

National Water Resources Plan
Irish Water
P.O. Box 13216
Glenagery
Co. Dublin

nwrp@water.ie

10th March 2021

Re: Irish Waters National Water Resources Plan (NWRP)

Dear Sir/Madam,

The Environmental Protection Agency (EPA) welcomes the opportunity to make a submission on Irish Water's National Water Resources Plan (NWRP).

The EPA notes that the NWRP will act as the basis for Irish Water's strategic public water supply investment over the next 25 years and that four Regional Water Resource Plans will be published following this consultation process.

Introduction

This submission is supported and based on recent reports published by the EPA including

- *Drinking Water Quality in Public Supplies 2019*
- *Ireland's Environment – An Integrated Assessment 2020*

which set out the current state of drinking water quality and highlights the current known issues with drinking water infrastructure.

The recent EPA publication *Ireland's Environment – An Integrated Assessment 2020*, highlighted that 99.9% per cent of public water supply samples were compliant with the microbiological standards and 99.6 per cent of samples were compliant with the chemical standards. While this indicates that the majority of public water supplies are safe, further improvements are necessary to make sure that they stay safe in the future.

The Drinking Water Quality Report 2019 set out the priority issues which need to be resolved to improve the resilience of drinking water services and to ensure that supplies stay safe in the future. The Report also stated that the pace of implementation arising from the various action programmes and the associated improvements is too slow as there are supplies on the Remedial Action List that have been on that list for over a decade.

In relation to water resources, the River Basin Management Plan 2018-2021 indicates that 6% of waterbodies are impacted by abstractions. The revised water body risk assessment conducted for the third cycle will be published in the coming months in the draft River Basin Management Plan 2022-2027. Changing weather patterns as a result of climate change also pose a threat to the resilience of water supplies and resources.

It is clear that sustained investment by Irish Water is needed to address current issues with drinking water quality, improve the resilience of water supplies into the future and ensure the sustainable abstraction of water to protect this national resource.

Key Points

Overall, the EPA welcomes the NWRP and the proposed methodology for identifying what plants require investment.

The EPA notes that one of the Plan's key objectives is to provide an improved level of service, both in terms of drinking water quality and supply reliability. The EPA agree that securing and providing a safe and reliable public water supply is critical and that this will involve a combination of measures associated with water sources, water treatment and distribution infrastructure. The EPA considers the move to regional solutions a positive step that supports the rationalisation of smaller and more vulnerable water supplies, as Irish Water invests in providing safe and secure drinking water infrastructure throughout the country.

The EPA notes the NWRP will determine Irish Water's public water supply investment strategy for the next 25 years. The EPA notes that the plan emphasises Irish Waters statutory obligation to produce safe drinking water that complies with regulatory standards set out in the European Union (Drinking Water) Regulations 2014 (the Drinking Water Regulations).

The EPA also notes that Irish Water acknowledges that over 50% of public water supplies are not as secure or reliable as they need to be, and that the asset base is old and in need of upgrade and investment.

While the planning horizon may extend to 25 years, implementation of actions to address current infrastructural deficits should be addressed immediately to reduce any risk to public health associated with these. Options assessments have already been done for sites on the RAL and improvements in these supplies should not be contingent on the completion of this plan. The Barriers Assessment process in the NWRP should address how Irish Water will rectify these current issues, with details and commitments provided in the four Regional Water Resource Plans.

In addition, the plan needs to provide greater clarity and include assessment criteria in relation to Irish Water's short-term response where urgency is needed, such as where a treatment barrier has been compromised. These additional criteria would improve investment decision making in each Water Resource Zone when there is an immediate identified risk to public health.

The EPA acknowledge that there is some uncertainty in relation to pending water abstraction and drinking water legislation and that this may impact on Irish Water's "water available for use" projections and water quality "barrier assessments".

It will be essential that the NWRP take account of any new or revised legislation relating to the recast Drinking Water Directive and the forthcoming abstractions control regime. The EPA suggest that Irish Water should review the NWRP and/or the four Regional Water Resource Plans following the publication of any new regulations on water abstractions and revisions to the drinking water regulations.

