Urban Waste Water Treatment in 2022

Environmental Protection Agency
An Ghníomhaireacht um Chaomhnú Comhshaoil

ENVIRONMENTAL PROTECTION AGENCY

The EPA is responsible for protecting and improving the environment as a valuable asset for the people of Ireland. We are committed to protecting people and the environment from the harmful effects of radiation and pollution.

The work of the EPA can be divided into three main areas:

Regulation: *Implementing regulation and environmental compliance systems to deliver good environmental outcomes and target those who don't comply.*

Knowledge: *Providing high quality, targeted and timely environmental data, information and assessment to inform decision making.*

Advocacy: *Working with others to advocate for a clean, productive and well protected environment and for sustainable environmental practices.*

Our responsibilities include:

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- Large-scale industrial, waste and petrol storage activities;
- Urban waste water discharges;
- The contained use and controlled release of Genetically Modified Organisms;
- Sources of ionising radiation;
- Greenhouse gas emissions from industry and aviation through the EU Emissions Trading Scheme.

National Environmental Enforcement

- Audit and inspection of EPA licensed facilities;
- Drive the implementation of best practice in regulated activities and facilities;
- Oversee local authority responsibilities for environmental protection;
- Regulate the quality of public drinking water and enforce urban waste water discharge authorisations;
- Assess and report on public and private drinking water quality;
- Coordinate a network of public service organisations to support action against environmental crime;
- Prosecute those who flout environmental law and damage the environment.

Waste Management and Chemicals in the Environment

- Implement and enforce waste regulations including national enforcement issues;
- Prepare and publish national waste statistics and the National Hazardous Waste Management Plan;
- Develop and implement the National Waste Prevention Programme;
- Implement and report on legislation on the control of chemicals in the environment.

Water Management

- Engage with national and regional governance and operational structures to implement the Water Framework Directive;
- Monitor, assess and report on the quality of rivers, lakes, transitional and coastal waters, bathing waters and groundwaters, and measurement of water levels and river flows.

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- Publish Ireland's greenhouse gas emission inventories and projections;
- Provide the Secretariat to the Climate Change Advisory Council and support to the National Dialogue on Climate Action;
- Support National, EU and UN Climate Science and Policy development activities.

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- Design and implement national environmental monitoring systems: technology, data management, analysis and forecasting;
- Produce the State of Ireland's Environment and Indicator Reports;
- Monitor air quality and implement the EU Clean Air for Europe Directive, the Convention on Long Range Transboundary Air Pollution, and the National Emissions Ceiling Directive;
- Oversee the implementation of the Environmental Noise Directive;
- Assess the impact of proposed plans and programmes on the Irish environment.
- Environmental Research and Development
- Coordinate and fund national environmental research activity to identify pressures, inform policy and provide solutions;
- Collaborate with national and EU environmental research activity.

Radiological Protection

- Monitoring radiation levels and assess public exposure to ionising radiation and electromagnetic fields;
- Assist in developing national plans for emergencies arising from nuclear accidents;
- Monitor developments abroad relating to nuclear installations and radiological safety;
- Provide, or oversee the provision of, specialist radiation protection services.

Guidance, Awareness Raising, and Accessible Information

- Provide independent evidence-based reporting, advice and guidance to Government, industry and the public on environmental and radiological protection topics;
- Promote the link between health and wellbeing, the economy and a clean environment;
- Promote environmental awareness including supporting behaviours for resource efficiency and climate transition;
- Promote radon testing in homes and workplaces and encourage remediation where necessary.

Partnership and networking

- Work with international and national agencies, regional and local authorities, non-governmental organisations, representative bodies and government departments to deliver environmental and radiological protection, research coordination and science-based decision making.

Management and structure of the EPA

The EPA is managed by a full time Board, consisting of a Director General and five Directors. The work is carried out across five Offices:

- Office of Environmental Sustainability
- Office of Environmental Enforcement
- Office of Evidence and Assessment
- Office of Radiation Protection and Environmental Monitoring
- Office of Communications and Corporate Services

The EPA is assisted by advisory committees who meet regularly to discuss issues of concern and provide advice to the Board.

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An Ghníomhaireacht um Chaomhnú Comhshaoil
PO Box 3000, Johnstown Castle Estate, Co. Wexford, Ireland Y35 W821
Telephone: +353 53 9160600
Email: info@epa.ie Website: www.epa.ie
Lo Call 1890 33 55 99

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EXECUTIVE SUMMARY

Waste water collected in our cities, towns and villages must be treated to make it clean and safe before it is released into the environment. Investment in treatment infrastructure at priority areas highlighted by the EPA continues to bring improvements. Six villages that used to discharge raw sewage every day were connected to treatment plants in the past year. These are Duncannon, Arthurstown and Ballyhack in Wexford, Inchigeelagh in Cork, Clarecastle in Clare and Kilcar in Donegal. While Uisce Éireann is making progress, it is concerning that Ireland has still not met all its obligations under the *Urban Waste Water Treatment Directive*, some 30 years after the country was required to bring provisions into force to comply with the Directive. Treatment at many areas is still not as good as it needs to be and inadequately treated waste water continues to impact water quality in our rivers, lakes, estuaries and coastal waters.

It will take a multi-billion euro investment to bring all treatment systems up to standard and at least two decades to complete this work. As all the problems cannot be fixed in the short term, the available resources must be directed where they are needed most. Uisce Éireann can deliver significant benefits for our environment between now and the end of its next investment cycle in 2029 by targeting funding and resources to improve treatment at the 89 priority areas highlighted by the EPA in this report. Fixing the problems at these areas will stop discharges of raw sewage, prevent waste water from harming water bodies most at risk of pollution, bring Ireland into compliance with EU waste water treatment obligations and protect endangered freshwater pearl mussels in our rivers.

Priorities and challenges

Comply with EU treatment standards. Treatment at 15 large urban areas including Dublin did not meet EU standards set to protect the environment. Just over half of these need new treatment infrastructure. The others already have treatment plants capable of meeting the standards and can be brought into compliance by making sure the plants perform at their best. Five of the plants that failed the treatment standards in 2022 had complied with the standards in 2021. This highlights the need to maintain all plants in optimum condition and prevent previously compliant plants from becoming non-compliant.

Eliminate raw sewage discharges. 26 towns and villages discharge raw sewage every day because they are not connected to treatment plants. This is down from 32 last year. Most of the remaining towns and villages will be connected to treatment by the end of 2025, but at least six will not and these will take a few more years to resolve.

Improve collecting systems (sewers). Collecting systems at six priority areas must be upgraded to protect the environment and address the findings of a judgement from the Court of Justice of the European Union. Uisce Éireann must also improve the information available on discharges of untreated waste water from collecting systems. This is essential to assess risks, prioritise improvement works and guide investment planning.

Prevent pollution of inland and coastal waters. Waste water is a significant pressure on many rivers, lakes, estuaries and coastal waters that are not in good enough health. The EPA has identified 39 priority areas where improvements are most needed to protect surface waters impacted by waste water. Improvement works are in train at approximately one-quarter of the areas prioritised by the EPA. Progress at the remaining areas is far too slow and Uisce Éireann is taking too long to design and start delivering the interventions needed to prevent pollution.

Protect vulnerable habitats. The EPA identified 12 towns and villages where treatment must improve to protect endangered freshwater pearl mussels. Improvements have been implemented or are ongoing at half of these. However, Uisce Éireann has not given sufficient priority to advancing the works needed at the other six areas and the continued failure to deliver the works in a timely manner is prolonging the risks to these endangered species.

In addition, Uisce Éireann is not meeting its obligations, and its own commitments, to assess the impacts of waste water discharges on shellfish waters and resolve any adverse impacts identified. The assessments required at 23 shellfish waters are long overdue.

Summary of key recommendations

The EPA recommends the following key actions for Uisce Éireann.

- Resolve the environmental issues at each priority area in this report and provide clear, site specific action plans and time frames to deliver the necessary improvements.
- Operate all treatment systems effectively to get the best from them, minimise breakdowns and prevent any deterioration in performance.
- Complete the overdue impact assessments for shellfish waters, improve the information available on storm water overflows and use the findings from these projects to identify and address environmental risks and guide investment planning.

1. INTRODUCTION

This report by the Environmental Protection Agency (EPA) provides a summary of urban waste water treatment in Ireland during 2022.

Every day more than a billion litres of waste water (sewage) is collected in Ireland's public sewers and treated at over 1,000 treatment plants. The treated waste water is then discharged into rivers, estuaries, lakes and coastal waters. Uisce Éireann is responsible for providing this essential service[1]. The EPA is the environmental regulator of Uisce Éireann. In 2022 the EPA conducted 214 inspections of Uisce Éireann's waste water works to assess compliance with environmental regulations.

Why is waste water treatment important?

Treating waste water to make it clean and safe is essential to protect our environment and public health. Untreated and poorly treated waste water can be contaminated with bacteria and viruses that can make people sick. It can cause pollution and damage aquatic ecosystems by depleting oxygen levels in water and releasing nutrients such as nitrogen and phosphorus that lead to excessive and unwanted growth of algae and aquatic plants.

Environmental priorities

While there have been improvements in recent years, treatment at many areas is not as good as it needs to be and waste water is still discharged into the environment without adequate treatment. It will take substantial and sustained investment over the next two decades to bring all deficient treatment systems up to standard and also provide for future needs. Uisce Éireann should have a long term plan for this work. It is not possible to fix all the problems in the short term and Uisce Éireann must direct the resources that are available now to the right areas to improve treatment where it is needed most and will bring the greatest benefits.

