



Water Services in Ireland

The national statutory body representative of stakeholders with an interest in the quality of Ireland's waters.

Water Services includes the sourcing, treatment and distribution of drinking water to domestic and business customers and the collection and treatment of wastewater and its return to the river catchment. A drinking water supply includes the abstraction, treatment, storage and distribution of water from the water source to the customer's tap. The raw water sources, rivers, lakes, springs, wells and groundwater can be a source of contaminants if the water is not managed or treated properly. Drinking water supplies need to meet standards set out in the European Drinking Water Regulations so they are safe to drink and do not pose a public health risk.

Drinking Water Services

Public water supplies **Uisce Éireann / Irish Water** is responsible for providing public water services and ensuring drinking water quality in public supplies meets the standards in the Drinking Water Regulations. In public water supplies, Uisce Éireann manages the abstraction, treatment and distribution of treated water. Uisce Éireann was established in 2014 to provide water services on a national basis (previously delivered on a Local Authority basis).

Public drinking water is provided through 539 individual water supply zones (WSZs) (Figure 1) that include a source, treatment and distribution network. There are 749 water treatment plants, 1,711 pumping stations and 1,426 water reservoirs producing 1.7 billion litres of drinking water every day, serving 1.8 million households and 184,000 businesses.

Uisce Éireann's National Water Resources Plan sets out the framework for how water supplies will be rationalised to build resilience through a 3 pillar approach to: Use less, Lose Less and Supply Smarter. The National Framework is delivered through 5 Regional Water Management Plans that aim to create efficiencies and

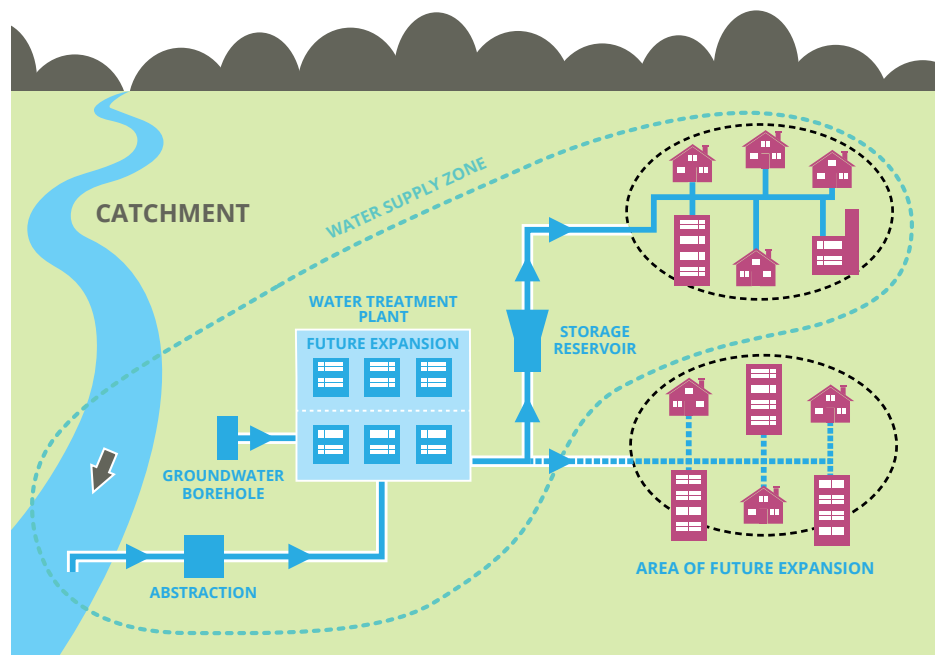


Figure 1. Graphical representation of a water supply zone from Uisce Éireann's Water Services Strategic Plan.



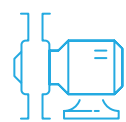
749

water treatment plants



1,426

water reservoirs



1,711

pumping stations



1.7bn L

of drinking water every day

build effective, efficient and resilient supplies to address economic development, population growth and the impacts of climate change.

