



City of Richmond

Report to Committee

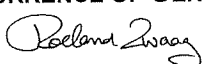
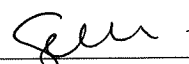
To: Public Works and Transportation Committee
From: Suzanne Bycraft
Director, Public Works Operations
Date: March 18, 2025
File: 10-6175-03-03/2025-
Vol 01
Re: Richmond Water Quality and Conservation Report 2024

Staff Recommendations

1. That the annual report titled “Richmond Water Quality and Conservation Report 2024”, dated March 18, 2025, from the Director, Public Works Operations, be:
 - a. endorsed as the City’s report to the public on water quality in Richmond; and
 - b. provided to the Drinking Water Officer and Medical Health Officer as the City’s plan for reporting water quality results; and
2. That the “Richmond Water Quality and Conservation Report 2024” be made available to the community on the City’s website and through various communication tools including social media channels.

Suzanne Bycraft
Director, Public Works Operations
(604-233-3338)

Att. 1

REPORT CONCURRENCE		
ROUTED TO: Engineering	CONCURRENCE ☒	CONCURRENCE OF GENERAL MANAGER 
SENIOR STAFF REPORT REVIEW	INITIALS: 	APPROVED BY CAO 

Staff Report

Origin

In 2001, the Province of British Columbia enacted the Drinking Water Protection Act, which gave authority to the Minister of Health to implement and enforce standards for water supply systems in British Columbia. In May 2003, regulations to be implemented under the Act were adopted by the legislature as the Drinking Water Protection Regulation. These Acts were updated on April 29, 2014, under Bill 18 – 2014: the Water Sustainability Act. These regulations are designed to ensure the safe supply of drinking water.

This report presents the City's "Richmond Water Quality and Conservation Report 2024" (the Report), which enables the City to meet its obligations for public reporting to comply with applicable requirements in accordance with these regulations. The City ensured the safe and adequate supply of essential water services throughout 2024. The Report also provides information on the City's water system and water conservation efforts. The Report is presented as Attachment 1.

This report supports Council's Strategic Plan 2022-2026 Focus Area #2 Strategic and Sustainable Community Growth:

2.3 Ensure that both built and natural infrastructure supports sustainable development throughout the city.

This report supports Council's Strategic Plan 2022-2026 Focus Area #3 A Safe and Prepared Community:

3.3 Ensure the community is collectively prepared for emergencies and potential disasters.

3.4 Ensure civic infrastructure, assets and resources are effectively maintained and continue to meet the needs of the community as it grows.

This report supports Council's Strategic Plan 2022-2026 Focus Area #5 A Leader in Environmental Sustainability:

5.3 Encourage waste reduction and sustainable choices in the City and community.

This report supports Council's Strategic Plan 2022-2026 Focus Area #6 A Vibrant, Resilient and Active Community:

6.1 Advance a variety of program, services, and community amenities to support diverse needs and interests and activate the community.

Analysis

The Drinking Water Protection Regulation requires water purveyors in BC to possess an operating permit, which confirms the Drinking Water Officer for the area has approved the water supply. Vancouver Coastal Health is responsible for the placement and function of the Drinking

Water Officer, who has the authority to monitor water purveyors to ensure they are providing safe drinking water through compliance with the British Columbia Drinking Water Protection Regulation, and any other conditions of the operating permit.

Under the Regulation, the City of Richmond is required to:

- Develop and maintain a process to notify the Drinking Water Officer and the Medical Health Officer of situations or conditions that could render unsafe drinking water;
- Implement and maintain a plan for collecting, shipping and analyzing water samples that adequately represent all areas within the City, in compliance with the direction set by the Drinking Water Officer; and
- Implement and maintain a plan for reporting results to the Drinking Water Officer and to water users.

Richmond thrives on its ability to provide water to residents and businesses, and water for fire protection services. All water supplied is from Metro Vancouver, to ensure a consistent supply, the Capital Construction Watermain Replacement program and the Pressure Management program are in place as proactive approaches to reduce the risk of watermain breaks. These approaches have been proven to be reliable and valuable tools in water distribution management. The Capital Construction program replaces aging infrastructure that is susceptible to breaks and the Pressure Management program lowers the strain on existing infrastructure to make it less likely to develop leaks and breaks. The City's Leak Detection Program is another proactive approach that helps quickly identify leaks and reduce the number of breaks and water loss. By scanning the City's system, crews can detect non-visible leaks before they surface. In 2024, through our Leak Detection Program, City crews repaired 54 leaks. These leaks were quickly repaired, tested, and put back into service without compromising the integrity of the water distribution system. These three proactive programs are essential for minimizing costs with water losses and ensuring minimal disruptions to water quality and supply.

Water conservation is an important aspect of Richmond's Water Services operations. Climate change, extreme heat events and increasingly dry summers in recent years have emphasized a critical need for city-wide water conservation efforts. The City, through its Water Use Restriction Bylaw No. 7784, collaborates with Metro Vancouver to align water restrictions and various programs to promote the conservation of water and to minimize the wastage of potable water. Richmond's various water conservation programs are outlined in the Report.

Highlights of the Report include:

- Through 636 kilometres of total watermain, the City, delivered 34.2M cubic metres of water to 239,389 residents, businesses and other institutions.
- The water met all drinking water quality guidelines and Richmond residents and visitors enjoyed high quality, safe and reliable drinking water.
- 2,046 water samples were collected to ensure water quality and each passed with exceptional results.
- Compared to the year that Richmond's water metering program started in 2003, the City's total water usage in 2024 decreased by 14%, from 39.7M cubic in 2003 to 34.2M cubic

metres in 2024, despite a population increase of 34% from 178,319 to 239,389 residents over the same period.

- Richmond's 39 outdoor water fountains found in parks and other public areas provided potable water to the public while promoting tap water consumption as an alternative to bottled water.
- City staff completed three watermain replacement projects, replacing a total of five kilometres; and installed 29 multi-family meters.
- Water Conservation campaign will be launched in 2025.

In addition to these highlights, the City is continuously evaluating and improving proactive maintenance and detection programs to ensure safe and uninterrupted water service to the community.

These and many other initiatives are detailed in the Report.

Proposed Communication

Subject to Council's approval, the Report will be posted on the City's website and made available through various communication tools including social media channels and as part of community outreach activities.

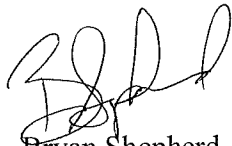
Financial Impact

None.

Conclusion

The Report outlines the methods in which the City manages its water system to ensure compliance with applicable provincial requirements under the Drinking Water Protection Act. In 2024, the City's water quality met and exceeded the required standards to ensure residents enjoyed high quality, reliable and safe drinking water.

This report will be reviewed and endorsed by the Medical Health Officer of Vancouver Coastal Health Authority as part of the City's reporting obligations.



Bryan Shepherd
Manager, Water Services
(604-233-3334)

BS:ns

Att. 1: Richmond Water Quality and Conservation Report 2024

Richmond **Water Quality and Conservation Report 2024**



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1.0 Year in Review

1.1 Delivering Richmond's "water of choice"

The City Richmond is dedicated to making tap water the "water of choice" in our community.

Our rigorous commitments to deliver safe, high quality drinking water ensure Richmond remains one of the healthiest cities in Canada. Municipal drinking water is also the best choice for the environment, relying on a sustainably managed, natural supply source and reducing the use of plastic water bottles.

Our commitment to water quality is bolstered by a comprehensive testing program. The City collects water samples on a weekly basis at 40 dedicated sampling sites strategically located throughout the community. Water samples are taken to Metro Vancouver laboratories for analysis. Sample results are reviewed to ensure the drinking water meets the standards and parameters outlined in the British Columbia Drinking Water Protection Regulations. In addition to testing water to look for contaminants, water is monitored for taste, odour, temperature and appearance to ensure our water meets aesthetic standards, as well as public health requirements. In 2024, 2,046 water samples were collected and analyzed.

All samples met or exceeded public health standards.

The maintenance of a reliable distribution system is also critical to ensuring water quality. The City is constantly replacing and upgrading its water distribution infrastructure, which includes 636 kilometres of water mains. This includes replacing older water mains with new, more dependable material, which supports reliability of service and reduces chances of leaks or breaks in the system, that can lead to water contamination. In 2024, we completed installation of just over 5 kilometres of new PVC watermain in a number of areas across the city, including the Burkeville and Seaford neighbourhoods, and segments of No. 2 and No. 7 Roads. Other key infrastructure improvements in 2024 included the installation of 16 new compression fire hydrants, increasing the reliability of water supply for the fire safety components of our network.

Quick detection and response to watermain leaks and breaks is also important to keep our drinking water safe and clean.

Tap water provides the best value for our residents and businesses, costing just pennies per litre.



In 2024, 2,046 water samples were collected and analyzed.

The City strives to ensure our water distribution system and highly efficient and provides good value to taxpayers.

Whenever there is a watermain break, the system can experience a loss of pressure within the watermain, which can lead to contamination by allowing groundwater into the system. The Leak Detection and Pressure Management programs help reduce watermain breaks and minimize weak spots in the distribution system where ground water can get into the pipes. As part of this program, staff used acoustic equipment to inspect 475 kilometres of watermain, an increase of 47% from 2023. Crews identified and repaired 54 leaks in 2024.

To further support water quality, 24-hour patrols respond quickly to service requests such as watermain breaks and other service disruptions. Quick response time limits service disruptions and crews take steps to ensure that the water remains safe to drink. This also minimizes any water loss or damages from leaks and breaks. In 2024, patrol staff responded to more than 1,100 service requests.

A key component of making tap water the water of choice is affordability. The City strives to ensure our water distribution system is highly efficient and provides good value to taxpayers.

The cost of municipal water remains one of the best values around. Richmond tap water costs just \$1.66 per cubic metre, which is equivalent to 1,000 litres. By comparison, in a recent price check, a package of 40 500-millilitre bottles of water at a major local retailer cost \$4.79. The same volume water from a Richmond tap costs just three cents (\$0.03).

The affordability of water is also supported by the expertise of our own staff, who complete many of our new construction and maintenance programs. City crews have a comprehensive understanding of Richmond's water system, the expertise to complete the projects and the ability to deliver projects at a competitive price, which reduces the use of external contractors and provides added value to taxpayers. The City is also committed to using innovation to maintain water quality, increase efficiency and provide further enhanced value to our water

system users. In 2024, this included an upgrade to our water flushing infrastructure and enhanced wireless monitoring technology for both water flushing and water meter tracking.

The City has also empowered residents to control their water costs through our water metering program. With water meters, customers only pay for the water they use and they can reduce their overall costs for water by taking simple steps to

reduce their use. All single-family homes, as well as commercial, industrial and institutional users in Richmond, are now on water meters. More than half of our multi-family residential complexes are also on water meters and the remainder will be transitioned to water meters over the next 15 years. Last year, a new water conservation campaign was developed that will further support users in helping to conserve water supply and reduce their own costs. This program will be launched to the public in 2025.

As we move into 2025, the City will continue its focus on providing safe and reliable tap water to the community, while continuing to provide outstanding value to taxpayers.



Water is an important part of our daily lives, wherever we are.

That's why the City is committed to ensuring residents and visitors have access to tap water throughout Richmond. We have **39 permanent drinking water fountains** across the community, which operate seasonally during warmer months. In 2023, the City began a multi-year program to upgrade our water fountains to improve customer service and experience. These improvements include installing new fountains with bottle fillers and ground-level drinking bowls for pets. In 2024, we completed the upgrade of four additional permanent water fountains.

The City also continues to develop our growing inventory of portable water fountains. These fountains are used at community events and other locations to provide the public with safe, free drinking water and reduce the use of plastic water bottles. In 2024, the public used our larger mobile water fountains to consume about 27 cubic metres of water, equivalent to 54,000 500-millilitre plastic water bottles.

2024 Top Accomplishments

This report showcases some key Water Services achievements in the past year, along with our ongoing commitment to excellence and innovation in service delivery.

1

Safe delivery of water

Delivered 34.2 million cubic metres of water and tested 2,046 water samples that all met the drinking water quality guidelines.

2

Watermain replacement

Replaced five kilometres of asbestos cement watermain with new PVC pipes.

3

Leak detection and repair

Used acoustic equipment to inspect 475 kilometres of watermain and repaired 54 leaks.

4

Expanded water metering

Installed 29 multi-family meters as part of a universal water metering program, which supports water conservation.

5

Promoted water conservation

Provided 299 rebates to residents who purchased low-flow toilets. Residents also purchased 191 rain barrels to support water conservation.

6

Upgraded flushing infrastructure

Upgraded four existing flushing stations to keep watermain clean and silt-free, and enhanced flushing automation.

7

Enhanced monitoring technology

Replaced 526 Neptune V3 Water Meter Registers for better monitoring capacity.

8

Upgraded fire hydrants

Replaced an additional 16 slide-gate hydrants with compression hydrants to reduce property damage due to motor vehicle accidents.

9

Efficient service response

Crews responded to 1,112 service requests in 2024, including leaks and watermain breaks, with round-the-clock response.

10

Upgraded water fountains

Completed upgrades of four permanent drinking fountains to include dog bowls and backflow preventers.

1.2 Year in Review Highlight

Power washing our PIPES

When Richmond residents turn on their taps, they're getting clean, fresh, world class water thanks in large part to the efforts of city workers who power wash the pipes using a practice called unidirectional flushing.

WHAT IS UNIDIRECTIONAL FLUSHING?

- Unidirectional flushing is a best practice used by local governments as part of regular maintenance to "power wash" pipes by forcing water in a single direction through a specific route by closing or opening valves in a strategic way.
- Forcing the water in a single direction increases the velocity of the water flow and ensures that the insides of the pipes are being scoured while the water is safely flushed out of the watermain network.
- The water is then drained through hydrants at the end of the flushing sequence to remove the debris from the system.
- Cleaning pipes is important because it prevents bacterial growth and removes sediment – the tiny solids that occur naturally in water and gradually build up on the bottom of the watermain.
- Staff control the flow of water during flushing. When practical, the water that is flushed is captured to be reused for irrigation.

THE SHORT
EXPLANATION FOR
UNIDIRECTIONAL
FLUSHING:

A LOT OF
WATER AND A
LOT OF PRESSURE
EQUALS CLEAN
PIPES AND
SAFE DRINKING
WATER.



But it's even more complex than that, says Todd Smithers, a supervisor in Richmond's Water Services Hydrant and Valves Division, who explains that scheduling and conducting the work must take into account safety for workers, road users and residents as well as potential disruption for homes and businesses while addressing the overarching issue: water quality.

And it's no small job, since Richmond has more than 600 km of watermains that deliver more than 30 million cubic metres of water to customers each year.

The work is done once a year at night to minimize disruption, explains Smithers, a City employee since 1997, with crews working 10-hour shifts.

The target is for each crew member to cover two kilometres per shift, and they typically leapfrog one another, moving from hydrant to hydrant along the specified route as clean water at pressures up to 80 pounds per square inch (PSI) pushes out contaminants such as biofilm and organic matter. They flush the water across roads and into ditches, and diffusers are used to mitigate the pressure while temporary berms can be used to protect properties.

It takes between five and eight weeks to complete, and throughout this process, water at each hydrant is tested for cleanliness and turbidity (that refers to suspended particles in the water, which result in cloudy water) before and after each flush to ensure the

end users – residents, businesses, institutions – get the safest possible water.

"We always have a good source of high-quality water from Metro Vancouver, and we're constantly flushing the pipes to help maintain that water quality for our residents so they don't have to worry about it," says Derek Gardner, another veteran of Richmond's water staff. "Our whole department, we take pride in that."

He also notes the steps taken to protect workers and the public while the work is underway, from lights to traffic control. "It's safety first all the time."

Hydrant mechanic Dylan McQuistin, who has been with the City for eight years, says many water customers don't understand what crews are doing late at night. "Some people think we're wasting water but the reality is, we're cleaning out the entire pipe. It ends up in a huge water quality improvement in the long run."

It makes financial sense, too, says Smithers. If sediment is allowed to build up in pipes, it would decrease capacity, resulting in the need to upsize the pipes more often, and could also cause the pipes to deteriorate more quickly.

"Without flushing, our mains wouldn't last as long," he says. "So, not only is it ensuring the mains last longer, by doing this maintenance, the water quality is extremely high. And it keeps all of that debris from showing up in tap water."

"It's money well spent. The numbers don't lie. We know how good our system is with all the testing we do."

And it's a group effort, says Carly Smith, a 19-year Richmond employee. "It takes a lot of leadership and just being a team. Our crews thrive on working together, and it makes everything go smoother. It helps us cover more ground."

Deborah Prystay, Richmond Water Services Project Manager, echoes Smith's comments and applauds the work of water crews.

"They're a very dedicated crew, and they are passionate about what we do in Water Services," she says.

"By working through the night, they not only ensure we have high-quality drinking water, they also help to minimize impacts on our residents."

Adds Prystay: "They understand the importance of the program and the water we deliver to Richmond residents."

The end result of late nights, teams working together and the power of water at high velocity is a network of clean pipes that deliver safe, reliable and high-quality drinking water to Richmond residents.

Annual watermain flushing enhances drinking water quality.

1.3 Setting Goals and Objectives

The goals for Water Services are to provide clean and high-quality tap water to Richmond residents; ensure adequate supply of water to meet demand; apply innovative technology, equipment and operational practices as part of continuous improvement to secure water quality and support water conservation; provide 24/7 emergency response support to residents experiencing water service leaks or disruptions; and improve water conservation in the community through outreach, education and programs.

The objectives listed opposite support achieving our goals.



1. Water quality

Continue to maintain a high level of quality water with no positive results of contamination within the water system.



2. Water Conservation Education

Launch a water conservation awareness and education campaign.



3. Deliver Community Outreach

Conduct elementary school education through Project WET and community outreach at the Public Works Open House, and develop activities and materials for enhanced outreach in the community.



4. Expand water metering

Install 60 multi-family meters of various sizes.



5. Continue fire hydrant upgrades

Replace 40 slide-gate hydrants with compression hydrants to reduce property damage due to motor vehicle accidents.



6. Watermain replacement

Upgrade five kilometres of City watermain with new PVC pipes to replace outdated asbestos cement pipes.



7. Enhance water meter monitoring

Replace an additional 750 Neptune V3 Water Meter Registers to better monitor and read through the City's fixed base towers.



8. Enhance emergency response

Upgrade lay-flat watermain hose system to provide water to properties in emergencies or during watermain shut-offs. Maintain emergency mobile trailer, which can provide temporary water supply when regular service is disrupted.



9. Improve service through innovation

Transition the Work Control Water tasks to a fully digital workflow, aiming to reduce paper usage and streamline operations.

1.4 Tracking Our Progress

As part of tracking its progress, the City collects data across a broad spectrum of programs, services and activities. This data shows how Richmond meets its mandates for reliable delivery of safe drinking water and water conservation.

The mix of data reported reflects the effectiveness of Water Services' many programs and its commitment to excellence and innovation.

WATER QUALITY TESTING

Every week, Water Services collects water samples for analysis from multiple locations across Richmond. In 2024, there were no key contaminants found in the water supply.

100%

All tested samples were free of key contaminants

2,046 water samples tested

40

testing locations

WATER SUPPLY AND USAGE

Since the water metering program started in 2003, water use has declined by 14%. This is despite the fact that the City's population has grown by 34% (61,141 people) since 2003 for a total of 239,389 residents in 2024. Our individual and collective efforts have made a huge difference.

2024 TOTAL WATER USE
34.2 million cubic metres*

2024 WATER USE PER PERSON
142.9 cubic metres*

REDUCTION IN ANNUAL WATER USE per person SINCE 2003
80 cubic metres*

*One cubic metre = 1,000 litres

14% water use reduction

in annual volume use in 2024 compared to 2003

36% water use reduction

per capita use in 2024 compared to 2003

5.5 million cubic metres*

Reduction in total annual water use in 2024 compared to 2003 (by volume)

6x

That's enough water to fill BC PLACE STADIUM six times.

WATER METERS

Richmond's reductions in water use have been largely driven by the City's move toward universal water metering. All single-family homes and businesses are now on water meters. More than half of multi-family homes are now on meters as well.

100%
Single-family homes + businesses have water meters

60%
Multi-family properties have water meters

29
Multi-family water meters installed by City crews in 2024

83%
of water use in Richmond is metered

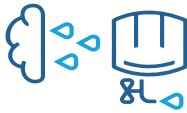
PWT - 30

Type	Total Complexes	Metered Complexes	Percentage of Complexes Metered
2023 Totals	1,027	574	56%
2024 Totals	1,077	646	60%



WATER CONSERVATION PROGRAMS

In addition to water metering, the City has a number of ongoing programs to promote water conservation, from leak detection and repairs to rain barrel sales and a rebate program for the purchase of low-flow toilets.



191 Rain barrels sold



299 Rebates for low-flow toilet purchases



54 Water leaks detected and repaired

Lawn sprinkling causes a significant increase in water use during the high-demand months from May to October. Regional sprinkling limits are introduced annually to encourage people to use less water and water less often. However, despite those limits, summer consumption levels continue to place a strain on the water supply.

AVERAGE MONTHLY USE
2024 LOW-DEMAND MONTHS

2,496,184 cubic metres

AVERAGE MONTHLY USE
2024 HIGH-DEMAND MONTHS

3,203,717 cubic metres

Due to the water usage in the summer of 2024, Stage 1 water restrictions were in place from May 1 to mid-October.



168 days of Stage 1 watering restrictions



PWT - 31

WATER DISTRIBUTION NETWORK

The City has a comprehensive network of watermain, service connections, hydrants and other infrastructure to ensure reliable water delivery to its users. Through a series of pressure reducing valves, the City's network connects to Metro Vancouver's system, which delivers water across the region from its mountain reservoirs.

INFRASTRUCTURE



636

Total kilometres of City watermain



13

Pressure reducing valves



5,175

Fire hydrants

CONSTRUCTION AND MAINTENANCE

Annual maintenance and construction programs help to ensure Richmond's community has access to a reliable, high-quality water supply.