The EPA has identified five key issues or environmental priorities that Uisce Éireann must address to protect our environment from the harmful effects of waste water discharges. Table 1 summarises these and shows the number of urban areas where treatment must improve to address each environmental priority. We refer to these urban areas as priority areas. You can keep up to date with all the priority areas and see Uisce Éireann's action plans and time frames to deliver the improvements needed at each priority area on the EPA's website at *https://www.epa.ie/publications/compliance--enforcement/waste-water/priority-areas-list-current.php*.

1 The Water Services (Amendment) Act 2022 specifies that from the start of 2023 Irish Water shall be known only by its name in the Irish language, Uisce Éireann.

Table 1: Environmental priorities for waste water[2]

Ensure waste water treatment at all large urban areas complies with European Union standards

15 large urban areas that did not meet European Union treatment standards in 2022 require improvements to comply with these standards.

Eliminate discharges of raw sewage

26 towns and villages discharging raw sewage into the environment every day must be connected to waste water treatment plants.

Upgrade collecting systems found non-compliant with European Union requirements

6 collecting systems (sewers) must be upgraded to address the findings of a judgement from the Court of Justice of the European Union.

Improve treatment to protect inland and coastal waters that are adversely impacted by waste water

39 priority areas require improvements to protect rivers, lakes, estuaries and coastal waters that are adversely impacted by waste water.

Improve treatment where needed to protect freshwater pearl mussels

12 areas need improvements in waste water treatment to protect endangered freshwater pearl mussels.

2 There is more than one environmental priority at some urban areas. For example, Arklow is one of the 15 areas that did not meet European Union treatment standards in 2022 and is also one of the 26 areas discharging raw sewage.

2. TREATMENT AND EFFLUENT QUALITY

The European Union's *Urban Waste Water Treatment Directive* sets standards for treating waste water at all large urban areas, with the objective of protecting the environment from the harmful effects of waste water discharges[3]. Ireland's performance in 2022 is summarised below.

173 areas were subject to the Directive's treatment standards in 2022

158 areas complied with the standards

15 areas failed to comply with the standards

The number of areas failing the standards increased in 2022 compared with the previous two years (Figure 1). Five areas that met the standards in 2021 failed to maintain compliance in 2022. These more than offset the areas that came into compliance in 2022. This highlights the need for Uisce Éireann to improve the management and oversight of treatment plants to make sure they always perform at their best and prevent previously compliant plants from becoming non-compliant.

55 per cent of all the waste water collected in Ireland's large urban areas was produced in the 15 areas that failed the standards, with Dublin (Ringsend) accounting for most of this. The areas that failed are shown in Figure 2. There is further information in *Appendix A* on the European Union requirements and the treatment standards breached at each area.

Just over half the areas that failed the standards have inadequate treatment infrastructure and most of these repeatedly discharged poor quality effluent throughout 2022. These areas require substantial investment to build and upgrade treatment infrastructure.

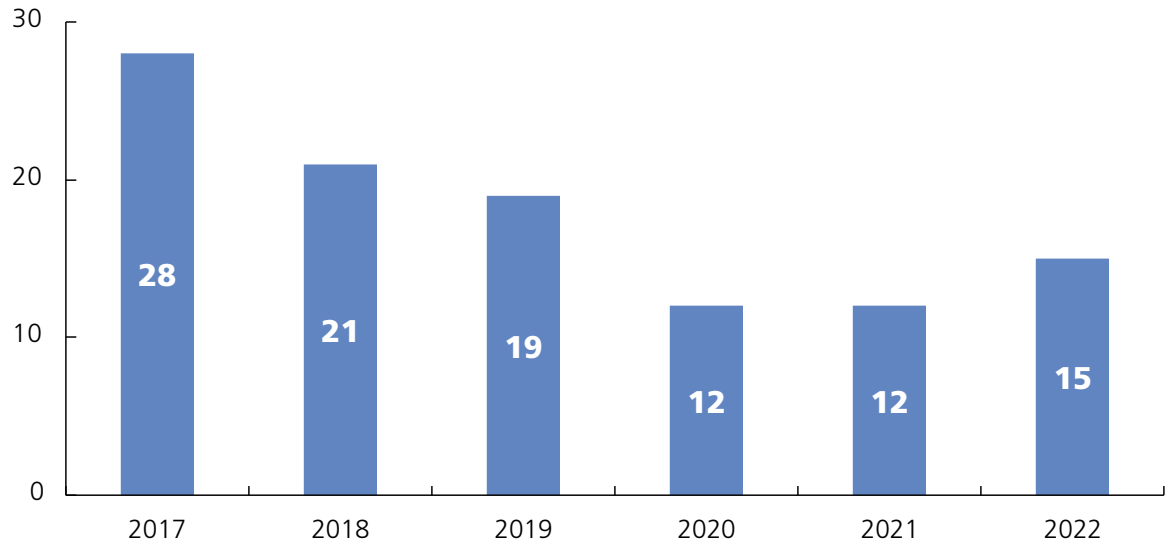

Figure 1: Number of large urban areas failing the European Union treatment standards

3 Large urban areas are towns and cities with a population equivalent of at least 2,000 that discharge effluent to freshwater or estuaries, and areas with a population equivalent of at least 10,000 that discharge effluent to coastal waters. There is information on large urban areas and other technical terms used in this report in the *Glossary and background information*.

Other towns and cities already have treatment plants capable of meeting the standards but on occasion these did not perform as well as they should due to issues with the management and control of the plants. For example, inadequate management of sludge in the treatment plant serving Skibbereen, Co. Cork adversely affected the treatment process and led to discharges of poorly treated sewage in August 2022. Such failures can be prevented by improving the operation and management of treatment plants, for instance, providing better preventative maintenance and training.

Uisce Éireann has plans in place to upgrade treatment plants at the areas that failed the standards due to inadequate treatment infrastructure. Most of these upgrades will be completed by 2025 but some will take longer, for example, Uisce Éireann recently revised its plans for a new treatment plant at Lahinch, Co. Clare and extended the completion date from 2027 to 2029. The following are examples of significant treatment infrastructure projects that were in construction during 2022:

- The overloaded plant at Ringsend in Dublin, which takes over 40% of Ireland's urban waste water, is being upgraded to substantially increase capacity and bring treatment up to European Union standards. This critical national project is due to be completed in 2025 and will bring Ireland's compliance with the Directive in line with the rest of the European Union.
- The outdated treatment plant that served Lifford, Co. Donegal for over 50 years was replaced at the end of 2022 by a modern plant that treats sewage from the town to a much higher standard.
- Construction of a new treatment plant for Arklow, which currently has no treatment, is progressing and expected to be completed in 2025.

Complying with the treatment standards in the Directive is an essential step in protecting our environment and is also necessary to avoid European Union fines. The Directive was adopted in 1991 and the final deadline to comply was 2005. In 2019 the Court of Justice of the European Union declared that Ireland had failed to fulfil its obligations under the Directive. Ireland is at risk of fines if treatment continues to fail the standards.

Uisce Éireann must take the following actions to comply with the Directive's treatment standards.

- Provide the outstanding infrastructure needed to treat waste water properly at large urban areas.
- Make sure treatment plants are operated and maintained in a manner that gets the best from them and minimises breakdowns.

The Directive is currently undergoing a revision or 'recast' and this is likely to introduce more stringent requirements for waste water treatment in all European Union Member States. Ireland must factor these changes into the future planning and delivery of waste water services.

Figure 2: Areas that failed the EU treatment standards in 2022

3. RAW SEWAGE

There has been some good progress in reducing the number of areas with no treatment (Figure 3) and six villages that used to discharge raw sewage were connected to treatment over the past year. These are Duncannon, Arthurstown and Ballyhack in Co. Wexford, which were connected in the second half of 2022 and Inchigeelagh, Co. Cork, Clarecastle, Co. Clare and Kilcar, Co. Donegal which were connected in the first half of 2023.

However, raw sewage from the equivalent of 54,000 people in 26 towns and villages is still discharged into the environment every day because these areas are not connected to treatment plants (Figure 4)[4]. The volume of raw sewage discharged daily could fill three Olympic size swimming pools.

Based on Uisce Éireann's recent plans, 20 of the towns and villages discharging raw sewage will have treatment in place by the end of 2025 and the remaining areas are expected to receive treatment by the end of 2028[5]. There is more detail on when each area is scheduled to receive treatment in *Appendix B*.

Raw sewage poses an unacceptable risk to the environment and public health. The 26 areas discharging raw sewage must be connected to treatment as soon as possible.

