Jersey Water
for Island life

2024
Water Quality Report

The Jersey New Waterworks Company Limited

Contents

'The year' refers to the financial reporting year from 1 October 2023 to 30 September 2024.

Front cover image: Customers brushing their teeth. Photographer Max Burnett
Inside cover image: Operational Scientist random sampling at commercial customer's property. Photographer Max Burnett

A message from our Head of Water Quality

Jeanette Sheldon

Head of Water Quality

The quality of our drinking water remains among the best in the world.

We are committed to supplying high quality drinking water 24 hours a day, 365 days a year and providing excellent service to you, our customers. Our dedicated Water Operations team works around the clock to ensure that the water is safe to drink and delivered to your tap. We sample and analyse the water we supply at all stages of the process to make sure that it meets stringent quality standards.

Supplying safe drinking water

2024 was another year for excellent water quality. 99.95% of all our samples, whether from our treatment works, our service reservoirs or customer taps, met the regulatory requirements. 100% of the tests of treated drinking water at our Handois and Augrès treatment works were compliant.

These results are from 14,851 sampling tests that our Water Quality team conducted during the year, including 243 randomly selected customer properties. From all our tests, eight samples returned results that were outside of the regulatory requirements. None of these posed a risk to public health and, as ever, we thoroughly investigated all failures to prevent any reoccurring in the future.

In addition to the testing that we undertake to meet regulatory requirements for treated drinking water, we also proactively carry out sampling of untreated – also referred to as 'raw' - water supplies, for example from streams and our six storage reservoirs. During the reporting year, we completed a further 27,583 tests, to understand the quality of the untreated water and enable us to select the best supplies to send for treatment at our treatment works.

Over the course of the year, we completed more than 42,000 tests of both untreated and treated water. This testing is critical for us to understand and manage the risks around water supply and water quality. The results inform the action we take to ensure the water we supply to you remains of the highest quality, whether that's mitigating and minimising the levels of nitrates, pesticides and lead, or supporting the Government of Jersey to address the environmental pollution caused by PFAS (per- and polyfluoroalkyl substances).

PFAS

As PFAS pollution continues to be a topic of increasing concern, not just in Jersey but around the world, we are taking action, in line with other water companies globally, to deal with these man-made chemicals that have permeated the environment. Since 1989, we have been monitoring the levels of PFAS in streams, reservoirs and our treated drinking water through an extensive sampling and analysis programme.

Over the last five years, we have increased independent testing for PFAS by 75%. In 2024 alone, 16,656 tests were conducted at our accredited contract laboratories in the UK, at a total cost of nearly £100,000, demonstrating our commitment to understanding and managing this contamination. These tests evidenced that we continue to remain fully compliant with the regulatory requirements for PFAS in drinking water set by the European Union (EU) and the UK's Drinking Water Inspectorate (DWI). In fact, we are 68% lower than the maximum permissible standard.

In recent years, we have been proactively investigating potential treatment solutions for PFAS. It was well-documented in 2024 that new regulatory requirements for PFAS will come into effect over the coming years in the UK (2031), the EU (2026) and the USA (2029). We do already predominantly meet all of these future standards, but we will most likely need to put in place additional treatment processes to guarantee consistent compliance. We will take all necessary steps to ensure our mains supply remains clean, safe and compliant with any regulatory standard adopted by the Government of Jersey. Once the Government has determined and set the Island's future limits for PFAS in drinking water, we will then be able to decide upon and deliver the most appropriate treatment solution to meet those requirements. (See pages 8 to 11).

Nitrates

Nitrate levels have reduced significantly over the last 15 years, thanks to focused efforts by the farming community to minimise the use of fertilisers. This is evident from the lower levels detected in our treated drinking water (41.2 milligrams per litre (mg/l) was the maximum detected in drinking water in 2024), which remains below the Jersey regulatory standards of 50mg/l[1].

For more than a decade, we have been fully compliant with the regulatory levels for nitrates. As a precautionary measure, we applied for an extension to the dispensation from the Government's Environment Department in December 2023, for use in exceptional circumstances if there was a severe pollution incident that affected our ability to supply water to the Island. Thanks to the collaborative work by the Action for Cleaner Water Group to minimise nitrate levels, we have not needed to use the dispensation for more than ten years. Our aim is to get to a place where we will not need one in the future. We remain committed to working with the Government and the farming community, to achieve these water quality improvements and protect the Island's catchments.

Pesticides

In 2024, we maintained our compliance with regulatory requirements for pesticides for the eighth consecutive year. We detected 36 cases of elevated concentrations of pesticide in stream and reservoir water. By carefully selecting which reservoir to use and appropriate treatment, there were no breaches of the pesticide limit in treated drinking water, which for Jersey is 0.1 micrograms per litre (µg/l). We have also worked closely with the Action for Cleaner Water Group regarding these detections of pesticides.

In January 2025, the current dispensation for oxadixyl expires. This fungicide was banned in 2003 and concentrations in the stream water, and subsequently our reservoirs, have gradually reduced. We are also able to remove oxadixyl at the treatment works through the addition of powdered activated carbon. As a result of these two actions, treated drinking water has been compliant with the standard since 2016, so we will not be applying for a renewal of this dispensation.

Lead

Similarly, we remain 100% compliant with the current Jersey standard for lead in drinking water, which is 10 micrograms per litre (µgl)[2].

In 2036, the EU legislation will change to 5µg/l and we are predominantly already compliant with this new regulation, thanks to our orthophosphate dosing. The only way to be fully compliant will be to remove lead pipes all the way from the water main to the kitchen tap. In 2024, we replaced a further 147 lead pipes on our mains network and when customers upgraded their own pipework.

Algae

Algae blooms and manganese in our storage reservoirs are a perennial issue for our Operations teams due to their effect on raw water quality and treatment processes. For the past three years, we have been participating in a UK industry-wide research project with Cardiff and Bath universities on algae management. As a result of this research, we have changed our management practices, using fewer chemicals and less resource to treat algae, which is leading to better results for water quality.

The goal of this project is to better understand how to manage algae blooms and manganese in our raw water storage reservoirs and optimise treatment. This will reduce the risk of adverse taste and odour complaints and reduce manganese, which can cause discolouration.

Investing in water quality for the future

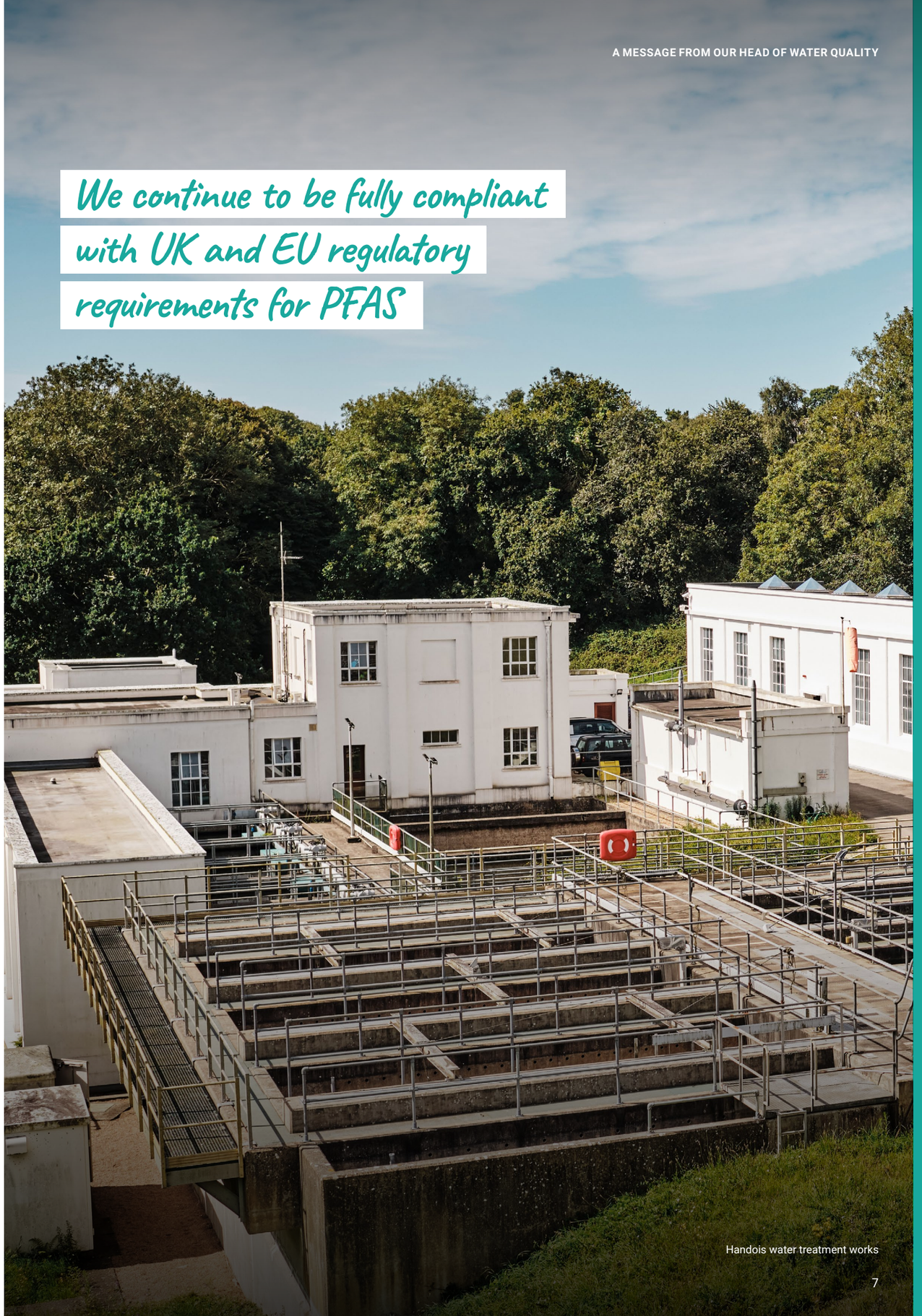
Our new headquarters at Rue des Pres Trading Estate, will feature a new state-of-the-art water quality laboratory. Providing a larger operating environment, equipped with the latest water quality technologies, this new facility will increase our capacity to conduct even more comprehensive water testing. This will help ensure that our drinking water continues to meet the highest quality and safety standards, so that we keep providing a safe, reliable supply to you, our customers, today and in the future. During 2024, we completed the design for the laboratory and started its construction, with a phased move to the new premises anticipated for 2026.