NEW CONSTRUCTION

90

New service connection installations

5

Capital construction projects completed

5 KM

of new watermain constructed



MAINTENANCE



167

Service connection repairs



23

Watermain breaks repaired



526

Water meter heads replaced



1,112

Service requests received by patrollers

COMMUNITY SERVICE

As an added benefit to serve residents and visitors, Water Services provides both permanent and portable water fountains around the community and at events as well as misting stations during extreme heat periods.

27,100
Litres of water
dispensed
from mobile
fountains

39
Permanent
water
fountains

4
Mobile
water
fountains

252
Days mobile
water fountains
in service

To support work experience opportunities for local youth and provide increased capacity to perform seasonal work, the City hires extra staff for the summer. Some tasks performed by summer students included important fire hydrant maintenance.

915
Fire hydrants
re-painted by
summer students
to improve
visibility

2,555
Sites with improved
access to fire hydrants
thanks to work done
to clear vegetation
overgrowth around
hydrants.

WATER COST COMPARISON

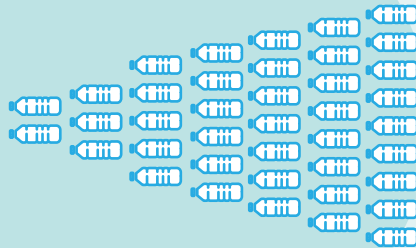
The cost of municipal water remains one of the best values around.

\$1.66
AVERAGE
METERED RATE
for one cubic metre
*1,000 litres of water

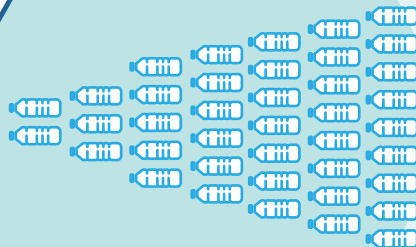
\$4.79
COST FOR ONE PACK OF
40 X 500 ml
bottles of water at
a local retailer

In the City of Richmond, the equivalent of 40 bottles of store-bought water (500 ml) costs just \$0.03 (three cents) when it comes from your tap. The same amount of water at a major local retailer cost \$4.79 in a recent price check.

Bottled water costs about 160 times more than the same amount from the tap.

CITY OF RICHMOND WATER**VS****LOCAL STORE BOUGHT WATER**

Cost of equivalent amount of water
(40 x 500 ml) from your tap



Cost for one pack of 40 x 500 ml bottles
of water at local retailer

2.0 Safe and Reliable Water Delivery



PWT – 33

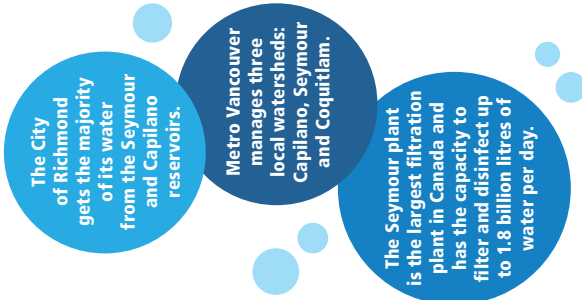
2.1 Where Our Water Comes From

The City of Richmond's drinking water is supplied by Metro Vancouver via four large transmission mains. The water then enters the City's water distribution system through various connections and is delivered to residences and businesses through our system via service connections at each property.

The region's water supply originates from three local watersheds: Capilano, Seymour and Coquitlam. The watersheds contain large collection lakes called reservoirs, which collect and store rainfall and snowmelt from the mountains. Water from the reservoirs is treated at two water treatment facilities: the Seymour Capilano Filtration Plant, which treats water from the Seymour and Capilano reservoirs, and supplies two thirds of the region's drinking water, and the Coquitlam Water Treatment Plant, which treats water from the Coquitlam reservoir and supplies the remaining third of the region's drinking water. The City of Richmond gets the majority of its water from the Seymour and Capilano reservoirs.

The Seymour plant is the largest filtration plant in Canada and has the capacity to filter and disinfect up to 1.8 billion litres of water per day. It is located in the Seymour watershed so water has to be transmitted from the Capilano reservoir to the Seymour plant and back by two underground water mains called "Twin Tunnels," which are over seven kilometres long and 3.8 metres in diameter. Water at this facility undergoes filtration and ultraviolet (UV) disinfection.

The Coquitlam plant is located north of the City of Coquitlam and treats 380 million litres of water per day. Water at this facility undergoes ozone and UV disinfection. The treatment methods at each plant are designed to address the specific characteristics of the source water.



Metro Vancouver Watershed and Water Transmission Map

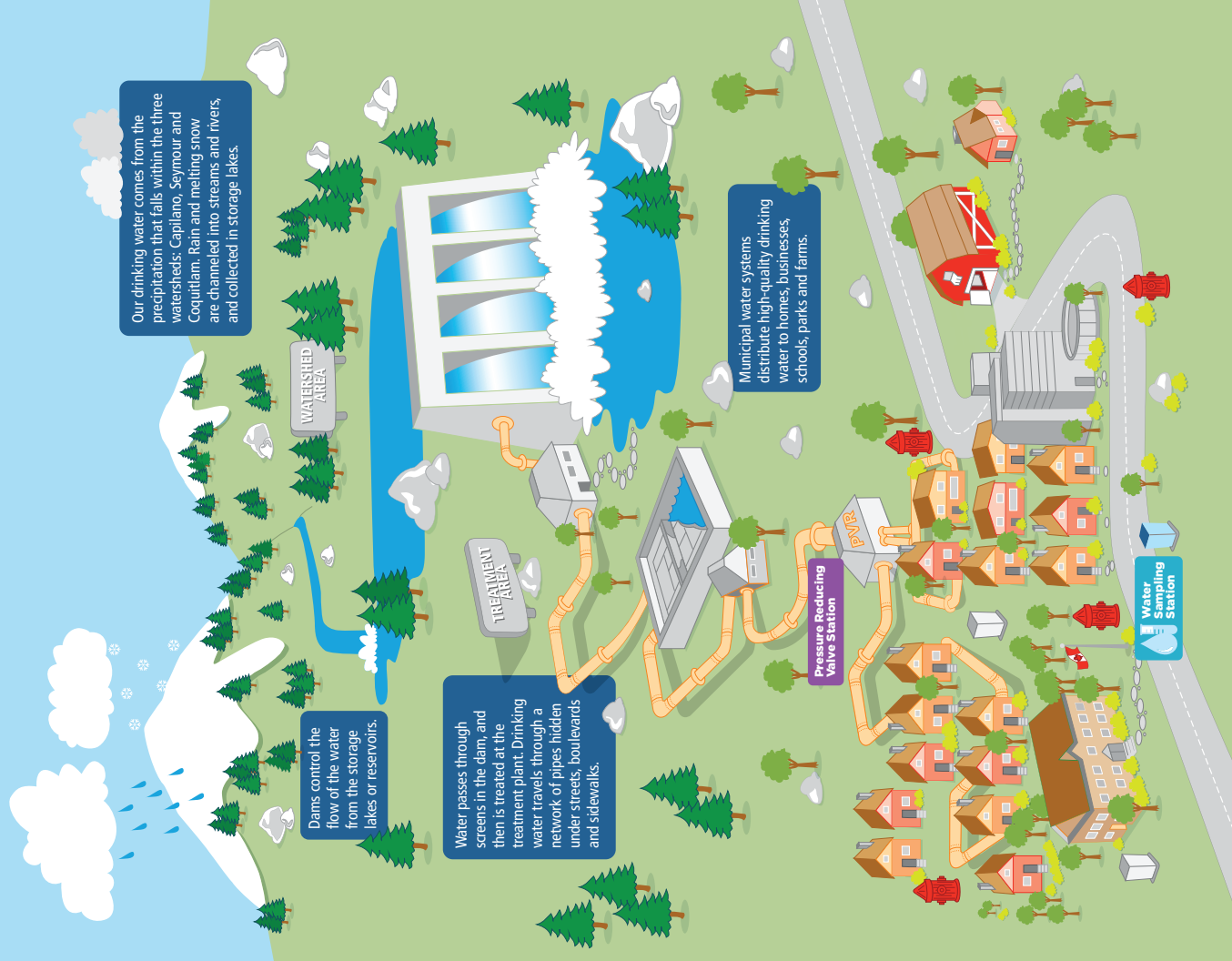
Did you know?

THERE ARE THREE WATERSHEDS that have the capacity to provide over two billion litres of drinking water in one day!

PRESSURE REDUCING VALVE STATIONS are located throughout Richmond to decrease the pressure of water as it enters Richmond's distribution system from Metro Vancouver's.

WATER SAMPLING STATIONS are located throughout Richmond, where the water is regularly tested and monitored. The City takes pride in providing residents with safe, high-quality tap water.

GRAVITY AND PUMP STATIONS in Metro Vancouver's water transmission deliver water to Richmond and keep pressure up in the system.



2.2 Our Water System

The City of Richmond owns, operates and maintains a complex water distribution system, which delivers water to its residents, businesses and other customers.

Once Metro Vancouver treats the water, it is carried into Richmond via four large transmission mains: Angus Drive main, Lulu Island-Delta main, Tilbury main and Annacis main No. 4. Richmond then draws water through 13 connection points along Metro Vancouver's mains. Each connection has a pressure reducing valve station that reduces the pressure from the transmission mains to match the pressure set in the City's system. The pressure reducing valve stations are monitored from the Works Yard through a supervisory control and data acquisition (SCADA) system.

PWT 35

Downstream of the pressure reducing valve stations is the rest of the City's water distribution system, consisting of more than 630 kilometres of distribution mains.

The water mains are all interconnected in different ways to supply high-quality water to our residents and businesses. Individual service connections feed water from the main network to homes and businesses. All businesses and single-family homes, as well as many multi-family complexes, have been provided with water meters, which record consumption. A network of fire hydrants, valves, service connections and other infrastructure further supports delivery of water where and when it is needed. An overview of our water system is shown on *Figure 1* on page 28.

**34.2 CUBIC
METRES
million OF**



water

IS DELIVERED TO

239,389

**residents
in Richmond.**



Richmond's water supply originates from one of three regional reservoirs.

Richmond's Water System

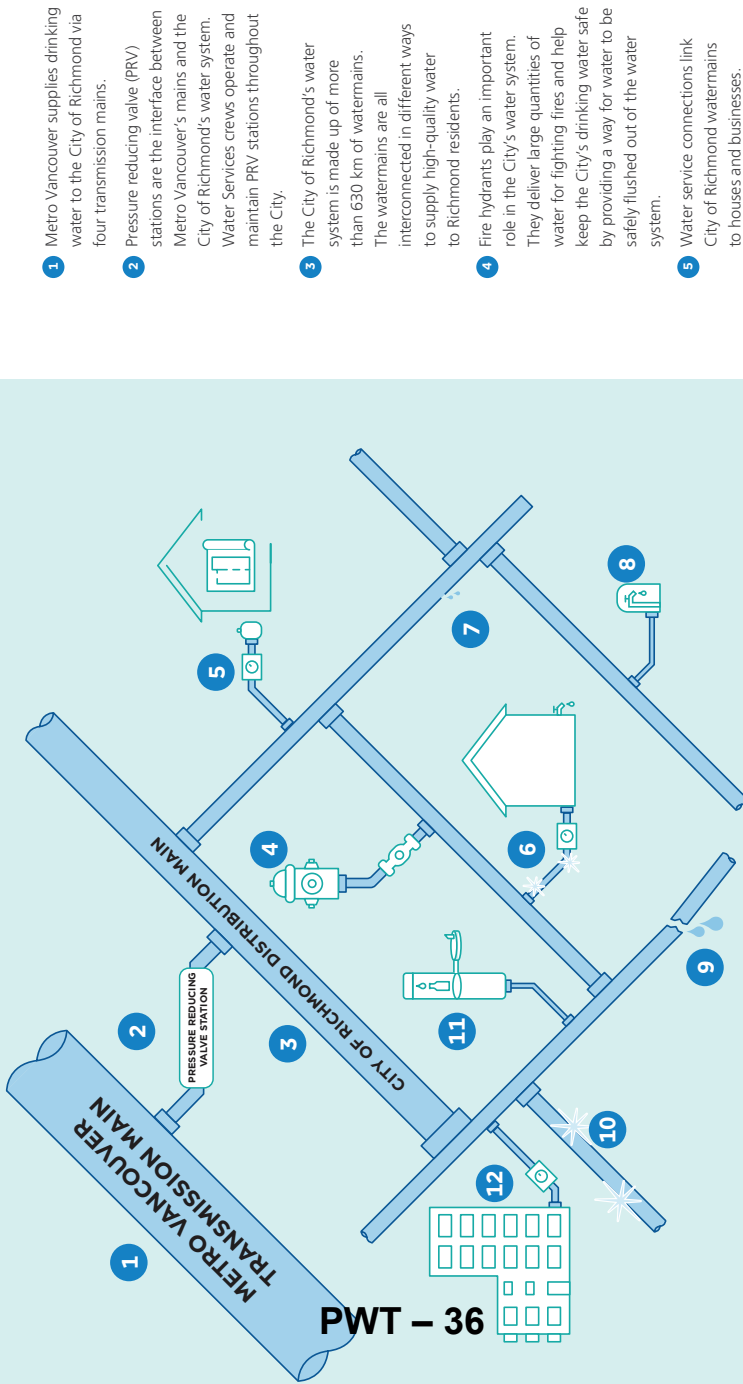


Figure 1

2.3 Mobile Emergency Response Unit

Water Services staff are trained to operate the City's mobile emergency water treatment trailer for use during a major emergency where the City's water is contaminated or unavailable. The emergency mobile unit is flexible and can be used to respond to both large-scale emergencies and smaller, neighbourhood-contained incidents.

The City has a mobile emergency response unit to provide a supply of safe, drinkable water in the event of a disruption to regular service.

All components of the emergency mobile unit that come in contact with the treated water are compliant with the Guidelines for Canadian Drinking Water Quality. The water is pumped into the system and through cartridges to reduce turbidity and through activated carbon to improve taste and odour. Next, it goes through UV units to disinfect the water. Lastly, sodium hypochlorite is added to provide a second source of disinfection and to act as free chlorine, which provides residual disinfection in the water.

The trailer was designed with the consideration of factors such as extreme weather events, sudden loss of clean water from Metro Vancouver and seismic events. It is regularly maintained and tested by Water Services staff to ensure that the City is ready to deliver clean, safe water for Richmond residents during an emergency.

*The treatment trailer is capable of filtering approximately **60 litres of water per minute** and can draw water straight from the Fraser River.*



This mobile trailer ensures safe drinking water can be supplied wherever needed.

3.0 Ensuring Our Water Quality and Safety



3.1 Water Quality Standards

In 2002, the City of Richmond implemented a Drinking Water Quality Monitoring Program to comply with provincial and federal legislation: the British Columbia Drinking Water Protection Act, the British Columbia Drinking Water Protection Regulations, the Water Quality Monitoring and Reporting Plan for Metro Vancouver, and the Guidelines for Canadian Drinking Water Quality.

Under these regulations, the City of Richmond is required to:

Develop a process to notify the Vancouver Coastal Health (VCH) Drinking Water Officer and the VCH Medical Health Officer of any condition that could render unsafe drinking water.

Implement a sampling program that adequately represents all areas within the City.

Ensure test results are immediately available to the VCH Medical Health Officer.

Receive an annual construction permit for the construction, installation and extension of the water distribution system.

Produce an annual report detailing the results of the City's water quality monitoring program for review by VCH.

The conditions set out in the Drinking Water Protection Act require all water systems in B.C. to be classified as a Level I through IV facility through the Environmental Operators Certification Program (EOCP). Richmond's system is classified as a Level III facility so all staff that work on the system are responsible for possessing a valid Level I to Level III EOCP certificate.

To obtain and maintain their level of certification, staff have to successfully complete the required training and hands-on experience. This ensures staff are able to respond appropriately and immediately to problems prior to them becoming a risk to health or property.



3.2 Ensuring Water Quality

FLUSHING PROGRAM

Water Services conducts a unidirectional flushing program every year. Unidirectional flushing involves forcing water in a single direction through a specific route through the pipes by closing or opening valves in a strategic way. Forcing the water in a single direction increases the velocity of the water flow and ensures that the inside of the pipes is being scoured and cleaned while the water is safely flushed out of the watermain network. The water is then drained through hydrants at the end of the flushing sequence to remove the debris from the system. Cleaning the inside of the pipes is important because it prevents bacterial growth and removes sediment. Staff take measures to control the flow of water during flushing. When practical, the water that is flushed is captured to be reused for irrigation. The City also conducts regular weekly, monthly and annual flushing at lower velocities to eliminate stagnant water in dead-end watermains and other low-demand areas.

our drinking water safe by preventing this ingress of groundwater. The Leak Detection and Pressure Management programs help reduce watermain breaks and minimize weak spots in the distribution system where groundwater can get into the pipes. You can learn more about these programs in **Section 6** of this report.

QUICK RESPONSE TO WATERMAIN LEAKS AND BREAKS

Not only is reducing watermain breaks in the system important, but responding quickly when leaks and breaks happen is just as crucial. Quick response by staff reduces water loss and eliminates the chance or the amount of time that groundwater can enter the system, which in turn prevents contaminants from getting into the watermains. Water Services staff are always on call and trained to respond to all levels of watermain breaks.

REDUCE WATERMAIN LEAKS AND BREAKS

The City has various programs that reduce leaks and breaks in the system, which help keep our drinking water safe and clean. Whenever there is a watermain break, the system can experience a loss of pressure, which can result in negative pressure. This means that the pressure on the inside of the main is lower than the pressure from the soil on the outside of the main. When a watermain along the system has cracks or gaps between joints, there is a possibility that groundwater can be siphoned back into the system during times of negative pressure. Two programs that promote water conservation also help keep

BACKFLOW PREVENTER PROGRAM

A Backflow Preventer Program supports safe, temporary use of hydrants by farm, construction and film industries, and others who sometimes require access to bulk volumes of water or where other connections to the water distribution system are not feasible or viable.

Water Services staff install a backflow preventer at every hydrant that has an active hydrant-use permit. The backflow preventer acts as a one-way valve and helps keep outside water from getting into the City's water system, which keeps possible contaminants out.



3.3 Monitoring Water Quality

The City of Richmond collects water samples on a weekly basis at 40 dedicated sampling sites. These sites are strategically located throughout the City to provide a suitable representation of the City's water quality across the whole network.

Water samples collected by City staff are taken to Metro Vancouver laboratories for analysis. Sample results are reviewed by City staff and Vancouver Coastal Health, the Health Authority in Richmond, to ensure the drinking water meets the standards and parameters outlined in the British Columbia Drinking Water Protection Regulations.

Appendix F

The sampling stations are split up into three groups, and each group is sampled on a different day of the week. Additional information on sampling sites can be found in **Appendix G**.

PWT-140

Richmond is recognized as providing high-quality drinking water. In addition to testing for contaminants, water is also monitored for taste, odour, temperature and appearance. This additional commitment to quality assurance supports the objective of making Richmond's tap water the "water of choice" throughout our community. The 2024 water quality testing results are included in **Appendix A** of this report. Test results for specific parameters can be found in **Appendices B, C, D and E**. Test samples are analyzed to ensure the water quality is within defined standards, including bacterial, physical and chemical parameters.

As part of regular water flushing to clean pipes and ensure quality, water is tested for contaminants and monitored for taste, odour, temperature and appearance.

Results that are outside of these parameters are considered 'Failed Samples'. It is important for City staff to deal with failed sample results immediately. The City's standard response to a failed water sample is:

Re-sample from the same station.

Flush the watermain extensively.

Re-sample again from the same station.

Isolate the watermain to one feed until test results confirm compliance with the British Columbia Drinking Water Protection Regulations.

Under the Drinking Water Protection Act, the Metro Vancouver laboratory must immediately inform the City of Richmond, the Drinking Water Officer and the Medical Health Officer if a water supply system result fails to meet established guidelines. Water Services staff then take immediate action and precautions, and issue required notifications.

Water safety situations such as chemical or biological contamination, excessive turbidity, disinfection failure, loss of pressure due to high demand, or a watermain break where there is suspected contamination, would be considered an emergency.

See **Appendix H** for more details about the actions taken by Water Services staff in these situations.



WATER QUALITY ADVISORIES ARE ISSUED TO THE GENERAL PUBLIC WHEN NECESSARY.

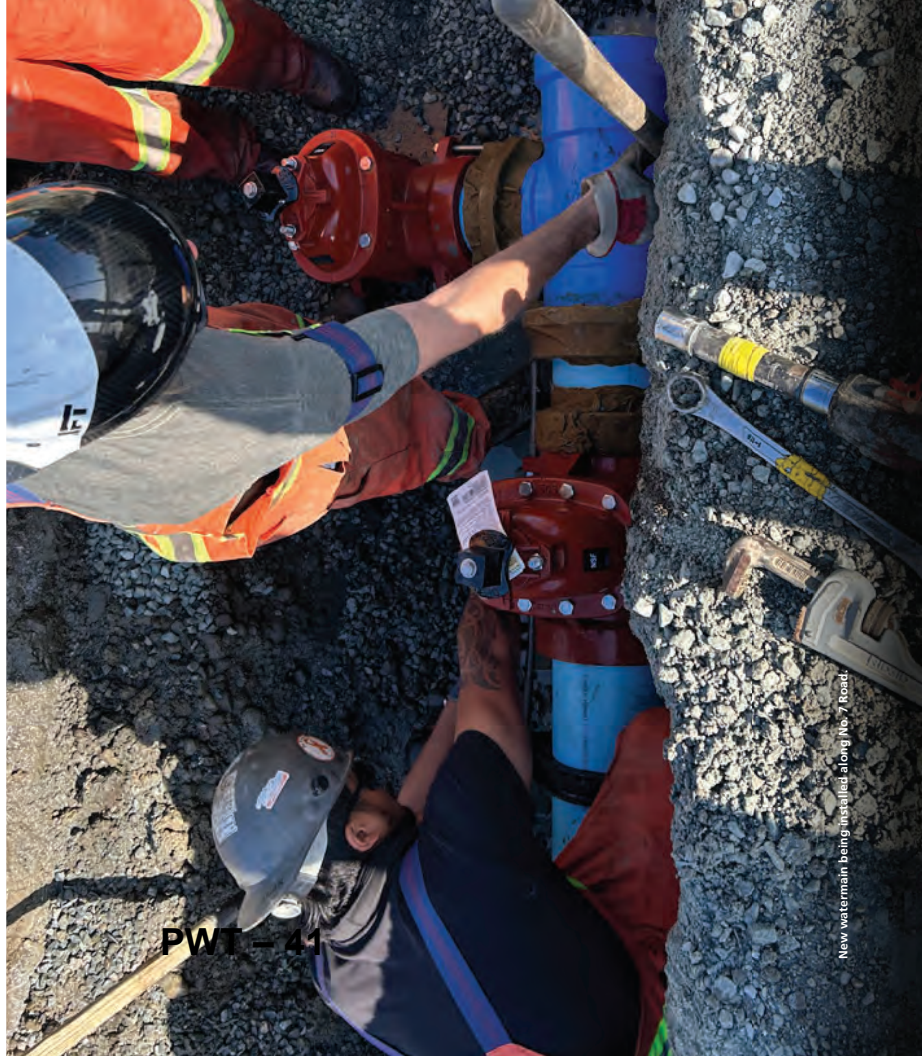


Regular water sample testing helps to ensure Richmond's safe water supply.