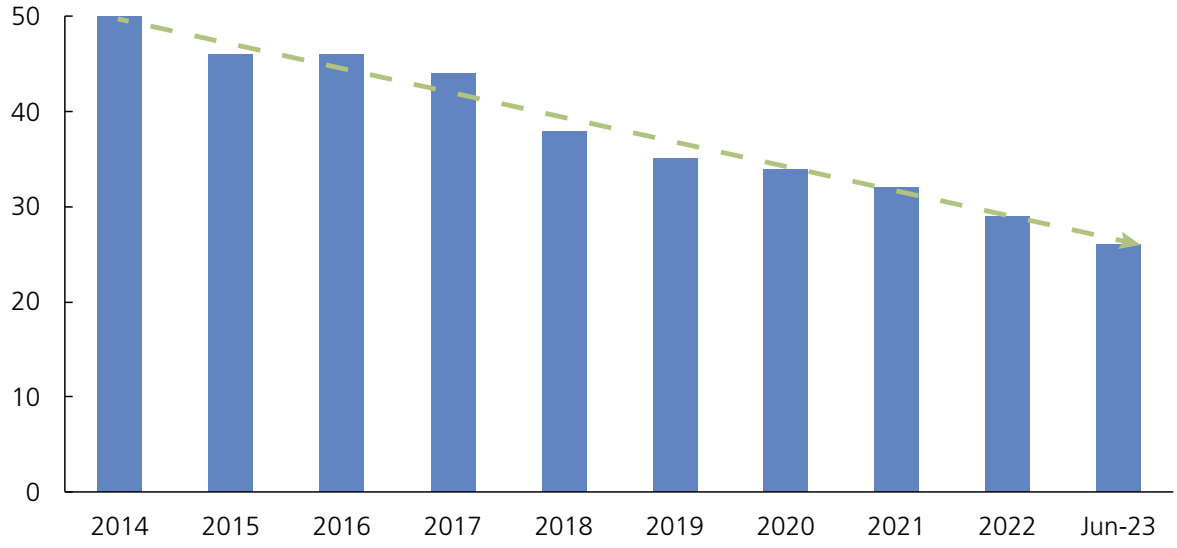

Figure 3: Number of areas with no treatment

4 This is the situation in mid-2023, based on information provided by Uisce Éireann in June 2023. 24 of these are smaller towns and villages, below the size thresholds for large urban areas. Arklow and Moville are the two large urban areas with no treatment.

5 Information provided by Uisce Éireann in June 2023.

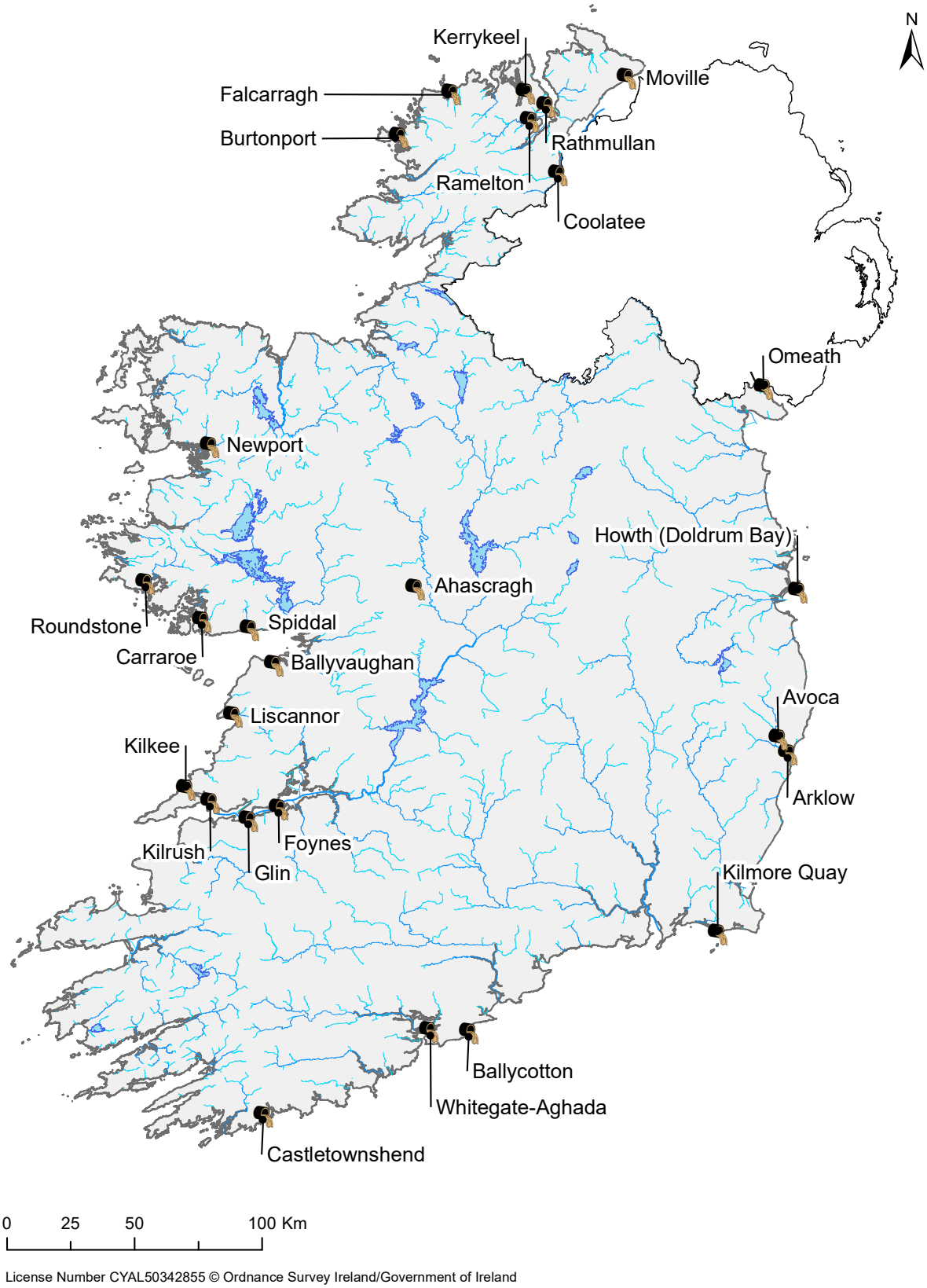

Figure 4: Areas discharging raw sewage in mid-2023

Example: Stopping raw sewage discharges

Prior to 2022 sewage from the coastal villages of Duncannon, Arthurstown and Ballyhack in County Wexford was discharged into the Barrow Suir Nore estuary without treatment. The EPA identified these villages as priority areas and required Uisce Éireann to provide treatment to stop discharges of raw sewage into the estuary.

In 2021 Uisce Éireann, in partnership with Wexford County Council, began constructing a new treatment plant in Arthurstown and expanding the sewerage system to allow it to convey sewage from the three villages to the new plant. The treatment plant was completed in 2022. Three new pumping stations now pump sewage collected in the villages to the new treatment plant, where it is treated to make it clean and safe before it is released into the estuary.

The elimination of discharges of raw sewage from these villages is helping to protect the local environment and enhance the amenity value of the area.

Figure 5: New treatment plant at Arthurstown, Co. Wexford

4. WASTE WATER COLLECTING SYSTEMS

Ireland's waste water collecting systems include an estimated 25,000 kilometres of public sewers and around 2,600 pumping stations. These collect sewage generated in communities and convey it to over 1,000 treatment plants. Most sewers are combined systems meaning they also collect rainwater runoff from impermeable surfaces such as roads.

Collecting systems should have enough capacity to collect and retain waste water during all normal weather conditions and all normal seasonal variations in waste water load. They must also be structurally sound to prevent groundwater ingress. Many collecting systems are old and not as good as they need to be and from time to time they discharge sewage into the environment before it can reach a treatment plant. Uisce Éireann needs to address this issue.

Bringing all collecting systems up to the required standards is a substantial challenge which is likely to take decades and cost several billion euro. Better information is needed on the condition, capacity and performance of collecting systems to help plan and prioritise interventions that will protect the environment and public health. Uisce Éireann must complete surveys and assessments of collecting systems to gather this outstanding information.

Priority collecting systems

In 2019 the Court of Justice of the European Union declared that Ireland failed to ensure waste water collected from eight large urban areas was retained and conveyed for treatment. The collecting systems serving two of these areas have been upgraded to resolve the issues raised by the Court. Collecting systems at the other six areas, listed in *Appendix C*, must be upgraded as a priority to protect the environment and address the Court's findings.

The upgrades needed to four of these collecting systems, including Mallow (Figure 6), are expected to be completed between 2023 and 2025. The improvement works needed at Midleton are scheduled to continue until 2029 and the works at Cork City may extend into the 2030s.

Figure 6: Upgrading the sewer network at Mallow, Co. Cork

Storm water overflows

Ireland's waste water collecting systems include an estimated 2,447 storm water overflow outlets[6]. Storm water overflows should only activate in extreme rainfall and should not be used in normal conditions to compensate for a lack of sewer capacity. Uisce Éireann does not have enough information about discharges of untreated waste water through these overflow outlets. The EPA requires Uisce Éireann to build a comprehensive picture on its use of storm water overflows and their impact on receiving waters.

- At the end of 2022 Uisce Éireann had assessed 1,735 of its storm water overflow structures against national standards[7]. This is unchanged from 2021 as Uisce Éireann completed no assessments during 2022. Over 400 of the overflows that have been assessed did not meet the national standards and require improvements.
- Uisce Éireann is installing monitoring equipment on storm water overflows to measure how often they activate and how long they discharge for. This equipment was fitted on 888 overflows by the end of 2022, up from 790 at the end of 2021.

Uisce Éireann must improve its information on collecting systems and expedite the outstanding assessments of storm water overflows against national standards. Uisce Éireann must use this information to plan and prioritise appropriate action to mitigate risks from overflows.

6 There is more information about storm water overflows in the *Glossary and background information* and on the EPA's website at *https://www.epa.ie/our-services/compliance--enforcement/waste-water/urban-waste-water/*.

7 The standards are set out in the Procedures and criteria in relation to storm water overflows on the EPA's website at *https://www.epa.ie/publications/licensing--permitting/waste-water/UrbanWasteWater2.pdf.*

5. RISKS TO SURFACE WATERS

Clean rivers, lakes, estuaries and coastal waters support a rich diversity of habitats and species and are vital to the natural environment and our wellbeing. If waste water is not properly treated it can pose a health risk and can pollute the water environment by depleting oxygen levels in the water and releasing nutrients that lead to excessive and unwanted growth of algae and aquatic plants.