Jeanette Sheldon
Head of Water Quality
11 December 2024

The quality of our drinking water remains among the best in the world

1 *Water (Jersey) Law 1972 (as amended): https://www.jerseylaw.je/laws/current/Pages/27.700.aspx*
2 *EU Drinking Water Directive. December 2020: https://eur-lex.europa.eu/eli/dir/2020/2184/oj*

We continue to be fully compliant with UK and EU regulatory requirements for PFAS



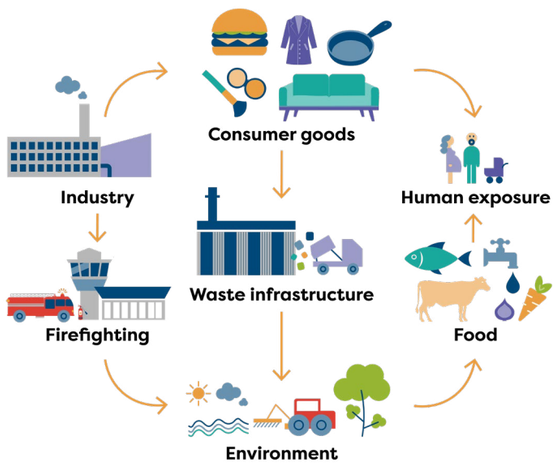
Handois water treatment works

PFAS: Tackling this environmental pollution

Public concern, understanding and expectations about PFAS chemicals are growing. At Jersey Water, we are very aware of and share Islanders' worries about the extent of the pollution in Jersey and what is being done to remove it from our natural environment. While globally PFAS pollution extends beyond water sources – also being found in the air, sea and soil - we want to reassure you that we are focused on doing everything we can to minimise these chemicals in our water supply, in addition to already being fully compliant with the UK and EU regulations for PFAS.

PFAS pollution is not an issue that is unique to Jersey. Around the world, countries are facing the effects that these man-made chemicals are having on our environment and the implications for public health. Although PFAS pollution was not created by the water industry, water companies globally are being looked to, to help tackle it and find solutions to treat it, where necessary, to preserve water supply sources.

There are a number of ways in which people can be exposed to PFAS (see diagram below); these so called 'forever chemicals' – because they are extremely difficult to degrade - have been in production since the 1940s. Today, they are still found everywhere, in our homes and everyday products.



Scientific studies have found that drinking water normally accounts for a small proportion of a person's potential exposure, approximately 20%, with the rest coming from food, other drinks, and products that we use in everyday life[3].

3 Second Report of the Independent PFAS Scientific Advisory Panel for Jersey – An Assessment of the Impact on PFAS Exposure on Health. November 2024. https://www.gov.je/SiteCollectionDocuments/Health%20and%20wellbeing/Report%202%20Health%20impacts%20of%20PFAS.pdf

What are PFAS?

PFAS (poly and perfluoroalkyl substances, which include PFOS and PFOA) are man-made chemicals not naturally found in the environment – air, sea, soil and rainwater.

There are at least 5,000 different synthetic chemicals that are found everywhere in our homes and everyday products. For example, cosmetics, food packaging, non-stick cookware, and water-resistant clothing. Often referred to as 'forever chemicals', they take decades if not centuries to breakdown in the environment.

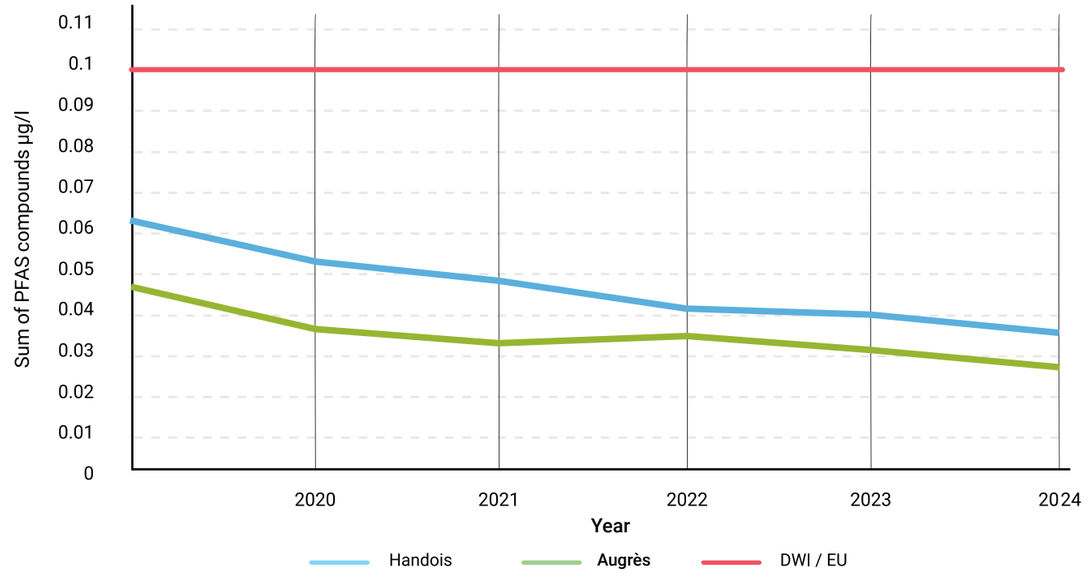
What we are doing to manage PFAS in our Island's water

Since 1989, we have been monitoring, sampling and managing PFAS concentrations in the Island's streams, our raw water reservoirs and our treated drinking water supplies.

The number of PFAS compounds that we can test for has increased substantially over the years, as laboratory capabilities have improved. Today, we test for 48 different PFAS compounds, using fully accredited contract laboratories in the UK. Out of all PFAS, these 48 are the compounds that are most likely to be found in drinking water, as determined by the UK's Environment Agency and the UK's Drinking Water Inspectorate (DWI) - the regulator for England and Wales. Of these 48, only eight have been detected in our treated water supply.

Over the last five years, we have increased independent testing for PFAS by 75%. In 2024 alone, 16,656 tests were conducted, at a total cost of nearly £100,000, demonstrating our commitment to understanding and minimising this contamination. These tests evidenced that we continue to remain fully compliant with the regulatory requirements for PFAS in drinking water set by the European Union (EU) and the UK's DWI. In fact, we are 68% lower than the maximum permissible standard.

We keep following best practices and ensure that we do not use water sources that have been identified as highly contaminated



The graph above shows the annual average concentration of total PFAS detected in the drinking water from both of our Handois and Augrès treatment works since 2019. This is compared against the EU Directive and the UK's DWI standard which illustrates that PFAS in drinking water in Jersey is considerably less than the regulatory requirements.

with PFAS. This has led to a noteworthy reduction in PFAS concentrations in drinking water. (See graph on page opposite).

Widely documented, the main source of PFAS pollution to Island streams and groundwater is from the historic use of firefighting foams containing PFAS at the airport. This led to the contamination of Jersey Water boreholes in St Ouen's Bay and a stream source at Pont Marquet. The most contaminated borehole was taken out of service more than 15 years ago and the other sources in 2022. Our current operating policy is not to use these affected sources unless in the most severe drought, and only in conjunction with the desalination plant. This significantly dilutes PFAS concentrations, ensuring that our treated drinking water remains fully compliant.

Full compliance with current regulation

Drinking water in Jersey is regulated under the Water (Jersey) Law 1972 (as amended). Under this Law, there is a legal requirement for Jersey Water to maintain a supply of "wholesome" water. That means water that does not contain any micro-organism, parasite or substance at a concentration or value that would constitute a potential danger to human health.

16,656 tests
conducted at our UK accredited contract laboratories

In the absence of any specific water quality standards relating to PFAS in Jersey, we look to regulation and best practice in the UK by the DWI and the EU, as a benchmark to determine our approach to ensuring your drinking water remains "wholesome".

Over the past 15 years, we have adopted a precautionary approach and taken significant steps to protect the quality of our drinking water from PFAS contamination. The water we supply to you has been consistently compliant with drinking water quality standards for PFAS throughout that time.

