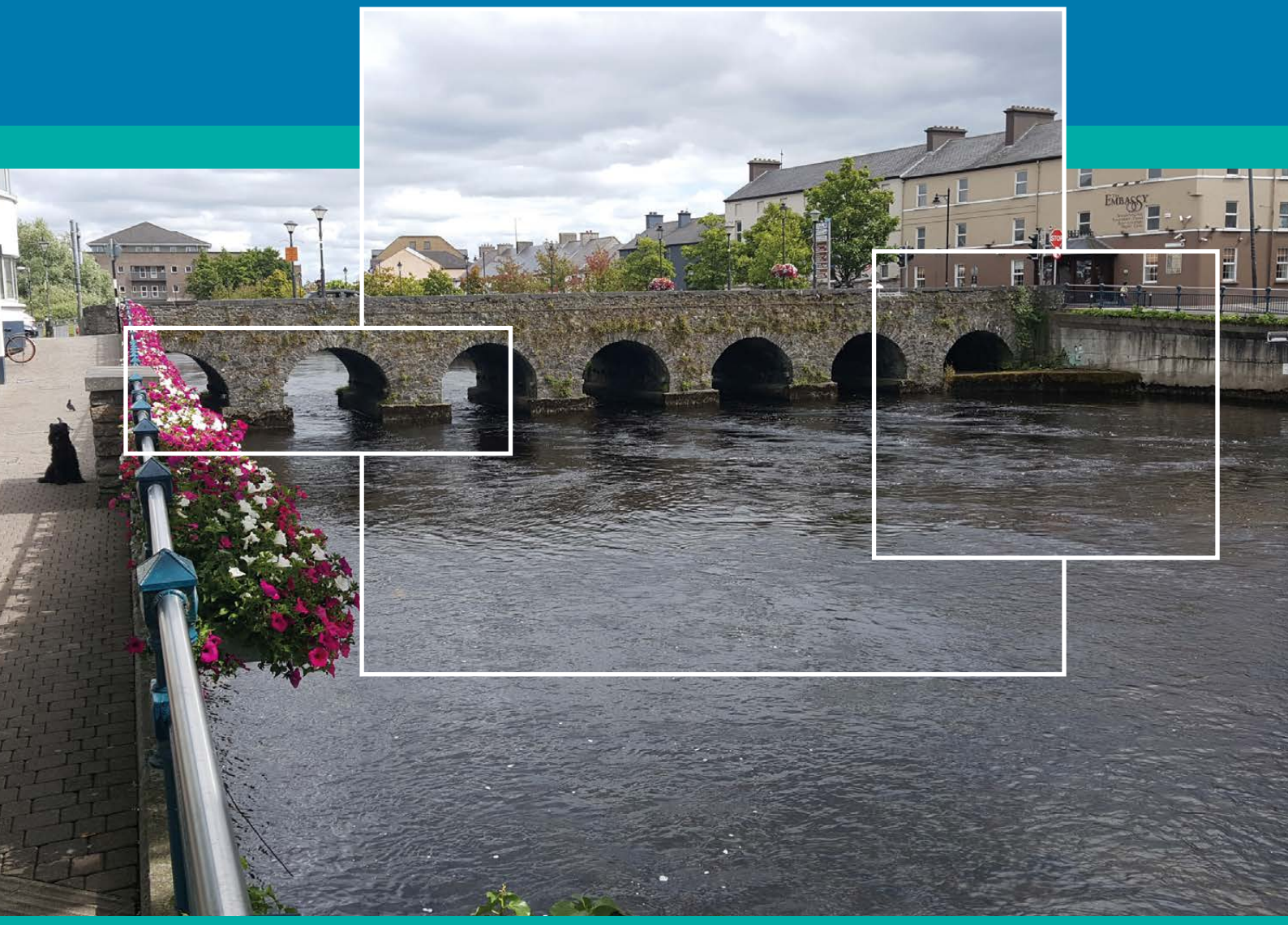
Urban Waste Water Treatment in 2021



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:

Licensing

- 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.

Climate Science & Climate Change

- 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.

Environmental Monitoring & Assessment

- 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.

Urban Waste Water Treatment in 2021

ENVIRONMENTAL PROTECTION AGENCY

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EXECUTIVE SUMMARY

Waste water from our cities, towns and villages is collected in a large network of public sewers and must be treated to make it clean and safe before it is released back into the environment. Irish Water completed important projects at some areas over the past year to improve treatment and address key environmental concerns. These projects include the elimination of raw sewage discharges from Cobh and Castletownbere in County Cork and the upgrade of Shannon treatment plant in Clare, which met European Union treatment standards for the first time ever in 2021. However, treatment at many areas is still not as good as it needs to be, and this is putting our environment and public health at risk.

It will take a multi-billion euro investment and, based on current investment levels, at least two decades to get all treatment systems up to standard. In this report the EPA identifies the priority areas where Irish Water should target the available resources to deliver improvements where they are most needed and will bring the greatest environmental benefits. By making improvements at these areas Irish Water can stop raw sewage from discharging into our environment, make sure Ireland complies with EU requirements to collect and treat waste water properly, prevent waste water from harming water bodies such as rivers that are most at risk of pollution and protect some globally endangered species living in our rivers. The improvement works needed at many of these areas will not be completed during Irish Water's current investment plan, which runs until the end of 2024. It is important that Irish Water allocates sufficient funding and resources in its next investment plan to complete all outstanding work needed to resolve the environmental concerns at these areas.

Priorities and challenges

Comply with EU treatment standards. Treatment at 12 large urban areas did not comply with EU standards set to protect the environment. These areas generate almost half of Ireland's urban waste water. Some areas that failed require capital investment to build new treatment infrastructure while other areas that failed already have the necessary infrastructure, but Irish Water needs to improve how the plants are operated and make sure they consistently perform at their best. The final deadline to comply with the standards was 2005 and Irish Water must give utmost priority to completing the long overdue works needed to meet the standards.

Eliminate raw sewage discharges. 32 towns and villages discharge raw sewage into our seas and rivers every day. Irish Water must provide waste water treatment plants for these areas. Construction work is underway to provide treatment for almost half the areas. Irish Water now has plans in place to start construction at the remaining areas between 2022 and 2024 and it is important that these projects are delivered in as timely a manner as possible.