Waste water discharges have been identified as a significant pollution pressure on almost 200 surface water bodies that are not in good enough health[8]. The majority of these water bodies are sections of rivers. In most cases waste water is not the only pressure on these water bodies and there are additional pollution pressures from other activities such as agriculture and forestry. Based on current estimates it will take well over a decade to complete the work needed to resolve the waste water pollution pressures at all these areas. Uisce Éireann should have a clear long term plan to identify and deliver the interventions needed at each area and should provide for this in its investment planning.

As it will require significant resources and several years to complete all this work it is important to give priority to the areas where improvements are needed most and will bring the greatest environmental benefits. To this end, the EPA has identified 39 priority areas, listed in *Appendix D*, where Uisce Éireann must direct resources and prioritise the work needed to prevent waste water from harming rivers, lakes, estuaries and coastal waters. The reasons for selecting these priority areas are summarised below.

- Waste water from 36 of these areas was identified as the main significant source of pollution impacting the local waters and therefore, in the absence of other pressures, the health of these water bodies can be significantly improved by resolving the impacts from waste water[9]. The 36 areas are shown as red circles in Figure 7.
- Sewage from three of these areas was a contributing factor to poor bathing water quality in 2022[10]. These three areas (Buncrana, Co. Donegal, Spiddal, Co. Galway and Balbriggan Co. Dublin) are shown as blue triangles in Figure 7.

8 Identified during the characterisation work for Ireland's third cycle River Basin Management Plan.

9 These were identified as the main significant pressures during characterisation work for Ireland's River Basin Management Plans.

10 Bathing waters at three beaches were classified as poor in 2022 because the water quality did not meet the minimum required standard. See EPA report on Bathing Water Quality in Ireland in 2022 on the EPA *website*.

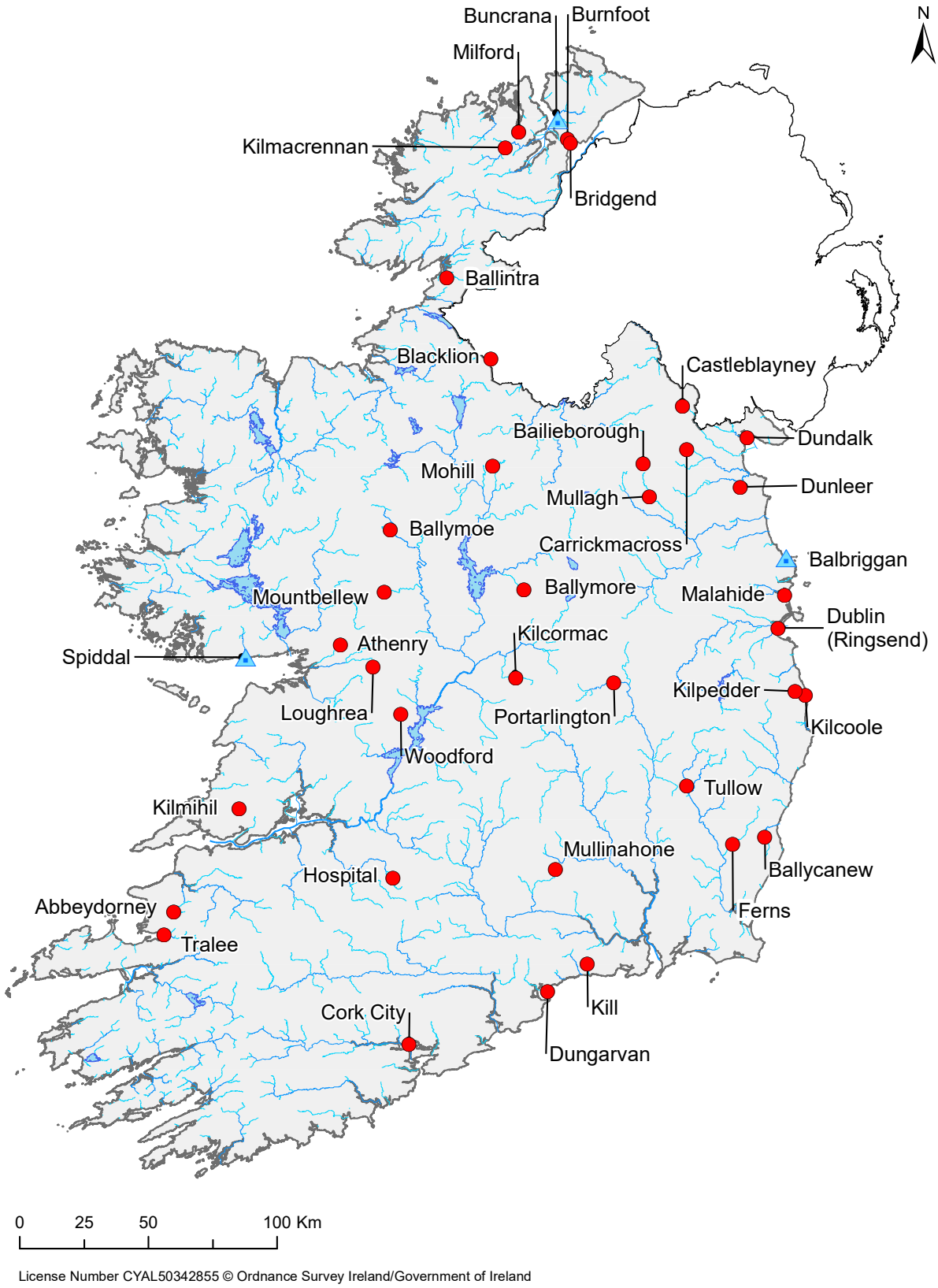

Figure 7: Areas prioritised to protect surface waters

Progress at protecting surface waters from pollution

Upgrades to treatment infrastructure at 10 of the priority areas are either ongoing or due to begin within the next two years. The treatment plant at one further priority area was upgraded recently and monitoring is being carried out to assess if the upgrade has resolved the risk of pollution. These areas are identified in *Appendix D*.

Progress at identifying and delivering the improvements needed to prevent pollution and protect receiving waters at the remaining 28 priority areas is far too slow. Uisce Éireann is still in the preliminary stages of designing action plans to resolve the risk of pollution at these areas and has either provided no clear time frame to complete improvements or proposes to start upgrading the infrastructure in 2029 and 2030. Uisce Éireann has been aware of the importance of improving treatment at these priority areas since 2017. The lengthy delays in bringing these projects to construction are prolonging risks to the environment.

In 2023 the EPA prosecuted Uisce Éireann for failing to treat waste water properly at five of the priority areas that are significant pressures on surface waters[11]. Upgrade works are due to start next year at one of these and Uisce Éireann indicated to the court that the others would be funded in the next investment plan.

Uisce Éireann must finalise the outstanding action plans to resolve the risk of pollution at the priority areas and speed up the delivery of these plans. The resources and funding to implement these action plans should be given priority in Uisce Éireann's upcoming investment plan (2025 to 2029) and one of the central drivers of the plan must be to resolve significant pollution pressures.

11 Abbeydorney, Co. Kerry, Dunleer, Co. Louth, Kilmacrennan, Co. Donegal, Mullagh, Co. Cavan and Mullinahone, Co. Tipperary. There is more information about the prosecutions on the EPA *website*.

Example: Delays by Uisce Éireann in taking action to prevent pollution

Waste water from Dunleer, Co. Louth discharges to a section of river known as the White (Louth)_020. This section of river is in an unsatisfactory condition and waste water from Dunleer has been identified as the main pollution pressure on the river. In 2015 the EPA issued a waste water discharge licence for Dunleer which required Uisce Éireann to upgrade the treatment plant by the end of 2019 to protect the river and help restore it to good status.

Since 2017 the EPA has been highlighting Dunleer as one of the national priority areas where Uisce Éireann must direct resources to improve treatment and prevent pollution. Uisce Éireann repeatedly failed to provide a clear action plan and time frame to deliver the necessary improvements, despite numerous requests from the EPA.

In response to the unacceptably slow progress at providing treatment needed to prevent pollution, the EPA initiated a district court prosecution against Uisce Éireann in 2021 for discharging inadequately treated waste water and failing to upgrade the plant. The case concluded in early 2023 when Uisce Éireann was convicted and fined (see EPA *website*).

The plant has still not been upgraded and it persistently discharges waste water that fails to meet the treatment standards set by the EPA. In 2022 the average concentration of orthophosphate in effluent discharged from the plant was over 10 times the limit set by the EPA. Elevated concentrations of orthophosphate can pollute rivers and cause excessive and unwanted growth of algae and aquatic plants.

In June 2023 Uisce Éireann was still in the initial stage of developing options to improve treatment and advised the likely start date for the upgrade work is 2030, which is 13 years after Dunleer was first identified as a priority area. This example illustrates the need for Uisce Éireann to have a much greater focus and urgency in delivering improvements needed to prevent pollution at priority areas.

Figure 8: White (Louth) river at Dunleer

6. PROTECTING FRESHWATER PEARL MUSSELS

The EPA has identified 12 towns and villages where Uisce Éireann must improve waste water treatment to protect the habitats of freshwater pearl mussels (Figure 10).