The mains water supply is rigorously and frequently sampled and tested for PFAS concentrations to ensure that our drinking water meets with the requirements set by the EU and the UK. The trace concentrations found in mains water fall well within these current regulatory requirements.


Max and Jack, Operational Scientists

The average total PFAS concentration for drinking water in 2024 was 0.032 micrograms per litre (µg/l). For context, this is equivalent to approximately one and a half teaspoons of sugar in 100 Olympic-sized swimming pools, and is 68% lower than both the EU and UK regulatory requirement of 0.1µg/l. The highest level we detected (0.051µg/l) was also well below the standard, in fact 49% lower. These results demonstrate that we continue to do everything we can to minimise PFAS.

Current compliance

The table below shows our current levels of compliance with the UK's existing regulatory requirements, and also the new standards that the UK, EU and USA will adopt between now and 2031.

Our current performance against these future standards shows that full PFAS compliance is very nearly already achieved.

While the Government of Jersey determines the regulation that we will need to comply with, we will continue to ensure that we follow wider guidance, as we develop our treatment capability to meet these new and emerging requirements both now and in the future.

68% Lower
than both EU and UK regulatory requirements

Country	Regulatory guidance	Legal regulation	Standard or parametric value in drinking water	Contaminant level	Implementation date	Jersey Water compliance and performance *FY24*
England and Wales	✓		**Sum of** 48 PFAS compounds should be <0.1µg/l	Maximum result*	In place	100%
	✓		**Individual** 48 PFAS compounds should be <0.01µg/l	Maximum result*	March 2031	99.8% of individual PFAS compounds were less than <0.01µg/l
European Union		✓	**Sum of** 20 PFAS compounds should be <0.1µg/l	Maximum result*	January 2026	100%
United States of America		✓	PFOS <0.004µg/l	(12-month average for minimum 4 samples)**	April 2029	100%
			PFOA <0.004µg/l			0% (12-month average is 0.006µg/l so 0.002µg/l away from full compliance)
			PFHxS <0.01µg/l			100%
			PFNA <0.01µg/l			100%
			HFPO-DA <0.01µg/l			100%
			Hazard mixture <1 (unitless)			100%

*No single result shall be greater than the parametric value **12-month average result must not be greater than the parametric value

Meeting future regulation

The scientific knowledge and understanding of the risks associated with PFAS are developing at pace; water quality regulations around the world vary and are rapidly evolving. We will soon see updated regulations come into effect for compliance in the EU in 2026, in UK in 2031 and in the USA by 2029 (see above table). The latter is taking a zero-tolerance stance for PFAS for six compounds. These compounds fall within the 48 we already test for here in Jersey.

We are supporting the Government of Jersey as the Environment and Public Health Departments work through the wider public health issues associated with PFAS and consider the adoption of specific water quality regulations for Jersey. In the absence of such standards, we will continue to be guided by the UK and EU regulatory limits. Now and in the future, we will take all necessary steps to ensure our drinking water remains "wholesome" and that you, our customers, have confidence in your tap water. Our aim is that our treated drinking water does not just meet the regulations the Island adopts but meets your expectations.

Victoria, Laboratory Team Leader

Working together on solutions

As the regulator for water quality, it is for the Government of Jersey to set the regulatory limits for PFAS for the Island. Those limits will dictate the treatment solutions that we will need to adopt for water quality and the subsequent timeline for compliance. The cost of installing and operating treatment processes for PFAS (and the impact on your bills) has the potential to be significant, but this can only be determined once the new regulatory limits for Jersey are known.

Throughout 2024, we continued investigating all viable treatment options and have projects underway to consider the specific PFAS treatment requirements for Jersey, their cost and timelines. This work will help us determine the installation and operating requirements of potential treatment solutions. We will complete further pilot trials to assess the effectiveness of treatment on the Island's streams and untreated reservoirs. Our research and trials will supplement the studies that the Government of Jersey is undertaking.

In September, we hosted the Independent PFAS Scientific Advisory Panel and members of the Government of Jersey's Public Health Department at our Handois treatment works. This visit was to show first-hand our processes for treating drinking water and to discuss the critical work that we continue to do to tackle the PFAS levels found in raw and treated drinking water.

We are part of a multi-agency approach, led by the Government of Jersey, that is focused on addressing all PFAS environmental pollution in the Island. Through effective collaboration, the correct solution and appropriate management of the PFAS contamination can be found, to further ensure you continue to be supplied with high quality drinking water.

Our priority, and our commitment, is to keep minimising PFAS in drinking water and complying with any internationally recognised standards that Jersey adopts, so that the high quality of your drinking water and your confidence are both maintained.

£100,000
approximately spent on PFAS testing

Handois water treatment works

Drinking water compliance and results

Every year, we complete a detailed sampling and analysis programme to ensure we always provide high quality drinking water to you and all our customers.

We test for a wide range of parameters, including metals, bacteria, nitrates, pesticides and PFAS. In fact, we regularly test for more than 100 different chemical and microbial parameters, and 450 different pesticides.

In line with regulations set by the EU standard and the UK's DWI, and additional recommendations from the World Health Organisation, we have a water safety plan in place to evaluate potential risks and complete risk-based water quality testing to help manage those risks.

Every week, at regular intervals, we examine samples from our two water treatment works at Handois and Augrès, our two service reservoirs at Westmount and Les Platons, and from customers' properties.

Overall compliance

2024 was another year for excellent water quality. 99.95% of all our samples, whether from our treatment works, our service reservoirs or customer taps, met the stringent regulatory requirements, which is comparable to standards in England and Wales during 2024.

These results are from approximately 14,851 tests that our Water Quality team conducted during the year, including 243 randomly selected customer properties.

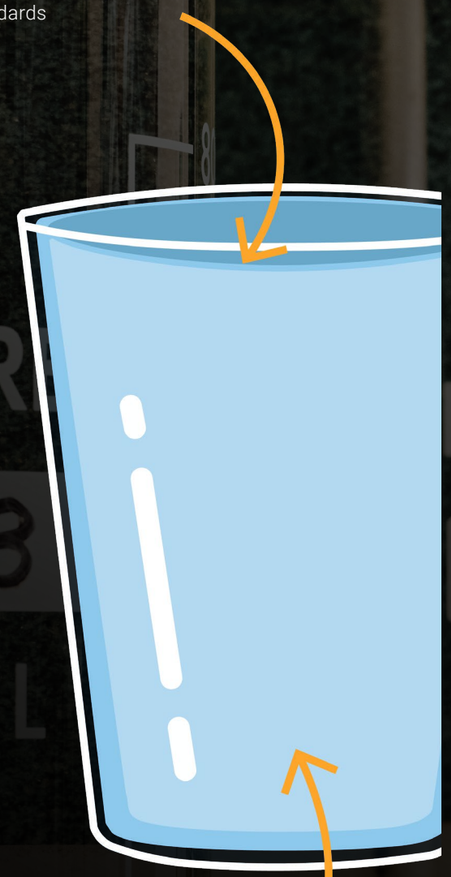
From all our tests, eight samples returned results that were outside of the regulatory requirements, and this meant that we did not quite meet our water quality compliance target for the year. None of the eight failures posed a risk to public health and, as ever, we thoroughly investigated all of them to help prevent and reduce the likelihood of any reoccurring in the future.

The small number of failures were identified either at our service reservoir at Les Platons or at customers' taps. In the case of the service reservoir, we took immediate remedial action. Two of the failures at customers' taps were likely due to the private plumbing.

100% of the tests on treated drinking water at our treatment works were compliant.

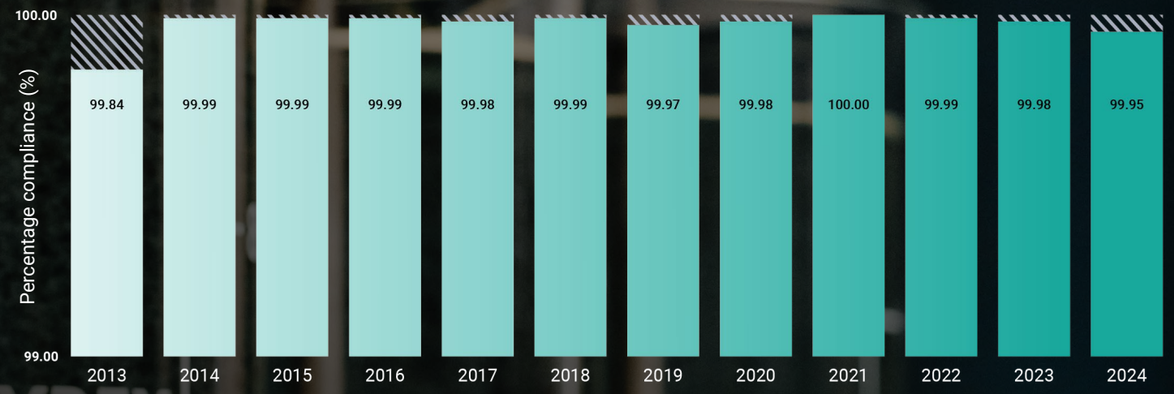
In the subsequent pages, we provide our summary findings and more detailed results on pages 24-35.