Improve collecting systems (sewers). The collecting systems at six areas must be upgraded as a priority to make sure the waste water they collect is retained and conveyed for treatment to protect the environment and address a 2019 judgement from the Court of Justice of the European

Union. Irish Water also needs to gather better information on discharges of untreated waste water from the collecting systems across the country and use this to inform and prioritise future improvement works.

Prevent pollution of inland and coastal waters. Waste water is one of the main pollution pressures on water quality in Ireland. The EPA is prioritising 38 areas where improvements are most needed to protect inland and coastal waters adversely impacted by waste water discharges. Irish Water has been aware of most of these priority areas for several years but has not provided a clear time frame to improve treatment at almost three-quarters of them.

Protect vulnerable habitats. The EPA identified 12 towns and villages where treatment must improve to protect endangered freshwater pearl mussels. Irish Water has repeatedly failed to provide a clear time frame to carry out improvements at five of these areas. In addition, Irish Water must complete overdue assessments of the impacts of waste water discharges on shellfish waters and put plans in place to resolve any risks identified during these assessments.

Summary of key recommendations

Protecting and improving our waters from the adverse effects of waste water discharges is critical in maintaining a vibrant and healthy society and an aquatic environment that will support a rich diversity of species and habitats. Irish Water can deliver significant benefits for our environment by targeting resources at the issues highlighted in this report. It will take a significant and sustained effort over many years to bring waste water treatment systems to the required standard. While all the current problems cannot be resolved in the short term, the available resources must be directed to the right areas to deliver improvements where they are most needed and will bring the greatest benefits.

To this end, the EPA recommends the following key actions for Irish Water.

- Implement improvements to resolve the environmental issues at each priority area and provide clear, site specific action plans and time frames to carry out this work.
- Operate and maintain all treatment systems effectively to get the best from them and minimise breakdowns.
- Improve the evidence base on Ireland's collecting systems to inform upgrade works, complete the impact assessments on 24 shellfish waters, and allocate resources at the earliest opportunity to carry out improvements to mitigate any environmental risks identified from this work.

1. INTRODUCTION

This report by the Environmental Protection Agency (EPA) provides a summary of urban waste water treatment in Ireland during 2021.

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 back into rivers, estuaries, lakes and coastal waters. Irish Water (Uisce Éireann) is the national water utility responsible for providing this essential service. The EPA is the environmental regulator of Irish Water[1].

Why is waste water treatment important?

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

Environmental priorities

There have been some much needed improvements in waste water treatment in recent years but there is still a long way to go to bring all deficient treatment systems up to standard and also provide for future needs. It will take a significant and sustained effort over many years and a multi-billion euro investment to complete this work. All the current problems cannot be resolved in the short term and the available resources must be directed to the right areas to deliver improvements where they are most needed and will bring the greatest benefits.

The EPA has identified five key issues or environmental priorities that Irish Water 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 improvements are needed to address each environmental priority. We refer to the urban areas that require improvements as *priority areas*[2].

1 The economic regulator of Irish Water is the Commission for Regulation of Utilities *https://www.cru.ie/*.

2 You can keep up to date with the priority areas and see Irish Water's action plans 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*.

Table 1: Environmental priorities for waste water[3]

Ensure waste water treatment at all large urban areas complies with European Union standards	12 large urban areas that did not meet European Union treatment standards in 2021 require improvements to comply with these standards.
Eliminate discharges of raw sewage	32 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	38 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.

3 There is more than one environmental priority at some urban areas. For example, Moville in Donegal is one of the 12 areas that did not meet European Union treatment standards in 2021 and is also one of the 32 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[4], with the objective of protecting the environment from the harmful effects of waste water discharges. The final deadline to meet the standards was 2005 and Ireland's performance in 2021 is summarised below. Figure 1 charts the performance over the five-year year period from 2017 to 2021.

174 large urban areas in Ireland were subject to the EU waste water treatment standards

162 areas complied with the standards

12 areas failed to comply with the standards

Almost half of Ireland's urban waste water is generated in the 12 areas that failed the standards (Figure 2). Most of this is produced in the greater Dublin area and conveyed to the overloaded treatment plant at Ringsend, which does not provide a sufficient level of treatment. Consequently just 51% of the waste water from Ireland's large urban areas was treated to European Union standards in 2021. This is well below the European average of 90%. A €500 million upgrade of Ringsend treatment plant to increase treatment capacity and bring it up to EU standards is ongoing and due to be completed in 2025.

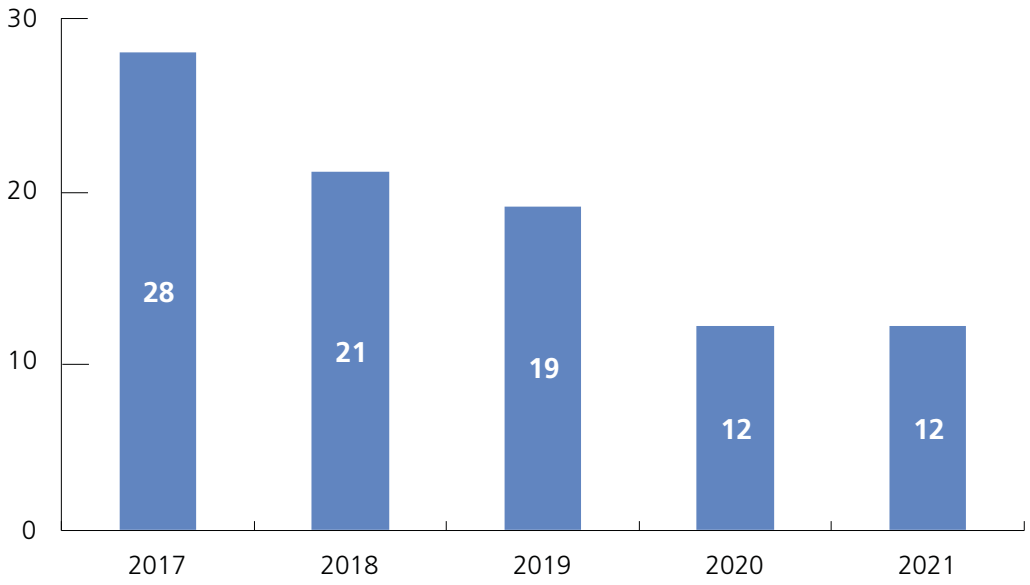

Figure 1: Number of large urban areas failing the European Union treatment standards

There is further information in *Appendix A* on the European Union requirements and the standards breached in 2021 at the 12 large urban areas.