Freshwater pearl mussels are critically endangered molluscs that need clean, fast flowing, well oxygenated rivers and a clean river bed. They are very sensitive to changes in their environment and are declining both nationally and internationally due to deteriorating river quality. Pollution by waste water that has not been properly treated can be detrimental to the survival of new generations of mussels. Urgent action is needed to halt the decline of this endangered species.

Figure 9: Freshwater pearl mussels

Uisce Éireann's progress at delivering improvements to resolve the risks to freshwater pearl mussel habitats at the 12 towns and villages is summarised below and in *Appendix E*.

- Improvements have been completed at three villages. Uisce Éireann must carry out environmental monitoring to demonstrate the effectiveness of these improvements and confirm if the risks to freshwater pearl mussel habitats are resolved.
- Upgrade works are underway and nearing completion at three further areas.
- Uisce Éireann has not given sufficient priority to advancing the works needed at the other six areas and has either provided no time frame, or a date of 2030, to start the improvement works. The continued failure to deliver these works in a timely manner is prolonging the risks to these endangered species.

Uisce Éireann must identify the scope of improvements needed at the latter six areas and then deliver these works.

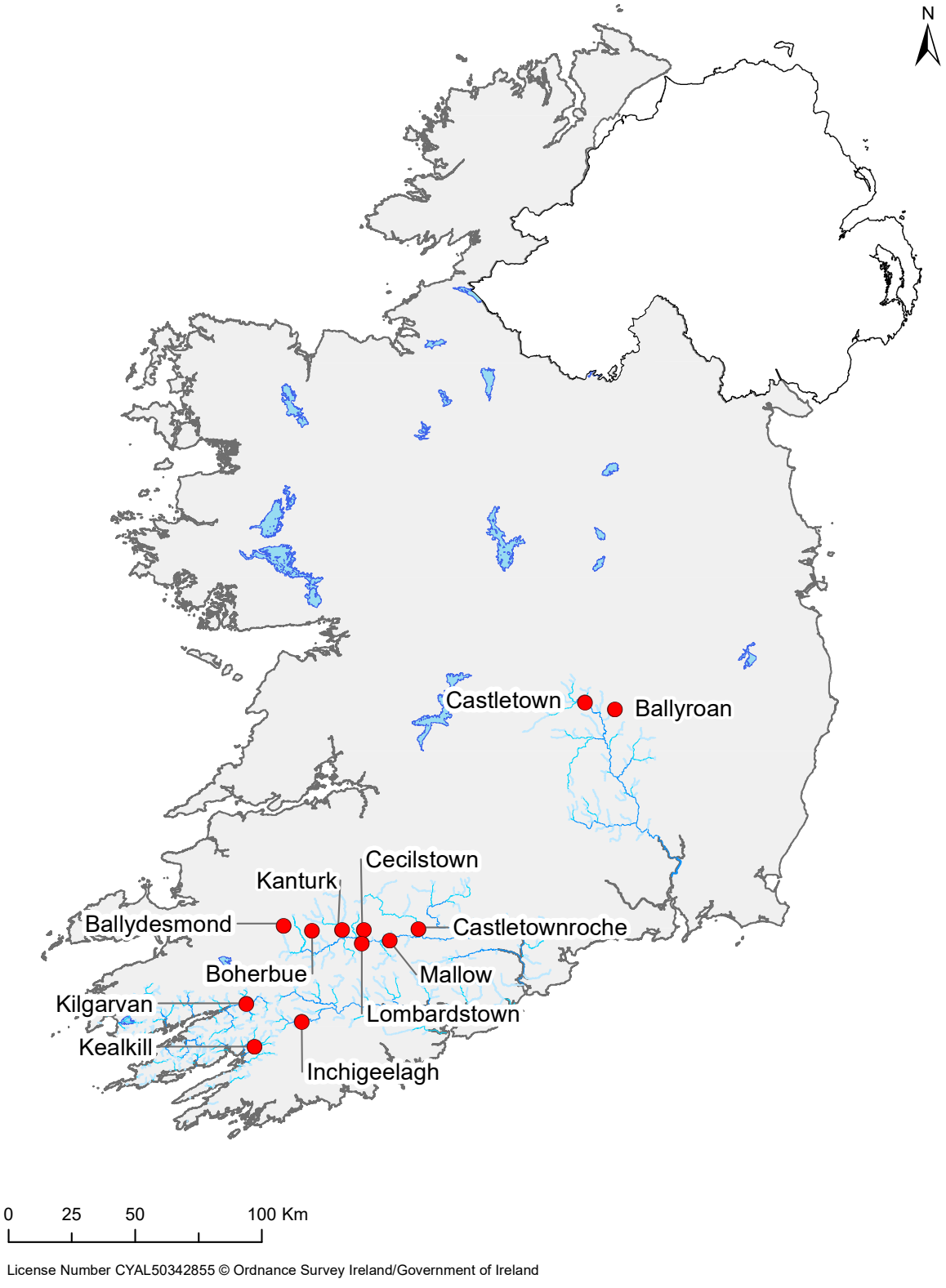

Figure 10: Areas prioritised to protect freshwater pearl mussels

7. ASSESSING RISKS TO SHELLFISH WATERS

Shellfish waters are protected areas that are designated to support the life and growth of shellfish such as oysters and mussels. If sewage pollutes these waters then shellfish in the affected areas can be contaminated with bacteria and viruses. This can put public health at risk as people may get sick by eating contaminated shellfish.

The EPA requires Uisce Éireann to assess the impacts of waste water discharges on shellfish waters and to implement improvements to address any adverse impacts identified in the assessments. A common improvement to protect shellfish waters is to disinfect the treated waste water using ultraviolet lamps, which kill or inactivate bacteria and viruses.

Uisce Éireann is not meeting its obligations, and its own commitments, to complete this work.

- The assessments required at 23 shellfish waters, listed in *Appendix F*, have not been completed and are long overdue.
- Assessments already completed found that improved treatment is needed to protect four shellfish waters but Uisce Éireann has not provided clear action plans and time frames to deliver the improvements. The four shellfish waters are Donegal Bay, Drumcliffe Bay, Dungarvan Harbour and Killary Harbour.

Uisce Éireann must expedite and complete the overdue impact assessments, put clear action plans in place to address any risks identified in the assessments and deliver these plans in a timely manner. The resources and funding needed to complete this work should be factored into Uisce Éireann's next investment plan, which runs from 2025 to 2029.

8. IMPROVING WASTE WATER TREATMENT

Appropriate infrastructure needs to be in place to collect and treat waste water and this must be managed and operated effectively to make sure waste water is always clean and safe before it is discharged into the environment.

Infrastructure

Waste water discharge licences issued by the EPA require Uisce Éireann to upgrade treatment infrastructure within specified time frames where such works are needed to protect the environment and public health. The pace at which these upgrades are being delivered continues to fall far short of EPA licence requirements. Uisce Éireann has completed just 61 per cent of the almost 1,000 improvement works due up to the end of 2022 (Figure 11). Some 350 individual improvements are at least three years overdue and more than one-third of these are at priority areas.

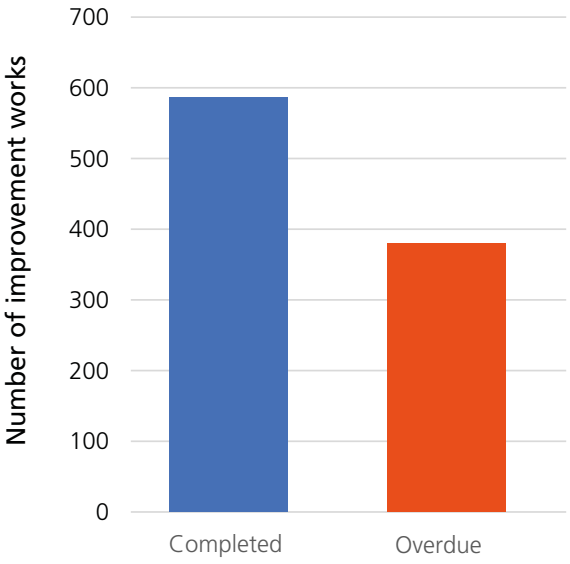

Figure 11: Status of improvement works due up to the end of 2022

Improvements completed during 2022 include new treatment plants for Innishannon, Co. Cork (Figure 12) and Lifford, Co. Donegal. These new plants replaced old, inadequate and overloaded plants which were providing very poor treatment.

Uisce Éireann should have a clear long term plan to complete all upgrades identified by the EPA to protect the environment and public health. The Programme for Government commits to funding capital investment in waste water infrastructure on a multi-annual basis. Uisce Éireann should use the available funding efficiently and effectively to deliver infrastructure improvements where they are needed most. Any infrastructure upgrades required to rectify the issues identified in this report that are not currently funded should be prioritised for prompt delivery during Uisce Éireann's next investment period, which covers 2025 to 2029.

Figure 12: New waste water treatment plant at Innishannon, Co. Cork

Operation and maintenance

Equipment breakdowns at waste water treatment plants have increased each year since 2019 (Figure 13)[12]. There were approximately 360 breakdowns reported in 2022, an increase of 84 per cent on 2019. An example of a breakdown in 2022 was the failure of the pumps needed to control activated sludge within a treatment plant. This impacted the plant's performance and resulted in discharges of poorly treated effluent into a river.