The NWRP recognises that historic underinvestment in capital maintenance has resulted in an asset base in poor condition, which manifests in high leakage rates across the networks. The EPA note the Irish Water project to reduce leakage from 43% of total water abstracted in 2019 to 31% of total water abstracted in 2034. While the EPA welcomes the planned reduction in leakage, it is concerned at the rate of progress. Irish Water agreed a leakage reduction of 176 MLD with the Commission for Regulated Utilities (CRU) as part of the 2020-24 investment programme, but the NWRP only projects a 41 MLD leakage reduction by 2024.

The EPA is aware of the water supply challenges experienced by Irish Water arising from extreme weather events in the past five years. The EPA welcomes the NWRP's focus on building resilience in water-related infrastructure to guard against the impacts of weather and climate related extremes on water services and the water environment.

The EPA welcomes the level of detail and information provided in the Non-Technical Summary which clearly outlines the key elements of the Strategic Environmental Assessment (SEA) and the NWRP.

Appendix 1 provides further specific points on the NWRP, the Strategic Environmental Assessment and the Appropriate Assessment and the EPA looks forward to having the opportunity to comment on the four Regional Water Resource Plans when published.

Yours Sincerely,

A handwritten signature in black ink, appearing to read 'Micheál Lehane', with a stylized flourish at the end.

Micheál Lehane

Director, Office of Evidence and Assessment,
Environmental Protection Agency

Appendix 1 - Additional Feedback on the NWRP, SEA and AA

Assessment approach

1. While the multi-criteria analysis and screening process is clear, it is not clear how the preferred approach in a Water Resources Zone will be determined. Also, it is not clear how the options in a Water Resource Zone be prioritised / ranked when competing for funding with options in other Water Resource Zones. This, and how known water supply issues will be addressed, should be clarified in the final NWRP and the four Regional Plans.
2. The EPA acknowledges that there is uncertainty regarding the pending abstraction legislation. Irish Water should clarify the statement in the plan that the current 'water available for use' forecast does not include the pending abstraction legislation, whilst also indicating the water available for use could reduce from 1,723 MLD to 1,478 MLD as a result of the pending abstraction legislation. In the absence of the abstraction legislation the EPA request that Irish Water publish the criteria in the NWRP that it has used in lieu of the pending abstraction legislation.
3. The EPA notes that Irish Water have incorporated national climate change projections from the ICARUS research team and the Met Éireann TRANSLATE project which are projected to cause a 1 - 5% reduction in Water Available for Use.
4. The plan states that the agricultural supply demand is expected to increase in response to Food Wise 2025, but thereafter the plan indicates it will exclude this growth in its forecasts. Consideration should be given to the updated information in the Agri-Food 2030 Strategy when published because projected agricultural growth, especially in the southern region, including increased agri-industry related demand, may be significant and should be accounted for in the Water Available for Use (WAFU) figures and assessment in this region.
5. Irish Water should define the sustainability criteria and benchmarks used in the NWPR. An environmentally sustainable supply will be one which can be delivered by Irish Water without posing a risk to a water body's environmental objectives. In addition, the plan would benefit from clearly stating benchmarks and/or standards in relation to reducing demand.
6. In the context of resilience, the vulnerability of water infrastructure to cascading impacts (for example, during recent extreme weather events where flooding and vulnerabilities in power supply have affected water infrastructure) should be discussed further in the NWRP and form part of the multi-criteria analysis.
7. The EPA notes that Irish Water is planning on applying a Drinking Water Safety Plan (DWSP) approach. This is in line with the requirements in the re-cast Drinking Water Directive, but the EPA is concerned that the NWRP makes only cursory references to some aspects of the DWSP approach i.e. in relation to mitigating pressures that would reduce the level of treatment required. The NWRP option prioritisation criteria should include all aspects of the DWSP approach, including potential management measures in the catchment to inform decision making on the barrier assessment and demonstrate a reduction in risks to public water supplies.