0.05%
of samples did not meet the standards



99.95%
of samples met the standards

Overall drinking water compliance



Water quality performance at our water treatment works

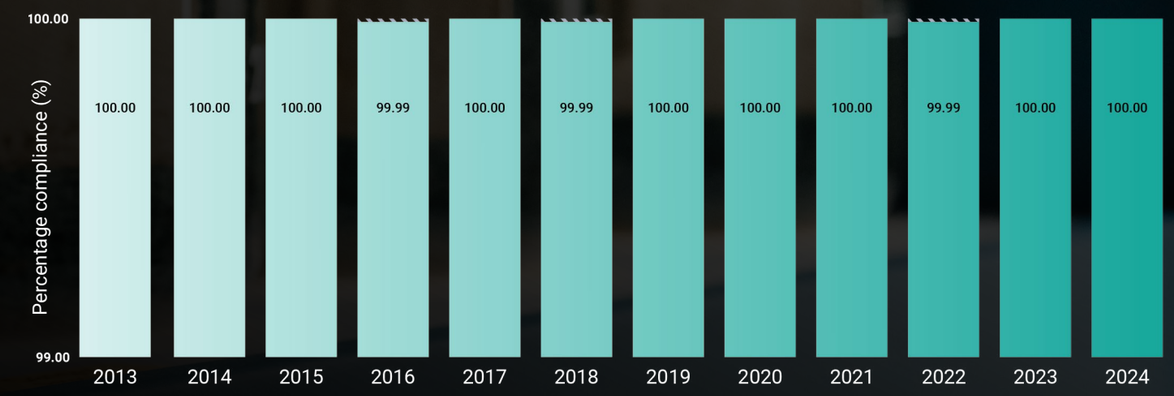
We operate two water treatment works at Handois and Augrès. These treatment works use processes that are tailored to the individual quality of the raw water stored in our reservoirs.

The majority of our water supply is derived from surface water, from rainfall captured by streams and stored in our reservoirs. We need to fully treat the water to make sure it is of the highest quality for you to drink.

We use a multi-stage treatment process, comprising chemically assisted clarification and filtration through sand and anthracite media. Following this treatment, the water is disinfected to ensure we remove any remaining bacteria present in the water, before it passes into the supply distribution network and to your taps.

In 2024, all the samples we collected from the drinking water leaving both our treatment works passed the relevant standards, demonstrating our ongoing commitment to providing you with high quality, safe drinking water. The graph shows our performance for the past 12 years; the only years when we did not achieve 100% compliance were due to single coliform failures.

Percentage compliance at water treatment works



Filling up at our St Aubin's water refill point

Performance at our service reservoirs

We have two service reservoirs which are strategically located at Westmount and Les Platons. These are enclosed storage reservoirs which we use to make sure we maintain drinking water supplies during peak demand periods, for example in the mornings, evenings and during exceptionally hot days. The total storage capacity of these reservoirs is 19.3 megalitres, which is slightly above the average daily demand for the whole Island of 18.8 megalitres.

Every week, we carried out tests on the water stored in our service reservoirs. From these tests, in 2024, coliforms were detected in four samples from Les Platons East and West service reservoirs. A coliform failure is caused by bacteria commonly found in the wider environment and does not pose a health risk. We thoroughly investigate all coliform detections. Les Platons East reservoir was removed from service, cleaned and inspected in July 2024 and the inspection and clean of Les Platons West reservoir was completed in October 2024. Similar precautionary work is also scheduled for Westmount reservoir.

Lead pipework and solder

The water that leaves our treatment works does not contain any lead. To reduce the amount of lead that could dissolve into drinking water from lead pipes or solder, we have plumbosolvency control treatment in place. This treatment forms a protective layer on the inside of lead pipework.

During the year, all the samples we collected passed the standard for lead and also the lower standard set by the EU[4].

The most robust way to minimise any exposure to lead is to remove all lead pipework and solder. In 2024, we replaced a further 147 lead pipes on our mains network and when customers upgraded their own pipework.

If you have lead pipework and you replace it, we will remove any lead communication pipes that may be present on our network to supply drinking water from the mains to your property.

If you have any concerns, we will sample your water without charge to check for lead in your drinking water.

4 EU Drinking Water Directive. December 2020: https://eur-lex.europa.eu/eli/dir/2020/2184/oj

In 2024, we completed more than 42,000 tests of both untreated and treated water

Samples from customers' taps

To demonstrate our water is of the highest quality all the way to your taps, we took 243 water samples from randomly selected customer properties. All but four of the 2,022 analyses that we took from these water samples were compliant with the stringent regulatory limits that we adhere to.

We thoroughly investigate all failures. On one occasion in 2024, two failures were due to domestic plumbing issues. In this instance, we provided the customer with suitable advice. Two further samples related to elevated concentrations of iron and manganese. These results did not constitute a health concern and are likely to be related to historic sediment in the distribution system, which can occasionally lead to discoloured water. All subsequent samples from these properties met the relevant regulatory standards.

We are grateful to all our customers who have supported us with this sampling and analysis programme during the year.

Water quality from source to tap

27,583
tests on water from streams and storage reservoirs

Zero
failures for nitrates and pesticides

100%
compliance with current standard for lead

When we refer to raw water, we mean water before it is treated. For example, the groundwater that feeds Island streams, boreholes and our six storage reservoirs at Grands Vaux, Queen's Valley, Handois, Dannemarche, Millbrook and Val de la Mare.

Every week, we take samples of water from streams, our six storage reservoirs and the inlet to our two treatment works, at Handois and Augrès. This enables our Water Supply team to select the most suitable water to be taken for treatment. This sampling also helps to identify any pollution or changes in water chemistry that may occur in particular catchment areas.

Our primary areas of concern arise from agricultural chemicals, such as nitrates and pesticides, entering the reservoirs from field run-off, and the environmental pollution caused by PFAS, which has contaminated streams and groundwater supplies across the Island.

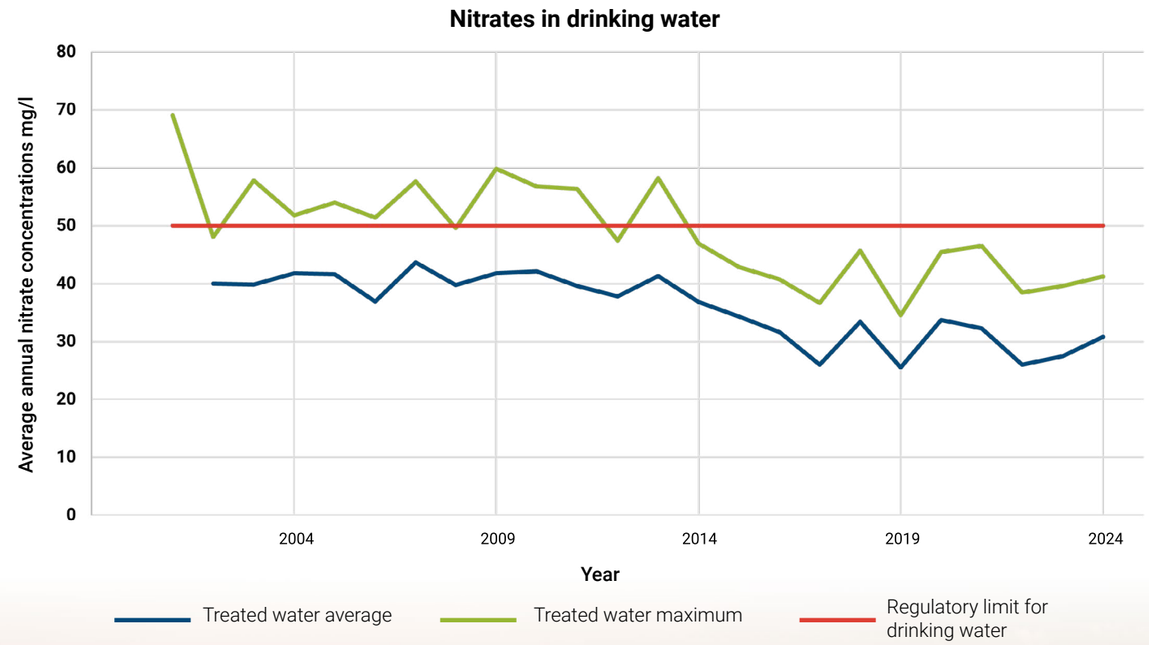
We are fortunate that the streams supplying our reservoirs are not polluted by heavy metals, for example chromium, lead, iron, copper or mercury.

Nitrates

The main source of nitrates in untreated water is from fertilisers being used in the agricultural industry. Through our collaborative work as part of the Action for Cleaner Water Group, the levels of nitrates in Island streams have reduced over time and we are proud to report that, for the 11th year running, we have been fully compliant with the nitrate standard in drinking water (50 mg/l).

This was achieved through the careful selection and blending of our raw water supplies during the potato growing season. It was also due to the availability of low nitrate water collected in the reservoirs before the growing season began. The graph opposite shows nitrate concentrations in our drinking water since 2002.

2024 posed greater challenges compared to previous years, as we detected elevated concentrations in Val de la Mare reservoir. This, combined with increased pesticide concentrations, meant that, as a precaution, we did not use the reservoir for more than two months.