Uisce Éireann prepares Drinking Water Safety Plans for every WSZ to protect human health by taking a whole catchment approach to manage risks to water quality from source to tap. Appropriate raw water treatment and preventative measures to mitigate contamination risks in the distribution network is required. The Environment Protection Agency (EPA) monitors drinking water quality to make sure it meets Drinking Water Regulations and it monitors operations at water treatment facilities to ensure compliance with standards and regulations. The EPA publishes an annual [Drinking Water Quality in Public Supplies Report](#)

Public group schemes are supplies where a group water scheme, set up

by the local community, manages the distribution of treated water to scheme members while Uisce Éireann manages the abstraction and treatment of the water.

Private group water schemes (PGS) are supplies where a group water scheme is set up by a local community. The community identify a local source and manage the treatment and distribution of the water to the scheme members. There are around 380 private group schemes, many established as community owned co-operatives, serving almost 200,000 people. The National Federation of Group Water Schemes (NFGWS) represents and works with the community-owned rural water services sector in Ireland (Figure 2). The NFGWS works in partnership with local authorities and individual group schemes to identify and address water quality issues and risks.

Small private supplies (SPS) provide water to many rural commercial or public activities (e.g. national schools, holiday accommodation and premises providing food and drink) often sourced from a well. There are over 1,700 SPS's registered with local authorities but there may be many more that have not registered. Thousands of people use these supplies every day as they provide water to employees, customers and service users.

The water supplier (PGS or SPS) is legally responsible for making sure the water they provide complies with the water quality standards set in the Drinking Water Regulations and is safe to drink.

Household wells serve individual private homes, mostly in rural areas. There are approximately 180,000 household wells that are also referred to as private wells. The householder is responsible for managing this type of supply.

Local authorities have responsibility for ensuring that private drinking water supplies, both group schemes and SPS, are monitored for compliance with drinking water standards. The latest [EPA Water Quality in Small Private Supplies Report](#) shows that drinking water quality at SPS's is not where it should be, and it remains consistently below the water quality standards provided through public water supplies.

The [National Federation of Group Water Schemes](#) works with schemes to protect and improve drinking water quality through a diverse range of activities. The NFGWS has developed processes to assist GWSs in identifying and managing risk from catchment to consumer. It's quality assurance scheme, source protection guidance and regular training courses contribute to a catchment-wide water safety planning process. This approach is welcomed by the EPA and is being implemented in a number of supplies around the country.

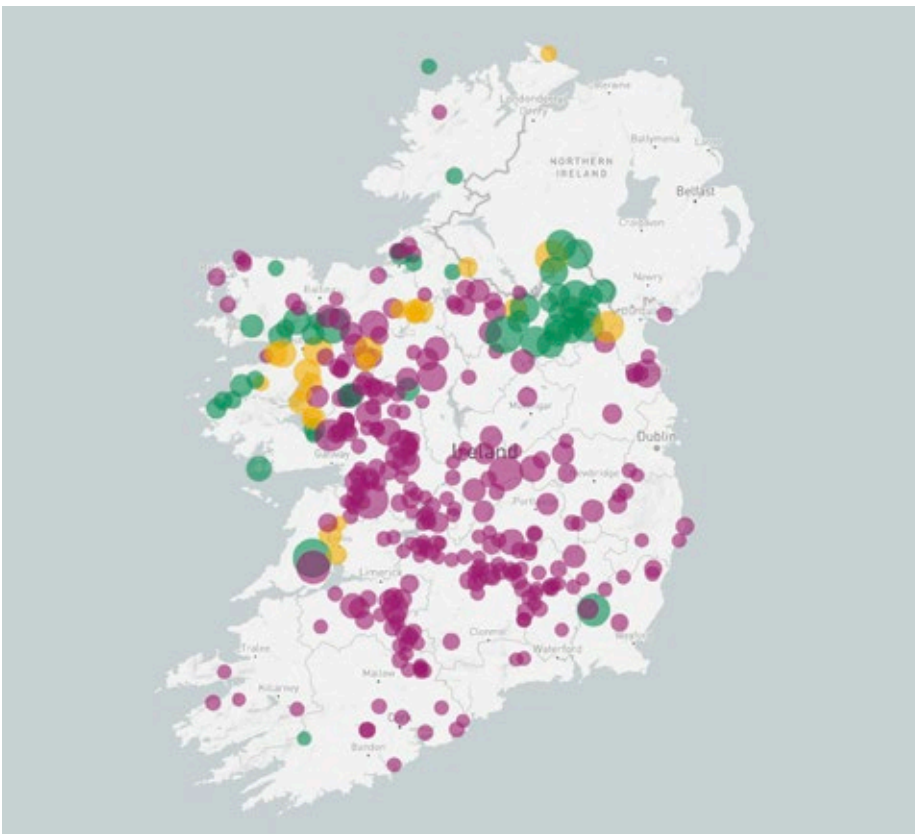


Figure 2. Ireland's Group Water Schemes (GWS). Green: surface source; red: groundwater source and yellow combined source.