4 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*.

Three areas that failed the standards in 2020 passed in 2021. Upgrades to the treatment plants serving Cork City and Shannon in County Clare, which were completed in 2021, delivered improvements in effluent quality which resulted in these areas meeting the treatment standards for the first time. Ennis South in Clare was brought into compliance in 2021 by improving the operation and management of the plant.

Three towns served by plants that have the capacity to meet the treatment standards, and met these standards in 2020, failed in 2021. The towns are Clonakilty and Kinsale in Cork and Ballymote in Sligo. These failures highlight the need for improved vigilance and oversight by Irish Water to make sure plants always perform at their optimum.

Complying with the Directive's standards is vital to protect our environment, but also to reduce the risk of fines from the Court of Justice of the European Union[5]. There are two key steps to achieving this.

1. Some of the large urban areas that failed the standards require new or upgraded treatment plants. Irish Water plans to complete the work at most of these areas by 2025. However, new plants needed for Moville in Donegal and Lahinch in Clare are not scheduled for completion until 2027.
2. Failures at areas that already have sufficient treatment infrastructure in place should be eliminated by operating and maintaining plants to get the best from them at all times and minimise breakdowns.

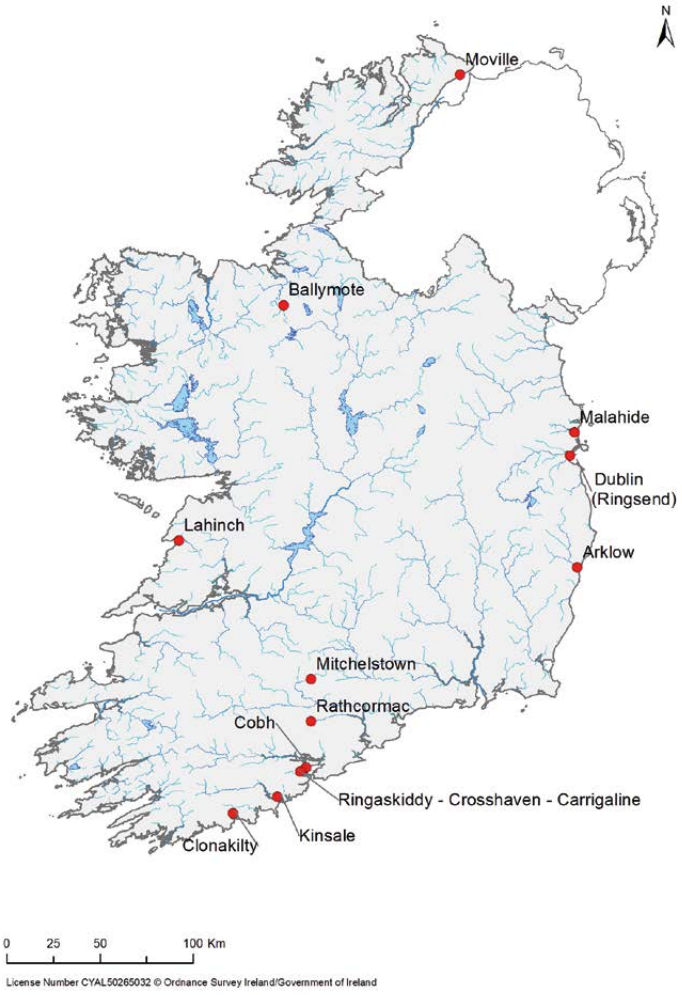

Figure 2: Areas that failed the EU treatment standards in 2021

5 In 2019 the Court declared that Ireland failed to fulfil its obligations under the Directive.

3. RAW SEWAGE

32 towns and villages discharge raw sewage into our seas and rivers every day because they are not connected to waste water treatment plants[6]. These areas, shown in Figure 3, discharge enough sewage to fill three Olympic size swimming pools every day. The number of towns and villages discharging raw sewage on a daily basis has reduced by two during the past year and by 18 since 2014. The two areas connected to treatment plants in the past year are Castletownbere and Cobh in County Cork.

Irish Water must build the waste water infrastructure needed to stop raw sewage discharges. Construction work is underway at almost half the areas and is due to start at the remainder between 2022 and 2024. *Appendix B* shows when Irish Water expects to complete the work needed at each of the 32 areas. Based on Irish Water's latest plans:

- Raw sewages discharges from 19 areas will cease by the end of 2024.
- A further 11 areas are scheduled to be connected to treatment plants in 2025.
- The final two areas are expected to receive treatment in 2027.

Over the years Irish Water produced various plans and time frames to eliminate discharges of raw sewage. However, Irish Water often changed these plans and extended its own time frames to complete this work, thereby prolonging the risks to the environment and public health. The work to provide treatment for the 32 areas discharging raw sewage must be progressed and completed as soon as possible.

Figure 3: Areas discharging raw sewage

6 This is the situation in mid-2022. 30 of these are small towns and villages that are below the size thresholds for large urban areas. The two large urban areas with no treatment are Arklow and Moville.

4. WASTE WATER COLLECTING SYSTEMS

Ireland has an estimated 26,000 kilometres of public sewers and around 2,200 public waste water pumping stations. These collect the sewage generated in our communities and convey it to treatment plants. Many sewers also collect rainwater runoff from impermeable surfaces such as roads.

Collecting systems (sewers and pumping stations) 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 not as good as they need to be and from time to time they release waste water into the environment before it can reach a treatment plant. Based on Irish Water's information, it is likely to take decades and cost several billion euro to bring all collecting systems up to the required standards. Irish Water has significant work to do to gather all the information needed on the condition and performance of collecting systems and any associated risks to the environment. This information is essential to plan and prioritise improvements needed to protect the environment.

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 now been upgraded to resolve the issues raised by the Court. The six remaining collecting systems, listed in *Appendix C*, must be upgraded as a priority to bring them up to standard and address the Court's findings. Irish Water estimates the works needed to upgrade these six collecting systems will cost over €500 million.