Nitrates in untreated water peaked at 110.1 mg/l in November 2023 in the Queen's Valley side stream catchment and averaged 43.8 mg/l throughout the Island in 2024 in the streams. By proactively managing and selecting which raw water reservoirs we use, we ensure that our drinking water remains below the Jersey regulatory standard of 50mg/l. This has been the case for more than a decade. Further information on concentrations of nitrates in raw water is available on our website: jerseywater.je/stream-nitrate-map/

In December 2023, we applied for an extension to our nitrate dispensation. The dispensation allows us, in exceptional circumstances, to exceed the maximum concentrations of nitrates in drinking water. This is a precautionary measure that we would only use in an emergency to maintain our ability to supply water to the Island. Thanks to the strong collaborative working relationship between the Government of Jersey, the farming community and Jersey Water to reduce nitrate levels, there have not been any incidents of this nature for more than a decade, and we have not needed to use the dispensation. As a result, this latest dispensation has more stringent conditions attached to it. The Government granted its extension in October 2024. Our aim is to get to a place where we do not need a dispensation.

Val de la Mare reservoir

Pesticides

Throughout 2023 and 2024, we carefully managed the raw water taken from our reservoirs for treatment to optimise water quality. We monitor for pesticides using an analytical method which scans for 450 substances, and this enabled us to quickly identify issues with the quality of the stream water. If we detect, or are notified, that there are high concentrations of pesticides in the streams, in most instances we can divert the source, so that contaminated water does not enter the reservoirs. In 2024, we bypassed the reservoirs on several occasions due to storms, heavy rainfall and potential pollution incidents, to protect both reservoir and drinking water quality.

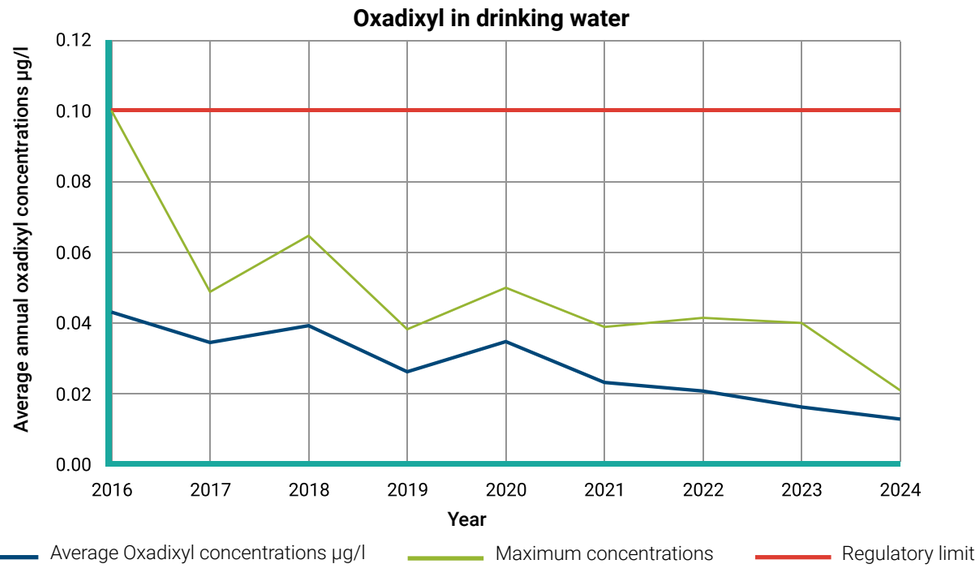
During the year, we detected 36 instances where pesticide levels in the streams and reservoirs were at 0.1 µg/l or greater. By carefully selecting which reservoir to use and through our treatment processes, there were no breaches of the pesticide limit in our drinking water.

We add a very small quantity of powdered activated carbon at the start of our treatment works which adsorbs most pesticides in the water. The carbon is then removed from the water through filtration to ensure that your drinking water is of the highest quality.

In January 2025, the current dispensation in place for oxadixyl will expire. This fungicide was banned in 2003 and concentrations in stream water have gradually reduced as a result. We are also able to remove some of the oxadixyl at our treatment works through the addition of powdered activated carbon. These two actions have ensured that treated drinking water has remained compliant with the standard for the eighth consecutive year. We therefore will not be applying to renew this dispensation in the future.

Algae *Micrasterias Spp* under microscope

Water sample testing



We will take all necessary steps to ensure our mains supply remains clean, safe and compliant with regulatory standards

Max, Operational Scientist

Handling customer enquiries

Every customer call and enquiry that we receive is carefully investigated, recorded and, where appropriate, we complete a visit to the customer to investigate the issue and take action to improve water quality wherever possible. All contacts for the 2024 reporting period are summarised in the tables on the opposite page.

In the last ten years, we have seen an overall reduction in the number of customers contacting us about their water quality. There was a slight increase in water quality enquiries in 2024, compared to 2023, which we investigated fully, and took action where needed.

The majority of enquiries are due to discoloured water, resulting from historic deposits in old, corroded steel or cast-iron pipes. We are undertaking a programme to replace our old pipework and service connections within the distribution system. Unfortunately, this work can disrupt water supplies and cause discolouration for very small periods of time. In 2024, we replaced 1.4 km of treated water mains, to improve the water supply infrastructure. We always advise customers in advance when we carry out planned works and we are grateful for your cooperation.

We took bacteriological and chemical samples from eight properties where customers suspected their water supply could be causing illness. All results met the regulatory standards. We took a further 59 bacteriological samples while investigating other customer queries – all samples were compliant.

Filtering drinking water

Your drinking water is already filtered before it reaches your taps. It is safe to drink and you do not need to filter it. That said, people do have different preferences on taste and may wish to filter their drinking water. It is not necessary but down to personal choice.

Occasionally we are contacted by customers about the taste and smell of their drinking water and whether a home filter or treatment is necessary. Drinking water does vary from area to area in the Island, which means that taste and smell can be slightly different; but it is always high quality and wholesome.

We do use small quantities of chlorine as part of our treatment processes. This is standard industry practice to protect against bacterial growth and to ensure the water supply is safe to drink. The level of chlorine in the water leaving our treatment works is equivalent to about half a gram of chlorine in every 1,000 litres.

Water sampling at domestic customer property

These levels are monitored continuously 24 hours a day. If you place a jug of water in the fridge overnight, the chlorine taste or smell dissipates.

The average pH of our drinking water is 7.9. This is considered neither significantly alkaline nor acid. The overall pH of the water is governed by the naturally occurring minerals which are present. Some household filters, ionisers or treatment systems may remove these minerals and leave a residue in the filter system waste. The presence of naturally occurring minerals, such as calcium and magnesium, poses no risk to health. In fact, there is medical evidence to indicate these minerals are beneficial[5].

5 NHS Overview - Vitamins and minerals: https://www.nhs.uk/conditions/vitamins and-minerals/others/

If you are concerned about heavy metals being present in your drinking water, we can reassure you that our rigorous testing does not detect any of these compounds in either untreated or treated water supplies. See pages 24 to 35 for full details of our test results.

It is a personal choice to install or use any kind of filtration system, including water filters and jugs. If you do so, it is important to follow the instructions for use. These filters do remove chlorine so make sure you use the water within 24 hours to ensure bacteria does not develop.

Customers' requests for information about water quality

		Customer contacts				
		Fluoride	Water hardness	Water quality report	Other information	
Total customer contacts	7	0	0	3	4	
Overall total	7					
Overall rate (contacts per 1,000 population)	0.07	England and Wales average 2023: 1.77				

Customers' enquiries about the quality of their water

		Customer enquiries about the appearance of their water						
Total number of appearance enquiries	60	Discoloured Bl/Br/Or	Discoloured blue/green	Particles	White - air	White - chalk	Animalcules	General condition
		48	3	3	1	0	0	5
		Customer enquiries about the taste or odour of their water						
Total taste and odour enquiries	24	Chlorine	Earthy / musty	Petrol/ diesel	Other taste or odour			
		7	4	0	13			
		Customer contacts relating to illness						
Total illness enquiries	12	Gastroenteritis	Oral	Skin	Medical opinion			
		4	0	6	2			
		Customer contacts about water quality concerns						
Total concerns	11	Pets and other animals	Lead and other analysis	Lifestyle	Incident related	Campaigns		
		1	2	4	1	3		
Overall total	107							
Overall rate (contact per 1,000 population)	1.09	England and Wales average 2023: 1.11						

Understanding test results

We are required to undertake two kinds of regulatory water quality monitoring – check and audit monitoring, to comply with the Water (Jersey) Law 1972 (as amended), the EU's Drinking Water Directive and the UK's Drinking Water Inspectorate (DWI).

Check monitoring

We undertake this monitoring most frequently. It is designed to ensure that our water treatment works are operating as expected and that the water in distribution is suitable for supply.

Audit monitoring

This is designed to test the quality of the water supplied against the full requirements of the Water (Jersey) Law 1972 (as amended), the EU's Drinking Water Directive and the UK's DWI.

Our 2024 Water quality report is based on the 12-month period from 1 October 2023 to 30 September 2024.

The following defined terms are used throughout our test results.

