40% more treated water by 2044 in the Greater Dublin Area and Midlands to address current shortfalls with our supplies and to provide a sustainable and resilient water supply to support housing and commercial growth. The Water Supply Project - Eastern and Midlands Region ("WSP-EMR") is an essential project to meet the long-term water supply requirements to 2050 and beyond in a sustainable manner.

The project comprises of an abstraction of water from the lower River Shannon at Parteen Basin in County Tipperary, with a new water treatment plant nearby at Birdhill. Treated water will then be piped 170km to a termination point reservoir at Peamount in County Dublin, connecting into the Greater Dublin Area. The project will also facilitate options to reinforce supplies of treated water to communities along the route.

The project has already gone through extensive non-statutory public consultation and there will be a further opportunity to provide feedback on the project before a Strategic Infrastructure Development Planning Application is submitted to An Bord Pleanála. (<https://www.water.ie/projects/national-projects/water-supply-project-east-1/>)

## 7. In the Demand side of your Supply/Demand balance, is there a user conservation strategy. i.e., water reduction campaigns targeted at customers

"Use Less" is one of the three "pillars" that Irish Water has used to develop options to address identified need. Under the 'Use Less' pillar, conservation activities are underway at present, and Irish Water is committed to helping our customers become more efficient in their water use. Presently, Irish Water is actively promoting water conservation in schools, business and communities through activities including:

- National and Local Media Campaigns;
- Targeted Sectoral campaigns;
- Green Schools;
- Water Stewardship Scheme;
- First Fix Free Scheme; and
- Development of an online water conservation application, which will provide tips on how to conserve water in the home.

Irish Water also works with stakeholders to support policy change, such as developing water efficiency standards in Building Regulations and social housing.

8. How are water demands from possible new developments assessed within Irish Water and how does this feed into capacity for growth and development?
9. Does the strategy for drinking water take account of the County Development plans?

It is Irish Water's objective to meet future customers' needs in line with growth rates and land zoning, as set out in the Regional Spatial and Economic Strategy (RSES), National Planning Framework (NPF) and Local Authority Development Plans.

We recognise the ongoing work between the Regional Assemblies and the Local Authorities over the course of the development of the Local Authority Development Plans. As these plans are finalised, Irish Water will incorporate the increasingly refined growth rates into our demand forecasts through the monitoring and feedback process set out in Section 8.3.8 of the Framework Plan.

When Irish Water receives an enquiry or an application for any new connection to the network, a detailed assessment is carried out to assess the available capacity in the network and, where appropriate, to identify the upgrades that may be required to service that development. In such cases, the upgrades are discussed with the applicant/developer as part of the assessment process.

10. Are there any plans to engage with stakeholders in catchment / source protection measures on an ongoing basis and in advance of major schemes for long term future?

IW is already engaging with stakeholders in catchment and source protection measures. In our Water Services Strategic Plan, IW outlines its commitment to work effectively with other stakeholders to support a catchment-based approach.

Through our interim pesticide strategy (<https://www.water.ie/projects/strategic-plans/interim-pesticide-strategy/>), we are collaborating with stakeholders to manage the risks of pesticides in the catchment, with collaboration occurring at

all stages of the risk management process. IW is a key stakeholder involved in the National Pesticides and Drinking Water Action Group (NPDWAG). This group was established to enhance collaboration between key stakeholders in this area.

IW is also working on source protection projects, such as Source to Tap (<https://www.sourcetotap.eu/>) and our first pilot project is being rolled out in County Cavan.

IW is also working on expanding this approach through our Drinking Water Safety Plan project and is currently planning for the requirements of the Recast Drinking Water Directive.

#### 11. If we know of a local leak, how do we report that to you?

To report a water leak on public property e.g. footpaths, roads, communal spaces and public recreational facilities, fill in Irish Water's online form, which can be found on Irish Water's website under the heading "Report a leak on public property" (<https://www.water.ie/contact/leak-on-public-property/>)

Water leaks can also be reported to the Irish Water customer care helpline, which is open 24/7 on 1800 278 278. Customers can also contact us on Twitter @IWCare with any queries. For updates, please visit the [Water Supply Updates](#) section of the [Irish Water](#) website.

## Appendix H Stakeholders Briefings

Stakeholder	Date
Environmental Protection Agency	4 May 2022
Commission for Regulation of Utilities	17 May 2022
An Forum Uisce	5 May 2022
Inland Fisheries Ireland	27 April 2022
Department of the Environment, Climate and Communications (DECC);	28 April 2022
Department of Housing Local Government and Heritage	14 June 2022
Environmental Protection Agency	15 June 2022
An Forum Uisce	14 June 2022
Commission for Regulation of Utilities	27 June 2022
National Federation of Group Water Schemes	12 May 2022
Inland Fisheries Ireland	22 June 2022
HSE	23 June 2022
LAWPRO	30 June 2022
Oireachtas Webinar	15 June 2022
Ibec	28 June 2022
ICMSA	28 June 2022
Inland Waterways Ireland	28 June 2022
Southern Regional Assembly	28 June 2022
Kerry County Council	21 June 2022
Cork City Council	5 July 2022
Cork County Council	22 July 2022
Limerick City and County Council	22 June 2022
Waterford City and County Council	21 July 2022
Public Webinar 1 (evening)	28 June 2022
Public Webinar 2	29 June 2022
Public Webinar 3	30 June 2022
Public Webinar 3 (evening)	30 June 2022



## Appendix I Public Webinar Q&A Document

### Introduction

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