Wastewater Services

Every day more than a billion litres of wastewater (sewage) is collected in Ireland's public sewers and treated at 1,062 treatment plants. The treated wastewater is then discharged back into rivers, estuaries, lakes and coastal waters. Uisce Éireann (Irish Water) is the national water utility responsible for providing this essential service.

Treating wastewater to make it clean and safe is necessary to protect our environment and public health. Untreated and poorly treated wastewater 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 releasing nutrients such as nitrogen and phosphorus that lead to excessive and unwanted growth of algae and aquatic plants that deplete oxygen levels in the water.

The European Union's Urban Waste Water Treatment Directive (UWWTD) sets standards for treating wastewater at all large urban areas with the objective of protecting the environment from the harmful effects of wastewater discharge. Almost half of Ireland's urban wastewater

is generated in the greater Dublin area and is conveyed for treatment at Ringsend water treatment plant (pictured below). Ringsend treatment plant is currently undergoing an upgrade to bring treatment to EU standards and to increase treatment capacity and this work is due for completion in 2025.

Other large urban areas (with >2000 population equivalent) are not in compliance with the UWWTD (e.g. Clonakilty, Kinsale and Ballymote) and Uisce Éireann state that plans are in place to achieve compliance in these areas by 2025. However, some upgrades needed to achieve UWWTD objectives will not be met until 2027 (e.g. Merville and Lahinch). Complying with standards is vital to protect the environment and also to reduce the risk of fines from the EU Court of Justice.

The last [EPA Urban Wastewater Treatment Report](#) for 2021, stated that 32 towns and villages discharge raw sewage into the seas and rivers every day because they are not connected to wastewater treatment plants. Uisce Éireann stated that raw sewage discharge will cease in 19 of

these areas by 2024 and a further 11 by 2025, with the final 2 being addressed by 2027.

The draft River Basin Management Plan (RBMP) published in 2021 showed that wastewater discharge is the 4th largest significant pressure in Irish waterbodies. It is the most significant pressure impacting water quality in 208 waterbodies and the Water Forum has requested that Uisce Éireann prioritise action to address these within the third RBMP cycle to 2027.

Waste Water Collecting Systems

Ireland has an estimated 26,000 kilometres of public sewers and 2,206 wastewater pumping stations that collect sewage generated in communities and transfer it to treatment plants. Many sewers also collect rainwater runoff and this can put stress on the system's capacity. Sewers and pumping stations should have enough capacity to collect and treat wastewater during normal weather conditions and to cope with seasonal variations in waste load. Currently, collecting systems are not up to the required standard and this poses