4.0

Constructing and Maintaining a Reliable Water System



PWT - 41

New watermain being installed along No. 7 Road.

4.1 Comprehensive Water Network

The extensive network of watermains and other infrastructure has been carefully planned to provide redundancy. This ensures system and service stability, and minimizes service disruptions.

The system's network of pressure reducing valves and gate valves provides a broad variety of options to control water flow on an area-specific basis. In addition, most watermains are looped so that water can be fed to properties from both ends of their fronting mains. Therefore, system valves can be used to isolate portions of the system that require repairs, maintenance or replacement, limiting the number of customers that are impacted by service disruptions while necessary work is completed.



The City's municipal water distribution service includes more than:

600 KM OF watermains
ANNUALLY DELIVERING MORE THAN 30 million CUBIC METRES OF water
TO OUR CUSTOMERS



CITY CREWS ADD VALUE

Water Services crews work year-round to replace aging watermain and infrastructure across the City as well as to install new watermain, service connections and water meters. In 2024, we completed the installation of just over 5 kilometres of new PVC watermain in a number of areas across the city, including the Burkeville and Sealand neighbourhoods, and segments of No. 2 and No. 7 Roads.



4.2 Capital Construction Programs

The dedicated watermain crew is responsible for completing the annual planned capital construction program. Annual construction programs include installation of new watermain, upgrades to existing water distribution infrastructure, provision of service connections to new construction and multi-family water meter installation.

Crews are tasked with meeting project scope, schedule and budget, while minimizing service and other disruptions to residents, businesses and others. The crews make extra effort to maintain positive relationships and communication with the immediate community within project areas.

Water Services crews have become the service provider of choice for many capital projects that might otherwise be contracted externally.

Crews are able to deliver projects at a competitive price, providing value to taxpayers.



Crews install new watermain along No. 2 Road.



4.3 Maintenance and Repairs

Water Services also undertakes system repairs as required, including fixing watermain breaks and repairing damaged or broken water service connections. In addition, Water Services uses specialized equipment to identify, locate and repair underground leaks in our water system.

Water Services crews are also tasked with responding to maintenance and service requests from a wide variety of customers, including residents, businesses, developers, contractors and other utilities such as Fortis BC, BC Hydro and Metro Vancouver.

PWT
This includes:

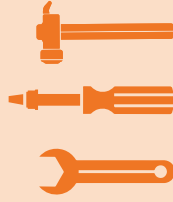


Ongoing maintenance ensures a safe, reliable water supply.

Additional ongoing preventative maintenance and repair programs help extend the life of the infrastructure and reduce service disruptions due to equipment or infrastructure breakdowns. This helps reduce ongoing operating and capital costs. Dedicated preventative maintenance programs are in place for all valves, hydrants and the system's pressure reducing valves.

Preventative maintenance can identify the need for demand maintenance, a more in-depth maintenance process that is only done if required. This includes valve box raising, hydrant parts replacement, valve replacements and other work. Demand repairs can arise at any time and crews are available to respond to emergencies at all hours of the day.

The department's rapid response standards include a team of staff who work after-hours and overnight to quickly respond to issues arising with the water system and other City utilities and assets. This ensures major disruptions to water services, such as pipe breaks and leaks and other issues, are dealt with quickly and efficiently, minimizing impact on the system, its users and the community at large.



4.4 Fire Protection



PWT – 44

Fire hydrants play an important role in our water system as they serve multiple needs. Hydrants deliver large quantities of water for fighting fires and help keep our drinking water safe by providing a way for water to be flushed out of our system.

Water Services conducts extensive annual maintenance on the City's 5,000-plus fire hydrants to ensure they are ready to provide large volumes of water during fire fighting efforts. In addition to replacing hydrants as part of the City's Capital Construction Watermain Replacement Program, or demand replacements due to damage or malfunction, Water Services actively performs hydrant retrofits to replace slide gate hydrants with compression hydrants. Compression hydrants close when they are compromised, preventing major water loss and infrastructure damage. Since starting the retrofits, Water Services has replaced 40 hydrants throughout the City. Slide gate hydrants are being phased out and all new hydrants being installed in the City are compression-style.



Fire hydrants play an important role in our water system.



Fire hydrants are being upgraded to ensure a stable supply of water when needed.



Accessible Water in the Community

PWT — 45



The City's mobile water fountains provide free drinking water at many community events.



5.1 Water Where You Are

Universal access to safe drinking water is critical to public health and quality of life, whether you are at home, at work or out in the community.

The City ensures this access by providing free water at its network of permanent public water fountains and at mobile water fountains deployed at special events. This helps the public maintain healthy hydration levels at all times while also protecting the environment and promoting sustainability by reducing the need to use plastic water bottles.

Water misting stations, deployed during extreme heat events, also support public health.



Water fountain with a pet bowl located in Steveston Village.

A permanent water fountain upgrade program was launched in 2023.

5.2 Water Fountains

The water fountains found in Richmond parks and other public areas are maintained by Water Services. This ensures the public has ready access to free, safe drinking water throughout the community.

The water fountains are tested and inspected regularly to ensure they provide high-quality drinking water. The fountains are turned off in winter months to prevent freezing and costly damage, and are turned back on in the spring for the public to enjoy.

A permanent water fountain upgrade program was launched in 2023. The program involves upgrading older fountains with new and longer-lasting fountains. The new fountains have improved designs that also incorporate a bottle water-fill station. Some of the fountains also include ground-level spouts to keep pets hydrated. Part of the upgrades might also include relocating the fountains to another location within the same area to better serve the community.

The first fountain to be upgraded as part of this program is located at Barnard Park. A new fountain with a water bottle filler and pet drinking bowl at ground level was installed in a more convenient location for the public. Four additional fountain upgrades were completed in 2024.

5.3 Portable Water Fountains

City staff proudly maintain four portable drinking water units that are used at numerous community events. Two of the units have the ability to chill water when connected to a power source. The units provide the public with access to free, potable tap water at events and promote tap water usage as an alternative to bottled water consumption.

The portable water fountains are deployed at a variety of popular community events such as the Steveston Salmon Festival, Richmond Maritime Festival and dozens of other local events annually.

In addition to the larger, wheeled water fountains, the City also maintains a number of drinking water fountains that can be attached to the tops of fire hydrants. These units provide an alternative potable water source at events or camps where other service options are not available or practical. The units can also be used at large events like the Salmon Festival to provide additional drinking water sources.



The water from the portable fountains is tested upon installation to ensure we provide good quality water for the public to enjoy.

5.4 Misting Stations

In response to recurring extreme hot weather, Water Services staff designed and built misting stations that can be placed at a water source, like a hydrant, and provide a way for people to cool down.

In coordination with Emergency Programs, misting stations are regularly deployed in parks and popular outdoor locations, such as Minoru Plaza and Garry Point Park, during extreme high temperature events to provide heat relief. Misting stations are also deployed outside of extreme heat events throughout the city to provide the public with a fun way to keep cool while enjoying being outdoors and about in the community.



Misting station in use in Steveston Village on Canada Day.





6.0

Conserving Our Water Supply



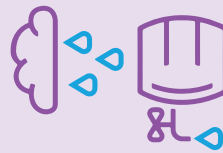
PWT – 48



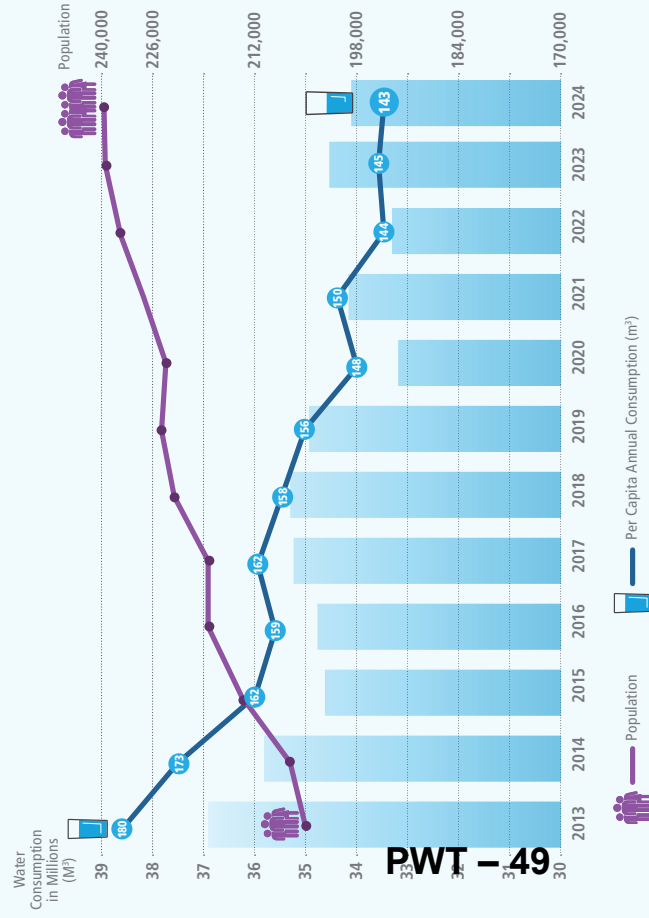
6.1 Reducing Water Consumption

Water conservation efforts are important to ensure that our regional system can keep up with the growing population to safeguard our water supply and to help maintain our beautiful environment.

The City of Richmond continues to succeed in reducing annual water consumption despite a growing population by implementing corporate and community-wide initiatives. These include water metering, lawn watering regulation, pressure management, leak-reduction and leak-detection programs, a toilet rebate program and a rain barrel sale program.



Water Consumption vs. Population | 2013 to 2024



PWT - 49

The graph above shows how the City of Richmond has been conserving water despite an increase in population over the years. Water consumption has been steadily decreasing since its peak in 2006, except for small year-to-year increases in 2021 and 2023. The steady decrease in consumption parallels the City's steady and ongoing transition toward universal water metering for all users.

Despite this progress, the whole Metro Vancouver region, including Richmond, saw a spike in consumption due to extreme heat in the summers of 2021 and 2023, placing a strain on our regional water supply. This has reinforced the City's determination to continue to expand and place increased emphasis on our water conservation programs in order to further decrease our consumption and do our part in the region's push to conserve water.

6.2 Water Metering Programs

Water metering plays a significant role in the City's water management program as it promotes water conservation by encouraging users to reduce their water consumption.

The City implemented its single-family water metering program in 2003. Initially voluntary, water meters eventually became mandatory. All single-family homes in Richmond have been metered since the end of 2017. All industrial, commercial and institutional properties are also metered. Most users have experienced significant savings in costs over the previous flat-rate billing system. The program has contributed to significant overall reductions in water consumption in Richmond.

The City is now working to achieve water meter universality in multi-family residences. Currently, more than half of Richmond's multi-family residential complexes have water meters. All remaining unmetered properties are scheduled to be metered over the next 15 years.

Nearly all multi-family residences that have installed meters have experienced reductions in their water costs, with average savings of nearly 50%. Multi-family water meter installations are undertaken by experienced City crews and are completed with minimal service disruptions.



Multi-family complexes are being transitioned to water meters.

AVERAGE SAVINGS OF NEARLY 50%

Residents and businesses are **billed based on actual amount of water they use**, rather than a flat-rate system, providing a **financial incentive to conserve water**.

6.3 Pressure Management Program

Using the pressure reducing valve stations, the City of Richmond reduces water pressure in the system by 10 pounds per square inch (PSI) from October to May, lowering the system pressure from 90 PSI to 80 PSI.

The purpose of this practice is to reduce the volume of leakage during a lower demand period, decrease the risk of watermain breaks and extend the life of our water infrastructure.

During summer months, the daytime pressure is set to 90 PSI to meet the increased water demand on the system.

A timer-based system is used to lower the pressure to 80 PSI daily from midnight to 4 a.m. as water demand decreases during that time over the summer.

This program has successfully decreased watermain leaks and breaks in the water system.



A look inside a pressure reducing valve station.

6.4 Leak Reduction and Detection Programs

The City has made significant progress identifying and eliminating leaks through programs that target residential users and the City's own network.

The Leak Reduction Program identifies single-family properties with continuous flow using our metering system. City staff then inform the homeowner about the potential leak. The program can significantly reduce overall private property leakage since leaks can be detected by the metering system before they become visible or obvious.

The Leak Detection Program discovers non-visible underground leaks within the City's distribution system without the need to excavate. City crews use special equipment called noise loggers to measure sound frequencies along the targeted pipe. The frequencies are then recorded for staff review. A leak in the pipe creates different sound patterns than typical water flow in the watermain, allowing the crew to pinpoint leaks and provide swift action to excavate and repair the affected asset.

It is estimated that most municipalities in North America lose 12% to 15% of their potable water to undiscovered underground leakage.



6.5 Toilet Rebate Program

This program encourages homeowners to replace older, high-volume toilets with low-flush toilets to conserve water and reduce costs.



PWT - 51

Toilets account for almost one quarter of the water used in the average home. Switching to a low-flush toilet could save more than 70 litres of water per day per person and, when combined with a water meter, will result in cost savings.

In addition to reducing water use and costs, installing low-flush toilets ensures homes reflect current best practices and market preferences.

Single and multi-family homeowners are eligible to apply for a lifetime maximum of two rebates per property. Industrial, commercial and other non-residential properties are not eligible at this time.



The City of Richmond's Toilet Rebate Program provides a utility account rebate of \$100 to homeowners when they install a low-flush toilet.

6.6 Rain Barrel Sale Program

Rain barrels are excellent outdoor water-saving devices that collect and store rainwater from rooftops for lawn and garden use.

Rain barrels are available for purchase at the City's Recycling Depot by Richmond residents only. The barrels can hold up to 208 litres and are made from safe and durable recycled materials. The barrels include a mosquito mesh to keep out bugs and leaves. Installation instructions are included with each rain barrel.

Rainwater is a great water source for lawns, plants and gardens, and for washing outside surfaces. Using rainwater will reduce the amount of tap water you use, therefore saving money on your utility bill.

HOLDS UP TO
208
LITRES



Collecting water using a rain barrel to water flowers and plants.

6.7 Lawn Watering Regulations

As the temperature increases, water consumption increases with it. During summer months, average water use can increase by as much as 50%, largely due to lawn watering. Overall, lawn watering typically represents nearly 40% of all water used in an average single-family home.

The higher water demand combined with the decrease in precipitation during the summer causes water levels in the Metro Vancouver reservoirs to drop more quickly. Water conservation, particularly in summer, is vital in order to maintain a minimum amount of water in the reservoirs in case of emergency. Conservation is particularly important in years when snowpack levels are low and seasonal rainfall is below normal.

To help manage the high demand for drinking water during the hot and dry summer months in 2024, Metro Vancouver initiated annual Stage 1 lawn watering regulations from May 1 to Oct. 15, 2024. Regional lawn watering and other water usage restrictions are applied on an annual basis to limit consumption and ensure adequate supply levels are maintained.

The staged water restrictions are applied and adjusted throughout the summer based on demand and available supply. Lawn watering and other water usage is regulated through the Water Use Restriction Bylaw No. 7784. Failure to comply with lawn watering restrictions is an offence subject to fines.

PWT-152



6.8 Waterwise Demonstration Garden

Lawn and garden watering are major consumers of water during the summer. Overwatering can place a strain on the regional water supply and can be detrimental to the health of many plants. In addition, with the advent of water metering for most Richmond homes, excessive lawn and garden watering can significantly increase utility bills.

The City of Richmond's Waterwise Demonstration Garden acts as a resource for local residents, providing tips on how they can reduce their water usage and still have beautiful, healthy gardens, lawns and landscapes. The garden shows a variety of plants that residents and businesses can use in their landscaping that are drought-tolerant and do not require a lot of water to grow and thrive in our unique climate. The garden also offers lawn maintenance tips, and provides information on micro-irrigation, with different ways and systems of watering plants like driplines, bubblers, micro-sprays and others.

The demonstration garden is located within Terra Nova Rural Park and can be visited year-round for those looking for useful information on reducing their water consumption. In 2024, Water Services and Parks launched planning for a revitalization of the demonstration garden, with a new layout and signage to be implemented in 2025.



7.0 Community Outreach



PWT – 53

Students go into the community to learn about Richmond's water and drainage systems as part of the Public Works on Wheels program.



Water Services staff share information and host activities at Richmond's Public Works Open House.

7.1 Project WET

Project WET is an interactive elementary school program aimed at educating students on the importance of water.

In partnership with Richmond elementary school teachers, City of Richmond Public Works staff invite students in Grades 4 to 7 to the Works Yard to learn about water conservation, supply and quality. Students also learn about other Public Works areas like Sewerage and Drainage, Environmental Programs and Inspections.

There are several interactive displays, with staff guiding students through key learning objectives for each. Project WET field trips take place as a celebration of National Public Works Week. The available class spaces are in high demand and are always fully booked.

Due to scheduling issues, Project WET was not held in 2024. However, as an alternative, a group of Grade 3, 4 and 5 students from Manohah Steves Elementary participated in a wide-ranging Public Works on Wheels program. They visited a number of sites in Burkeville and Terra Nova, where they learned about the City's water distribution and drainage systems. Project WET will return in 2025.



Kids learning about water distribution and the importance of fire hydrants at Project WET.

7.2 Community Engagement

When the City undertakes a new project in the community, it makes every effort to ensure residents and businesses in the area are kept aware of what will be happening, the projected timeline, potential service impacts and more.

Water Services strives to remain engaged with the community throughout the year,

both through its day-to-day activities and specific initiatives.

PWT – 54



Before every project, the City sends letters to all area residents who will be affected by the construction work.

In addition, the City regularly conducts direct outreach with individuals and groups in the project area. Staff often meet directly with local residents, schools and others to answer their questions and address concerns about the project. This has included inviting school classes to the project site to learn first-hand about the work being done.

A major highlight of the City's engagement activity is the Public Works Open House, and National Public Works Week.

Water Services staff annually work to develop new displays for the Open House with information and activities to help keep the public informed about the work being done to deliver high-quality water to their taps, promote water conservation and provide excellent value to taxpayers.

During the past year, Water Services set up an above-ground water system display that included water meters, valves and blow-offs to teach Open House attendees

about the water system and water conservation. The Emergency Water Treatment trailer was also set up to educate people on the importance of water quality and emergency preparedness. Staff volunteered their time and effort on a non-working day to educate and interact with the public.

The Public Works Open House also features the City's portable water fountains and misters to help keep attendees hydrated and cool during the warm weather.

Community engagement is also undertaken through various communication initiatives with the public through a variety of mediums. The watermain construction crew was featured in a National Public Works Week media campaign for hosting a class of elementary school children at one of its sites. The visit allowed a great teaching opportunity for kids to learn about the water system and ask questions of our staff. City staff take pride in their work and embrace opportunities to raise awareness about their contributions and the benefits to the community.



8.0 Appendices

Appendices

A Water Quality Results 68

Water sample test results from our 2024 Drinking Water Quality Monitoring Program, listed by sampling site. Results include total coliform, E. coli, HPC, free chlorine, temperature and turbidity.

B THM and HAA Test Results 108

Disinfection by product amounts in the water samples from specific sites that were established in the Drinking Water Quality Monitoring Program and are representative of the City's system.

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Metal level guidelines allowed in drinking water established by the federal government.

D Municipal Testing Results 111

Metal amounts in the water samples from specific sites that were established in the Drinking Water Quality Monitoring Program and are representative of the City's system.

E Vinyl Chloride Results 112

Vinyl chloride amounts in the water samples from specific sites that were established in the Drinking Water Quality Monitoring Program and are representative of the City's system.

F Water Quality Testing Parameters 114

Information regarding the testing parameters that are used to determine the City's water quality. Bacterial, chemical and physical parameters are outlined and explained.

G Water Sampling Sites 117

A list of the City's 40 water sampling site locations with addresses.

H Specific Emergency Response Plans 118

Emergency response plans that City staff follow in specific situations.

I References 121

A list of references used to produce this report.



PWT – 55

Crews don't mind the mud when working on pipes in dirt trenches to keep Richmond's water clean and safe to drink.