Existing and Short Term Issues with Public Water Supplies

8. The EPA reminds Irish Water that it has an obligation to comply with any requirements stipulated in regulations in a timely manner, irrespective of any timelines for mitigation proposed in the Plan(s).
9. The planning horizon of the NWRP is such that flexibility, adaptability and regular touch points should be included to satisfy the regulatory requirements of both the EPA and Commission for Regulated Utilities (CRU). This should include being able to adapt to any future EPA guidance, or CRU intervention on infrastructure funding.
10. To date, the National Disinfection Programme has not achieved the timelines set for its delivery. Only a third of all water treatment plants have had their works completed. The EPA notes that most of the assessment work to determine the requirements on a plant by plant basis has been already been completed nationally and that further assessment of this under the barrier's assessment may impede delivery of this critical work. It is the view of the EPA that no delay should be introduced into the delivery of this programme as these works are of fundamental importance in addressing disinfection issues in water supplies.
11. There are opportunities to address multiple issues when undertaking leakage reduction works e.g. replacing cast iron mains and lead service connections which may compromise the quality of water delivered to the public. These opportunities for synergies should be identified and implemented via the Plan, as they deliver the maximum benefit.

Recommendations for Consideration in the NWRP

12. The NWRP acknowledges that emerging contaminants are a challenge for the future. The EPA considers that Irish Water should include proposals to address the removal of chemicals and pharmaceuticals in wastewater treatment and a reduction in the spread of antimicrobials into the environment via wastewater. This in turn would benefit the approach taken by Irish Water in relation to water supply treatment.
13. Radioactivity monitoring of drinking water and potential mitigation measures are not mentioned in the NWRP. In general, the plan should include monitoring of water quality for a broader range of emerging and radiological contaminants and not just those which already have specified drinking water limits.
14. In relation to the energy efficiency improvements referenced in the NWRP, consideration should be given to utilising renewable energy sources where possible to contribute to the decarbonisation of our society and economy.
15. Currently there is little reference to knowledge gaps in the NWRP. Irish Water should identify the research requirements needed to identify and address knowledge gaps in the short and long term. Commitments in the Programme for Government refer to Irish Water commissioning a range of research projects to explore innovative ways of improving water infrastructure and reducing consumption. Developments in these areas could be captured in the NWRP.

16. The EPA Research Report 346 'National Risk Assessment of Impacts of Climate Change: Bridging the Gap to Adaptation Action' (Flood et al., 2020), which considers the National Adaptation Framework's four themes including water resources, flood risk management and public health.
17. The EPA suggests that the plan be renamed as the National Public Water Resources Plan, or similar, as it solely focuses on public water supply provision and doesn't reflect that there are many other users of water resources in Ireland aside from Irish Water, for example private water supplies, agriculture, industry and recreation.

Inclusion of information from the Strategic Environmental Assessment (SEA) Environmental Report in the NWRP

18. The Environmental Action Plan-EAP (Table 10.1) and the Monitoring Plan (Table 10.2) of the SEA Environmental Report should be included in the NWRP. The plan would benefit from the inclusion of a subsection to show how the SEA recommendations have been integrated.
19. It is recommended that a commitment be included in the NWRP to report, within a specified timescale, on the environmental monitoring and actions that are proposed in the SEA Environmental Report. The monitoring programme should indicate monitoring responsibilities and should be flexible to take account of specific environmental issues and unforeseen adverse impacts should they arise. The monitoring programme should consider and address the possibility of cumulative effects and impacts on other activities. To aid transparency and tracking, consideration should also be given to assigning reference numbers, where possible, to the proposed monitoring indicators and targets.
20. The plan should include clear commitments to implement the recommended mitigation measures identified in the SEA.
21. In relation to the Appropriate Assessment, the *General Mitigation Measures and Principles*, the *Further assessments and data to inform potential impacts* and the associated *Table 8.1 Summary of mitigation measures and further assessments/ data required for each option type*, should also be included in the NWRP.

Specific Comments on the NWRP SEA Environmental Report

We welcome the level of detail and information provided in the Non-Technical Summary. It clearly outlines the key elements of the SEA and the NWRP.