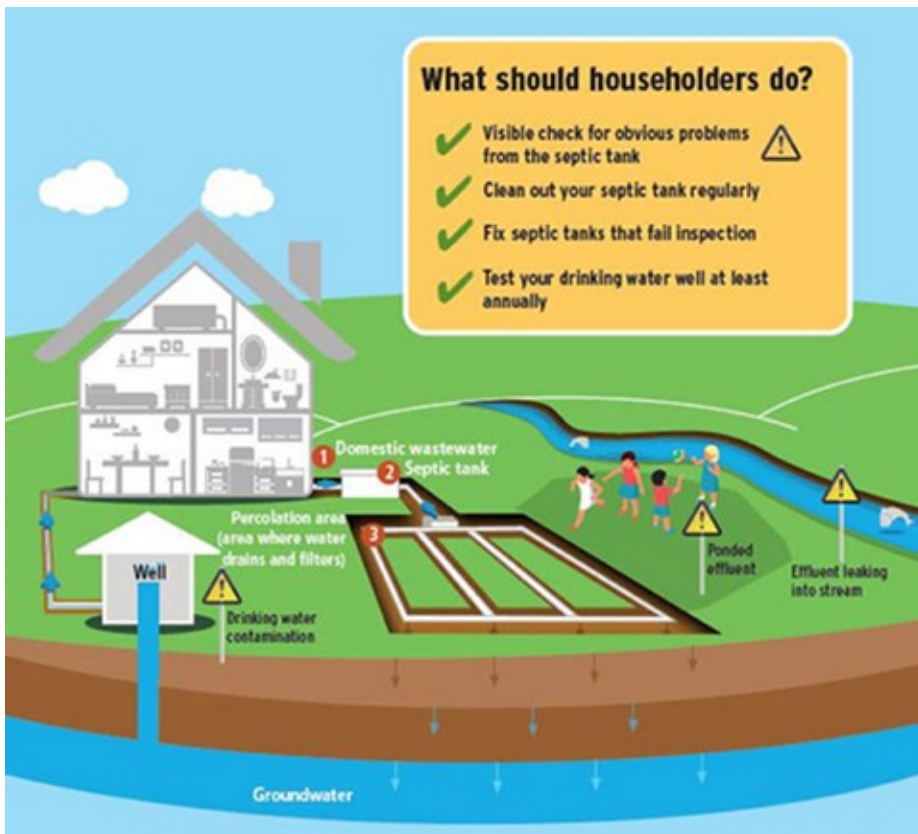


Figure 3. EPA Infographic on what to householders should do to maintain septic tanks.

a risk to the environment and public health. Uisce Éireann estimate that upgrades are needed on 6 collections systems with an estimated cost of over €500 million. There are plans for 4 to be completed by 2025 and the remaining 2 to be completed by 2030.

Storm Water Overflows

There are an estimated 2,350 overflow outlets, referred to as storm water overflows, on Ireland’s wastewater collecting systems. 400 of these outlets require improvements to meet EU standards. Monitoring equipment is being installed to measure overflows from outlets to help prioritise upgrades. It is essential to mitigate environmental risks from such outflows as soon as possible.

Domestic Waste Water Treatment Systems

There are nearly half a million domestic wastewater treatment systems (DWWTS), mostly septic tanks, used by householders

“Local authorities inspect a random selection of systems each year. In 2021, 53% of the 1,147 systems inspected failed. Over half of the failures were because the systems were not maintained properly or desludged.”

to treat sewage. If not built or operated properly, DWWTS can contaminate household wells with harmful bacteria and viruses and release nitrogen and phosphorus that can cause pollution in rivers and other waters. The draft RBMP identifies domestic wastewater as the 6th most significant pressure on water quality, impacting 188 (4%) rivers and other waters.

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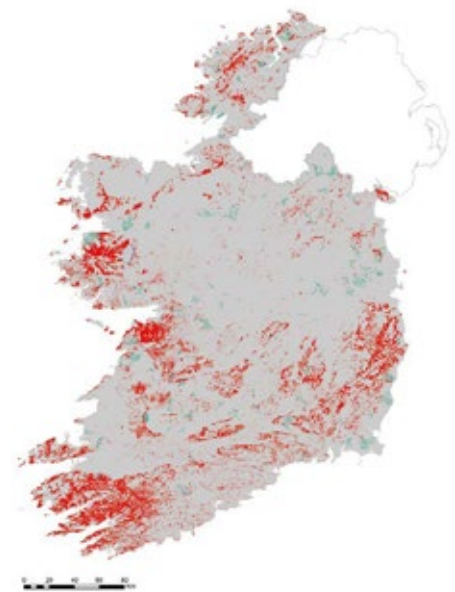


Figure 4. Areas identified for more DWWTS inspections are identified in red.

53% of the 1,147 systems inspected failed. Over half of the failures were because the systems were not maintained properly or desludged. Local Authorities issue advisory notices requiring householders to fix systems that fail inspections. This failure rate indicates that many systems pose a risk to people’s health and the environment.

This is of particular concern if a DWWTS is near household wells or if effluent is ponding in the garden or being discharged to ditches/ streams. Householders should ensure their DWWTS are properly built and maintained and their wells are tested to protect the health of their family (Figure 3). **DWWTS grants** of up to €5,000 are available to fix DWWTS in certain circumstances. Private well grants may also be available for improvement works to private water supplies.

The new National DWWTS Inspection Plan will focus inspections in areas where there is a risk to water quality (Figure 4) and risks to household wells, and the number of inspections will be increased to 1,200 per year.