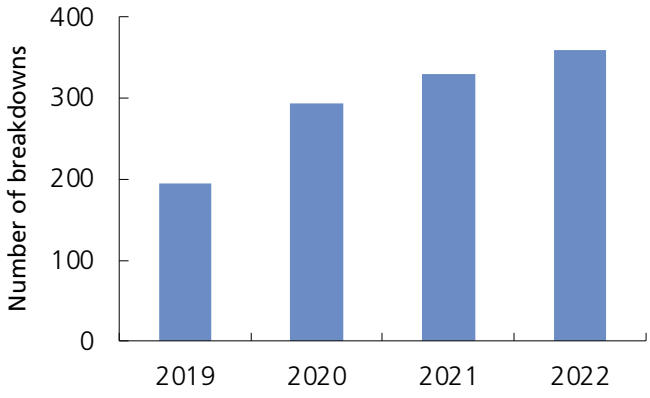

Figure 13: Plant and equipment breakdowns each year

The increase in breakdowns shows the need for more effective preventative maintenance of plant and equipment to improve resilience. Uisce Éireann should allocate sufficient resources to operation and maintenance, to keep treatment systems in optimum condition and minimise breakdowns. If operation and maintenance is not properly resourced and managed then treatment systems are likely to deteriorate or fail, which can lead to pollution and costly reactive repairs.

When critical equipment breaks down it is important to take prompt action to mitigate risks to the environment. This did not always happen in 2022; for example, the duty and standby pumps at a pump station in Rosslare Harbour, Co. Wexford tripped, causing sewage to flow into a stream and

12 This is based on environmental incidents reported to the EPA by Uisce Éireann. There is further information on environmental incidents in *Appendix G*.

this was not noticed or responded to for two days because the alarm system did not work. Uisce Éireann subsequently installed a new control system to avoid this happening again. This example demonstrates the importance of regularly testing alarms to make sure they are working effectively.

Sewage sludge

Sewage sludge is a by-product of the waste water treatment process. A total of 59,755 tonnes of sludge was removed from treatment plants during 2022. This was treated and reused as a fertiliser and soil conditioner on agricultural land. There is more information on the reuse of sewage sludge in *Appendix H*.

9. CONCLUDING REMARKS

Investment in waste water treatment infrastructure continues to bring improvements for our environment. Positive achievements during the past year include the provision of treatment for six villages that used to discharge raw sewage every day. While Uisce Éireann is making progress, it is concerning that Ireland has still not met all its obligations under the *Urban Waste Water Treatment Directive*, some 30 years after the country was required to bring provisions into force to comply with the Directive. Waste water continues to impact the quality of our rivers, lakes, estuaries and coastal waters and it will take substantial investment over many years to bring all treatment systems up to the standards needed to protect our environment and build resilience for the future.

Uisce Éireann must complete assessments of the condition and performance of its assets and use this information to identify risks and guide improvements, as part of its long term national plan to upgrade deficient treatment systems. All the problems cannot be fixed in the short term and the EPA has identified the national priority areas where improvements are most urgently needed to protect our environment and public health. Improvement works are in train at some of these priority areas, including Ringsend in Dublin, and these will bring significant benefits when completed. However, Uisce Éireann is taking too long to identify and deliver the works needed to resolve environmental issues at many other areas and is still in the preliminary stages of designing action plans for around one-third of the priority areas. Uisce Éireann must expedite this work and allocate funding to complete the necessary improvements.

In addition to building treatment infrastructure, it is essential to have effective and well-resourced maintenance programmes for the existing assets and to operate and manage treatment infrastructure so it always performs at its best. This is important to reverse the trend of increasing equipment breakdowns at treatment plants and prevent any deterioration in effluent quality that could harm the environment or result in a failure to maintain compliance with treatment standards.

The Government continues to provide substantial funding for water services and Uisce Éireann can make significant improvements in waste water treatment across the country between now and the end of the next investment cycle in 2029. Uisce Éireann must use the information in this report to inform and prioritise investment decisions and deliver improvements that will protect and enhance our environment into the future.

GLOSSARY AND BACKGROUND INFORMATION

Directive	The Urban Waste Water Treatment Directive. The EPA assesses compliance with the Directive's treatment and effluent quality standards using effluent monitoring results and information on the type of treatment, the size of the urban area and the type of receiving water the effluent discharges into. Uisce Éireann provides this information to the EPA and is responsible for ensuring it is true and accurate.
Effluent	Waste water discharged from a waste water collecting and treatment system.
Effluent quality standards	**Standards for secondary treatment.** The Directive sets mandatory standards for two parameters that we use to assess polluting potential, namely biochemical oxygen demand and chemical oxygen demand. These measure the amount of oxygen used up (demanded) to break down polluting matter in the effluent. If effluent does not meet these quality standards it may lead to a drop in oxygen levels within the receiving waters, which could harm aquatic life and biodiversity. Effluent discharged from all 173 large urban areas must meet these basic standards. **Standards for more stringent treatment.** Effluent discharged to sensitive areas requires a higher level of treatment to remove nutrients that could lead to pollution. Phosphorus and nitrogen are the main nutrients that drive pollution in sensitive areas. The Directive sets maximum limits on the concentration of phosphorus and nitrogen in effluent discharged to sensitive areas from towns and cities with a population equivalent of at least 10,000. A total of 36 towns and cities were subject to these standards in 2022. Uisce Éireann monitors effluent regularly to check if it is properly treated and meets the necessary quality standards.
Large urban area	Towns and cities with a population equivalent of at least 2,000 that discharge effluent to freshwater or estuaries, and areas with a population equivalent of at least 10,000 that discharge effluent to coastal waters. 92 per cent of Ireland's urban waste water is generated in large urban areas. The remaining 8 per cent is generated in almost 900 small towns and villages.
Population equivalent	A term used to indicate how much waste water is generated in an urban area. It includes waste water generated by the resident population, the non-resident population (for example, tourists) and industries. A population equivalent of one is defined as the organic biodegradable load having a five-day biochemical oxygen demand of 60 grams of oxygen per day.
Sensitive area	A water body is classified as a sensitive area if it is eutrophic; may become eutrophic if protective action is not taken; or is intended for abstraction of drinking water and contains more than 50 milligrams per litre of nitrates. Ireland's sensitive areas are listed in the Urban Waste Water Treatment (Amendment) Regulations, 2010 (Statutory Instrument number 48 of 2010). Eutrophic refers to the enrichment of waters by nutrients, leading to an accelerated and unwanted growth of algae and aquatic plants. Phosphorus enrichment tends to drive eutrophication in rivers and lakes, whereas nitrogen enrichment tends to drive eutrophication in estuaries and coastal waters.
Shellfish waters	Protected areas designated to support shellfish life and growth. They are identified in the following national regulations: Statutory Instrument (S.I.) 268 of 2006, S.I. 55 of 2009 and S.I. 464 of 2009.

Storm water overflow	Outlets from collecting systems designed to relieve sewers of excess flows caused by unusually heavy rainfall. They act as emergency safety valves when the capacity of the sewer is exceeded and release excess flow from the sewer directly into receiving waters such as rivers. Without these releases there could be a greater risk to the environment and people's health because the sewer and treatment plant could become inundated, and homes and streets flooded by sewage.
Urban waste water	Domestic waste water, or domestic waste water mixed with non-domestic waste water and/or urban runoff. Domestic waste water is waste water from residential settlements and services which originates mainly from human metabolism and/or from household activities. Non-domestic waste water is waste water from premises used to carry on a trade or for industrial or economic activities. Urban runoff means precipitation collected by sewers. Urban waste water is commonly referred to as 'sewage'.
Waste water discharge authorisation	This is a legal document issued by the EPA to Uisce Éireann which sets out the conditions under which Uisce Éireann must control and manage waste water discharges from an urban area. A waste water discharge licence is required for discharges from areas with a population equivalent of 500 or more. A certificate of authorisation is required for discharges from areas with a population equivalent of fewer than 500. You can view each authorisation on the EPA's website at *https://epawebapp.epa.ie/terminalfour/wwda/index.jsp*.

APPENDIX A: EU TREATMENT STANDARDS

In 2022 treatment at the following 15 large urban areas did not meet the mandatory standards in the *Urban Waste Water Treatment Directive*.

County	Urban area	Failed the secondary treatment standards	Failed the more stringent treatment standards
Clare	Lahinch	x	
Cork	Clonakilty		x
	Cork City	x	
	Courtmacsherry	x	
	Mitchelstown	x	
	Rathcormac	x	
	Skibbereen	x	
Donegal	Lifford	x	
	Moville	x	
Dublin	Dublin (Ringsend)	x	x
	Malahide		x[13]
Limerick	Limerick City	x	
Monaghan	Ballybay	x	
Sligo	Ballymote	x	
Wicklow	Arklow	x	

What are the Directive's treatment standards that apply to large urban areas in Ireland?

1. Waste water from all 173 large urban areas must receive secondary treatment to remove organic matter and the treated waste water must meet basic effluent quality standards used to assess polluting potential.
2. 36 of the 173 large urban areas require an additional, more stringent level of treatment to remove nutrients (nitrogen and/or phosphorus) and the concentration of nutrients in the treated waste water must be below specified limits. These standards apply at towns and cities with a population equivalent of 10,000 or more discharging into sensitive areas.

13 Effluent discharged from Malahide treatment plant met the Directive's effluent quality standards in 2022. However, the plant does not provide the more stringent level of treatment required by the Directive to remove nitrogen.

APPENDIX B: AREAS DISCHARGING RAW SEWAGE

In mid-2023 the following 26 towns and villages were discharging raw sewage because their public sewers were not connected to treatment plants.