- Improvement works at four of the areas are due to be finished between 2023 and 2025.
- Works at the final two areas, namely Midleton, County Cork and Cork City, are not scheduled to be completed by Irish Water until 2029 and 2030 respectively.

Storm water overflows

There are an estimated 2,350 overflow outlets, referred to as storm water overflows, on Ireland's waste water collecting systems[7]. Irish Water does not have enough information on discharges of untreated waste water released into the environment through these outlets. The following summarises some of the work Irish Water is carrying out in response to the EPA's requirement to improve information on storm water overflows.

- At the end of 2021 Irish Water had assessed almost three-quarters (1,735) of its storm water overflow outlets against national standards[8]. Over 400 of the outlets assessed require improvements because they do not meet the standards.
- Monitoring equipment is being installed to measure how often and for how long waste water is discharged through storm water overflow outlets. This equipment was installed on one-third (790) of the overflow outlets by the end of 2021.

The information gathered through this work will provide greater clarity on the extent of discharges through storm water overflows and help inform and prioritise upgrades to collecting systems. Irish Water should allocate resources in its next investment plan to mitigate any environmental risks from storm water overflows identified through this work.

Example: Pollution from a waste water collecting system

Bathing water quality at Lady's Bay, Buncrana, County Donegal was classified as poor in 2021. One of the main pollution sources that affected Lady's Bay in 2021 was untreated waste water released occasionally from the town's collecting system. The EPA requires Irish Water to upgrade the collecting system to resolve this issue and we identified Buncrana as a national priority area due to the importance of this work. Irish Water will begin a major upgrade of the collecting system shortly to improve its performance and provide more storage to retain the extra waste water collected during heavy rainfall.

7 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/*.

8 The standards are set out in the Procedures and criteria in relation to storm water overflows, which is available 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 own wellbeing. If waste water is not properly treated it 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.

Ireland's draft third cycle River Basin Management Plan (2022-2027) identified waste water discharges as a significant pollution pressure on 208 water bodies[9]. This is down from 291 water bodies in the second cycle River Basin Management Plan (2018-2021). Most of the affected water bodies are sections of rivers. Based on current and estimated future funding for water services it is likely to take well over a decade to resolve the waste water pollution pressure on all these water bodies. Irish Water needs a clear long term strategy to deliver this work and should include the improvements needed at as many of these areas as possible in its next capital investment plan, which runs from 2025 to 2029.

As it is not possible to resolve the issues at all these areas within the next few years, priority must be given to those areas where improvements in waste water treatment are most urgently needed and will bring the greatest environmental benefits. The EPA has identified 38 areas, shown in Figure 4 and *Appendix D*, where Irish Water should prioritise the work needed to prevent waste water from harming rivers, lakes, estuaries and coastal waters. This work may involve upgrading the collecting and treatment systems, as well as improving how these systems are operated and managed.

37 of these areas are prioritised because during the characterisation work for the River Basin Management Plans waste water discharges were identified as having the most significant impact on the local waters. One additional area is prioritised because waste water discharges were the main cause of poor bathing water quality at a nearby beach in 2021.

What is Irish Water doing to prevent pollution at the 38 priority areas?

- Treatment plants serving two of the priority areas were upgraded recently and monitoring is ongoing to assess if these upgrades have resolved the risk of pollution.
- Works to upgrade two more treatment plants began in 2021 and are due to be completed in 2023.
- Improvements to the treatment systems serving a further seven towns and villages are scheduled to start between 2022 and 2024.
- Irish Water still needs to produce clear plans and time frames to resolve the risk of pollution from the remaining 27 priority areas.

Irish Water's current investment plan, which runs from 2020 to 2024, does not provide for the completion of infrastructure upgrades to prevent waste water from harming the local environment at the latter 27 areas. Any upgrades needed at these areas should be given priority in Irish Water's next investment plan.

9 The final plan is due to be published in Quarter 4 2022. Waste water is not the only pollution pressure on many of these water bodies. The other main pollution pressures include agriculture and forestry.