In *Chapter 2 – National Water Resources Plan (NWRP) – Draft Framework Plan* we acknowledge the three pillars of the Plan relating to Supply, Demand and Water Quality.

In *Table 2.4 – Potential Water Resource Management Solutions (options types)*, in relation to Effluent Reuse, the relationship with the regional waste management plans should also be considered.

Relationship with other plans and programmes

The EPA acknowledges that the plan comprehensively references other national plans and programmes. The EPA suggests that the most recent versions of plans / programmes and strategies should be referenced and consulted throughout.

In *Chapter 5 – Review of Relevant Plans, Policies and Programmes*, a few additional plans should be considered in the areas described below, in *Table 5.1 – List of Policies, plans and programmes reviewed*. In addition, the most recent versions of plans, programmes and/or strategies should be referenced and consulted throughout.

References to the National Spatial Strategy should be replaced with the National Planning Framework. Additionally, in relation to the specific themes described in Table 5.1, the following comments are made:

- For *Population and Human Health*, we refer you to the draft Agri Food Strategy 2030 (DAFM (in preparation)) and Fáilte Ireland's 10 Year Tourism Strategy to also be considered.
- For *Biodiversity, Flora and Fauna*, update references to the EU Biodiversity Strategy to reflect the latest published Biodiversity Strategy to 2030 report. We also suggest including a reference to the National Biodiversity Action Plan and the All Ireland Pollinator Plan.
- For the *Material Assets* theme, replace the reference to the National Spatial Strategy with the National Planning Framework. We also suggest referencing the Government's National Waste Action Plan for a Circular Economy strategy document, which sets out targets in relation to food waste, which as defined therein, also includes drinking water.
- For *Climate Change*, consider including a reference to Ireland's National Climate Action Plan 2019. There is also merit in clarifying the inclusion of reference to the Offshore Renewable Energy Development Plan. Additionally, the Climate Change Adaptation Plan for the Health Sector 2019-2024 discusses the risks to human health associated with wastewater management, drought, and the role of improved drinking water infrastructure in addressing the climate impacts identified.
- The relevant aspects of the European Green Deal should also be considered.

We acknowledge the main environmental issues identified for the various environmental criteria considered in the assessment and in the plan.

We recommend that reference is made to the EPA's recently published State of the Environment Report *Ireland's Environment - An Integrated Assessment 2020*. The most recent versions of EPA reports on air, water and waste and associated data should be consulted and referenced throughout. The report needs updating to reflect the most recent environmental assessments at national, sector and topic level.

In *Subsection 5.2.2 - Sustainable Energy Strategy – Climate Change Mitigation and Adaptation*, Strategy, while we acknowledge energy efficiency improvement as a key

mitigation measure, we suggest that consideration also be given to utilising renewable energy sources where possible to contribute to the decarbonisation of our society and economy.

Environmental Baseline

We note the extent to which the EPA's State of the Environment Report *Ireland's Environment – An Assessment 2016* (EPA, 2016), has been incorporated into the SEA Environmental Report, in *Chapter 6 – Environmental Baseline*. The next iteration of this report series *Ireland's Environment – An Integrated Assessment 2020* (EPA, 2020), was published in November 2020 and should be used to update the relevant environmental baseline descriptions. The plan should also consider the key relevant recommendations of this latest report to address the environmental challenges facing Ireland.

With regards to linkages to tourism aspects, as described in the subsection on Tourism & Recreation, there is merit in referencing Fáilte Ireland Visitor Experience Development Plans and Waterways Ireland Tourism Masterplan for the River Shannon.

In relation to linkages with the agri-food sector, there is merit in referencing the draft Agri-Food Strategy 2030 (DAFM) currently in preparation and subject to SEA.

Table 6.5 Summary of the key issues and scope of the Strategic Environmental Assessment provides a useful and informative overview of the key issues relevant to the specific SEA environmental topics.