County	Urban area	Date for treatment[14]
Clare	Ballyvaughan[15]	2025
	Kilkee[15]	2025
	Kilrush	2023
	Liscannor	2023
Cork	Ballycotton	2024
	Castletownshend	2024
	Whitegate - Aghada	2024
Donegal	Burtonport	2023
	Coolatee	2025
	Falcarragh[15]	2028[16]
	Kerrykeel	2023
	Moville[15]	2027
	Ramelton	2025
	Rathmullan	2025
Dublin	Howth (Doldrum Bay)[15]	2024
Galway	Ahascragh	2023
	Carraroe[15]	2027
	Roundstone[15]	2024
	Spiddal	2023
Limerick	Foynes[15]	2028[16]
	Glin[15]	2028[16]
Louth	Omeath	2023
Mayo	Newport[15]	2028[16]
Wexford	Kilmore Quay	2024
Wicklow	Arklow	2025
	Avoca[15]	2025

14 Dates provided by Uisce Éireann in June 2023.

15 Construction had not yet started at this area in June 2023.

16 During the past year Uisce Éireann extended the date to provide treatment at this area from 2025 to 2028.

APPENDIX C: PRIORITY COLLECTING SYSTEMS

Collecting systems serving the following six areas must be upgraded to protect the environment and address the findings of a 2019 judgement from the Court of Justice of the European Union.

County	Urban Area
Cork	Cork City
	Fermoy
	Mallow
	Midleton
Roscommon	Roscommon
Westmeath	Athlone

Uisce Éireann has completed works to address the Court's findings on the collecting systems at two further areas, namely Ringaskiddy-Crosshaven-Carrigaline, Co.Cork and Enniscorthy, Co. Wexford.

APPENDIX D: PRESSURES ON SURFACE WATERS

Treatment at the 39 priority areas listed below should be improved to prevent waste water discharges from harming rivers, lakes, estuaries and coastal waters.

County	Urban area
Treatment plant has been upgraded and monitoring is being carried out to assess if the upgrade has resolved the risk of pollution[17]	
Monaghan	Castleblayney
Improvement works are ongoing or due to start in the next two years	
Carlow	Tullow
Cavan	Bailieborough
Donegal	Buncrana[18]
	Kilmacrennan
	Milford
Dublin	Balbriggan[18]
Galway	Mountbellew
	Spiddal[18]
Monaghan	Carrickmacross
Waterford	Dungarvan
No clear time frame to complete improvements or Uisce Éireann does not plan to start the upgrade works until at least 2029	
Cavan	Blacklion
	Mullagh
Clare	Kilmihil
Cork	Cork City
Donegal	Ballintra
	Bridgend
	Burnfoot
Dublin	Dublin / Ringsend
	Malahide
Galway	Athenry
	Ballymoe
	Loughrea
	Woodford

17 The status of the works is based on information provided by Uisce Éireann in June 2023.

18 Sewage discharges from this area contributed to poor bathing water quality.

County	Urban area
No clear time frame to complete improvements or Uisce Éireann does not plan to start the upgrade works until at least 2029	
Kerry	Abbeydorney
	Tralee
Laois	Portarlington
Leitrim	Mohill
Limerick	Hospital
Louth	Dundalk
	Dunleer
Offaly	Kilcormac
Tipperary	Mullinahone
Waterford	Kill
Westmeath	Ballymore
Wexford	Ballycanew
	Ferns
Wicklow	Kilcoole
	Kilpedder

Environmental objectives

The European Union's Water Framework Directive is a key piece of legislation aimed at protecting and enhancing waters across Europe. The Directive requires Ireland to protect and enhance our waters to meet the following environmental objectives:

- achieve at least good status; and
- prevent any deterioration in existing status.

When we refer to waste water as a pollution pressure in this report, we mean it is putting part of a river, lake, estuary or coastal water at risk of not meeting the specific environmental objective set for that water body.

APPENDIX E: PROTECTING FRESHWATER PEARL MUSSELS

Waste water treatment must improve at the following 12 towns and villages to protect freshwater pearl mussel habitats.

County	Urban area
Status: Monitoring is required to demonstrate the effectiveness of recent improvements in treatment and verify if the risks to freshwater pearl mussel habitats are resolved	
Cork	Cecilstown
	Inchigeelagh
Laois	Castletown
Status: Improvement works are underway and nearing completion	
Cork	Boherbue
	Castletownroche
	Mallow
Status: Uisce Éireann must finalise clear action plans for improvement works and allocate resources to deliver these plans as soon as possible	
Cork	Ballydesmond
	Kanturk
	Kealkill
	Lombardstown
Kerry	Kilgarvan
Laois	Ballyroan

Uisce Éireann previously reported that corrective actions to protect freshwater pearl mussel habitats were completed at Kealkill and Kilgarvan. However, environmental monitoring has shown that these actions have not resolved the risks to freshwater pearl mussels and further improvements are needed.

APPENDIX F: SHELLFISH ASSESSMENTS

Uisce Éireann must complete overdue assessments of the impacts of waste water discharges on the following 23 designated shellfish waters.

County	Shellfish waters
Cork	Baltimore Harbour / Sherkin
	Cork Great Island North Channel
	Glengarriff
	Oysterhaven
	Rostellan North
	Rostellan South
	Rostellan West
Donegal	Lough Swilly
	McSwynes Bay
	Sheephaven
Kerry	Cromane
	Maherees
	Tralee Bay
	Valentia Harbour
Kerry and Cork	Kenmare River
Louth	Carlingford Lough
	Dundalk Bay
Mayo	Blacksod Bay
Sligo	Sligo Bay
Waterford and Wexford	Waterford Harbour
Wexford	Bannow Bay
	Wexford Harbour Inner
	Wexford Harbour Outer

APPENDIX G: ENVIRONMENTAL INCIDENTS

An environmental incident at a waste water treatment plant or collecting system is:

- any discharge that does not comply with the requirements of a waste water discharge licence; or
- any discharge or occurrence with the potential for environmental contamination or requiring an emergency response.

A common example of an incident is when inadequately treated waste water is discharged into a river.

There were 1,080 short duration or once-off incidents during 2022. Almost half were caused by equipment breakdowns and issues with the operation and maintenance of treatment plants. Other causes of short duration incidents included blocked and broken sewers and problems at pumping stations. The storms in February 2022 caused around 60 short duration incidents.

At the end of 2022 there were also an additional 244 longer term incidents that were either ongoing for some time or were likely to recur because the underlying problem that caused the incident was not fixed. We refer to these as recurring incidents. Figure 14 charts the number of recurring incidents at the end of each year since 2018.

Most recurring incidents are medium to long term problems that are unlikely to be solved until the treatment infrastructure is upgraded. However, almost one-fifth of recurring incidents can be fixed in a shorter time frame through improved operation and management of treatment plants and effective maintenance of equipment. Uisce Éireann should resolve the latter incidents promptly and must also have a clear national plan to deliver the infrastructure upgrades needed to fix the longer term problems.

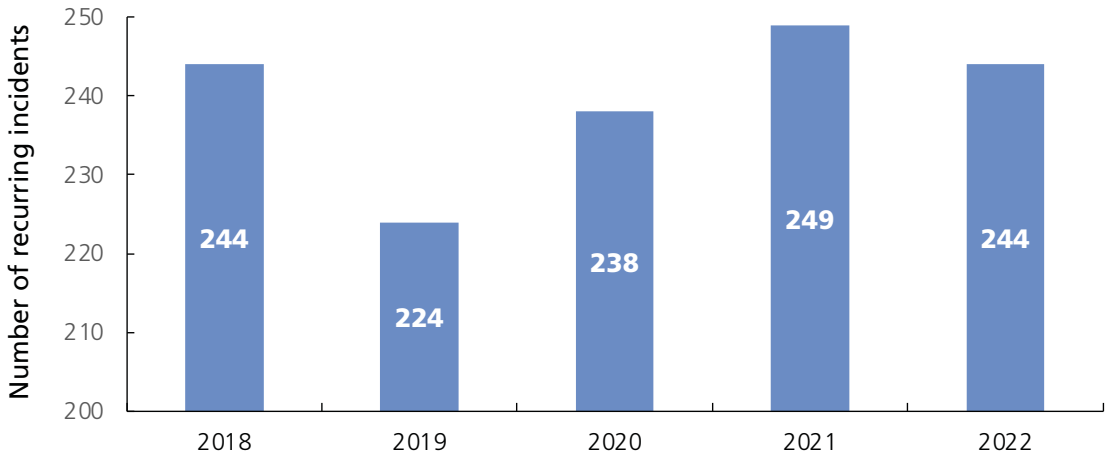

Figure 14: Recurring incidents at the end of each year

APPENDIX H: SEWAGE SLUDGE

The *Urban Waste Water Treatment Directive* requires sewage sludge to be reused whenever appropriate. Sludge is rich in nutrients and the sludge generated in Ireland in 2022 was reused as a fertiliser / soil conditioner on agricultural land. The table below shows the amount of sewage sludge produced during 2022.

Sludge must be treated to make it stable and free from odours, harmful bacteria and viruses before it is reused on land. The treated sludge must then be applied to the land in a way that makes sure the nutrients are effectively used for plant growth or assimilated into the soil.

Sewage sludge produced in 2022 and reuse routes

	Agriculture	Compost	Total
Tonnes dry solids	55,544	4,211	**59,755**

The sludge sent for composting was subsequently reused in soil / agriculture.

AN GHNÍOMHAIREACHT UM CHAOMHNÚ COMHSHAOIL

Tá an GCC freagrach as an gcomhshaol a chosaint agus a fheabhsú, mar shócmhainn luachmhar do mhuintir na hÉireann. Táimid tiomanta do dhaoine agus don chomhshaol a chosaint ar thionchar díobhálach na radaíochta agus an truaillithe.