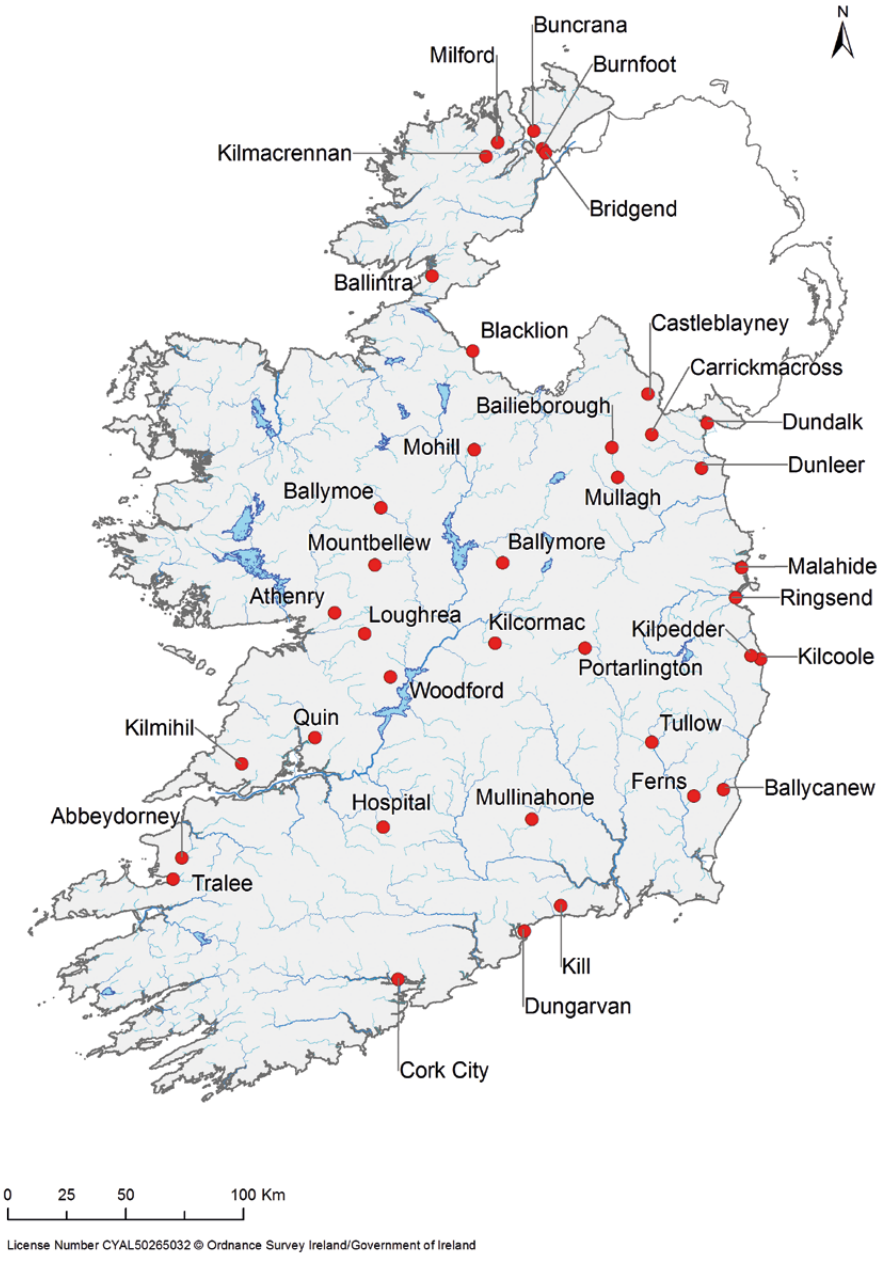

Figure 4: Areas prioritised to protect surface waters

Example: Protecting a river from pollution

The old waste water treatment plant serving Collooney in County Sligo was designed and built for a time when the town was smaller and the volume of waste water to be treated was much less than it is today. As the town developed and grew the plant could not treat the town's sewage to the standard needed to protect the local river. Consequently, effluent discharged from the old treatment plant was contributing to pollution of the Owenmore River. The EPA identified Collooney as a national priority area and we required Irish Water to improve treatment to protect the river and prevent pollution.

Irish Water completed a major infrastructural upgrade of the treatment plant in 2021. The plant is now treating waste water to a much higher standard than before and releasing much cleaner effluent back into the river. Waste water is no longer a significant pollution pressure on the Owenmore River as a result of these improvements and the EPA removed Collooney from our list of priority areas in 2022.

The graph in Figure 5 shows the concentration of ammonia in the treated waste water discharged from Collooney between 2019 and 2021. There has been a significant and much needed reduction in ammonia released into the river following the completion of the upgrade works. High concentrations of ammonia can harm the ecological health of a river and ammonia is toxic to some aquatic life. The concentration of ammonia should not exceed the green line in the graph below.

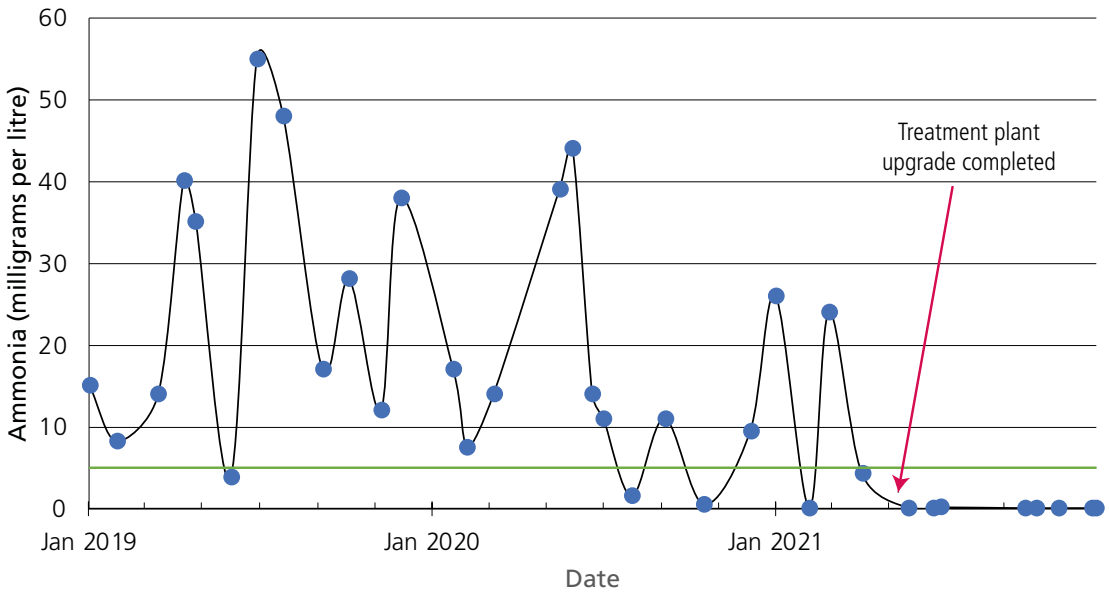

Figure 5: Effluent quality at Collooney

6. PROTECTING FRESHWATER PEARL MUSSELS

Freshwater pearl mussels are globally endangered molluscs that need clean, fast flowing, well oxygenated rivers and a clean river bed. They are declining both nationally and internationally due to deteriorating river quality. Pollution by inadequately treated waste water can be detrimental to the survival of new generations of mussels.

The EPA requires Irish Water to improve waste water treatment at 12 towns and villages to protect vulnerable freshwater pearl mussels in the local rivers (Figure 6 and *Appendix E*). This is unchanged over the past year.

- Improvements have been completed at three of these areas, but Irish Water has still not completed the monitoring necessary to determine if the risk to freshwater pearl mussels is resolved.
- New or upgraded treatment plants are due to be completed between 2023 and 2024 at a further four of the towns and villages.
- Irish Water has still not provided a clear time frame to complete the improvements needed at the remaining five areas, despite being aware for several years of the need to improve treatment at these areas.

Irish Water must allocate the resources and funding to identify and implement the improvements needed at the latter five areas at the earliest opportunity.