Appendix A | 2024 Water Quality Results

Water Sampling | Type: GRAB | Station Number: RMD-202 | Address: 1500 Valemont Way

Sampled Date	Total Coliform (CFU/1000 ml)	E. coli (CFU/1000 ml)	HPC (CFU/ml)	Chlorine Free (mg/l)	Turbidity (NTU)	Temperature (C°)
2024-01-05 09:30	<1	<1	<2	0.86	0.5	9
2024-01-11 09:45	<1	<1	<2	0.66	0.23	7
2024-01-25 09:25	<1	<1	<2	0.78	0.14	7
2024-02-02 09:30	<1	<1	<2	0.67	0.15	7
2024-02-08 09:45	<1	<1	<2	0.7	0.21	8
2024-02-16 09:30	<1	<1	<2	0.72	0.22	5
2024-02-22 09:30	<1	<1	<2	0.74	0.23	6
2024-03-01 09:25	<1	<1	<2	0.65	0.15	6
2024-03-07 09:45	<1	<1	<2	0.66	0.18	6
2024-03-15 09:25	<1	<1	<2	0.82	0.17	7
2024-03-21 09:30	<1	<1	4	0.73	0.21	9
2024-03-28 09:30	<1	<1	<2	0.79	0.35	6
2024-04-04 09:50	<1	<1	2	0.76	0.13	8
2024-04-12 09:45	<1	<1	2	0.71	0.14	7
2024-04-18 09:50	<1	<1	<2	0.62	0.11	7
2024-04-26 09:25	<1	<1	<2	0.73	0.11	9
2024-05-02 10:00	<1	<1	<2	0.83	0.16	9
2024-05-10 09:30	<1	<1	<2	0.75	0.16	9
2024-05-16 09:30	<1	<1	2	0.79	0.16	10
2024-05-24 09:30	<1	<1	<2	0.7	0.14	10
2024-06-07 09:30	<1	<1	<2	0.92	0.21	10
2024-06-13 09:25	<1	<1	<2	0.62	0.15	11
2024-06-21 09:30	<1	<1	2	0.61	0.14	10
2024-06-27 09:45	<1	<1	10	0.57	0.17	11
2024-07-05 09:30	<1	<1	2	0.71	0.19	12
2024-07-11 09:30	<1	<1	<2	0.61	0.13	12
2024-07-25 09:45	<1	<1	<2	0.83	0.12	12
2024-08-02 09:30	<1	<1	<2	0.78	0.13	13
2024-08-07 14:30	<1	<1	<2	0.7	0.13	14
2024-08-16 10:05	<1	<1	<2	0.67	0.1	17
2024-08-22 09:25	<1	<1	2	0.64	0.09	16
2024-08-30 09:45	<1	<1	<2	0.65	0.1	15
2024-09-05 10:00	<1	<1	<2	0.86	0.13	17
2024-09-13 09:30	<1	<1	<2	0.68	0.1	17
2024-09-19 09:25	<1	<1	<2	0.75	0.09	16
2024-09-27 09:30	<1	<1	<2	0.71	0.16	16
2024-10-03 09:55	<1	<1	<2	0.67	0.15	15
2024-10-11 10:00	<1	<1	<2	0.72	0.72	14
2024-10-17 09:25	<1	<1	<2	0.74	0.23	14
2024-10-25 09:25	<1	<1	<2	0.59	0.16	11
2024-10-31 09:30	<1	<1	<2	0.68	0.17	11
2024-11-08 09:25	<1	<1	2	0.54	0.33	9
2024-11-14 09:25	<1	<1	<2	0.54	0.33	10
2024-11-22 09:25	<1	<1	<2	0.67	0.17	8
2024-11-28 09:25	<1	<1	4	0.75	0.2	7
2024-12-06 09:30	<1	<1	<2	0.71	0.2	7
2024-12-12 09:55	<1	<1	<2	0.66	0.17	7
2024-12-20 09:30	<1	<1	NA	0.63	0.34	8
2024-12-23 09:25	<1	<1	NA	0.67	0.2	7

PWT-56

Water Sampling | Type: GRAB | Station Number: RMD-203 | Address: 23260 Westminster Highway

Sampled Date	Total Coliform (CFU/1000 ml)	E. coli (CFU/1000 ml)	HPC (CFU/ml)	Chlorine Free (mg/l)	Turbidity (NTU)	Temperature (C°)
2024-01-05 11:10	<1	<1	<2	0.59	0.33	9
2024-01-11 11:30	<1	<1	<2	0.68	0.22	6
2024-01-25 11:00	<1	<1	<2	0.77	0.55	7
2024-02-02 11:10	<1	<1	<2	0.68	0.33	7
2024-02-08 11:30	<1	<1	<2	0.69	0.26	7
2024-02-16 11:10	<1	<1	<2	0.66	0.41	6
2024-02-22 11:00	<1	<1	<2	0.68	0.23	7
2024-03-01 11:00	<1	<1	<2	0.63	0.13	6
2024-03-07 11:30	<1	<1	4	0.68	0.23	5
2024-03-15 11:00	<1	<1	2	0.88	0.17	6
2024-03-21 11:10	<1	<1	<2	0.57	0.23	10
2024-03-28 11:00	<1	<1	2	0.76	1.2	6
2024-04-04 11:30	<1	<1	<2	0.78	0.14	8
2024-04-12 11:30	<1	<1	<2	0.73	0.13	7
2024-04-18 11:30	<1	<1	<2	0.72	0.13	7
2024-04-26 11:00	<1	<1	<2	0.71	0.09	8
2024-05-02 11:30	<1	<1	<2	0.81	0.28	9
2024-05-10 11:10	<1	<1	<2	0.76	0.14	10
2024-05-16 11:10	<1	<1	<2	0.74	0.88	11
2024-05-24 11:10	<1	<1	4	0.67	0.13	11
2024-05-30 11:00	<1	<1	<2	0.71	0.22	11
2024-06-07 11:10	<1	<1	<2	0.61	0.12	11
2024-06-13 11:00	<1	<1	<2	0.7	0.24	11
2024-06-21 11:10	<1	<1	<2	0.42	0.15	11
2024-06-27 11:45	<1	<1	2	0.63	0.2	11
2024-07-05 11:10	<1	<1	8	0.69	0.15	12
2024-07-11 11:10	<1	<1	<2	0.59	0.11	12
2024-07-25 11:30	<1	<1	<2	0.7	0.11	13
2024-08-02 11:10	<1	<1	<2	0.89	0.13	14
2024-08-07 15:50	<1	<1	6	0.63	0.12	15
2024-08-16 11:45	<1	<1	2	0.71	0.36	13
2024-08-22 11:00	<1	<1	26	0.62	0.24	15
2024-08-30 11:30	<1	<1	<2	0.82	0.27	12
2024-09-05 11:30	<1	<1	4	0.78	0.23	15
2024-09-13 11:10	<1	<1	<2	0.77	0.34	14
2024-09-19 11:00	<1	<1	8	0.58	0.31	15
2024-09-27 11:10	<1	<1	2	0.54	0.26	15
2024-10-03 11:40	<1	<1	4	0.39	0.22	14
2024-10-11 11:30	<1	<1	<2	0.5	0.31	14
2024-10-17 11:00	<1	<1	<2	0.71	0.32	12
2024-10-25 11:00	<1	<1	2	0.58	0.2	11
2024-10-31 11:10	<1	<1	<2	0.68	0.16	11
2024-11-08 11:00	<1	<1	10	0.85	1.4	9
2024-11-14 11:00	<1	<1	8	0.52	0.89	10
2024-11-22 11:00	<1	<1	6	0.51	0.57	8
2024-11-28 11:00	<1	<1	12	0.58	0.58	9
2024-12-06 11:10	<1	<1	<2	0.48	0.42	9
2024-12-12 11:45	<1	<1	<2	0.48	0.41	8
2024-12-20 11:10	<1	<1	NA	0.46	1.1	8
2024-12-23 11:00	<1	<1	NA	0.63	0.54	7

Water Sampling | Type: GRAB | Station Number: RMD-204 | Address: 3180 Granville Avenue

Sampled Date	Total Coliform (CFU/1000 ml)	E. coli (CFU/1000 ml)	HPC (CFU/ml)	Chlorine Free (mg/l)	Turbidity (NTU)	Temperature (C°)
2024-01-05 07:30	<1	<1	<2	0.36	0.18	10
2024-01-11 08:00	<1	<1	<2	0.74	0.25	7
2024-01-25 07:30	<1	<1	2	0.65	0.23	8
2024-02-02 07:30	<1	<1	<2	0.73	0.23	8
2024-02-08 08:00	<1	<1	<2	0.66	0.2	9
2024-02-16 07:30	<1	<1	<2	0.65	0.19	7
2024-02-22 07:30	<1	<1	<2	0.63	0.12	7
2024-03-01 07:30	<1	<1	<2	0.63	0.12	7
2024-03-07 08:00	<1	<1	2	0.8	0.19	9
2024-03-15 07:30	<1	<1	<2	0.89	0.16	7
2024-03-21 07:30	<1	<1	2	0.77	0.29	9
2024-03-28 07:30	<1	<1	<2	0.67	0.14	8
2024-04-04 07:50	<1	<1	<2	0.71	0.17	8
2024-04-12 08:00	<1	<1	<2	0.69	0.14	9
2024-04-18 08:00	<1	<1	<2	0.71	0.11	9
2024-04-26 07:30	<1	<1	<2	0.68	0.12	10
2024-05-02 08:00	<1	<1	<2	0.72	0.13	10
2024-05-10 07:30	<1	<1	2	0.71	0.13	10
2024-05-16 07:30	<1	<1	<2	0.59	0.15	10
2024-05-24 07:30	<1	<1	<2	0.65	0.11	11
2024-05-30 07:30	<1	<1	2	0.63	0.11	11
2024-06-07 07:30	<1	<1	<2	0.61	0.12	11
2024-06-13 07:30	<1	<1	<2	0.61	0.16	12
2024-06-21 07:30	<1	<1	<2	0.63	0.14	12
2024-06-27 08:00	<1	<1	<2	0.61	0.13	13
2024-07-05 07:30	<1	<1	2	0.71	0.11	13
2024-07-11 07:30	<1	<1	<2	0.63	0.11	14
2024-07-25 08:00	<1	<1	6	0.6	0.09	14
2024-08-02 07:30	<1	<1	2	0.68	0.12	15
2024-08-07 12:30	<1	<1	34	0.66	0.1	15
2024-08-16 08:00	<1	<1	<2	0.62	0.09	17
2024-08-22 07:30	<1	<1	32	0.64	0.18	17
2024-08-30 08:00	<1	<1	<2	0.65	0.11	17
2024-09-05 08:00	<1	<1	2	0.69	0.09	17
2024-09-13 07:30	<1	<1	<2	0.74	0.08	18
2024-09-19 07:30	<1	<1	<2	0.59	0.09	18
2024-09-27 07:30	<1	<1	<2	0.52	0.17	17
2024-10-03 07:45	<1	<1	4	0.74	0.1	16
2024-10-11 08:00	<1	<1	<2	0.71	0.12	15
2024-10-17 07:30	<1	<1	<2	1.03	0.2	16
2024-10-25 07:30	<1	<1	12	0.72	0.17	13
2024-10-31 07:30	<1	<1	4	0.48	0.14	12
2024-11-08 07:30	<1	<1	<2	0.46	0.13	11
2024-11-14 07:30	<1	<1	<2	0.56	0.13	11
2024-11-22 07:30	<1	<1	<2	0.76	0.14	10
2024-11-28 07:30	<1	<1	<2	0.85	0.12	9
2024-12-06 07:30	<1	<1	10	0.88	0.19	8
2024-12-12 08:00	<1	<1	<2	0.91	0.13	8
2024-12-20 07:30	<1	<1	NA	0.75	0.12	7
2024-12-23 07:30	<1	<1	NA	0.68	0.1	8

PWT - 57

Water Sampling | Type: GRAB | Station Number: RMD-205 | Address: 13851 Steveston Highway

Sampled Date	Total Coliform (CFU/1000 ml)	E. coli (CFU/1000 ml)	HPC (CFU/ml)	Chlorine Free (mg/l)	Turbidity (NTU)	Temperature (C°)
2024-01-05 09:15	<1	<1	<2	0.5	0.17	10
2024-01-11 09:30	<1	<1	<2	0.64	0.17	6
2024-01-25 09:10	<1	<1	<2	0.69	0.21	7
2024-02-02 09:15	<1	<1	<2	0.69	0.18	7
2024-02-08 09:30	<1	<1	<2	0.69	0.26	8
2024-02-16 09:15	<1	<1	4	0.65	0.35	6
2024-02-22 09:15	<1	<1	<2	0.69	0.25	6
2024-03-01 09:00	<1	<1	<2	0.67	0.15	6
2024-03-07 09:30	<1	<1	<2	0.81	0.21	5
2024-03-15 09:00	<1	<1	<2	0.73	0.21	6
2024-03-21 09:10	<1	<1	<2	0.75	0.25	10
2024-03-28 09:15	<1	<1	<2	0.75	0.21	6
2024-04-04 09:30	<1	<1	<2	0.69	0.2	8
2024-04-12 09:30	<1	<1	<2	0.83	0.1	7
2024-04-18 09:30	<1	<1	<2	0.62	0.13	7
2024-04-26 09:00	<1	<1	<2	0.7	0.08	9
2024-05-02 09:30	<1	<1	<2	0.73	0.13	8
2024-05-10 09:15	<1	<1	<2	0.85	0.16	9
2024-05-16 09:15	<1	<1	<2	0.84	0.24	10
2024-05-24 09:15	<1	<1	<2	0.71	0.16	11
2024-05-30 09:00	<1	<1	<2	0.71	0.14	10
2024-06-07 09:15	<1	<1	<2	0.62	0.14	10
2024-06-13 09:00	<1	<1	<2	0.65	0.23	11
2024-06-21 09:15	<1	<1	<2	0.64	0.21	10
2024-06-27 09:30	<1	<1	<2	0.6	0.35	11
2024-07-05 09:15	<1	<1	2	0.71	0.18	12
2024-07-11 09:15	<1	<1	<2	0.63	0.13	12
2024-07-25 09:30	<1	<1	<2	0.75	0.13	13
2024-08-02 09:15	<1	<1	<2	0.77	0.1	13
2024-08-07 14:00	<1	<1	<2	0.67	0.16	15
2024-08-16 09:45	<1	<1	2	0.66	0.11	16
2024-08-22 09:00	<1	<1	2	0.68	0.11	16
2024-08-30 09:30	<1	<1	<2	0.64	0.11	16
2024-09-05 09:30	<1	<1	<2	0.65	0.12	17
2024-09-13 09:15	<1	<1	<2	0.73	0.11	17
2024-09-19 09:00	<1	<1	<2	0.68	0.1	16
2024-09-27 09:15	<1	<1	<2	0.7	0.18	16
2024-10-03 09:35	<1	<1	<2	0.7	0.11	15
2024-10-11 09:30	<1	<1	<2	0.8	0.2	15
2024-10-17 09:00	<1	<1	6	0.8	0.3	15
2024-10-25 09:00	<1	<1	2	0.68	0.16	13
2024-10-31 09:15	<1	<1	<2	0.69	0.14	11
2024-11-08 09:00	<1	<1	NA	0.67	0.14	9
2024-11-14 09:00	<1	<1	<2	0.64	0.13	11
2024-11-22 09:00	<1	<1	6	0.58	0.17	9
2024-11-28 09:00	<1	<1	10	0.81	0.26	8
2024-12-06 09:15	<1	<1	<2	0.69	0.17	8
2024-12-12 09:35	<1	<1	<2	0.65	0.14	7
2024-12-20 09:15	<1	<1	NA	0.73	0.16	8
2024-12-23 09:00	<1	<1	NA	0.66	0.13	6

Water Sampling | Type: GRAB | Station Number: RMD-206 | Address: 4251 Moncton Street

Sampled Date	Total Coliform (CFU/1000 ml)	E. coli (CFU/1000 ml)	HPC (CFU/ml)	Chlorine Free (mg/l)	Turbidity (NTU)	Temperature (C°)
2024-01-05 07:50	<1	<1	2	0.55	0.38	10
2024-01-11 08:15	<1	<1	4	0.57	0.2	6
2024-01-25 07:45	<1	<1	<2	0.71	0.13	8
2024-02-02 07:50	<1	<1	<2	0.7	0.11	7
2024-02-08 08:15	<1	<1	<2	0.55	0.15	8
2024-02-16 07:50	<1	<1	<2	0.61	0.21	6
2024-02-22 07:50	<1	<1	2	0.58	0.17	6
2024-03-01 07:45	<1	<1	<2	0.59	0.13	7
2024-03-07 08:15	<1	<1	<2	0.7	0.11	9
2024-03-15 07:45	<1	<1	<2	0.77	0.2	6
2024-03-21 07:45	<1	<1	2	0.79	0.33	10
2024-03-28 07:50	<1	<1	<2	0.57	0.19	6
2024-04-04 08:05	<1	<1	<2	0.64	0.4	8
2024-04-12 08:15	<1	<1	2	0.68	0.12	8
2024-04-18 08:15	<1	<1	6	0.57	0.13	8
2024-04-26 07:45	<1	<1	<2	0.71	0.11	9
2024-05-02 08:15	<1	<1	<2	0.66	0.15	9
2024-05-10 07:50	<1	<1	<2	0.71	0.16	9
2024-05-16 07:50	<1	<1	2	0.61	0.23	10
2024-05-24 07:50	<1	<1	<2	0.69	0.11	11
2024-06-03 07:45	<1	<1	<2	0.62	0.1	10
2024-06-07 07:50	<1	<1	<2	0.63	0.15	11
2024-06-13 07:45	<1	<1	<2	0.64	0.18	11
2024-06-21 07:50	<1	<1	<2	0.6	0.33	12
2024-06-27 08:15	<1	<1	<2	0.56	0.22	11
2024-07-05 07:50	<1	<1	4	0.69	0.23	12
2024-07-11 07:50	<1	<1	<2	0.68	0.21	12
2024-07-25 08:15	<1	<1	6	0.65	0.39	13
2024-08-02 07:50	<1	<1	<2	0.77	0.42	14
2024-08-07 12:45	<1	<1	<2	0.65	0.14	15
2024-08-16 08:15	<1	<1	6	0.58	0.3	16
2024-08-22 07:45	<1	<1	30	0.69	0.13	16
2024-08-30 08:15	<1	<1	64	0.6	0.15	16
2024-09-05 08:15	<1	<1	24	0.64	0.12	16
2024-09-13 07:50	<1	<1	8	0.63	0.12	17
2024-09-19 07:45	<1	<1	<2	0.81	0.09	16
2024-09-27 07:50	<1	<1	2	0.81	0.09	16
2024-10-03 08:00	<1	<1	<2	0.63	0.11	16
2024-10-11 08:15	<1	<1	80	0.66	0.13	15
2024-10-17 07:45	<1	<1	6	0.87	0.26	15
2024-10-25 07:45	<1	<1	14	0.66	0.13	13
2024-10-31 07:50	<1	<1	10	0.38	0.79	13
2024-11-08 07:45	<1	<1	6	0.57	0.37	11
2024-11-14 07:45	<1	<1	2	0.59	0.21	10
2024-11-22 07:45	<1	<1	4	0.66	0.13	9
2024-11-28 07:45	<1	<1	<2	0.64	0.42	8
2024-12-06 07:50	<1	<1	<2	0.46	0.49	8
2024-12-12 08:20	<1	<1	<2	0.79	0.18	7
2024-12-20 07:50	<1	<1	NA	0.49	0.36	7
2024-12-23 07:45	<1	<1	NA	0.8	0.14	7

PWT - 58

Water Sampling | Type: GRAB | Station Number: RMD-208 | Address: 13200 No. 4 Road

Sampled Date	Total Coliform (CFU/1000 ml)	E. coli (CFU/1000 ml)	HPC (CFU/ml)	Chlorine Free (mg/l)	Turbidity (NTU)	Temperature (C°)
2024-01-05 08:55	<1	<1	<2	<1	0.26	10
2024-01-11 09:15	<1	<1	2	<1	0.28	7
2024-01-25 08:50	<1	<1	<2	<1	0.11	7
2024-02-02 08:55	<1	<1	<2	<1	0.11	7
2024-02-08 09:15	<1	<1	<2	<1	0.18	8
2024-02-16 08:55	<1	<1	<2	<1	0.32	6
2024-02-22 08:55	<1	<1	<2	<1	0.17	6
2024-03-01 08:45	<1	<1	<2	<1	0.11	6
2024-03-07 09:15	<1	<1	<2	<1	0.12	6
2024-03-15 08:45	<1	<1	<2	<1	0.18	6
2024-03-21 08:50	<1	<1	<2	<1	0.24	9
2024-03-28 09:00	<1	<1	2	<1	0.13	6
2024-04-04 09:20	<1	<1	<2	<1	0.12	9
2024-04-12 09:15	<1	<1	4	<1	0.14	7
2024-04-18 09:15	<1	<1	6	<1	0.13	9
2024-04-26 08:45	<1	<1	<2	<1	0.1	8
2024-05-02 09:15	<1	<1	<2	<1	0.13	9
2024-05-10 08:55	<1	<1	<2	<1	0.14	9
2024-05-16 08:55	<1	<1	<2	<1	0.19	10
2024-05-24 08:55	<1	<1	<2	<1	0.12	10
2024-05-30 08:45	<1	<1	<2	<1	0.13	10
2024-06-07 08:55	<1	<1	<2	<1	0.14	11
2024-06-13 08:45	<1	<1	<2	<1	0.14	12
2024-06-21 08:55	<1	<1	<2	<1	0.13	12
2024-06-27 09:15	<1	<1	<2	<1	0.15	12
2024-07-05 08:55	<1	<1	<2	<1	0.11	13
2024-07-11 08:55	<1	<1	<2	<1	0.11	13
2024-07-25 09:15	<1	<1	<2	<1	0.11	15
2024-08-02 08:55	<1	<1	<2	<1	0.12	14
2024-08-07 13:45	<1	<1	4	<1	0.12	15
2024-08-16 09:20	<1	<1	<2	<1	0.11	16
2024-08-22 08:45	<1	<1	<2	<1	0.09	17
2024-08-30 09:15	<1	<1	4	<1	0.09	16
2024-09-05 09:15	<1	<1	2	<1	0.09	16
2024-09-13 08:55	<1	<1	<2	<1	0.09	17
2024-09-19 08:45	<1	<1	2	<1	0.09	16
2024-09-27 08:55	<1	<1	<2	<1	0.11	16
2024-10-03 09:15	<1	<1	<2	<1	0.09	16
2024-10-11 09:15	<1	<1	2	<1	0.13	15
2024-10-17 08:45	<1	<1	<2	<1	0.14	14
2024-10-25 08:45	<1	<1	8	<1	0.14	13
2024-10-31 08:55	<1	<1	<2	<1	0.16	11
2024-11-08 08:45	<1	<1	<2	<1	0.22	10
2024-11-14 08:45	<1	<1	<2	<1	0.14	10
2024-11-22 08:45	<1	<1	<2	<1	0.14	10
2024-11-28 08:45	<1	<1	<2	<1	0.12	10
2024-12-06 08:55	<1	<1	<2	<1	0.27	8
2024-12-12 09:20	<1	<1	8	<1	0.14	7
2024-12-20 08:55	<1	<1	NA	<1	0.18	8
2024-12-23 08:45	<1	<1	NA	<1	0.29	7