Term	Definition
Substances and parameters	The item we are testing for.
Specific concentration or value (maximum) or state	The maximum or range of values allowed by law in the water supply (regulatory limit).
mg/l	Milligrams per litre or parts per million, equivalent to 1p in £10,000.
µg/l	Micrograms per litre or parts per billion, equivalent to 1p in £10,000,000.
µS/cm	The unit of measure commonly used for electrical conductivity in water, microSiemens/cm.
Sample point	The location where the sample was taken.
Min	The minimum or lowest result produced for that test.
Mean	The average value of all the results produced for that test.
Max	The maximum or highest result produced for that test.
% Compliance	The percentage of the results that comply with the regulatory limit.
MPN	Most probable number – a statistical method used to estimate the viable numbers of bacteria in a sample.
CFU	Colony-forming units – a physical count of the number of colonies of bacteria visible on a membrane or an agar plate (Petri dish).
NTU	Nephelometric turbidity unit - used to quantify the clarity of water.
Bq/l	Becquerel per litre - measurement used to quantify radioactivity.

Victoria, Laboratory Team Leader

Test results

2024 Treatment Works performance – Check monitoring

Substances and parameters	Specific concentration or value (maximum) or state	Sample point	Min	Mean	Max	% Compliance	What it means
E.coli	0 MPN per 100ml	Augrès	0	0	0	100	Primary indicator of faecal contamination of treated water.
		Handois	0	0	0	100	
Coliform bacteria	0 MPN per 100ml	Augrès	0	0	0	100	Detection of coliform bacteria may indicate sub-optimal operation of the treatment process or ingress of contamination from breaches in the integrity of the distribution system.
		Handois	0	0	0	100	
Colony counts	No abnormal change	Augrès	No abnormal change			100	Monitoring water supplies for colony count bacteria can be useful for monitoring trends in water quality or detecting sudden changes in quality.
		Handois				100	
Nitrite	0.1 mg NO_2/l	Augrès	<0.003	<0.003	0.031	100	Nitrite may be associated with nitrate or with the use of ammonia in water disinfection.
		Handois	<0.003	<0.003	0.047	100	
Residual disinfectant	No value mg Cl_2/l	Augrès	0.49	0.65	0.80		Sufficient chlorine is added to all supplies to ensure the absence of harmful microorganisms.
		Handois	0.51	0.65	0.88		
Turbidity	1 NTU	Augrès	0.06	0.09	0.16	100	The standard requires that there should be no haziness caused by fine particles.
		Handois	0.05	0.10	0.15	100	
Conductivity	2500 µS/cm at 20°C	Augrès	398	497	581	100	A measure of the ability of the water to conduct an electric current and therefore a measurement of the mineral salts dissolved in the water.
		Handois	416	515	589	100	

2024 Treatment Works performance – Audit monitoring

Substances and parameters	Specific concentration or value (maximum) or state	Sample point	Min	Mean	Max	% Compliance	What it means
Clostridium perfringens	0 CFU per 100 ml	Augrès	0	0	0	100	The presence of Clostridium perfringens in filtered water and/or final water may indicate deficiencies in the filtration process (e.g. filter breakthrough) or in the disinfection process.
		Handois	0	0	0	100	
Benzene 1,2 dichloroethane	1.0 µg/l 3.0 µg/l	Augrès	All results were below limit of detection from both sample points.			100	Benzene may be introduced into source water by industrial effluents or atmospheric pollution. 1,2 dichloroethane is an organic solvent. Its presence is an indication of industrial pollution.
		Handois				100	
Bromate	10 µg BrO_3/l	Augrès	All results were below limit of detection from both sample points.			100	Bromate can be associated with industrial pollution or can occur as a by-product of the disinfection process.
		Handois				100	
Trichloroethene &} Tetrachloroethene}	10 µg/l	Augrès	All results were below limit of detection from both sample points.			100	Trichloroethene and Tetrachloroethene are organic solvents. Their presence is an indication of industrial pollution.
		Handois				100	
Tetrachlorometh-ane	3 µg/l	Augrès	All results were below limit of detection from both sample points.			100	This substance is an organic solvent. Its presence is an indication of industrial pollution.
		Handois				100	
Boron	1.0 mg B/l	Augrès	0.066	0.072	0.077	100	Although higher than normal, the amount found is well within the standards which have a large built-in safety factor.
		Handois	0.060	0.079	0.107	100	
Cyanide	50 µg CN/l	Augrès	<4.1	<4.1	<4.1	100	Very low levels may occur naturally, but higher amounts could be associated with industrial pollution. The standards are health related but have a large built-in safety factor.
		Handois	<4.1	<4.1	<4.1	100	

2024 Treatment Works Performance – Audit monitoring (continued)

Substances and parameters	Specific concentration or value (maximum) or state	Sample point	Min	Mean	Max	% Compliance	What it means
Fluoride	1.5 mg F/l	Augrès	<0.010	0.036	0.100	100	Occurs naturally in many water sources. The standard is set to ensure no adverse effects. Jersey Water does not artificially fluoridate the water supplies.
		Handois	0.020	0.044	0.080	100	
Chloride	250 mg Cl/l	Augrès	49	54	62	100	Occurs naturally in most water sources. Levels above the standard could give rise to taste issues and contribute to corrosion.
		Handois	53	62	71	100	
Sulphate	250 mg SO_4/l	Augrès	65	79	100	100	Dissolves in water after contact with certain mineral deposits. Excess levels can contribute to corrosion.
		Handois	67	79	90	100	
Total Organic Carbon	No abnormal change	Augrès	1.5	1.8	2.0	100	This parameter assesses the organic content of the water.
		Handois	1.6	1.9	3.0	100	
Gross Alpha	0.1 Bq/l	Augrès	<0.020	<0.020	<0.020	100	These parameters are measured as part of screening for radioactivity.
		Handois	<0.020	<0.020	<0.020	100	
Gross Beta	1.0 Bq/l	Augrès	<0.28	<0.28	<0.28	100	
		Handois	<0.28	<0.28	<0.28	100	

2024 treatment works pesticide analysis – Audit monitoring

We analysed a group of 83 pesticides from the treated water that leaves our treatment works to be supplied to our customers. The following table shows the ones that were above the limit of detection. 71 substances were not. As well as our regulatory requirements, we take additional samples for operational purposes to identify potential issues with the untreated water, using an analytical method which scans for 450 pesticides.

Substances and parameters	Specific concentration or value (maximum) or state	Sample Point	Min	Mean	Max	% Compliance
Atrazine Deisopropyl	0.1 µg/l	Augrès	<0.004	<0.004	0.005	100
		Handois	<0.004	<0.004	0.006	100
Bentazone	0.1 µg/l	Augrès	<0.007	<0.007	0.009	100
		Handois	<0.007	<0.007	<0.007	100
Clopyralid	0.1 µg/l	Augrès	<0.007	<0.007	0.013	100
		Handois	<0.007	<0.007	0.011	100
Flufenacet	0.1 µg/l	Augrès	<0.002	<0.002	0.004	100
		Handois	<0.002	<0.002	<0.002	100
Fluopicolide	0.1 µg/l	Augrès	<0.003	<0.003	0.007	100
		Handois	<0.003	<0.003	<0.003	100
Metobromuron	0.1 µg/l	Augrès	<0.003	<0.003	0.004	100
		Handois	<0.003	<0.003	0.018	100
Metribuzin	0.1 µg/l	Augrès	<0.003	<0.003	0.005	100
		Handois	<0.003	<0.003	0.005	100
Oxadixyl	0.1 µg/l	Augrès	0.006	0.010	0.018	100
		Handois	0.007	0.015	0.028	100
PCP (Pentachlorophenol)	0.1 µg/l	Augrès	<0.005	<0.005	0.005	100
		Handois	<0.005	<0.005	0.007	100
Pendimethalin	0.1 µg/l	Augrès	<0.007	<0.007	<0.007	100
		Handois	<0.007	<0.007	0.020	100
Prosulfocarb	0.1 µg/ll	Augrès	<0.005	<0.005	0.010	100
		Handois	<0.005	<0.005	0.008	100
Quinmerac	0.1 µg/ll	Augrès	<0.002	<0.002	<0.002	100
		Handois	<0.002	<0.002	0.006	100
Total Pesticides	0.5 µg/l	Augrès	0.007	0.016	0.031	100
		Handois	0.007	0.019	0.048	100

2024 treatment works per- and polyfluoroalkyl substances (PFAS) Analysis– Audit monitoring

We analysed a group of 48 per- and polyfluoroalkyl substances during the year from the treated water that leaves our treatment works to be supplied to your taps. All results are reported as micrograms (µg/l). The following table shows the ones that were above the limit detection. 40 substances were not found at all.