Is féidir obair na Gníomhaireachta a roinnt ina trí phríomhréimse:

Rialáil: *Rialáil agus córais chomhlíonta comhshaoil éifeachtacha a chur i bhfeidhm, chun dea-thorthaí comhshaoil a bhaint amach agus díriú orthu siúd nach mbíonn ag cloí leo.*

Eolas: *Sonraí, eolas agus measúnú ardchaighdeáin, spriocdhírithe agus tráthúil a chur ar fáil i leith an chomhshaoil chun bonn eolais a chur faoin gcinnteoireacht.*

Abhcóideacht: *Ag obair le daoine eile ar son timpeallachta glaine, táirgiúla agus dea-chosanta agus ar son cleachtas inbhuanaithe i dtaobh an chomhshaoil.*

I measc ár gcuid freagrachtaí tá:

Ceadúnú

- Gníomhaíochtaí tionscail, dramhaíola agus stórála peitril ar scála mór;
- Sceitheadh fuíolluisce uirbigh;
- Úsáid shrianta agus scaoileadh rialaithe Orgánach Géinmhodhnaithe;
- Foinsí radaíochta ianúcháin;
- Astaíochtaí gás ceaptha teasa ó thionscal agus ón eitlíocht trí Scéim an AE um Thrádáil Astaíochtaí.

Forfheidhmiú Náisiúnta i leith Cúrsaí Comhshaoil

- Iniúchadh agus cigireacht ar shaoráidí a bhfuil ceadúnas acu ón GCC;
- Cur i bhfeidhm an dea-chleachtais a stiúradh i ngníomhaíochtaí agus i saoráidí rialáilte;
- Maoirseacht a dhéanamh ar fhreagrachtaí an údaráis áitiúil as cosaint an chomhshaoil;
- Caighdeán an uisce óil phoiblí a rialáil agus údaruithe um sceitheadh fuíolluisce uirbigh a fhorfheidhmiú
- Caighdeán an uisce óil phoiblí agus phríobháidigh a mheasúnú agus tuairisciú air;
- Comhordú a dhéanamh ar líonra d'eagraíochtaí seirbhíse poiblí chun tacú le gníomhú i gcoinne coireachta comhshaoil;
- An dlí a chur orthu siúd a bhriseann dlí an chomhshaoil agus a dhéanann dochar don chomhshaol.

Bainistíocht Dramhaíola agus Ceimiceáin sa Chomhshaol

- Rialacháin dramhaíola a chur i bhfeidhm agus a fhorfheidhmiú lena n-áirítear saincheisteanna forfheidhmithe náisiúnta;
- Staitisticí dramhaíola náisiúnta a ullmhú agus a fhoilsiú chomh maith leis an bPlean Náisiúnta um Bainistíocht Dramhaíola Guaisí;
- An Clár Náisiúnta um Chosc Dramhaíola a fhorbairt agus a chur i bhfeidhm;
- Reachtaíocht ar rialú ceimiceán sa timpeallacht a chur i bhfeidhm agus tuairisciú ar an reachtaíocht sin.

Bainistíocht Uisce

- Plé le struchtúir náisiúnta agus réigiúnacha rialachais agus oibriúcháin chun an Creat-treoir Uisce a chur i bhfeidhm;
- Monatóireacht, measúnú agus tuairisciú a dhéanamh ar chaighdeán aibhneacha, lochanna, uiscí idirchreasa agus cósta, uiscí snámha agus screamhuisce chomh maith le tomhas ar leibhéil uisce agus sreabhadh abhann.

Eolaíocht Aeráide & Athrú Aeráide

- Fardail agus réamh-mheastacháin a fhoilsiú um astaíochtaí gás ceaptha teasa na hÉireann;
- Rúnaíocht a chur ar fáil don Chomhairle Chomhairleach ar Athrú Aeráide agus tacaíocht a thabhairt don Idirphlé Náisiúnta ar Ghníomhú ar son na hAeráide;
- Tacú le gníomhaíochtaí forbartha Náisiúnta, AE agus NA um Eolaíocht agus Beartas Aeráide.

Monatóireacht & Measúnú ar an gComhshaol

- Córais náisiúnta um monatóireacht an chomhshaoil a cheapadh agus a chur i bhfeidhm: teicneolaíocht, bainistíocht sonraí, anailís agus réamhaisnéisiú;
- Tuairiscí ar Staid Thimpeallacht na hÉireann agus ar Thascairí a chur ar fáil;
- Monatóireacht a dhéanamh ar chaighdeán an aeir agus Treoir an AE i leith Aeir Ghlain don Eoraip a chur i bhfeidhm chomh maith leis an gCoinbhinsiún ar Aerthruailliú Fadraoin Trasteorann, agus an Treoir i leith na Teorann Náisiúnta Astaíochtaí;
- Maoirseacht a dhéanamh ar chur i bhfeidhm na Treorach i leith Torainn Timpeallachta;
- Measúnú a dhéanamh ar thionchar pleananna agus clár beartaithe ar chomhshaol na hÉireann.
- Taighde agus Forbairt Comhshaoil
- Comhordú a dhéanamh ar ghníomhaíochtaí taighde comhshaoil agus iad a mhaoiniú chun brú a aithint, bonn eolais a chur faoin mbeartas agus réitigh a chur ar fáil;
- Comhoibriú le gníomhaíocht náisiúnta agus AE um thaighde comhshaoil.

Cosaint Raideolaíoch

- Monatóireacht a dhéanamh ar leibhéil radaíochta agus nochtadh an phobail do radaíocht ianúcháin agus do réimsí leictreamaighnéadacha a mheas;
- Cabhrú le pleananna náisiúnta a fhorbairt le haghaidh éigeandálaí ag eascairt as taismí núicléacha;
- Monatóireacht a dhéanamh ar fhorbairtí thar lear a bhaineann le saoráidí núicléacha agus leis an tsábháilteacht raideolaíochta;
- Sainseirbhísí um chosaint ar an radaíocht a sholáthar, nó maoirsiú a dhéanamh ar sholáthar na seirbhísí sin.

Treoir, Ardú Feasachta agus Faisnéis Inrochtana

- Tuairisciú, comhairle agus treoir neamhspleách, fianaise-bhunaithe a chur ar fáil don Rialtas, don tionscal agus don phobal ar ábhair maidir le cosaint comhshaoil agus raideolaíoch;
- An nasc idir sláinte agus folláine, an geilleagar agus timpeallacht ghlan a chur chun cinn;
- Feasacht comhshaoil a chur chun cinn lena n-áirítear tacú le hiompraíocht um éifeachtúlacht acmhainní agus aistriú aeráide;
- Tástáil radóin a chur chun cinn i dtithe agus in ionaid oibre agus feabhsúchán a mholadh áit is gá.

Comhpháirtíocht agus líonrú

- Oibriú le gníomhaireachtaí idirnáisiúnta agus náisiúnta, údaráis réigiúnacha agus áitiúla, eagraíochtaí neamhrialtais, comhlachtaí ionadaíocha agus ranna rialtais chun cosaint chomhshaoil agus raideolaíoch a chur ar fáil, chomh maith le taighde, comhordú agus cinnteoireacht bunaithe ar an eolaíocht.

Bainistíocht agus struchtúr na Gníomhaireachta um Chaomhnú Comhshaoil

Tá an GCC á bhainistiú ag Bord lánaimseartha, ar a bhfuil Ard-Stiúrthóir agus cúigear Stiúrthóir. Déantar an obair ar fud cúig cinn d'Oifigí:

- An Oifig um Inbhuanaitheacht i leith Cúrsaí Comhshaoil
- An Oifig Forfheidhmithe i leith Cúrsaí Comhshaoil
- An Oifig um Fhianaise agus Measúnú
- An Oifig um Chosaint ar Radaíocht agus Monatóireacht Comhshaoil
- An Oifig Cumarsáide agus Seirbhísí Corparáideacha

Tugann coistí comhairleacha cabhair don Ghníomhaireacht agus tagann siad le chéile go rialta le plé a dhéanamh ar ábhair imní agus le comhairle a chur ar an mBord.

Environmental Protection Agency
An Ghníomhaireacht um Chaomhnú Comhshaoil

Headquarters

PO Box 3000,
Johnstown Castle Estate
County Wexford, Ireland

T: +353 53 916 0600
F: +353 53 916 0699
E: info@epa.ie
W: www.epa.ie
LoCall: 1890 33 55 99

Regional Inspectorate
McCumiskey House,
Richview, Clonskeagh Road,
Dublin 14, Ireland

T: +353 1 268 0100
F: +353 1 268 0199

Regional Inspectorate
Inniscarra, County Cork,
Ireland

T: +353 21 487 5540
F: +353 21 487 5545

Regional Inspectorate
Seville Lodge, Callan Road,
Kilkenny, Ireland

T +353 56 779 6700
F +353 56 779 6798

Regional Inspectorate
John Moore Road, Castlebar

County Mayo, Ireland

T +353 94 904 8400
F +353 94 902 1934

Regional Inspectorate
The Glen, Monaghan, Ireland

T +353 47 77600
F +353 47 84987

Regional Offices

The Civic Centre
Church St., Athlone
Co. Westmeath, Ireland
T +353 906 475722

Room 3, Raheen Conference Centre,
Pearse House, Pearse Road
Raheen Business Park, Limerick,
Ireland
T +353 61 224764

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