Water Sampling | Type: GRAB | Station Number: RMD-212 | Address: Across from 8600 Ryan Road

Sampled Date	Total Coliform (CFU/1000 ml)	E. coli (CFU/1000 ml)	HPC (CFU/ml)	Chlorine Free (mg/l)	Turbidity (NTU)	Temperature (C°)
2024-01-05 08:40	<1	<1	<2	0.47	0.18	10
2024-01-11 09:00	<1	<1	<2	0.62	0.18	6
2024-01-25 08:30	<1	<1	<2	0.68	0.19	8
2024-02-02 08:40	<1	<1	2	0.72	0.21	8
2024-02-08 09:00	<1	<1	<2	0.68	0.21	8
2024-02-16 08:40	<1	<1	<2	0.68	0.35	6
2024-02-22 08:40	<1	<1	<2	0.68	0.15	6
2024-03-01 08:30	<1	<1	2	0.65	0.12	7
2024-03-07 09:00	<1	<1	10	0.65	0.11	6
2024-03-15 08:30	<1	<1	10	0.79	0.15	6
2024-03-21 08:35	<1	<1	<2	0.83	0.4	9
2024-03-28 08:45	<1	<1	<2	0.77	0.17	7
2024-04-04 09:00	<1	<1	<2	0.69	0.14	8
2024-04-12 09:00	<1	<1	2	0.72	0.12	8
2024-04-18 09:00	<1	<1	<2	0.69	0.13	9
2024-04-26 08:30	<1	<1	<2	0.62	0.45	9
2024-05-02 09:00	<1	<1	2	0.73	0.14	9
2024-05-10 08:40	<1	<1	<2	0.75	0.16	10
2024-05-16 08:40	<1	<1	<2	0.78	0.17	11
2024-05-24 08:40	<1	<1	<2	0.72	0.12	10
2024-05-30 08:30	<1	<1	<2	0.59	0.1	11
2024-06-07 08:40	<1	<1	2	0.71	0.12	11
2024-06-13 08:30	<1	<1	<2	0.63	0.14	11
2024-06-21 08:40	<1	<1	<2	0.7	0.15	12
2024-07-05 08:40	<1	<1	2	0.74	0.11	13
2024-07-11 08:40	<1	<1	<2	0.6	0.12	14
2024-07-25 09:00	<1	<1	4	0.64	0.09	15
2024-08-02 08:40	<1	<1	2	0.73	0.11	15
2024-08-07 13:30	<1	<1	6	0.74	0.1	16
2024-08-16 09:05	<1	<1	2	0.64	0.1	17
2024-08-22 08:30	<1	<1	2	0.74	0.08	17
2024-08-30 09:00	<1	<1	6	0.86	0.09	16
2024-09-05 09:00	<1	<1	<2	0.64	0.09	17
2024-09-13 08:40	<1	<1	<2	0.68	0.09	17
2024-09-19 08:30	<1	<1	6	0.76	0.23	16
2024-09-27 08:40	<1	<1	6	0.89	0.09	17
2024-10-03 09:00	<1	<1	<2	0.58	0.1	15
2024-10-11 09:00	<1	<1	<2	0.75	0.12	15
2024-10-17 08:30	<1	<1	<2	0.84	0.14	15
2024-10-25 08:30	<1	<1	10	0.58	0.15	13
2024-10-31 08:40	<1	<1	4	0.53	0.16	12
2024-11-08 08:30	<1	<1	<2	0.6	0.15	12
2024-11-14 08:30	<1	<1	2	0.35	0.12	10
2024-11-22 08:30	<1	<1	4	0.71	0.14	10
2024-11-28 08:30	<1	<1	<2	0.56	0.16	9
2024-12-06 08:40	<1	<1	<2	0.75	0.28	8
2024-12-12 09:05	<1	<1	<2	0.9	0.16	7
2024-12-20 08:40	<1	<1	NA	0.76	0.2	8
2024-12-23 08:30	<1	<1	NA	0.83	0.1	7

Water Sampling | Type: GRAB | Station Number: RMD-214 | Address: 11720 Westminster Highway

Sampled Date	Total Coliform (CFU/1000 ml)	E. coli (CFU/1000 ml)	HPC (CFU/ml)	Chlorine Free (mg/l)	Turbidity (NTU)	Temperature (C°)
2024-01-05 9:50	<1	<1	2	0.38	0.22	11
2024-01-11 10:00	<1	<1	<2	0.66	0.14	6
2024-01-25 09:40	<1	<1	<2	0.75	0.14	7
2024-02-02 09:50	<1	<1	<2	0.72	0.16	7
2024-02-08 10:00	<1	<1	<2	0.69	0.2	7
2024-02-16 09:50	<1	<1	<2	0.63	0.16	6
2024-02-22 09:50	<1	<1	2	0.65	0.17	6
2024-03-01 09:45	<1	<1	<2	0.7	0.13	6
2024-03-07 10:00	<1	<1	8	0.64	0.15	6
2024-03-15 09:45	<1	<1	<2	0.61	0.13	6
2024-03-21 09:45	<1	<1	<2	0.79	0.2	10
2024-03-28 09:45	<1	<1	<2	0.74	0.16	7
2024-04-04 10:05	<1	<1	<2	0.74	0.11	8
2024-04-12 10:00	<1	<1	<2	0.77	0.11	8
2024-04-18 10:15	<1	<1	<2	0.68	0.11	8
2024-04-26 09:45	<1	<1	<2	0.65	0.08	9
2024-05-02 10:15	<1	<1	<2	0.72	0.14	9
2024-05-10 09:50	<1	<1	<2	0.69	0.15	8
2024-05-16 09:50	<1	<1	<2	0.74	0.19	10
2024-05-24 09:50	<1	<1	<2	0.71	0.12	10
2024-05-30 09:45	<1	<1	<2	0.63	0.12	10
2024-06-07 09:50	<1	<1	2	0.71	0.16	10
2024-06-13 09:45	<1	<1	<2	0.59	0.14	11
2024-06-21 09:50	<1	<1	<2	0.61	0.17	10
2024-06-27 10:00	<1	<1	<2	0.62	0.13	11
2024-07-05 09:50	<1	<1	<2	0.68	0.17	12
2024-07-11 09:50	<1	<1	2	0.61	0.13	11
2024-07-25 10:00	<1	<1	<2	0.72	0.13	13
2024-08-02 09:50	<1	<1	<2	0.77	0.14	13
2024-08-07 14:35	<1	<1	8	0.76	0.14	15
2024-08-16 10:30	<1	<1	2	0.67	0.13	16
2024-08-22 09:45	<1	<1	2	0.77	0.14	16
2024-08-30 10:00	<1	<1	<2	0.71	0.13	15
2024-09-05 10:15	<1	<1	<2	0.83	0.14	16
2024-09-13 09:50	<1	<1	<2	0.69	0.12	16
2024-09-19 09:45	<1	<1	<2	0.73	0.13	16
2024-09-27 09:50	<1	<1	2	0.72	0.13	16
2024-10-11 10:15	<1	<1	<2	0.77	0.13	14
2024-10-17 09:45	<1	<1	<2	0.85	0.21	15
2024-10-25 09:45	<1	<1	LA	0.65	0.2	12
2024-10-31 09:50	<1	<1	<2	0.57	0.17	11
2024-11-08 09:45	<1	<1	<2	0.64	0.16	10
2024-11-14 09:45	<1	<1	2	0.61	0.16	11
2024-11-22 09:45	<1	<1	<2	0.68	0.18	9
2024-11-28 09:45	<1	<1	<2	0.63	0.12	8
2024-12-06 09:50	<1	<1	<2	0.64	0.16	7
2024-12-12 10:15	<1	<1	<2	0.94	0.18	8
2024-12-20 09:50	<1	<1	NA	0.66	0.12	6
2024-12-23 09:45	<1	<1	NA	0.72	0.13	7

Water Sampling | Type: GRAB | Station Number: RMD-216 | Address: 11080 No. 2 Road

Sampled Date	Total Coliform (CFU/1000 ml)	E. coli (CFU/1000 ml)	HPC (CFU/ml)	Chlorine Free (mg/l)	Turbidity (NTU)	Temperature (°C)
2024-01-05 08:05	<1	<1	<2	0.68	0.17	10
2024-01-11 08:30	<1	<1	<2	0.67	0.26	6
2024-01-25 08:00	<1	<1	<2	0.74	0.13	8
2024-02-02 08:05	<1	<1	<2	0.7	0.13	7
2024-02-08 08:30	<1	<1	<2	0.65	0.15	8
2024-02-16 08:05	<1	4	4	0.69	0.22	6
2024-02-22 08:05	<1	<1	<2	0.66	0.17	6
2024-03-01 08:00	<1	<1	8	0.69	0.16	7
2024-03-07 08:30	<1	<1	<2	0.81	0.18	9
2024-03-15 08:00	<1	<1	<2	0.81	0.15	6
2024-03-21 08:00	<1	<1	<2	0.82	0.53	10
2024-03-28 08:10	<1	<1	<2	0.71	0.17	8
2024-04-04 08:20	<1	<1	2	0.68	0.24	8
2024-04-12 08:30	<1	<1	<2	0.73	0.13	8
2024-04-18 08:30	<1	<1	<2	0.69	0.14	8
2024-04-26 08:00	<1	<1	<2	0.7	0.13	9
2024-05-02 08:30	<1	<1	<2	0.7	0.12	9
2024-05-10 08:05	<1	<1	<2	0.72	0.19	9
2024-05-16 08:05	<1	<1	<2	0.73	0.15	10
2024-05-24 08:05	<1	<1	<2	0.73	0.11	11
2024-05-30 08:00	<1	<1	<2	0.59	0.12	10
2024-06-07 08:05	<1	<1	<2	0.7	0.15	11
2024-06-13 08:05	<1	<1	<2	0.67	0.16	11
2024-06-21 08:05	<1	<1	6	0.71	0.13	11
2024-06-27 08:30	<1	<1	<2	0.57	0.13	12
2024-07-05 08:05	<1	4	4	0.76	0.14	12
2024-07-11 08:05	<1	<1	<2	0.61	0.11	12
2024-07-25 08:30	<1	<1	6	0.69	0.09	13
2024-08-02 08:05	<1	<1	40	0.78	0.12	14
2024-08-07 13:00	<1	<1	24	0.7	0.13	15
2024-08-16 08:30	<1	<1	<2	0.68	0.11	17
2024-08-22 08:00	<1	<1	10	0.67	0.08	15
2024-08-30 08:30	<1	6	6	0.74	0.09	16
2024-09-05 08:30	<1	<1	<2	0.9	0.09	16
2024-09-13 08:05	<1	<1	10	0.58	0.08	17
2024-09-19 08:00	<1	<1	<2	0.85	0.1	17
2024-09-27 08:05	<1	<1	<2	0.8	0.1	16
2024-10-03 08:20	<1	<1	<2	0.59	0.12	16
2024-10-11 08:30	<1	<1	<2	0.63	0.13	15
2024-10-17 08:00	<1	<1	6	0.93	0.25	15
2024-10-25 08:00	<1	<1	20	0.69	0.2	12
2024-10-31 08:05	<1	<1	<2	0.74	0.14	12
2024-11-08 08:00	<1	<1	6	0.45	0.16	10
2024-11-14 08:00	<1	<1	2	0.55	0.14	10
2024-11-22 08:00	<1	<1	2	0.58	0.13	10
2024-11-28 08:00	<1	<1	6	0.6	0.11	10
2024-12-06 08:05	<1	<1	<2	0.5	0.21	9
2024-12-12 08:35	<1	84	<2	0.84	0.19	8
2024-12-20 08:05	<1	<1	NA	0.69	0.11	8
2024-12-23 08:00	<1	<1	NA	0.74	0.11	7

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Water Sampling | Type: GRAB | Station Number: RMD-249 | Address: 23000 block Dyke Road

Sampled Date	Total Coliform (CFU/1000 ml)	E. coli (CFU/1000 ml)	HPC (CFU/ml)	Chlorine Free (mg/l)	Turbidity (NTU)	Temperature (°C)
2024-01-05 10:25	<1	<1	2	0.43	0.19	10
2024-01-11 10:30	<1	<1	<2	0.69	0.23	6
2024-01-25 10:15	<1	<1	<2	0.7	0.19	8
2024-02-02 10:25	<1	<1	2	0.58	0.31	7
2024-02-08 10:30	<1	<1	<2	0.56	0.22	8
2024-02-16 10:25	<1	<1	<2	0.62	0.21	6
2024-02-22 10:25	<1	<1	2	0.69	0.19	7
2024-03-01 10:15	<1	<1	<2	0.63	0.14	7
2024-03-07 10:30	<1	<1	<2	0.62	0.2	6
2024-03-15 10:15	<1	<1	<2	0.71	0.19	7
2024-03-21 10:15	<1	<1	<2	0.72	0.25	11
2024-03-28 10:15	<1	<1	<2	0.44	0.2	7
2024-04-04 10:45	<1	<1	<2	0.7	0.17	8
2024-04-12 10:30	<1	<1	<2	0.63	0.17	9
2024-04-18 10:45	<1	<1	<2	0.65	0.11	9
2024-04-26 10:15	<1	<1	8	0.61	0.1	9
2024-05-02 10:45	<1	<1	4	0.67	0.12	10
2024-05-10 10:25	<1	<1	8	0.7	0.63	9
2024-05-16 10:25	<1	<1	12	0.71	0.15	13
2024-05-24 10:25	<1	<1	12	0.64	0.11	13
2024-05-30 10:15	<1	<1	24	0.68	0.11	10
2024-06-07 10:25	<1	<1	2	0.73	0.13	11
2024-06-13 10:15	<1	<1	<2	0.58	0.15	14
2024-06-21 10:25	<1	<1	<2	0.56	0.09	14
2024-06-27 10:30	<1	<1	4	0.5	0.11	15
2024-07-05 10:25	<1	<1	12	0.64	0.13	15
2024-07-11 10:25	<1	<1	12	0.56	0.1	16
2024-07-25 10:30	<1	<1	18	0.64	0.09	17
2024-08-02 10:25	<1	<1	<2	0.65	0.16	17
2024-08-07 15:05	<1	<1	12	0.63	0.1	17
2024-08-16 11:10	<1	<1	10	0.54	0.21	17
2024-08-22 10:15	<1	<1	12	0.48	0.16	17
2024-08-30 10:30	<1	<1	<2	0.4	0.15	16
2024-09-05 10:45	<1	<1	10	0.52	0.17	16
2024-09-13 10:25	<1	<1	<2	0.51	0.16	17
2024-09-19 10:15	<1	<1	22	0.43	0.17	17
2024-09-27 10:25	<1	<1	6	0.25	0.23	16
2024-10-03 10:50	<1	<1	<2	0.37	0.2	14
2024-10-11 10:45	<1	<1	4	0.35	0.22	15
2024-10-17 10:15	<1	<1	<2	0.35	0.29	12
2024-10-25 10:15	<1	<1	<2	0.51	0.17	13
2024-10-31 10:25	<1	<1	4	0.59	0.15	13
2024-11-08 10:15	<1	<1	4	0.35	0.77	11
2024-11-14 10:15	<1	<1	4	0.43	0.96	11
2024-11-22 10:15	<1	<1	LA	0.28	0.41	10
2024-11-28 10:15	<1	<1	8	0.55	0.27	9
2024-12-06 10:25	<1	<1	2	0.22	0.34	9
2024-12-12 11:00	<1	<1	<2	0.22	0.38	7
2024-12-20 10:25	<1	<1	NA	0.29	0.54	7
2024-12-23 10:15	<1	<1	NA	0.27	0.36	8

Water Sampling | Type: GRAB | Station Number: RMD-250 | Address: 6071 Azure Road

Sampled Date	Total Coliform (CFU/1000 ml)	E. coli (CFU/1000 ml)	HPC (CFU/ml)	Chlorine Free (mg/l)	Turbidity (NTU)	Temperature (C°)
2024-01-02 15:45	<1	<1	<2	0.62	0.24	8
2024-01-08 16:00	<1	<1	<2	0.58	0.12	7
2024-01-15 15:45	<1	<1	2	0.68	0.13	6
2024-01-22 15:45	<1	<1	<2	0.74	0.38	6
2024-01-29 15:45	<1	<1	4	0.72	0.2	7
2024-02-05 15:45	<1	<1	<2	0.65	0.17	8
2024-02-12 15:45	<1	<1	2	0.63	0.17	7
2024-02-20 15:45	<1	<1	<2	0.63	0.14	6
2024-02-26 15:45	<1	<1	<2	0.62	0.12	7
2024-03-04 15:45	<1	<1	<2	0.66	0.21	9
2024-03-11 15:45	<1	<1	<2	0.71	0.2	7
2024-03-18 15:45	<1	<1	2	0.72	0.27	7
2024-03-25 15:45	<1	<1	<2	0.51	0.27	7
2024-04-02 15:45	<1	<1	<2	0.76	0.13	8
2024-04-08 15:45	<1	<1	2	0.71	0.42	8
2024-04-15 15:45	<1	<1	<2	0.66	0.1	8
2024-04-22 15:45	<1	<1	2	0.57	0.2	9
2024-04-29 15:45	<1	<1	<2	0.65	0.11	9
2024-05-06 15:45	<1	<1	16	0.69	0.11	10
2024-05-13 15:45	<1	<1	<2	0.69	0.16	11
2024-05-21 15:45	<1	<1	<2	0.5	0.11	11
2024-05-27 15:45	<1	<1	2	0.82	0.09	11
2024-06-03 15:45	<1	<1	<2	0.63	0.09	12
2024-06-10 15:45	<1	<1	<2	0.62	0.11	11
2024-06-17 15:45	<1	<1	8	0.64	0.11	12
2024-06-24 15:45	<1	<1	4	0.68	0.11	13
2024-07-02 15:45	<1	<1	24	0.71	0.09	13
2024-07-08 15:45	<1	<1	2	0.76	0.11	14
2024-07-15 15:45	<1	<1	20	0.76	0.15	14
2024-07-22 15:45	<1	<1	16	0.71	0.14	14
2024-07-29 15:45	<1	<1	6	0.69	0.09	15
2024-08-07 15:45	<1	<1	16	0.75	0.1	16
2024-08-12 15:30	<1	<1	4	0.64	0.09	16
2024-08-19 15:45	<1	<1	<2	0.63	0.12	17
2024-08-26 15:45	<1	<1	<2	0.76	0.1	17
2024-09-03 15:45	<1	<1	4	0.5	0.15	16
2024-09-09 15:45	<1	<1	2	0.64	0.13	17
2024-09-16 15:45	<1	<1	<2	0.66	0.09	17
2024-09-23 15:45	<1	<1	2	0.77	0.18	17
2024-10-01 15:45	<1	<1	4	0.64	0.11	16
2024-10-07 15:45	<1	<1	2	0.69	0.13	16
2024-10-15 15:45	<1	<1	4	0.66	0.1	15
2024-10-21 15:45	<1	<1	2	0.69	0.11	14
2024-10-28 15:45	<1	<1	2	0.62	0.15	12
2024-11-04 15:45	<1	<1	<2	0.44	0.17	12
2024-11-12 15:45	<1	<1	2	0.59	0.14	11
2024-11-18 15:45	<1	<1	<2	0.63	0.1	10
2024-11-25 15:30	<1	<1	<2	0.69	0.29	8
2024-12-02 15:45	<1	<1	2	0.7	0.11	8
2024-12-09 15:45	<1	<1	<2	0.8	0.12	8
2024-12-16 15:45	<1	<1	2	0.67	0.12	7
2024-12-23 13:45	<1	<1	NA	0.79	0.1	7
2024-12-30 15:45	<1	<1	NA	0.8	0.08	7

PWT - 61

Water Sampling | Type: GRAB | Station Number: RMD-251 | Address: 5951 McCallan Road