Per- and polyfluoroalkyl substances	Specific concentration or value (maximum) or state*	Sample point	Min	Mean	Max	% Compliance
PFBA (357-22-4) Perfluoro-n-butanoic acid	0.1 µg/l	Augrès	0.002	0.002	0.003	100
		Handois	0.002	0.003	0.004	100
PFBS (375-73-5) Perfluoro-1-butanesulfonate	0.1 µg/l	Augrès	0.003	0.003	0.004	100
		Handois	0.004	0.005	0.006	100
PFHpA (375-85-9) Perfluoro-n-heptanoic acid	0.1 µg/l	Augrès	0.002	0.003	0.004	100
		Handois	0.002	0.004	0.005	100
PFHxA (307-24-4) Perfluoro-n-hexanoic acid	0.1 µg/l	Augrès	<0.001	0.005	0.014	100
		Handois	<0.001	0.007	0.014	100
PFHxS (355-46-4) Perfluoro-1-hexanesulfonate	0.1 µg/l	Augrès	0.002	0.003	0.004	100
		Handois	0.003	0.004	0.005	100
PFOA (335-67-1) Perfluoro-n-octanoic acid	0.1 µg/l	Augrès	0.003	0.005	0.007	100
		Handois	0.005	0.007	0.009	100
PFOS (1763-23-1) Perfluorooctane sulfonic acid	0.1 µg/l	Augrès	<0.001	0.003	0.006	100
		Handois	<0.001	0.004	0.006	100
PFPeA (2706-90-3) Perfluoro-n-pentanoic acid	0.1 µg/l	Augrès	0.002	0.004	0.006	100
		Handois	0.002	0.005	0.007	100
Total PFAS	0.1 µg/l	Augrès	0.011	0.027	0.037	100
		Handois	0.026	0.036	0.051	100

Of the 48 compounds, eight were detected.

*EU Drinking Water Directive standard and Drinking Water Inspectorate (DWI).

2024 Service reservoir performance – Check monitoring

Substances and parameters	Specific concentration or value (maximum) or state	Sample point	Min	Mean	Max	% Compliance	What it means
E.coli	0 MPN per 100ml	Les Platons East	0	0	0	100	Primary indicator of faecal contamination of treated water.
		Les Platons West	0	0	0	100	
		Westmount	0	0	0	100	
Coliform bacteria	0 MPN per 100ml (95% of samples)	Les Platons East	0	2.2	109.1	96	Detection of coliform bacteria may indicate suboptimal operation of the treatment process or ingress of contamination from breaches in the integrity of the distribution system. Whilst we had a small number of failures, for water to be deemed wholesome leaving a service reservoir there has to be a 95% or greater compliance with the coliform bacteria regulatory limit, which we achieved with 100% at Westmount and 96% at Les Platons service reservoirs.
		Les Platons West	0	0	2.0	96	
		Westmount	0	0	0	100	
Colony counts	No abnormal change	Les Platons East	No abnormal change			100	Monitoring water supplies for colony count bacteria can be useful for monitoring trends in water quality or detecting sudden changes in quality.
		Les Platons West				100	
		Westmount				100	
Residual disinfectant	No value mg Cl_2/l	Les Platons East	0.08	0.20	0.30		Sufficient chlorine is added to all supplies to ensure the absence of harmful microorganisms.
		Les Platons West	0.09	0.21	0.48		
		Westmount	0.09	0.18	0.48		

2024 Water quality in the supply zone – Check monitoring

Substances and parameters	Specific concentration or value (maximum) or state	Min	Mean	Max	% Compliance	What it means
E.coli	0 MPN per 100ml	0	0	1	99.6	Primary indicator of faecal contamination
Coliform bacteria	0 MPN per 100ml	0	0	1	99.6	Coliform bacteria can be indicative of the condition of the customer's plumbing. Where issues of this nature arise, we provide the customer with advice
Residual disinfectant	No value mg Cl_2/l	0.02	0.19	0.64		Chlorine is added to our water along with ammonia to form a stable chloramine disinfectant compound, to ensure that there are no harmful bacteria in the water we supply.
Aluminium	200 µg Al/l	<6.1	12.5	24.0	100	Occurs naturally in many water resources. Aluminium compounds are also used at some water treatment works to remove impurities. These compounds are removed in the process.
Ammonium	0.50 mg NH_4/l	<0.02	0.04	0.16	100	May be naturally present in some waters and is not harmful.
Colony counts	No abnormal change	No abnormal change			100	Monitoring water supplies for colony count bacteria can be useful for monitoring trends in water quality or detecting sudden changes in quality.
Colour	20 mg/l Pt/Co	<0.99	<0.99	2.50	100	Water should be clear and bright but natural organic matter or pipework corrosion products may occasionally impart a slight tint.
Conductivity	2500 µS/cm at 20°C	423	510	596	100	A measure of the ability of the water to conduct an electric current and therefore a measure of the mineral salts dissolved in the water.
Clostridium perfringens	0 CFU per 100ml	0	0	0	100	The presence of Clostridium perfringens in filtered water and/or treated water may indicate deficiencies in the filtration process (e.g. filter breakthrough) or in the disinfection process.

2024 Water quality in the supply zone – Check monitoring (continued)

Substances and parameters	Specific concentration or value (maximum) or state	Min	Mean	Max	% Compliance	What it means
Hydrogen ion	10.0 max pH value 6.5 (min)	7.1	7.9	8.3	100	A measure of acidity or alkalinity. Excessively acidic or alkaline water can contribute to corrosion of pipes and fittings.
Iron	200 µg Fe/l	<7.3	9.0	208.3	98.7	Iron may be associated with the corrosion of old iron mains. The standard has been set for aesthetic reasons as levels persistently above the standard can give rise to discoloured water.
Manganese	50 µg Mn/l	<1.7	7.5	51.1	98.7	Occurs naturally in many water sources. The standard is set for aesthetic reasons as black deposits of manganese dioxide can give rise to discoloured water.
Nitrate	50 mg NO_3/l	15.4	30.8	41.2	100	Nitrate arises from the use of fertilisers in agriculture and may be minimised by good farming practices and appropriate controls.
Nitrite	0.5 mg NO_2/l	<0.003	0.005	0.069	100	Nitrite may be associated with nitrate or with the use of ammonia in water disinfection.
Nitrate/Nitrite ratio	1.000	0.308	0.616	0.825	100	The regulations specify that the ratio according to the following formula must not exceed 1, [nitrate]/50 + [nitrite]/3, where the square brackets signify the concentrations in mg/l for nitrate (no3) and nitrite (no2) respectively.
Taste and odour	3 at 25°C dilution number	0	0	1	100	The water is examined for unpleasant taste or odour. These are set for aesthetic reasons.
Turbidity	4 NTU	0.05	0.13	1.24	100	The standard requires that there should be no haziness caused by fine particles.
Cyanide	50 µg CN/l	<4.1	<4.1	<4.1	100	Very low levels may occur naturally, but higher amounts could be associated with industrial pollution. The standards are health related but have a large built-in safety factor.

2024 Water quality in the supply zone – Audit monitoring

Substances and parameters	Specific concentration or value (maximum) or state	Min	Mean	Max	% Compliance	What it means
Antimony	5.0 µg Sb/l	<0.20	<0.20	<0.20	100	Very low levels may occur naturally, but higher amounts could be associated with industrial pollution. The standards are health related but have a large built-in safety factor.
Arsenic	10 µg As/l	<1.0	<1.0	<1.0	100	
Benzene	1.0 µg/l	<0.02	<0.02	<0.02	100	Benzene may be introduced into source water by industrial effluents or atmospheric pollution.
Boron	1.0 mg B/l	0.059	0.074	0.104	100	Although higher than normal the amount found is well within the standards which have a large built-in safety factor.
Cadmium	5.0 µg Cd/l	<0.12	<0.12	<0.12	100	Very low levels may occur naturally, but higher amounts could be associated with industrial pollution. The standards are health related but have a large built-in safety factor.
Chromium	50 µg Cr/l	<0.50	<0.50	<0.50	100	
Chloride	250 mg Cl/l	52	58	66	100	Chloride can occur naturally in source water and is a component of common salt. The standard is not health-related but set to avoid taste and corrosion potential.
Copper	2000 µg Cu/l	<9	<9	22	100	Any significant amount of copper is likely to come from corrosion of customers' pipes or fittings. Excess amounts can cause a metallic taste.
1,2 Dichloroethane	3.0 µg/l	<0.12	<0.12	<0.12	100	The presence of this organic solvent indicates industrial pollution.
Enterococci	0 MPN per 100 ml	0	0	0	100	Used to assess the significance of the presence of coliform bacteria in the absence of *E.coli* or to provide additional information when assessing the extent of possible faecal contamination. They are regarded as secondary indicators of faecal pollution.
Fluoride	1.5 mg F/l	<0.01	0.03	0.07	100	Occurs naturally in many water sources. The standard is set to ensure no adverse effects. Jersey Water does not artificially fluoridate the water supplies.
Gross Alpha	0.1 Bq/l	<0.020	<0.020	<0.020	100	These parameters are measured as part of screening for radioactivity.
Gross Beta	1.0 Bq/l	<0.28	<0.28	<0.28	100	