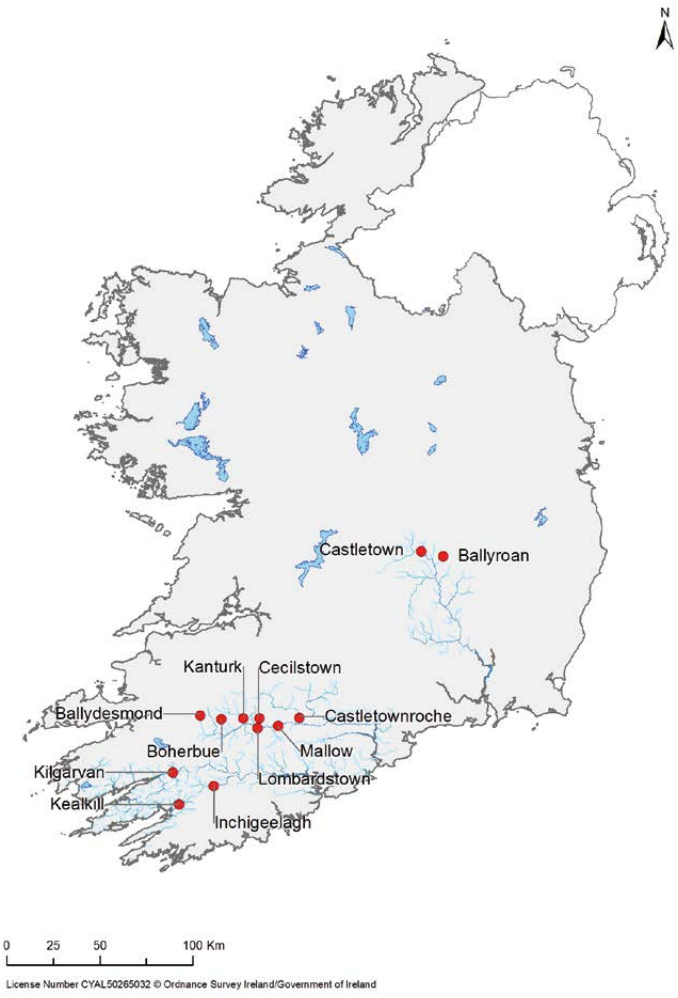

Figure 6: Areas prioritised to protect freshwater pearl mussels

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, mussels and clams. If waste water is discharged into the catchments of these waters without adequate treatment it has the potential to contaminate shellfish with bacteria and viruses. People can get sick from eating contaminated shellfish and can suffer stomach cramps, vomiting and diarrhoea.

The EPA requires Irish Water to assess the impacts of waste water discharges on designated shellfish waters around our coast. We use the impact assessments to identify where waste water discharges must improve to protect shellfish waters.

Irish Water is taking too long to complete these important assessments and to carry out any improvements necessary to address the risks identified during the assessments. The assessments required for 24 shellfish waters, listed in *Appendix F*, have still not been completed and are long overdue. Furthermore, some of the assessments that have already been completed found that improvements are needed to protect shellfish waters, but Irish Water has not provided a clear plan and time frame to carry out the improvements. These assessments were for the shellfish waters of Donegal Bay, Drumcliffe Bay, Dungarvan Harbour and Killary Harbour.

Irish Water has a significant amount of work to do to meet its obligations in relation to shellfish waters. The outstanding impact assessments must be completed as soon as possible, and action plans to resolve any risks identified from the assessments should be put in place and delivered in a timely manner. Based on the current rate of progress, this work will not be finished by 2024 and Irish Water should allocate sufficient funding and resources in its investment plan 2025 to 2029 to complete all this work and make sure that waste water discharges do not adversely impact on shellfish waters.

8. IMPROVING WASTE WATER TREATMENT

Protecting our environment and health from the waste water we generate requires the right infrastructure to collect and treat the waste water, and effective operation and management of this valuable infrastructure to get the best performance from it.

Infrastructure

When the EPA issues licences for waste water discharges we require Irish Water to improve waste water infrastructure within specified time frames, where such works are needed to protect the environment. The pace at which Irish Water is carrying out these works continues to fall short of EPA licence requirements. Irish Water has completed just 60% of the improvement works that were due up to the end of 2021 (Figure 7). Some 220 individual works are more than five years overdue and 89 of these are at priority areas.

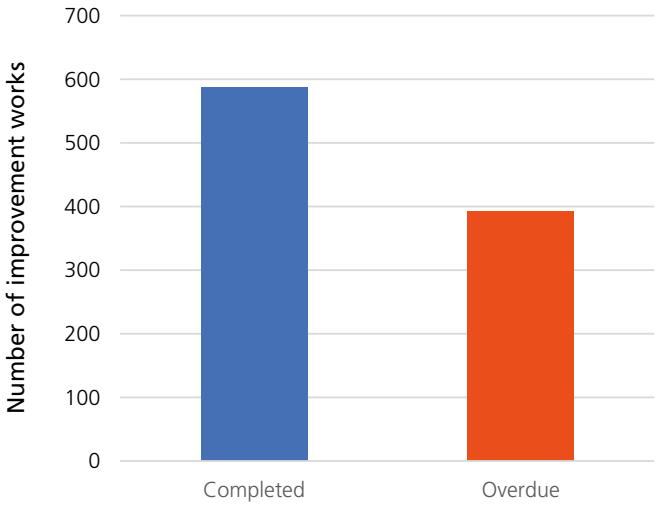

Figure 7: Status of improvement works due up to the end of 2021

The improvements completed in 2021 include a new treatment plant to serve Baile Bhuirne and Baile Mhic Íre in County Cork. The new plant replaced an old overloaded septic tank which was unable to treat waste water to the standards required by the EPA.

The Programme for Government commits to continued investment in waste water infrastructure to protect our waters. Irish Water should use the funding that is available efficiently and effectively to deliver infrastructure improvements where they are most needed. If infrastructure upgrades required to rectify environmental issues highlighted in this report are not currently funded they should be prioritised for funding in Irish Water's next investment period, which covers 2025 to 2029.

Operation and maintenance

Waste water treatment infrastructure must be operated and maintained in a manner that gets the best from it at all times. It is important that Irish Water allocates sufficient resources to operation and maintenance in order to keep treatment systems in optimum condition, reduce breakdowns and extend the lifespan of equipment. If operation and maintenance is not properly resourced then treatment systems may fail, and this can lead to water pollution and costly equipment repairs.

There has been a 70% rise in the breakdown of equipment at waste water treatment plants over the past two years, with around 330 breakdowns in 2021[10]. This highlights a need for more preventative maintenance and proactive servicing of plant and equipment to improve resilience,

10 This is based on environmental incidents reported to the EPA by Irish Water. There is further information on environmental incidents in *Appendix G*.

rather than just reactive responses to problems after they occur. An example of a breakdown is the failure of an aeration system to deliver enough oxygen into the treatment process to facilitate the decomposition of organic (polluting) matter in the waste water.