Sampled Date	Total Coliform (CFU/1000 ml)	E. coli (CFU/1000 ml)	HPC (CFU/ml)	Chlorine Free (mg/l)	Turbidity (NTU)	Temperature (C°)
2024-01-02 12:30	<1	<1	2	0.62	0.17	8
2024-01-08 12:30	<1	<1	2	0.64	0.13	7
2024-01-15 12:30	<1	<1	<2	0.69	0.18	6
2024-01-22 12:30	<1	<1	<2	0.71	0.21	5
2024-01-29 12:30	<1	<1	6	0.73	0.14	7
2024-02-05 12:30	<1	<1	2	0.63	0.26	7
2024-02-12 12:30	<1	<1	<2	0.64	0.17	7
2024-02-20 12:30	<1	<1	<2	0.62	0.16	6
2024-02-26 12:30	<1	<1	<2	0.61	0.24	6
2024-03-04 12:30	<1	<1	<2	0.64	0.45	7
2024-03-11 12:30	<1	<1	<2	0.98	0.16	6
2024-03-18 12:30	<1	<1	<2	0.62	0.2	7
2024-03-25 12:30	<1	<1	<2	0.66	0.22	6
2024-04-02 12:30	<1	<1	<2	0.62	0.21	7
2024-04-08 12:30	<1	<1	2	0.72	0.18	7
2024-04-15 12:30	<1	<1	<2	0.72	0.11	7
2024-04-22 12:30	<1	<1	2	0.68	0.25	9
2024-04-29 12:30	<1	<1	2	0.68	0.12	8
2024-05-06 12:30	<1	<1	2	0.7	0.11	9
2024-05-13 12:30	<1	<1	<2	0.73	0.15	10
2024-05-21 12:30	<1	<1	4	0.56	0.1	10
2024-05-27 12:30	<1	<1	<2	0.81	0.09	11
2024-06-03 12:30	<1	<1	<2	0.64	0.13	10
2024-06-10 12:30	<1	<1	2	0.68	0.11	10
2024-06-17 12:30	<1	<1	6	0.62	0.1	11
2024-06-24 12:30	<1	<1	2	0.66	0.11	12
2024-07-02 12:30	<1	<1	<2	0.71	0.12	11
2024-07-08 12:30	<1	<1	<2	0.7	0.12	12
2024-07-15 12:30	<1	<1	<2	0.74	0.13	12
2024-07-22 12:30	<1	<1	<2	0.73	0.11	13
2024-07-29 12:30	<1	<1	2	0.72	0.09	13
2024-08-07 12:30	<1	<1	<2	0.69	0.1	14
2024-08-12 12:00	<1	<1	<2	0.65	0.09	15
2024-08-19 12:30	<1	<1	<2	0.67	0.1	16
2024-08-26 12:30	<1	<1	2	0.74	0.08	16
2024-09-03 12:30	<1	<1	<2	0.64	0.09	16
2024-09-09 12:30	<1	<1	6	0.68	0.12	16
2024-09-16 12:30	<1	<1	2	0.72	0.11	17
2024-09-23 12:30	<1	<1	2	0.77	0.11	16
2024-10-01 12:30	<1	<1	4	0.65	0.11	16
2024-10-07 12:30	<1	<1	<2	0.68	0.12	15
2024-10-15 12:30	<1	<1	<2	0.76	0.11	15
2024-10-21 12:30	<1	<1	2	0.64	0.11	13
2024-10-28 12:30	<1	<1	<2	0.61	0.19	11
2024-11-04 12:30	<1	<1	<2	0.59	0.15	11
2024-11-12 12:30	<1	<1	4	0.55	0.17	10
2024-11-18 12:30	<1	<1	<2	0.53	0.12	9
2024-11-25 12:00	<1	<1	<2	0.64	0.53	8
2024-12-02 12:30	<1	<1	<2	0.75	0.29	7
2024-12-09 12:30	<1	<1	<2	0.83	0.15	9
2024-12-16 12:30	<1	<1	2	0.6	0.28	6
2024-12-23 12:30	<1	<1	NA	0.73	0.11	7
2024-12-30 12:30	<1	<1	NA	0.79	0.09	7

Water Sampling | Type: GRAB | Station Number: RMD-252 | Address: 9751 Pendleton Road

Sampled Date	Total Coliform (CFU/1000 ml)	E. coli (CFU/1000 ml)	HPC (CFU/ml)	Chlorine Free (mg/l)	Turbidity (NTU)	Temperature (C°)
2024-01-02 13:00	<1	<1	<2	0.56	0.23	8
2024-01-08 13:10	<1	<1	<2	0.58	0.13	8
2024-01-15 13:00	<1	<1	<2	0.64	0.14	7
2024-01-22 13:00	<1	<1	<2	0.71	0.33	5
2024-01-29 13:00	<1	<1	<2	0.72	0.2	7
2024-02-05 13:00	<1	<1	<2	0.66	0.18	8
2024-02-12 13:00	<1	<1	<2	0.62	0.28	7
2024-02-20 13:00	<1	<1	<2	0.62	0.13	7
2024-02-26 13:00	<1	<1	<2	0.62	0.11	7
2024-03-04 13:00	<1	<1	<2	0.62	0.28	8
2024-03-11 13:00	<1	<1	<2	0.71	0.49	7
2024-03-18 13:00	<1	<1	<2	0.71	0.17	7
2024-03-25 13:00	<1	<1	<2	0.52	0.15	7
2024-04-02 13:00	<1	<1	<2	0.67	0.2	8
2024-04-08 13:00	<1	<1	<2	0.66	0.27	8
2024-04-15 13:00	<1	<1	<2	0.89	0.1	8
2024-04-22 13:00	<1	<1	<2	0.62	0.15	10
2024-04-29 13:00	<1	<1	<2	0.64	0.13	9
2024-05-06 13:00	<1	<1	<2	0.57	0.11	10
2024-05-13 13:00	<1	<1	2	0.61	0.13	11
2024-05-21 13:00	<1	<1	<2	0.58	0.11	11
2024-05-27 13:00	<1	<1	<2	0.74	0.08	12
2024-06-03 13:00	<1	<1	2	0.52	0.09	12
2024-06-10 13:00	<1	<1	<2	0.65	0.14	12
2024-06-17 13:00	<1	<1	6	0.61	0.16	12
2024-06-24 13:00	<1	<1	6	0.62	0.1	14
2024-07-02 13:00	<1	<1	4	0.63	0.1	13
2024-07-08 13:00	<1	<1	2	0.67	0.1	13
2024-07-15 13:00	<1	<1	<2	0.68	0.16	14
2024-07-22 13:00	<1	<1	4	0.63	0.23	14
2024-07-29 13:00	<1	<1	<2	0.84	3	15
2024-08-07 13:00	<1	<1	6	0.62	0.1	15
2024-08-12 13:00	<1	<1	2	0.58	0.11	15
2024-08-19 13:00	<1	<1	<2	0.56	0.07	17
2024-08-26 13:00	<1	<1	<2	0.68	0.08	16
2024-09-03 13:00	<1	<1	4	0.52	0.09	16
2024-09-09 13:00	<1	<1	60	0.57	0.09	17
2024-09-16 13:00	<1	<1	<2	0.6	0.11	17
2024-09-23 13:00	<1	<1	8	0.74	0.14	17
2024-10-01 13:00	<1	<1	6	0.55	0.11	16
2024-10-07 13:00	<1	<1	<2	0.64	0.12	16
2024-10-15 13:00	<1	<1	4	0.63	0.1	15
2024-10-21 13:00	<1	<1	6	0.65	0.11	14
2024-10-28 13:00	<1	<1	<2	0.56	0.14	12
2024-11-04 13:00	<1	<1	<2	0.49	0.17	12
2024-11-12 13:00	<1	<1	<2	0.5	0.16	12
2024-11-18 13:00	<1	<1	<2	0.56	0.11	11
2024-11-25 13:00	<1	<1	<2	0.85	0.13	10
2024-12-02 13:00	<1	<1	<2	0.63	0.14	10
2024-12-09 13:00	<1	<1	2	0.8	0.12	8
2024-12-16 13:00	<1	<1	<2	0.76	0.1	8
2024-12-23 13:00	<1	<1	NA	0.64	0.1	9
2024-12-30 13:00	<1	<1	NA	0.66	0.08	8

PWT - 62

Water Sampling | Type: GRAB | Station Number: RMD-253 | Address: 11051 No. 3 Road

Sampled Date	Total Coliform (CFU/1000 ml)	E. coli (CFU/1000 ml)	HPC (CFU/ml)	Chlorine Free (mg/l)	Turbidity (NTU)	Temperature (C°)
2024-01-02 13:30	<1	<1	<2	0.65	0.12	8
2024-01-08 13:45	<1	<1	<2	0.63	0.12	7
2024-01-15 13:30	<1	<1	<2	0.72	0.12	6
2024-01-22 13:30	<1	<1	<2	0.71	0.13	5
2024-01-29 13:30	<1	<1	<2	0.71	0.23	6
2024-02-05 13:30	<1	<1	<2	0.75	0.29	8
2024-02-12 13:30	<1	<1	<2	0.8	0.19	7
2024-02-20 13:30	<1	<1	<2	0.71	0.16	6
2024-02-26 13:30	<1	<1	<2	0.62	0.14	6
2024-03-04 13:30	<1	<1	<2	0.66	0.18	6
2024-03-11 13:30	<1	<1	<2	0.81	0.25	7
2024-03-18 13:30	<1	<1	<2	0.63	0.16	6
2024-03-25 13:30	<1	<1	<2	0.56	0.2	6
2024-04-02 13:40	<1	<1	<2	0.48	0.58	7
2024-04-08 13:30	<1	<1	<2	0.78	0.2	7
2024-04-15 13:30	<1	<1	<2	0.71	0.16	7
2024-04-22 13:30	<1	<1	<2	0.91	0.17	9
2024-04-29 13:30	<1	<1	2	0.67	0.16	8
2024-05-06 13:30	<1	<1	<2	0.74	0.59	10
2024-05-13 13:30	<1	<1	<2	0.66	0.15	9
2024-05-21 13:30	<1	<1	<2	0.51	0.12	10
2024-05-27 13:30	<1	<1	<2	0.75	0.11	11
2024-06-03 13:30	<1	<1	<2	0.63	0.11	10
2024-06-10 13:30	<1	<1	<2	0.79	0.12	12
2024-06-17 13:30	<1	<1	<2	0.54	0.12	11
2024-06-24 13:30	<1	<1	<2	0.69	0.14	11
2024-07-02 13:30	<1	<1	<2	0.61	0.14	12
2024-07-08 13:30	<1	<1	<2	0.83	0.17	11
2024-07-15 13:30	<1	<1	<2	0.77	0.13	12
2024-07-22 13:30	<1	<1	<2	0.7	0.16	13
2024-07-29 13:30	<1	<1	<2	0.79	0.12	13
2024-08-07 13:30	<1	<1	<2	0.65	0.1	14
2024-08-12 13:00	<1	<1	38	0.62	0.11	15
2024-08-19 13:30	<1	<1	2	0.53	0.11	16
2024-08-26 13:30	<1	<1	<2	0.76	0.11	16
2024-09-03 13:30	<1	<1	<2	0.6	0.17	16
2024-09-09 13:30	<1	<1	6	0.62	0.13	16
2024-09-16 13:30	<1	<1	<2	0.71	0.11	16
2024-09-23 13:30	<1	<1	<2	0.83	0.25	16
2024-10-01 13:30	<1	<1	2	0.69	0.12	16
2024-10-07 13:30	<1	<1	2	0.71	0.16	16
2024-10-15 13:30	<1	<1	4	0.78	0.11	15
2024-10-21 13:30	<1	<1	<2	0.74	0.17	15
2024-10-28 13:30	<1	<1	2	0.62	0.18	12
2024-11-04 13:30	<1	<1	<2	0.61	0.17	12
2024-11-12 13:30	<1	<1	<2	0.69	0.13	10
2024-11-18 13:30	<1	<1	<2	0.57	0.11	10
2024-11-25 13:20	<1	<1	2	0.61	0.22	10
2024-12-02 13:30	<1	<1	<2	0.63	0.17	7
2024-12-09 13:30	<1	<1	<2	0.91	0.13	7
2024-12-16 13:30	<1	<1	<2	0.62	0.13	7
2024-12-23 13:30	<1	<1	NA	0.78	0.12	7
2024-12-30 13:30	<1	<1	NA	0.78	0.1	7

Water Sampling | Type: GRAB | Station Number: RMD-254 | Address: 5300 No. 3 Road

Sampled Date	Total Coliform (CFU/1000 ml)	E. coli (CFU/1000 ml)	HPC (CFU/ml)	Chlorine Free (mg/l)	Turbidity (NTU)	Temperature (°C)
2024-01-02 14:30	<1	<1	<2	0.6	0.22	8
2024-01-08 14:45	<1	<1	2	0.59	0.2	7
2024-01-15 14:30	<1	<1	<2	0.69	0.15	7
2024-01-22 14:30	<1	<1	<2	0.7	0.2	5
2024-01-29 14:30	<1	2	2	0.76	0.23	6
2024-02-05 14:30	<1	<1	<2	0.69	0.17	8
2024-02-12 14:30	<1	<1	<2	0.61	0.26	7
2024-02-20 14:30	<1	<1	2	0.66	0.14	7
2024-02-26 14:25	<1	<1	<2	0.69	0.14	7
2024-03-04 14:25	<1	<1	2	0.65	0.2	7
2024-03-11 14:30	<1	<1	<2	0.74	0.26	7
2024-03-18 14:30	<1	<1	<2	0.76	0.44	6
2024-03-25 14:25	<1	<1	<2	0.5	0.14	7
2024-04-02 14:30	<1	<1	2	0.65	2.2	7
2024-04-08 14:25	<1	<1	<2	0.69	0.14	8
2024-04-15 14:30	<1	<1	2	0.62	0.11	8
2024-04-22 14:25	<1	<1	<2	0.62	0.12	9
2024-04-29 14:25	<1	<1	<2	0.66	0.11	10
2024-05-06 14:30	<1	<1	<2	0.78	0.52	10
2024-05-13 14:30	<1	<1	<2	0.6	0.14	10
2024-05-21 14:25	<1	<1	<2	0.54	0.11	10
2024-05-27 14:30	<1	<1	<2	0.81	0.09	10
2024-06-03 14:25	<1	<1	<2	0.56	0.1	12
2024-06-10 14:30	<1	<1	<2	0.65	0.1	11
2024-06-17 14:30	<1	<1	<2	0.58	0.12	12
2024-06-24 14:25	<1	<1	<2	0.7	0.12	13
2024-07-02 14:30	<1	<1	<2	0.73	0.09	13
2024-07-08 14:30	<1	2	2	0.78	0.12	12
2024-07-15 14:30	<1	<1	<2	0.78	0.15	14
2024-07-22 14:30	<1	<1	6	0.72	0.14	14
2024-07-29 14:30	<1	<1	2	0.63	0.11	15
2024-08-07 14:30	<1	<1	14	0.7	0.09	13
2024-08-12 14:00	<1	2	2	0.61	0.09	14
2024-08-19 14:25	<1	<1	10	0.63	0.19	18
2024-08-26 14:30	<1	<1	6	0.78	0.08	16
2024-09-03 14:25	<1	<1	6	0.56	0.08	17
2024-09-09 14:20	<1	<1	2	0.66	0.11	17
2024-09-16 14:30	<1	<1	4	0.68	0.11	15
2024-09-23 14:30	<1	<1	6	0.78	0.17	17
2024-10-01 14:30	<1	<1	<2	0.67	0.1	16
2024-10-07 14:30	<1	<1	<2	0.68	0.11	16
2024-10-15 14:30	<1	<1	<2	0.65	0.12	15
2024-10-21 14:25	<1	<1	<2	0.73	0.11	14
2024-10-28 14:30	<1	<1	<2	0.55	0.13	12
2024-11-04 14:30	<1	<1	<2	0.58	0.14	12
2024-11-12 14:30	<1	<1	<2	0.59	0.14	11
2024-11-18 14:30	<1	<1	<2	0.63	0.12	10
2024-11-25 14:10	<1	<1	<2	0.62	0.14	9
2024-12-02 14:30	<1	<1	4	0.68	0.12	9
2024-12-09 14:30	<1	<1	<2	1.04	0.14	9
2024-12-16 14:25	<1	<1	<2	0.79	0.2	8
2024-12-23 14:30	<1	<1	NA	0.82	0.1	7
2024-12-30 14:30	<1	<1	NA	0.78	0.09	7

PWT - 63

Water Sampling | Type: GRAB | Station Number: RMD-255 | Address: 6000 block Miller Road

Sampled Date	Total Coliform (CFU/1000 ml)	E. coli (CFU/1000 ml)	HPC (CFU/ml)	Chlorine Free (mg/l)	Turbidity (NTU)	Temperature (°C)
2024-01-02 15:00	<1	<1	<2	0.76	0.21	8
2024-01-08 15:15	<1	<1	<2	0.67	0.18	7
2024-01-15 15:00	<1	<1	<2	0.76	0.15	6
2024-01-22 15:00	<1	<1	<2	0.73	0.24	5
2024-01-29 15:00	<1	<1	<2	0.83	0.22	6
2024-02-05 15:00	<1	<1	<2	0.73	0.28	8
2024-02-12 15:00	<1	<1	<2	0.87	0.29	7
2024-02-20 15:00	<1	<1	<2	0.73	0.28	5
2024-02-26 14:55	<1	<1	<2	0.74	0.15	6
2024-03-04 14:55	<1	<1	4	0.71	0.25	6
2024-03-11 15:00	<1	<1	2	0.85	0.2	6
2024-03-18 15:00	<1	<1	<2	0.78	0.22	6
2024-03-25 14:55	<1	<1	<2	0.71	0.46	6
2024-04-02 15:00	<1	<1	<2	0.69	0.54	6
2024-04-08 14:55	<1	<1	2	0.68	1	7
2024-04-15 15:00	<1	<1	2	0.6	0.21	7
2024-04-22 14:55	<1	<1	<2	0.6	0.18	8
2024-04-29 14:55	<1	<1	<2	0.73	0.18	8
2024-05-06 15:00	<1	<1	<2	0.77	0.42	9
2024-05-13 15:00	<1	<1	<2	0.87	0.28	9
2024-05-21 14:55	<1	<1	<2	0.61	0.33	11
2024-05-27 15:00	<1	<1	<2	0.8	0.16	10
2024-06-03 14:55	<1	<1	<2	0.59	0.13	13
2024-06-10 15:00	<1	<1	<2	0.72	0.3	10
2024-06-17 15:00	<1	<1	<2	0.84	0.24	10
2024-06-24 14:55	<1	<1	<2	0.79	0.23	11
2024-07-02 15:00	<1	<1	4	0.94	0.19	12
2024-07-08 15:00	<1	<1	<2	0.93	0.23	11
2024-07-15 15:00	<1	<1	2	0.82	0.23	11
2024-07-22 15:00	<1	<1	2	0.78	0.26	12
2024-07-29 15:00	<1	<1	8	0.89	0.17	12
2024-08-07 15:00	<1	<1	<2	0.79	0.16	13
2024-08-12 15:10	<1	<1	<2	0.68	0.17	14
2024-08-19 14:55	2	<1	6	0.61	0.26	15
2024-08-26 15:00	<1	<1	4	0.87	0.14	15
2024-09-03 14:55	<1	<1	<2	0.64	0.25	16
2024-09-09 14:55	<1	<1	6	0.79	0.14	16
2024-09-16 15:00	<1	<1	<2	0.96	0.13	15
2024-09-23 15:00	<1	<1	<2	0.9	0.24	16
2024-10-01 15:00	<1	<1	<2	0.84	0.21	16
2024-10-07 15:00	<1	<1	4	0.93	0.18	15
2024-10-15 15:00	<1	<1	<2	0.88	0.22	15
2024-10-21 14:55	<1	<1	<2	0.84	0.3	14
2024-10-28 15:00	<1	<1	4	0.62	0.28	11
2024-11-04 15:00	<1	<1	2	0.59	0.24	10
2024-11-12 15:00	<1	<1	2	0.69	0.22	10
2024-11-18 15:00	<1	<1	<2	0.73	0.29	9
2024-11-25 14:40	<1	<1	<2	0.84	0.23	8
2024-12-02 15:00	<1	<1	<2	0.77	0.28	9
2024-12-09 15:00	<1	<1	2	1.35	0.27	8
2024-12-16 14:55	<1	<1	<2	0.91	0.49	6
2024-12-23 15:00	<1	<1	NA	0.84	0.46	6
2024-12-30 15:00	<1	<1	NA	0.79	0.35	6

Water Sampling | Type: GRAB | Station Number: RMD-256 | Address: 1000 block McDonald Road

Sampled Date	Total Coliform (CFU/1000 ml)	E. coli (CFU/1000 ml)	HPC (CFU/ml)	Chlorine Free (mg/l)	Turbidity (NTU)	Temperature (°C)
2024-01-02 14:45	<1	<1	<2	0.65	0.16	9
2024-01-08 15:00	<1	<1	<2	0.65	0.15	7
2024-01-15 14:45	<1	<1	2	0.63	0.12	6
2024-01-22 14:45	<1	<1	<2	0.71	0.15	5
2024-01-29 14:45	<1	<1	<2	0.68	0.49	7
2024-02-05 14:45	<1	2	2	0.64	0.19	9
2024-02-12 14:45	<1	<1	<2	0.58	0.19	7
2024-02-20 14:45	<1	<1	<2	0.52	0.14	6
2024-02-26 14:40	<1	<1	<2	0.56	0.17	7
2024-03-04 14:40	<1	<1	<2	0.61	0.17	7
2024-03-11 14:45	<1	<1	<2	0.69	0.12	7
2024-03-18 14:45	<1	<1	<2	0.67	0.3	7
2024-03-25 14:40	<1	<1	<2	0.62	0.14	8
2024-04-02 14:45	<1	<1	<2	0.55	0.13	9
2024-04-08 14:40	<1	<1	2	0.66	0.36	8
2024-04-15 14:45	<1	<1	<2	0.5	0.09	9
2024-04-22 14:40	<1	<1	<2	0.71	0.16	9
2024-04-29 14:40	<1	<1	<2	0.54	0.14	10
2024-05-06 14:45	<1	<1	<2	0.58	0.12	11
2024-05-13 14:45	<1	<1	2	0.53	0.12	12
2024-05-21 14:40	<1	2	1	0.48	0.11	14
2024-05-27 14:45	<1	<1	<2	0.65	0.08	13
2024-06-03 14:40	<1	<1	4	0.75	0.09	13
2024-06-10 14:45	<1	<1	<2	0.69	0.13	11
2024-06-17 14:45	<1	<1	<2	0.6	0.12	14
2024-06-24 14:40	<1	<1	<2	0.6	0.1	15
2024-07-02 14:45	<1	<1	2	0.49	0.09	17
2024-07-08 14:45	<1	<1	<2	0.63	0.13	16
2024-07-15 14:45	<1	<1	4	0.66	0.14	16
2024-07-22 14:45	<1	<1	<2	0.58	0.12	17
2024-07-29 14:45	<1	<1	2	0.66	0.1	17
2024-08-07 14:45	<1	<1	32	0.56	0.11	19
2024-08-12 14:50	<1	2	2	0.61	0.11	19
2024-08-19 14:40	<1	<1	<2	0.64	0.1	20
2024-08-26 14:45	<1	<1	<2	0.6	0.08	18
2024-09-03 14:40	<1	<1	130	0.5	0.12	18
2024-09-09 14:40	<1	<1	6	0.59	0.12	19
2024-09-16 14:45	<1	<1	10	0.53	0.11	17
2024-09-23 14:45	<1	<1	30	0.55	0.16	18
2024-10-01 14:45	<1	<1	230	0.53	0.09	17
2024-10-07 14:45	<1	<1	10	0.57	0.11	16
2024-10-15 14:45	<1	<1	480	0.62	0.11	16
2024-10-21 14:40	<1	<1	220	0.52	0.16	15
2024-10-28 14:45	<1	<1	30	0.38	0.12	13
2024-11-04 14:45	<1	<1	4	0.44	0.15	13
2024-11-12 14:45	<1	<1	120	0.56	0.13	12
2024-11-18 14:45	<1	<1	92	0.45	0.1	11
2024-11-25 14:25	<1	<1	38	0.53	0.13	10
2024-12-02 14:45	<1	<1	8	0.65	0.16	9
2024-12-09 14:45	<1	<1	<2	0.65	0.1	8
2024-12-16 14:40	<1	<1	<2	0.63	0.13	8
2024-12-23 14:45	<1	<1	NA	0.62	0.12	8
2024-12-30 14:45	<1	<1	NA	0.59	0.21	8