The columns on *Key Policies, Plans and Programmes (PPPs)* should be updated to reflect the most recent iterations of the specific PPPs. The key issues columns should also be updated to reflect the relevant key findings, recommendations and actions in *Ireland's Environment - An Integrated Assessment 2020*.

We note the scoping out of noise, it would be useful to highlight, where relevant, acoustic screening measures which may already be in place at water treatment and related facilities.

Under Climate Change, include reference to the European Green Deal in the context of climate and environmental-related challenges. The EU Biodiversity Strategy should also be referenced under Biodiversity.

In *Table 6.6 Interrelationships between SEA topics for the Draft Framework*, consider the potential for linkages between Air Quality and Climate Change and Cultural Heritage and Geology.

Under *Material Assets* include reference to the National Hazardous Waste Management Plan (this is currently being reviewed and is subject to SEA). The three Regional Waste Management Plans should also be referenced. These will be replaced by the National Waste Action Plan.

Under *Transboundary*, Northern Ireland has recently commenced consultation on a *Draft Flood Risk Management Plan 2021-2027*. This consultation runs to June 2021.

Consideration of Alternatives

We note in *Chapter 7 – SEA Assessment Methodology*, that the consideration of alternatives is described in section 7.4.2 *Alternatives to the Draft Framework Plan considered within this SEA*.

In subsection 7.5 *Cumulative assessment of the National Water Resources Plan*, we acknowledge the reference to the EPA 2017 draft Guidelines on the Information to be contained in Environmental Impact Assessment Reports. The EPA has also published a [Good Practice Guidance Note on Cumulative Effects Assessment in Strategic Environmental Assessment](#). (EPA, 2020) that would also be useful to consider.

The SEA Environmental Report should identify significant data gaps that were encountered during the SEA process which, if available, would assist in the implementation of the final plan and the preparation and assessment of the four Regional Water Resources Plans.

Chapter 8 – Assessment of the draft Framework Plan (Phase 1)

We acknowledge subsection 8.6 – *SEA Recommendations for implementing the draft Framework Plan*. We recommend that this subsection is also included in the NWRP to show how the SEA recommendations have been integrated.

With regards to climate change considerations, in section 8.6.2 – *Delivering Solutions – approach*, it would be useful to comment on any identified vulnerability of water-related service infrastructure and supporting networks to storm events. Given the potential for increased frequency of storm events with climate change, this may impact on the network or water related assets which may impact on the ability to provide safe and secure water.

In relation to the approach to residual material from the water treatment process ‘*Residuals Approach*’ in *Section 8.6.2 Delivering Solutions- Approach*. You should describe how these residuals are treated and managed. The relationship with relevant plans such as the Waste Action Plan for a Circular Economy and the Regional Waste Management Plans should also be included.

Regional Water Resource Plan considerations

In *Chapter 9 – SEA Influencing Regional Water Resources Plans (RWRPs) (Phase 2)*, we note the options and methodology proposed to further consider and select appropriate options at a regional level. It would be useful to also consider the use of the EPA-supported Environmental Sensitivity Mapping Webtool (www.enviromap.ie) to assist in identifying sensitive receptors and areas of environmental sensitivity when the process of screening options begins. It may also be useful to refer to this in *Section 9.9.4 - Sensitivity Analysis*.

In addition, there would be merits in setting the four Regional Water Resource Plans in the context of the National Planning Framework and the three Regional Spatial Economic Strategies.

This chapter provides a useful overview on how SEA will be integrated in the Regional plan making process. Table 9.1 clearly sets out the plan making stages and the parallel SEA related stages. There would be merit in including the Appropriate Assessment

process and the Strategic Flood Risk Assessment, in this Table or a modification to the Table.

SEA Mitigation and Monitoring Considerations

We note *Table 10.1 – Environmental Action Plan (EAP)*, which sets out the recommended actions for mitigation or further study and sets out suggested targets and related monitoring considerations. *Table 10.2 Monitoring Plan-Indicators and Targets* describes the monitoring plan including suggested indicators and targets for each relevant environmental topic. We suggest that information on the frequency of monitoring of the various elements is provided in both tables, as appropriate.