When critical equipment does break down it is essential that Irish Water reacts quickly and takes prompt action to mitigate any risks to the environment. In 2021 the EPA prosecuted Irish Water for failing to take appropriate action in response to equipment failures at a pump station near Naas, County Kildare which had resulted in the release of raw sewage into the River Liffey[11].

Waste water has the potential to generate unpleasant odours and therefore effective odour control is an important aspect of waste water treatment. All treatment plants must be operated and maintained in a manner that ensures they avoid causing nuisance through odours. Irish Water must respond effectively to any odour complaints, identify the source of the odours and implement a solution to control the odours and make sure they do not cause nuisance.

Sewage sludge

Sewage sludge is a by-product of waste water treatment. Good sludge management, such as removing sludge from a treatment plant at an appropriate rate, is an essential part of the treatment process. Irish Water removed 60,467 tonnes of sewage sludge from its treatment plants in 2021. Most of this was subsequently reused as a fertiliser or soil improver on agricultural land. There is more information on the reuse of sewage sludge in *Appendix H*.

Waste water discharge licence reviews

EPA licences set out the conditions under which Irish Water must control and manage waste water discharges. In accordance with the *European Union (Waste Water Discharge) Regulations 2007 to 2020* periodic reviews of existing waste water discharge licences are required to ensure that they remain fit for purpose, particularly in the context of process capacity needs to support social and economic growth in our towns and villages. As a consequence, the EPA has carried out an examination of waste water discharge licences and initiated the review of 25 waste water discharge licences in 2021[12]. However, of the 25 licence reviews initiated by the EPA, Irish Water only submitted two applications in 2021.

Irish Water needs to engage with the licence review process promptly to ensure licences remain fit for purpose to protect the environment and public health and are compliant with the regulations.

11 There is more information about this prosecution on the EPA's *website*.

12 The EPA website has further information on these reviews at *https://www.epa.ie/our-services/licensing/waste-water/epa-initiated-wwda-reviews/*.

9. CONCLUDING REMARKS

During the past year key infrastructure projects were completed at some areas to protect rivers at risk of pollution, stop discharges of raw sewage and improve compliance with the Urban Waste Water Treatment Directive. However, waste water collected in urban areas is often discharged into rivers and coastal waters without adequate treatment. This is putting our environment and public health at risk. Substantial work needs to be done and it will take many years of sustained investment to bring all treatment infrastructure up to standard and also provide for future needs.

The EPA has identified the national priority areas where improvements are most urgently needed and where Irish Water should target resources to protect our environment from the harmful effects of waste water discharges. Projects are planned or ongoing to upgrade treatment infrastructure at some priority areas and these projects must be delivered in as timely a manner as possible. However, Irish Water has still not clearly identified when and how it will improve treatment at approximately one-third of all priority areas. Irish Water must provide clear action plans with time frames to resolve the environmental concerns at each of these areas. If the improvement works needed at any of the priority areas are not currently funded they should be allocated funding at the earliest opportunity.

Irish Water's next investment plan, which will run from 2025 to 2029, has the potential to deliver significant benefits for our environment and it is critical that Irish Water directs the investment to the right areas. The plan must have a strong focus on protecting and improving waters most at risk from waste water discharges. Irish Water should use the information in this report to help inform and prioritise investment decisions.

Figure 8: Castletownbere waste water treatment plant

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. Irish Water provides this information to us 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	Irish Water monitors effluent regularly to check if it is properly treated and meets the necessary 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 174 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 39 towns and cities were subject to these standards in 2021.
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% of Ireland's urban waste water is generated in large urban areas. The remaining 8% is generated in approximately 890 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 and release excess flow from the sewer directly into local 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. 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.
Urban waste water	Domestic waste water, or the mixture of domestic waste water with industrial waste water and/or rainwater runoff. Domestic waste water is waste water from residential settlements and services, which originates mainly from human metabolism and from household activities. Industrial waste water is waste water discharged from premises used to carry on any trade or industry. Urban waste water is commonly referred to as 'sewage'.
Waste water discharge authorisation	This is a legal document issued by the EPA to Irish Water which sets out the conditions under which Irish Water 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

Treatment at the following 12 large urban areas did not meet the standards in the *Urban Waste Water Treatment Directive* in 2021.

County	Urban area	Failed the secondary treatment standards	Failed the more stringent treatment standards
Clare	Lahinch	x	
Cork	Clonakilty	x	
	Cobh[13]	x	x
	Kinsale	x	
	Mitchelstown	x	
	Rathcormac	x	
	Ringaskiddy & environs		x[14]
Donegal	Moville	x	
Dublin	Dublin (Ringsend)	x	x
	Malahide		x[14]
Sligo	Ballymote	x	
Wicklow	Arklow	x	

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

1. Waste water from all 174 large urban areas must undergo secondary treatment to remove organic matter. The treated waste water must also meet basic effluent quality standards used to assess polluting potential.
2. 39 of the 174 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 additional standards apply at towns and cities with a population equivalent of 10,000 or more discharging into sensitive areas.

13 Cobh failed because it was discharging untreated waste water until Quarter 3 2021. It is now connected into, and forms part of, the waste water system serving Ringaskiddy & environs.

14 Effluent discharged from the treatment plant met the Directive's effluent quality standards in 2021. However, Irish Water confirmed the plant does not provide the more stringent level of treatment required by the Directive to remove nutrients.

APPENDIX B: AREAS DISCHARGING RAW SEWAGE

The table shows the 32 areas that release raw sewage into the environment in mid-2022 because the public sewers are not connected to treatment plants.