PWT - 64

Water Sampling | Type: GRAB | Station Number: RMD-257 | Address: 6640 Blundell Road

Sampled Date	Total Coliform (CFU/1000 ml)	E. coli (CFU/1000 ml)	HPC (CFU/ml)	Chlorine Free (mg/l)	Turbidity (NTU)	Temperature (°C)
2024-01-03 15:40	<1	<1	2	0.72	0.23	7
2024-01-10 15:45	<1	<1	<2	0.63	0.17	8
2024-01-24 15:45	<1	<1	6	0.74	0.17	5
2024-01-31 15:45	<1	<1	<2	0.72	0.11	8
2024-02-07 15:45	<1	<1	<2	0.69	0.14	6
2024-02-14 15:45	<1	<1	<2	0.65	0.14	7
2024-02-21 15:45	<1	<1	4	0.64	0.13	6
2024-02-28 15:45	<1	<1	<2	0.63	0.13	6
2024-03-06 15:45	<1	<1	<2	0.64	0.18	8
2024-03-20 15:45	<1	<1	<2	0.74	0.22	7
2024-03-27 15:45	<1	<1	<2	0.85	0.15	7
2024-04-10 15:50	210	<1	4	0.71	0.15	7
2024-04-17 15:55	<1	<1	<2	0.65	0.14	8
2024-04-24 15:45	<1	<1	<2	0.63	0.11	8
2024-05-01 16:00	<1	<1	<2	0.7	0.13	8
2024-05-08 15:45	<1	<1	2	0.77	0.15	9
2024-05-15 15:45	<1	<1	<2	0.79	0.18	10
2024-05-22 15:45	<1	<1	<2	0.67	0.11	10
2024-05-29 15:45	<1	<1	<2	0.66	0.12	10
2024-06-05 15:45	<1	<1	<2	0.73	0.12	10
2024-06-12 15:45	<1	<1	<2	0.71	0.12	10
2024-06-19 15:45	<1	<1	<2	0.71	0.1	11
2024-06-26 15:45	<1	<1	2	0.64	0.11	11
2024-07-03 15:45	<1	<1	<2	0.71	0.11	11
2024-07-10 15:45	<1	<1	<2	0.72	0.15	12
2024-07-17 15:45	<1	<1	4	0.74	0.15	12
2024-07-24 09:30	<1	<1	<2	0.75	0.26	12
2024-07-31 16:00	<1	<1	2	0.73	0.2	13
2024-08-07 16:00	<1	<1	<2	0.73	0.1	15
2024-08-14 15:45	<1	<1	<2	0.72	0.09	16
2024-08-21 15:45	<1	<1	<2	0.74	0.1	15
2024-08-28 15:45	<1	<1	4	0.75	0.11	16
2024-09-04 15:45	<1	<1	<2	0.79	0.11	16
2024-09-11 15:45	<1	<1	2	0.65	0.09	17
2024-09-18 15:45	<1	<1	2	0.65	0.1	16
2024-09-25 15:45	<1	<1	<2	0.81	0.11	16
2024-10-02 15:45	<1	<1	<2	0.69	0.1	15
2024-10-09 15:45	<1	<1	<2	0.69	0.1	15
2024-10-16 15:45	<1	<1	14	0.83	0.1	15
2024-10-23 15:45	<1	<1	2	0.79	0.15	12
2024-10-30 15:45	<1	<1	<2	0.55	0.13	12
2024-11-07 15:45	<1	<1	<2	0.59	0.13	11
2024-11-13 15:45	<1	<1	<2	0.68	0.12	10
2024-11-20 15:45	<1	<1	<2	0.65	0.11	10
2024-11-27 15:45	<1	<1	<2	0.67	0.15	10
2024-12-04 15:45	<1	<1	<2	0.77	0.26	7
2024-12-11 15:40	<1	<1	<2	0.76	0.32	8
2024-12-18 15:45	<1	<1	<2	0.81	0.11	7
2024-12-23 15:45	<1	<1	NA	0.83	0.11	8
2024-12-31 11:30	<1	<1	NA	0.72	0.11	7

Water Sampling | Type: GRAB | Station Number: RMD-258 | Address: 7000 block Dyke Road

Sampled Date	Total Coliform (CFU/1000 ml)	E. coli (CFU/1000 ml)	HPC (CFU/ml)	Chlorine Free (mg/l)	Turbidity (NTU)	Temperature (°C)
2024-01-03 15:15	<1	<1	<2	0.71	0.21	8
2024-01-10 15:30	<1	<1	2	0.51	0.35	8
2024-01-24 15:25	<1	<1	<2	0.69	0.19	5
2024-01-31 15:30	<1	<1	<2	0.77	0.15	8
2024-02-07 15:25	<1	<1	<2	0.75	0.12	6
2024-02-14 15:30	<1	<1	<2	0.69	0.26	8
2024-02-21 15:25	<1	<1	<2	0.66	0.18	6
2024-02-28 15:25	<1	<1	<2	0.67	0.1	7
2024-03-06 15:25	<1	<1	<2	0.7	0.16	8
2024-03-20 15:25	<1	<1	<2	0.8	0.2	7
2024-03-27 15:30	<1	<1	<2	0.58	0.13	8
2024-04-10 15:30	<1	<1	<2	0.73	0.14	8
2024-04-17 15:40	<1	<1	<2	0.53	0.11	9
2024-04-24 15:25	<1	<1	<2	0.66	0.1	9
2024-05-01 15:40	<1	<1	2	0.67	0.12	9
2024-05-08 15:25	<1	<1	<2	0.68	0.1	10
2024-05-15 15:25	<1	<1	2	0.85	0.12	11
2024-05-22 15:25	<1	<1	<2	0.66	0.12	11
2024-05-29 15:25	<1	<1	4	0.57	0.13	11
2024-06-05 15:25	<1	<1	<2	0.68	0.11	11
2024-06-12 15:25	<1	<1	<2	0.76	0.14	12
2024-06-19 15:25	<1	<1	<2	0.66	0.13	11
2024-06-26 15:25	<1	<1	<2	0.64	0.17	13
2024-07-03 15:25	<1	<1	<2	0.65	0.1	14
2024-07-10 15:30	<1	<1	<2	0.56	0.13	16
2024-07-17 15:25	<1	<1	8	0.72	0.12	15
2024-07-24 10:20	<1	<1	8	0.73	0.14	15
2024-07-31 15:45	<1	<1	<2	0.66	0.07	15
2024-08-07 15:40	<1	<1	<2	0.74	0.1	15
2024-08-14 15:30	<1	<1	2	0.66	0.08	17
2024-08-21 15:30	<1	<1	2	0.59	0.08	17
2024-08-28 15:25	<1	<1	2	0.7	0.09	16
2024-09-04 15:25	<1	<1	8	0.68	0.08	17
2024-09-11 15:25	<1	<1	<2	0.64	0.08	17
2024-09-18 15:30	<1	<1	2	0.71	0.1	16
2024-09-25 15:25	<1	<1	2	0.76	0.13	17
2024-10-02 15:25	<1	<1	<2	0.63	0.11	16
2024-10-09 15:25	<1	<1	2	0.5	0.12	16
2024-10-16 15:30	<1	<1	<2	0.6	0.11	16
2024-10-23 15:25	<1	<1	<2	0.69	0.12	14
2024-10-30 15:25	<1	<1	2	0.5	0.14	11
2024-11-07 15:30	<1	<1	2	0.61	0.13	10
2024-11-13 15:30	<1	<1	<2	0.6	0.1	11
2024-11-20 15:30	<1	<1	<2	0.75	0.15	10
2024-11-27 15:30	<1	<1	2	0.57	0.14	10
2024-12-04 15:30	<1	<1	<2	0.79	0.17	8
2024-12-11 15:20	<1	<1	<2	0.91	0.15	8
2024-12-18 15:25	<1	<1	<2	0.73	0.09	8
2024-12-23 15:30	<1	<1	NA	0.76	0.2	7
2024-12-31 11:15	<1	<1	NA	0.74	0.09	7

PWT - 65

Water Sampling | Type: GRAB | Station Number: RMD-259 | Address: 10020 Amethyst Avenue

Sampled Date	Total Coliform (CFU/1000 ml)	E. coli (CFU/1000 ml)	HPC (CFU/ml)	Chlorine Free (mg/l)	Turbidity (NTU)	Temperature (°C)
2024-01-03 14:25	<1	<1	<2	0.66	0.19	8
2024-01-10 14:40	<1	<1	<2	0.6	0.17	8
2024-01-24 14:40	<1	<1	<2	0.7	0.21	6
2024-01-31 14:40	<1	<1	<2	0.7	0.16	8
2024-02-07 14:40	<1	<1	<2	0.61	0.14	7
2024-02-14 14:45	<1	<1	2	0.69	0.22	8
2024-02-21 14:40	<1	<1	4	0.64	0.12	6
2024-02-28 14:40	<1	<1	<2	0.64	0.27	7
2024-03-06 14:40	<1	<1	<2	0.61	0.16	7
2024-03-20 14:40	<1	<1	<2	0.71	0.27	7
2024-03-27 14:45	<1	<1	<2	0.57	0.13	9
2024-04-10 14:45	<1	<1	<2	0.72	0.13	8
2024-04-17 14:55	<1	<1	<2	0.7	0.12	9
2024-04-24 14:40	<1	<1	<2	0.67	0.09	10
2024-05-01 14:55	<1	<1	4	0.66	0.14	9
2024-05-08 14:40	<1	<1	<2	0.64	0.11	10
2024-05-15 14:40	<1	<1	<2	0.74	0.12	11
2024-05-22 14:40	<1	<1	<2	0.56	0.12	12
2024-05-29 14:40	<1	<1	2	0.53	0.1	12
2024-06-05 14:40	<1	<1	<2	0.71	0.12	11
2024-06-12 14:40	<1	<1	<2	0.69	0.12	13
2024-06-19 14:40	<1	<1	<2	0.65	0.11	13
2024-06-26 14:40	<1	<1	4	0.65	0.1	14
2024-07-03 14:40	<1	<1	16	0.58	0.1	15
2024-07-10 14:40	<1	<1	18	0.59	0.12	13
2024-07-17 14:40	<1	<1	46	0.73	0.1	14
2024-07-24 10:45	<1	<1	60	0.69	0.12	14
2024-07-31 15:00	<1	<1	68	0.63	0.1	16
2024-08-07 14:50	<1	<1	50	0.65	0.11	14
2024-08-14 14:40	<1	<1	64	0.66	0.08	18
2024-08-21 14:40	<1	<1	84	0.63	0.08	17
2024-08-28 14:40	<1	<1	34	0.65	0.1	17
2024-09-04 14:40	<1	<1	24	0.64	0.08	17
2024-09-11 14:40	<1	<1	44	0.77	0.11	18
2024-09-18 14:40	<1	<1	16	0.58	0.09	15
2024-09-25 14:40	<1	<1	<2	0.75	0.09	17
2024-10-02 14:40	<1	<1	16	0.52	0.1	16
2024-10-09 14:40	<1	<1	10	0.69	0.28	15
2024-10-16 14:40	<1	<1	10	0.71	0.17	16
2024-10-23 14:40	<1	<1	<2	0.72	0.14	14
2024-10-30 14:40	<1	<1	6	0.5	0.13	11
2024-11-07 14:40	<1	<1	2	0.52	0.13	12
2024-11-13 14:40	<1	<1	6	0.72	0.13	11
2024-11-20 14:40	<1	<1	<2	0.6	0.11	10
2024-11-27 14:40	<1	<1	12	0.69	0.16	10
2024-12-04 14:40	<1	<1	<2	0.67	0.17	9
2024-12-11 14:40	<1	<1	<2	0.84	0.18	8
2024-12-18 14:40	<1	<1	<2	0.8	0.1	8
2024-12-23 14:40	<1	<1	NA	0.74	0.1	8
2024-12-31 10:30	<1	<1	NA	0.62	0.1	8

Water Sampling | Type: GRAB | Station Number: RMD-260 | Address: 11111 Horseshoe Way

Sampled Date	Total Coliform (CFU/1000 ml)	E. coli (CFU/1000 ml)	HPC (CFU/ml)	Chlorine Free (mg/l)	Turbidity (NTU)	Temperature (°C)
2024-01-03 14:10	<1	<1	2	0.74	0.29	7
2024-01-10 14:25	<1	<1	4	0.67	0.17	8
2024-01-24 14:25	<1	<1	<2	0.71	0.16	5
2024-01-31 14:25	<1	<1	<2	0.81	0.21	7
2024-02-07 14:25	<1	<1	<2	0.69	0.18	6
2024-02-14 14:30	<1	<1	<2	0.64	0.15	8
2024-02-21 14:25	<1	<1	2	0.75	0.21	6
2024-02-28 14:25	<1	<1	<2	0.64	0.15	6
2024-03-06 14:25	<1	<1	<2	0.7	0.17	6
2024-03-20 14:25	<1	<1	<2	0.74	0.24	6
2024-03-27 14:30	<1	<1	<2	0.63	0.14	7
2024-04-10 14:25	<1	<1	2	0.69	0.18	7
2024-04-17 14:40	<1	<1	<2	0.74	0.16	7
2024-04-24 14:25	<1	<1	<2	0.75	0.12	8
2024-05-01 14:40	<1	<1	<2	0.69	0.15	8
2024-05-08 14:25	<1	<1	<2	0.7	0.16	9
2024-05-15 14:25	<1	<1	<2	0.82	0.22	9
2024-05-22 14:25	<1	<1	6	0.66	0.12	10
2024-05-29 14:25	<1	<1	6	0.68	0.1	10
2024-06-05 14:25	<1	<1	<2	0.76	0.14	10
2024-06-12 14:25	<1	<1	<2	0.7	0.14	10
2024-06-19 14:25	<1	<1	<2	0.65	0.11	11
2024-06-26 14:25	<1	<1	4	0.74	0.14	11
2024-07-03 14:25	<1	<1	4	0.68	0.12	11
2024-07-10 14:25	<1	<1	<2	0.77	0.12	12
2024-07-17 14:25	<1	<1	2	0.79	0.12	12
2024-07-24 11:15	<1	<1	2	0.77	0.13	12
2024-07-31 14:45	<1	<1	4	0.71	0.1	14
2024-08-07 14:35	<1	<1	<2	0.86	0.11	14
2024-08-14 14:25	<1	<1	2	0.73	0.11	16
2024-08-21 14:25	<1	<1	8	0.71	0.11	16
2024-08-28 14:25	<1	<1	4	0.71	0.12	16
2024-09-04 14:25	<1	<1	<2	0.75	0.11	17
2024-09-11 14:25	<1	<1	<2	0.71	0.09	17
2024-09-18 14:25	<1	<1	<2	0.64	0.11	15
2024-09-25 14:25	<1	<1	<2	0.75	0.14	16
2024-10-02 14:25	<1	<1	<2	0.64	0.12	16
2024-10-09 14:25	<1	<1	<2	0.72	0.12	15
2024-10-16 14:25	<1	<1	2	0.57	0.1	15
2024-10-23 14:25	<1	<1	<2	0.74	0.12	13
2024-10-30 14:25	<1	<1	8	0.67	0.14	11
2024-11-07 14:25	<1	<1	8	0.61	0.13	11
2024-11-13 14:25	<1	<1	28	0.59	0.1	10
2024-11-20 14:25	<1	<1	<2	0.65	0.13	9
2024-11-27 14:25	<1	<1	6	0.56	0.11	8
2024-12-04 14:25	<1	<1	<2	0.76	0.34	7
2024-12-11 14:25	<1	<1	<2	0.86	0.17	7
2024-12-18 14:25	<1	<1	2	0.91	0.12	7
2024-12-23 14:25	<1	<1	NA	0.89	0.11	7
2024-12-31 10:15	<1	<1	NA	0.77	0.09	7

PWT - 66

Water Sampling | Type: GRAB | Station Number: RMD-261 | Address: 9911 Sidaway Road

Sampled Date	Total Coliform (CFU/1000 ml)	E. coli (CFU/1000 ml)	HPC (CFU/ml)	Chlorine Free (mg/l)	Turbidity (NTU)	Temperature (°C)
2024-01-03 13:55	<1	<1	<2	0.65	0.24	8
2024-01-10 14:10	<1	<1	<2	0.66	0.15	7
2024-01-24 14:10	<1	<1	<2	0.55	0.16	5
2024-01-31 14:10	<1	<1	2	0.67	0.19	8
2024-02-07 14:10	<1	<1	<2	0.73	0.13	6
2024-02-14 14:15	<1	<1	2	0.61	0.14	7
2024-02-21 14:10	<1	<1	<2	0.61	0.14	6
2024-02-28 14:10	<1	<1	<2	0.66	0.23	7
2024-03-06 14:10	<1	<1	<2	0.65	0.17	6
2024-03-20 14:10	<1	<1	<2	0.83	0.24	6
2024-03-27 14:15	<1	<1	<2	0.71	0.14	8
2024-04-10 14:10	<1	<1	2	0.61	0.1	7
2024-04-17 14:25	<1	<1	<2	0.67	0.38	7
2024-04-24 14:10	<1	<1	<2	0.71	0.09	9
2024-05-01 14:25	<1	<1	2	0.61	0.11	9
2024-05-08 14:10	<1	<1	4	0.61	0.12	9
2024-05-15 14:10	<1	<1	<2	0.6	0.15	10
2024-05-22 14:10	<1	<1	<2	0.66	0.24	11
2024-05-29 14:10	<1	<1	<2	0.75	0.11	10
2024-06-05 14:10	<1	<1	<2	0.51	0.11	11
2024-06-12 14:10	<1	<1	<2	0.69	0.14	10
2024-06-19 14:10	<1	<1	<2	0.59	0.08	12
2024-06-26 14:10	<1	<1	6	0.53	0.19	12
2024-07-03 14:10	<1	<1	<2	0.57	0.18	13
2024-07-10 14:10	<1	<1	2	0.52	0.09	13
2024-07-17 14:10	<1	<1	<2	0.59	0.11	13
2024-07-24 13:30	<1	<1	8	0.63	0.15	14
2024-07-31 14:30	<1	<1	<2	0.66	0.08	15
2024-08-07 14:20	<1	<1	2	0.63	0.1	15
2024-08-14 14:10	<1	<1	<2	0.65	0.09	17
2024-08-21 14:10	<1	<1	2	0.67	0.08	16
2024-08-28 14:10	<1	<1	<2	0.66	0.1	16
2024-09-04 14:10	<1	<1	2	0.63	0.09	17
2024-09-11 14:10	<1	<1	2	0.69	0.1	17
2024-09-18 14:10	<1	<1	<2	0.57	0.09	16
2024-09-25 14:10	<1	<1	2	0.72	0.11	16
2024-10-02 14:10	<1	<1	4	0.64	0.08	16
2024-10-09 14:10	<1	<1	2	0.67	0.11	15
2024-10-16 14:10	<1	<1	2	0.6	0.14	15
2024-10-23 14:10	<1	<1	<2	0.7	0.18	13
2024-10-30 14:10	<1	<1	8	0.6	0.16	11
2024-11-07 14:00	<1	<1	2	0.57	0.11	12
2024-11-13 14:10	<1	<1	<2	0.55	0.12	11
2024-11-20 14:10	<1	<1	2	0.63	0.21	9
2024-11-27 14:10	<1	<1	8	0.76	0.19	8
2024-12-04 14:10	<1	<1	<2	0.69	0.32	7
2024-12-11 14:10	<1	<1	<2	0.66	0.13	7
2024-12-18 14:10	<1	<1	<2	0.76	0.1	7
2024-12-23 14:10	<1	<1	NA	0.7	0.13	7
2024-12-31 10:00	<1	<1	NA	0.56	0.09	7

Water Sampling | Type: GRAB | Station Number: RMD-262 | Address: 13799 Commerce Parkway