2024 Water quality in the supply zone – Audit monitoring (continued)

Substances and parameters	Specific concentration or value (maximum) or state	Min	Mean	Max	% Compliance	What it means
Lead	Jersey: 10 µg Pb/l EU: 5 µg Pb/l	<0.9	<0.9	1.1	100	Absent in water entering supply but variable concentrations of lead may be found in water at the customer's tap in older properties built at a time when lead was commonly used in domestic plumbing systems. The standard recognises that the intake of lead should be minimised for health reasons.
Nickel	20 µg Ni/l	<0.9	<0.9	1.2	100	Very low levels may occur naturally, but higher amounts could be associated with tap fittings. The standards are health related but have a large built-in safety factor.
Selenium	10 µg Se/l	<0.8	<0.8	<0.8	100	Low levels of selenium may occur naturally in water after it has passed through various mineral deposits and rock strata. Selenium is an essential element and is required as part of our diet.
Sodium	200 mg Na/l	64.1	64.1	64.1	100	Sodium occurs naturally in water after passing through certain mineral deposits and rock strata or in brackish groundwater. Sodium salts are used extensively in the home and in industrial processes. Domestic water softeners regenerated with brine produce water containing an increased concentration of sodium. Always use unsoftened mains water for drinking, cooking and for preparing babies' feeds.
Sulphate	250 mg SO_4/l	66	81	98	100	Occurs naturally in many source waters after contact with particular mineral deposits and rock strata. The concentrations normally found in drinking water do not represent a risk to health.
Sum of Trichloroethene & Tetrachloroethene	10 µg/l	<0.25	<0.25	<0.25	100	These substances are organic solvents. Their presence is an indication of industrial pollution.
Tetrachlorometh-ane	3 µg/l	<0.11	<0.11	<0.11	100	
Total organic carbon	No abnormal change mg/l	1.5	1.7	2.2	100	This parameter provides a measure of the total amount of organic matter in water.
Total Trihalomethanes (THMs)	100 µg/l	5.94	12.77	18.39	100	THMs are formed by the reaction of chlorine added as a disinfectant with naturally occurring organic compounds in the water.

2024 Raw water sources Per- and polyfluoroalkyl substances (PFAS) Analysis

We analysed a group of 48 per- and polyfluoroalkyl substances during the year from samples taken from the untreated raw water streams, reservoirs and boreholes. All results are reported as µg/l. The following table shows total PFAS values found in these samples.

Substances and parameters	Sample point	Min	Mean	Max
Total PFAS µg/l	St Ouen A1 Borehole (not in use). One sample only.	0.999	0.999	0.999
	St Ouen A3 Borehole (not in use)	0.010	0.013	0.016
	Bellozanne stream	0.028	0.031	0.033
	Dannemarche stream	0.019	0.032	0.044
	Fernlands stream	0.008	0.009	0.011
	Greve de Lecq stream	0.033	0.034	0.035
	Grands Vaux stream	0.024	0.027	0.030
	Handois East stream	0.059	0.061	0.062
	Handois West stream	0.042	0.043	0.045
	La Hague stream	0.032	0.034	0.038
	Le Mourier combined stream	0.042	0.048	0.055
Total PFAS µg/l	Little Tesson stream	0.031	0.034	0.037
	Millbrook stream	0.032	0.034	0.038
	Pont Marquet stream (not in use)	0.149	0.364	0.802
	Queen's Valley stream	0.026	0.030	0.033
	Queen's Valley side stream	0.026	0.028	0.029
	St Catherine stream	0.028	0.047	0.061
	Tesson stream	0.033	0.034	0.034
	Val de la Mare East stream	0.063	0.093	0.106
	Val de la Mare West stream	0.041	0.045	0.047
	Vallée des Vaux stream	0.068	0.080	0.100
Total PFAS µg/l	Grands Vaux Reservoir abstraction point	0.026	0.031	0.039
	Handois Reservoir abstraction point	0.043	0.045	0.048
	La Hague Reservoir abstraction point	0.033	0.038	0.044
	Millbrook Reservoir abstraction point	0.032	0.034	0.035
	Queen's Valley Reservoir abstraction point	0.023	0.025	0.026
	Val de la Mare Reservoir abstraction point	0.038	0.048	0.060

2024 Raw water sources Nitrate Analysis

Substances and parameters	Sample point	Min	Mean	Max
Nitrate as NO3 mg/l	Bellozanne stream	27.4	51.4	60.9
	Dannemarche stream	18.8	34.5	41.5
	Fernlands stream	16.1	29.5	43.3
	Greve de Lecq stream	32.5	56.7	65.3
	Grands Vaux stream	18.2	29.3	37.0
	Handois East stream	25.8	51.4	61.8
	Handois West stream	6.8	22.6	34.5
	La Hague stream	20.5	34.0	40.6
	Le Mourier Combined stream	29.8	55.2	61.1
	Little Tesson stream	11.6	27.3	37.2
	Millbrook stream	13.5	28.7	36.9
	Pont Marquet stream (not in use)	16.9	28.7	41.7
	Queen's Valley stream	30.9	45.9	51.7
	Queen's Valley Side stream	42.6	81.2	110.1
	St Catherine stream	20.8	31.7	41.6
	Tesson stream	23.1	33.5	44.1
	Val de la Mare East stream	19.7	54.1	78.4
	Val de la Mare West stream	37.6	64.4	83.4
	Vallée des Vaux stream	23.6	33.2	40.7
Nitrate as NO3 mg/l	Grands Vaux Reservoir abstraction point	3.6	19.6	32.2
	Handois Reservoir abstraction point	9.6	27.8	40.9
	La Hague Reservoir abstraction point	11.5	31.2	44.7
	Millbrook Reservoir abstraction point	14.3	26.4	37.3
	Queen's Valley Reservoir abstraction point	12.2	26.6	35.1
	Val de la Mare Reservoir abstraction point	24.1	40.3	51.1

Glossary

Audit monitoring	Designed to test the quality of the water supplied against the full requirements of the Water (Jersey) Law 1972 (as amended).
Catchment	An area of land that collects rainfall and contributes to surface water (streams) or to groundwater.
Check monitoring	Designed to ensure that our water treatment works are operating as expected and that the water in distribution is suitable for supply.
Chlorination	Use of chlorine as a means of disinfection.
Coliform bacteria	Can be found in the environment, in soil and on vegetation; while coliforms themselves are not normally causes of serious illness, they are easy to culture, and their presence is used to indicate that other pathogenic organisms of fecal origin may be present.
Disinfectant residual	The amount of free and/or available disinfectant remaining after a given contact time under specified conditions.
Disinfection	The process designed to kill most microorganisms in water, including all pathogenic (disease-causing) bacteria. There are several ways to disinfect, with chlorine being most frequently used in water treatment.
Dispensation	An exemption from usual rules, granted to allow for specific circumstances.
Distribution system	A network of pipes leading from a treatment plant to customers' plumbing systems.
Drinking water	Water intended primarily for human consumption (excluding bottled water).
Drinking water quality monitoring	The wide-ranging assessment of the quality of water in the distribution system and as supplied to the consumer, which includes the regular sampling and testing performed for assessing conformance with guideline values and compliance with regulatory requirements and agreed levels of service.
DWI	Drinking Water Inspectorate - The drinking water regulator for England and Wales which we use for guidance for our water quality.
Exposure	Contact of a chemical, physical or biological agent with the outer boundary of an organism (eg through inhalation, ingestion or dermal contact).
Filtration	Process in which particulate matter in water is removed by passage through porous media such as sand and antracite.
Groundwater	Water contained in rocks or subsoil.
Indicator	A specific contaminant, group of contaminants or constituent that signals the presence of something else (e.g. Escherichia coli indicate the presence of pathogenic bacteria).
Microorganism	Organism too small to be visible to the naked eye. Bacteria, viruses, protozoa, and some fungi and algae are microorganisms.
Nephelometric turbidity unit (NTU):	A measure of turbidity.
Nitrate	A naturally occurring compound formed from nitrogen and oxygen atoms. It occurs naturally in all surface water and ground water although higher concentrations tend to occur only where fertilisers are used on the land.
Oxadixyl	A type of fungicide (pesticide) historically used to treat some food crops.
Pesticide	Also known as 'plant protection products' (PPP) are used to control pests, weeds and diseases. Examples include insecticides, fungicides, herbicides, molluscicides, and plant growth regulators.
pH	An expression of the intensity of the basic or acid condition of a liquid. Natural waters usually have a pH between 6.5 and 8.5.
Raw water	Water in its natural state, prior to any treatment; or the water entering the first treatment process of a water treatment plant.
Reservoir	Any natural or artificial holding area used to store, regulate or control water.
Risk	The likelihood of a hazard causing harm in exposed populations in a specified time frame, including the magnitude of that harm.
Service reservoir/tank	A storage for drinking water, generally within the distribution system, used to meet fluctuating demands, accommodate emergency requirements and/or equalise operating pressures.
Source water	Water in its natural state, before any treatment to make it suitable for drinking.
Storage reservoir	A natural or artificial impoundment used to hold water before its treatment and/or distribution.
Surface water	All water naturally open to the atmosphere (e.g. rivers, streams, lakes and reservoirs).
Turbidity	The cloudiness of water caused by the presence of fine suspended matter such as clay, silt, plankton and other microscopic organisms.
Water quality	Refers to the chemical, physical and biological characteristics of the water, by reference to the standards set out in relevant Regulations
Wholesome	Wholesome water is safe for human consumption, free from harmful microorganisms and chemicals, would not constitute a potential danger to human health and meets specific quality standards as set out in Water (Jersey) Law 1972 (as amended).

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Customers watering their plants