County	Urban area	Date for treatment[15]
Clare	Ballyvaughan	2025[16]
	Clarecastle	2023
	Kilkee	2025
	Kilrush	2023
	Liscannor	2023
Cork	Ballycotton	2024
	Castletownshend	2024
	Inchigeelagh	2023
	Whitegate - Aghada	2024
Donegal	Burtonport	2023
	Coolatee	2025
	Falcarragh	2025
	Kerrykeel	2023
	Kilcar	2023
	Moville	2027
	Ramelton	2025
	Rathmullan	2025
Dublin	Howth (Doldrum Bay)	2024
Galway	Ahascragh	2023
	Carraroe	2027
	Roundstone	2024
	Spiddal	2024
Limerick	Foynes	2025
	Glin	2025
Louth	Omeath	2023
Mayo	Newport	2025
Wexford	Arthurstown	2022
	Ballyhack	2022
	Duncannon	2022
	Kilmore Quay	2024
Wicklow	Arklow	2025
	Avoca	2025

15 Dates provided by Irish Water in September 2022.

16 In the past year Irish Water extended the date to provide treatment at Ballyvaughan from 2024 to 2025.

APPENDIX C: PRIORITY COLLECTING SYSTEMS

Collecting systems serving the six areas listed below must be upgraded to bring them up to standard, 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

Improvement works have now been completed to address the Court's findings on the collecting systems serving a further two areas, namely Ringaskiddy-Crosshaven-Carrigaline in County Cork and Enniscorthy in County Wexford.

APPENDIX D: PRESSURES ON SURFACE WATERS

Waste water treatment at the 38 areas listed below should be improved, as a priority, to prevent waste water discharges from harming rivers, lakes, estuaries and coastal waters.

County	Urban area
Carlow	Tullow
Cavan	Bailieborough
	Blacklion
	Mullagh
Clare	Kilmihil
	Quin
Cork	Cork City
Donegal	Ballintra
	Bridgend
	Buncrana[17]
	Burnfoot
	Kilmacrennan
	Milford
Dublin	Dublin / Ringsend
	Malahide
Galway	Athenry
	Ballymoe
	Loughrea
	Mountbellew
	Woodford
Kerry	Abbeydorney
	Tralee
Laois	Portarlington
Leitrim	Mohill
Limerick	Hospital
Louth	Dundalk
	Dunleer
Monaghan	Carrickmacross
	Castleblayney
Offaly	Kilcormac
Tipperary	Mullinahone

17 Contributed to poor bathing water quality at Lady's Bay, Buncrana in the 2021 bathing season.

County	Urban area
Waterford	Dungarvan
	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

The table lists the 12 towns and villages where waste water treatment must improve to help protect freshwater pearl mussels. It also summarises the status of the improvement works.

County	Urban area
Monitoring is ongoing to determine if recent improvements in treatment have resolved the risk to freshwater pearl mussels	
Cork	Cecilstown
	Kealkill
Kerry	Kilgarvan
New or upgraded treatment plants are due to be completed between 2023 and 2024	
Cork	Boherbue
	Inchigeelagh
	Mallow
Laois	Castletown
The EPA requires Irish Water to provide a clear time frame to complete all the improvements needed to protect freshwater pearl mussels	
Cork	Ballydesmond
	Castletownroche
	Kanturk
	Lombardstown
Laois	Ballyroan

APPENDIX F: SHELLFISH ASSESSMENTS

Irish Water must complete the long overdue assessments of the impacts of waste water discharges on the following 24 designated shellfish waters.

County	Shellfish waters
Cork	Baltimore Harbour / Sherkin
	Castletownbere
	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.

The most common type of an incident is the release of waste water into the environment without adequate treatment.

At the end of 2021 there were 249 incidents that were either ongoing for some time or were likely to recur because the underlying problem that caused the incident was not resolved. These types of incidents, which we refer to as recurring incidents, have increased over the past two years (Figure 9). Treatment infrastructure will need to be upgraded to resolve most of the recurring incidents. This is likely to take time and significant resources and Irish Water should have a clear, forward-looking national plan to carry out this work.

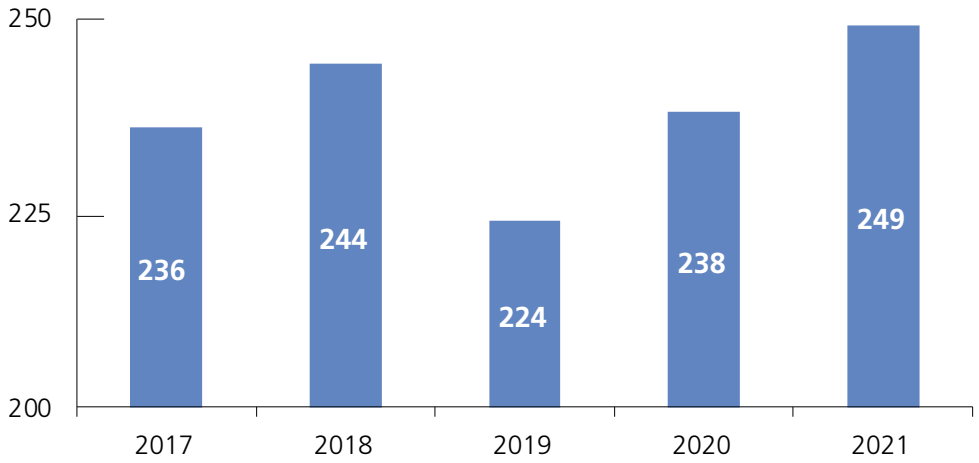

Figure 9: Number of recurring incidents at the end of each year

There were also 1,067 short duration or once-off incidents during 2021. Around half of these were equipment breakdowns and other issues associated with the operation and maintenance of treatment plants. The other main causes included blocked sewers and problems at pumping stations. The extreme weather during Storm Barra in December caused over 50 short duration incidents.

APPENDIX H: SEWAGE SLUDGE

The *Urban Waste Water Treatment Directive* requires sewage sludge to be reused whenever appropriate. Sludge contains valuable nutrients such as nitrogen and phosphorus and is mostly reused in Ireland as a fertiliser or soil improver on agricultural land. When reused in this manner it must first be treated to make it stable and free of harmful bacteria and viruses. It should then be spread on the land in a way that makes sure the nutrients are effectively used for plant growth or assimilated into the soil.

The table shows the amount of sewage sludge produced in 2021 and the reuse routes for this sludge.

Sewage sludge reuse routes in 2021

	Agriculture	Compost	Other	Total
Tonnes dry solids	55,182	5,154	131	**60,467**

All of the sludge sent for composting was subsequently reused in soil / agriculture.

The category *Other* in the table above refers to treated sludge in storage at the end of 2021 awaiting landspreading on soil / agricultural land in 2022.

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 Chreat-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 Tháscairí 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.

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