Sampled Date	Total Coliform (CFU/1000 ml)	E.coli (CFU/1000 ml)	HPC (CFU/ml)	Chlorine Free (mg/l)	Turbidity (NTU)	Temperature (°C)
2024-01-03 13:15	<1	<1	<2	0.72	0.15	7
2024-01-10 13:15	<1	<1	<2	0.66	0.14	7
2024-01-24 13:20	<1	<1	<2	0.66	0.13	5
2024-01-31 13:15	<1	<1	<2	0.7	0.13	8
2024-02-07 13:20	<1	<1	<2	0.7	0.12	6
2024-02-14 13:15	<1	<1	<2	0.63	0.12	7
2024-02-21 13:20	<1	<1	<2	0.63	0.14	6
2024-02-28 13:15	<1	<1	<2	0.7	0.15	6
2024-03-06 13:20	<1	<1	<2	0.71	0.24	6
2024-03-20 13:15	<1	<1	<2	0.74	0.19	7
2024-03-27 13:20	<1	<1	<2	0.68	0.12	8
2024-04-10 13:15	<1	<1	4	0.62	0.19	7
2024-04-17 13:30	<1	<1	<2	0.62	0.13	8
2024-04-24 13:20	<1	<1	<2	0.67	0.1	9
2024-05-01 13:30	<1	<1	<2	0.65	0.1	9
2024-05-08 13:15	<1	<1	<2	0.68	0.13	9
2024-05-15 13:15	<1	<1	<2	0.82	0.26	10
2024-05-22 13:00	<1	<1	<2	0.68	0.22	11
2024-05-29 13:20	<1	<1	<2	0.74	0.1	10
2024-06-05 13:15	<1	<1	2	0.75	0.13	11
2024-06-12 13:15	<1	<1	<2	0.54	0.27	11
2024-06-19 13:20	<1	<1	<2	0.58	0.13	11
2024-06-26 13:20	<1	<1	<2	0.61	0.2	12
2024-07-03 13:20	<1	<1	<2	0.71	0.18	12
2024-07-10 13:15	<1	<1	4	0.73	0.14	13
2024-07-17 13:20	<1	<1	2	0.72	0.14	13
2024-07-24 13:15	<1	<1	<2	0.67	0.18	14
2024-07-31 13:45	<1	<1	2	0.7	0.08	15
2024-08-07 13:20	<1	<1	2	0.74	0.11	15
2024-08-14 13:15	<1	<1	<2	0.67	0.17	17
2024-08-21 13:15	<1	<1	4	0.71	0.09	16
2024-08-28 13:20	<1	<1	4	0.75	0.1	16
2024-09-04 13:15	<1	<1	2	0.61	0.12	17
2024-09-11 13:15	<1	<1	2	0.64	0.1	17
2024-09-18 13:15	<1	<1	<2	0.62	0.09	17
2024-09-25 13:20	<1	<1	<2	0.73	0.1	16
2024-10-02 13:20	<1	<1	<2	0.61	0.1	16
2024-10-09 13:15	<1	<1	2	0.67	0.12	15
2024-10-16 13:15	<1	<1	10	0.7	0.2	15
2024-10-23 13:20	<1	<1	<2	0.6	0.13	13
2024-10-30 13:20	<1	<1	4	0.69	0.13	12
2024-11-07 13:15	<1	<1	<2	0.71	0.15	10
2024-11-13 13:15	<1	<1	<2	0.62	0.11	11
2024-11-20 13:15	<1	<1	<2	0.67	0.11	9
2024-11-27 13:15	<1	<1	2	0.98	0.2	8
2024-12-04 13:15	<1	<1	<2	0.74	0.31	7
2024-12-11 13:15	<1	<1	<2	0.65	0.13	7
2024-12-18 13:20	<1	<1	<2	0.77	0.13	7
2024-12-23 13:15	<1	<1	NA	0.62	0.13	7
2024-12-31 08:50	<1	<1	NA	0.57	0.1	8

PWT - 67

Water Sampling | Type: GRAB | Station Number: RMD-263 | Address: 12560 Cambie Road

Sampled Date	Total Coliform (CFU/1000 ml)	E.coli (CFU/1000 ml)	HPC (CFU/ml)	Chlorine Free (mg/l)	Turbidity (NTU)	Temperature (°C)
2024-01-03 12:30	<1	<1	<2	0.7	0.22	8
2024-01-10 12:30	<1	<1	<2	0.65	0.12	7
2024-01-24 12:30	<1	<1	<2	0.73	0.13	5
2024-01-31 12:30	<1	<1	<2	0.8	0.16	7
2024-02-07 12:30	<1	<1	<2	0.69	0.13	7
2024-02-14 12:30	<1	<1	<2	0.67	0.15	7
2024-02-21 12:30	<1	<1	<2	0.69	0.16	6
2024-02-28 12:30	<1	<1	<2	0.64	0.12	6
2024-03-06 12:30	<1	<1	<2	0.69	0.19	6
2024-03-20 12:30	<1	<1	<2	0.73	0.22	6
2024-03-27 12:30	<1	<1	<2	0.74	0.14	8
2024-04-10 12:30	<1	<1	<2	0.65	0.14	7
2024-04-17 12:30	<1	<1	<2	0.78	0.14	7
2024-04-24 12:30	<1	<1	<2	0.89	0.11	8
2024-05-01 12:45	<1	<1	2	0.73	0.12	9
2024-05-08 12:30	<1	<1	<2	0.73	0.14	9
2024-05-15 12:30	<1	<1	<2	0.71	0.18	10
2024-05-22 13:50	<1	<1	<2	0.65	0.12	11
2024-05-29 12:30	<1	<1	<2	0.62	0.1	11
2024-06-05 12:30	<1	<1	<2	0.7	0.11	11
2024-06-12 12:30	<1	<1	16	0.71	0.14	11
2024-06-19 12:30	<1	<1	18	0.63	0.11	11
2024-06-26 12:30	<1	<1	14	0.71	0.13	12
2024-07-03 12:30	<1	<1	26	0.65	0.14	12
2024-07-10 12:30	<1	<1	<2	0.76	0.12	12
2024-07-17 12:30	<1	<1	<2	0.81	0.15	13
2024-07-24 12:30	<1	<1	<2	0.72	0.28	14
2024-07-31 13:00	<1	<1	2	0.69	0.1	14
2024-08-07 12:30	<1	<1	46	0.69	0.12	15
2024-08-14 12:30	<1	<1	<2	0.75	0.12	16
2024-08-21 12:30	<1	<1	44	0.65	0.08	16
2024-08-28 12:30	<1	<1	26	0.66	0.12	16
2024-09-04 12:30	<1	<1	20	0.6	0.1	17
2024-09-11 12:30	<1	<1	20	0.73	0.1	17
2024-09-18 12:30	<1	<1	46	0.76	0.11	17
2024-09-25 12:30	<1	<1	12	0.73	0.11	17
2024-10-02 12:30	<1	<1	16	0.64	0.1	16
2024-10-09 12:30	<1	<1	12	0.77	0.12	15
2024-10-16 12:30	<1	<1	14	0.76	0.25	15
2024-10-23 12:30	<1	<1	2	0.62	0.14	13
2024-10-30 12:30	<1	<1	4	0.51	0.14	12
2024-11-07 12:30	<1	<1	4	0.63	0.18	11
2024-11-13 12:30	<1	<1	<2	0.56	0.12	10
2024-11-20 12:30	<1	<1	<2	0.65	0.13	9
2024-11-27 12:30	<1	<1	<2	0.76	0.18	8
2024-12-04 12:30	<1	<1	<2	0.76	0.2	8
2024-12-11 12:30	<1	<1	<2	0.75	0.15	7
2024-12-18 12:30	<1	<1	<2	0.73	0.11	7
2024-12-23 12:30	<1	<1	NA	0.76	0.11	7
2024-12-31 08:00	<1	<1	NA	0.72	0.12	7

Water Sampling | Type: GRAB | Station Number: RMD-264 | Address: 13100 Mitchell Road

Sampled Date	Total Coliform (CFU/1000 ml)	E. coli (CFU/1000 ml)	HPC (CFU/ml)	Chlorine Free (mg/l)	Turbidity (NTU)	Temperature (°C)
2024-01-03 12:45	<1	<1	<2	0.74	0.27	8
2024-01-10 12:45	<1	<1	<2	0.69	0.14	7
2024-01-24 13:00	<1	<1	<2	0.77	0.16	5
2024-01-31 12:45	<1	<1	<2	0.74	0.15	8
2024-02-07 13:00	<1	<1	<2	0.67	0.19	6
2024-02-14 13:00	<1	<1	<2	0.64	0.14	8
2024-02-21 13:00	<1	<1	<2	0.68	0.33	6
2024-02-28 13:00	<1	<1	<2	0.68	0.16	7
2024-03-06 13:00	<1	<1	2	0.66	0.17	6
2024-03-20 12:45	<1	<1	2	0.81	0.22	7
2024-03-27 13:05	<1	<1	2	0.61	0.13	8
2024-04-10 13:00	<1	<1	2	0.71	0.14	7
2024-04-17 13:15	<1	<1	<2	0.75	0.14	8
2024-04-24 13:00	<1	<1	<2	0.69	0.12	9
2024-05-01 13:15	<1	<1	<2	0.76	0.12	10
2024-05-08 13:00	<1	<1	<2	0.64	0.13	9
2024-05-15 12:45	<1	<1	4	0.87	0.19	10
2024-05-22 13:30	<1	<1	<2	0.65	0.13	11
2024-05-29 13:00	<1	<1	<2	0.57	0.19	11
2024-06-05 12:45	<1	<1	<2	0.72	0.12	11
2024-06-12 12:45	<1	<1	<2	0.66	0.15	11
2024-06-19 13:00	<1	<1	<2	0.6	0.12	11
2024-06-26 13:00	<1	<1	2	0.78	0.15	12
2024-07-03 13:00	<1	<1	<2	0.6	0.13	13
2024-07-10 12:45	<1	<1	<2	0.64	0.11	12
2024-07-17 13:00	<1	<1	2	0.71	0.19	13
2024-07-24 13:00	<1	<1	<2	0.65	0.21	14
2024-07-31 13:30	<1	<1	<2	0.71	0.11	15
2024-08-07 13:00	<1	<1	<2	0.77	0.11	15
2024-08-14 13:00	<1	<1	4	0.73	0.15	16
2024-08-21 12:45	<1	<1	52	0.64	0.11	16
2024-08-28 13:00	<1	<1	18	0.7	0.09	16
2024-09-04 12:45	<1	<1	4	0.66	0.11	17
2024-09-11 12:45	<1	<1	<2	0.68	0.1	17
2024-09-18 12:45	<1	<1	2	0.57	0.11	16
2024-09-25 13:00	<1	<1	<2	0.83	0.16	17
2024-10-02 13:00	<1	<1	<2	0.69	0.12	16
2024-10-09 12:45	<1	<1	2	0.73	0.11	15
2024-10-16 12:45	<1	<1	2	0.88	0.14	15
2024-10-23 13:00	<1	<1	16	0.73	0.15	13
2024-10-30 13:00	<1	<1	28	0.47	0.14	12
2024-11-07 12:45	<1	<1	<2	0.61	0.17	11
2024-11-13 12:45	<1	<1	2	0.59	0.13	10
2024-11-20 12:45	<1	<1	<2	0.54	0.12	10
2024-11-27 12:45	<1	<1	2	0.65	0.17	9
2024-12-04 12:45	<1	<1	<2	0.69	0.21	8
2024-12-11 13:00	<1	<1	<2	0.79	0.15	8
2024-12-18 13:00	<1	<1	<2	0.63	0.12	7
2024-12-23 12:45	<1	<1	NA	0.5	0.13	8
2024-12-31 08:15	<1	<1	NA	0.51	0.11	8

Water Sampling | Type: GRAB | Station Number: RMD-266 | Address: 9380 General Currie Road

Sampled Date	Total Coliform (CFU/1000 ml)	E. coli (CFU/1000 ml)	HPC (CFU/ml)	Chlorine Free (mg/l)	Turbidity (NTU)	Temperature (°C)
2024-01-03 14:40	<1	<1	<2	0.7	0.22	7
2024-01-10 14:55	<1	<1	<2	0.67	0.16	8
2024-01-24 14:55	<1	<1	<2	0.65	0.25	5
2024-01-31 14:55	<1	<1	<2	0.67	0.2	8
2024-02-07 14:55	<1	<1	<2	0.62	0.15	6
2024-02-14 15:00	<1	<1	<2	0.68	0.2	7
2024-02-21 14:55	<1	<1	<2	0.66	0.13	6
2024-02-28 14:55	<1	<1	<2	0.75	0.14	6
2024-03-06 14:55	<1	<1	<2	0.66	0.15	6
2024-03-20 14:55	<1	<1	2	0.75	0.21	6
2024-03-27 15:00	<1	<1	<2	0.66	0.16	7
2024-04-10 15:00	<1	<1	<2	0.77	0.17	7
2024-04-17 15:10	<1	<1	<2	0.67	0.19	8
2024-04-24 14:55	<1	<1	<2	0.75	0.11	9
2024-05-01 15:10	<1	<1	<2	0.73	0.13	9
2024-05-08 14:55	<1	<1	<2	0.74	0.16	9
2024-05-15 14:55	<1	<1	<2	0.82	0.21	9
2024-05-22 14:55	<1	<1	2	0.63	0.12	11
2024-05-29 14:55	<1	<1	2	0.62	0.12	11
2024-06-05 14:55	<1	<1	<2	0.77	0.12	11
2024-06-12 14:55	<1	<1	<2	0.71	0.14	10
2024-06-19 14:55	<1	<1	<2	0.66	0.12	11
2024-06-26 14:55	<1	<1	<2	0.69	0.19	12
2024-07-03 14:55	<1	<1	<2	0.7	0.13	12
2024-07-10 14:55	<1	<1	<2	0.64	0.12	13
2024-07-17 14:55	<1	<1	2	0.82	0.14	13
2024-07-24 11:00	<1	<1	2	0.79	0.16	13
2024-07-31 15:15	<1	<1	<2	0.73	0.1	14
2024-08-07 15:05	<1	<1	<2	0.85	0.12	15
2024-08-14 14:55	<1	<1	2	0.7	0.12	17
2024-08-21 14:55	<1	<1	2	0.65	0.08	16
2024-08-28 14:55	<1	<1	<2	0.77	0.12	16
2024-09-04 14:55	<1	<1	<2	0.62	0.1	17
2024-09-11 14:55	<1	<1	8	0.68	0.08	17
2024-09-18 14:55	<1	<1	<2	0.75	0.11	17
2024-09-25 14:55	<1	<1	<2	0.8	0.1	17
2024-10-02 14:55	<1	<1	<2	0.62	0.11	16
2024-10-09 14:55	<1	<1	<2	0.73	0.12	15
2024-10-16 14:55	<1	<1	<2	0.87	0.32	15
2024-10-23 14:55	<1	<1	<2	0.77	0.18	13
2024-10-30 14:55	<1	<1	<2	0.53	0.16	12
2024-11-07 14:55	<1	<1	<2	0.58	0.13	11
2024-11-13 14:55	<1	<1	<2	0.7	0.14	12
2024-11-20 14:55	<1	<1	<2	0.63	0.12	9
2024-11-27 14:55	<1	<1	<2	0.71	0.13	9
2024-12-04 14:55	<1	<1	<2	0.82	0.25	7
2024-12-11 14:55	<1	<1	<2	0.96	0.14	7
2024-12-18 14:55	<1	<1	<2	0.88	0.11	7
2024-12-23 14:55	<1	<1	NA	0.84	0.14	7
2024-12-31 10:45	<1	<1	NA	0.77	0.1	7

PWT - 68

Water Sampling | Type: GRAB | Station Number: RMD-267 | Address: 17240 Fedoruk Road

Sampled Date	Total Coliform (CFU/1000 ml)	E. coli (CFU/1000 ml)	HPC (CFU/ml)	Chlorine Free (mg/l)	Turbidity (NTU)	Temperature (C°)
2024-01-05 10:10	<1	<1	4	0.5	0.24	10
2024-01-11 10:15	<1	<1	<2	0.63	0.15	6
2024-01-25 10:00	<1	<1	<2	0.7	0.13	7
2024-02-02 10:10	<1	<1	2	0.62	0.18	8
2024-02-08 10:15	<1	<1	<2	0.67	0.2	8
2024-02-16 10:10	<1	<1	<2	0.64	0.19	6
2024-02-22 10:10	<1	<1	<2	0.66	0.33	7
2024-03-01 10:00	<1	<1	<2	0.63	0.15	7
2024-03-07 10:15	<1	<1	<2	0.6	0.2	6
2024-03-15 10:00	<1	<1	4	0.78	0.11	7
2024-03-21 10:00	<1	<1	<2	0.75	0.3	11
2024-03-28 10:00	<1	<1	<2	0.73	0.17	7
2024-04-04 10:20	<1	<1	<2	0.76	0.12	9
2024-04-12 10:15	<1	<1	<2	0.75	0.1	8
2024-04-18 10:30	<1	<1	<2	0.62	0.1	9
2024-04-26 10:00	<1	<1	<2	0.64	0.1	10
2024-05-02 10:30	<1	<1	<2	0.57	0.11	10
2024-05-10 10:10	<1	<1	<2	0.77	0.13	10
2024-05-16 10:10	<1	<1	<2	0.7	0.14	11
2024-05-24 10:10	<1	<1	2	0.7	0.13	11
2024-05-30 10:00	<1	<1	2	0.74	0.14	11
2024-06-07 10:10	<1	<1	<2	0.66	0.17	11
2024-06-13 10:00	<1	<1	<2	0.74	0.14	12
2024-06-21 10:15	<1	<1	<2	0.61	0.16	13
2024-06-27 10:15	<1	<1	2	0.57	0.35	13
2024-07-05 10:10	<1	<1	2	0.65	0.14	13
2024-07-11 10:10	<1	<1	10	0.54	0.11	14
2024-07-25 10:15	<1	<1	6	0.7	0.13	15
2024-08-02 10:10	<1	<1	<2	0.68	0.1	15
2024-08-07 14:50	<1	<1	2	0.64	0.11	17
2024-08-16 10:50	<1	<1	<2	0.61	0.09	18
2024-08-22 10:00	<1	<1	6	0.66	0.1	17
2024-08-30 10:15	<1	<1	2	0.63	0.11	16
2024-09-05 10:30	<1	<1	<2	0.64	0.11	17
2024-09-13 10:10	<1	<1	<2	0.75	0.1	17
2024-09-19 10:00	<1	<1	6	0.68	0.11	17
2024-09-27 10:10	<1	<1	6	0.71	0.12	17
2024-10-11 10:30	<1	<1	2	0.75	0.17	15
2024-10-17 10:00	<1	<1	40	0.63	0.21	16
2024-10-25 10:00	<1	<1	2	0.61	0.27	12
2024-10-31 10:10	<1	<1	2	0.72	0.12	11
2024-11-08 10:00	<1	<1	32	0.6	0.14	10
2024-11-14 10:00	<1	<1	14	0.64	0.14	11
2024-11-22 10:00	<1	<1	14	0.53	0.14	10
2024-11-28 10:00	<1	<1	4	0.77	0.19	9
2024-12-06 10:10	<1	<1	8	0.66	0.16	7
2024-12-12 10:30	<1	<1	<2	0.64	0.15	7
2024-12-20 10:10	<1	<1	NA	0.71	0.12	8
2024-12-23 10:00	<1	<1	NA	0.62	0.1	7

PWT - 69

Water Sampling | Type: GRAB | Station Number: RMD-268 | Address: 13800 No. 3 Road

Sampled Date	Total Coliform (CFU/1000 ml)	E. coli (CFU/1000 ml)	HPC (CFU/ml)	Chlorine Free (mg/l)	Turbidity (NTU)	Temperature (C°)
2024-01-03 15:00	<1	<1	<2	0.66	0.18	8
2024-01-10 15:15	<1	<1	<2	0.64	0.14	8
2024-01-24 15:10	<1	<1	<2	0.71	0.15	5
2024-01-31 15:15	<1	<1	<2	0.7	0.17	8
2024-02-07 15:10	<1	<1	<2	0.66	0.1	6
2024-02-14 15:15	<1	<1	<2	0.7	0.16	8
2024-02-21 15:10	<1	<1	<2	0.65	0.14	6
2024-02-28 15:10	<1	<1	<2	0.68	0.12	7
2024-03-06 15:10	<1	<1	<2	0.68	0.16	7
2024-03-20 15:10	<1	<1	<2	0.79	0.18	7
2024-03-27 15:15	<1	<1	<2	0.54	0.16	8
2024-04-10 15:15	<1	<1	<2	0.65	0.14	8
2024-04-17 15:25	<1	<1	<2	0.71	0.15	8
2024-04-24 15:10	<1	<1	<2	0.71	0.11	9
2024-05-01 15:25	<1	<1	<2	0.74	0.11	9
2024-05-08 15:10	<1	<1	<2	0.69	0.1	10
2024-05-15 15:10	<1	<1	<2	0.78	0.16	10
2024-05-22 15:10	<1	<1	<2	0.61	0.13	11
2024-05-29 15:10	<1	<1	2	0.56	0.1	11
2024-06-05 15:10	<1	<1	<2	0.69	0.11	11
2024-06-12 15:10	<1	<1	<2	0.71	0.1	11
2024-06-19 15:10	<1	<1	<2	0.65	0.12	11
2024-06-26 15:10	<1	<1	<2	0.72	1.7	12
2024-07-03 15:10	<1	<1	2	0.69	0.09	12
2024-07-10 15:15	<1	<1	<2	0.6	0.1	13
2024-07-17 15:10	<1	<1	4	0.68	0.12	13
2024-07-24 10:30	<1	<1	2	0.7	0.12	14
2024-07-31 15:30	<1	<1	<2	0.67	0.08	15
2024-08-07 15:20	<1	<1	<2	0.79	0.09	15
2024-08-14 15:15	<1	<1	<2	0.73	0.08	16
2024-08-21 15:15	<1	<1	<2	0.61	0.09	17
2024-08-28 15:10	<1	<1	6	0.61	0.09	16
2024-09-04 15:10	<1	<1	<2	0.65	0.09	17
2024-09-11 15:10	<1	<1	<2	0.62	0.08	17
2024-09-18 15:15	<1	<1	<2	0.7	0.43	17
2024-09-25 15:10	<1	<1	<2	0.8	0.11	17
2024-10-02 15:10	<1	<1	<2	0.6	0.09	16
2024-10-09 15:00	<1	<1	2	0.73	0.57	15
2024-10-16 15:15	<1	<1	4	0.64	0.1	15
2024-10-23 15:10	<1	<1	2	0.69	0.11	14
2024-10-30 15:10	<1	<1	<2	0.49	0.17	12
2024-11-07 15:15	<1	<1	<2	0.61	0.13	11
2024-11-13 15:15	<1	<1	<2	0.6	0.12	11
2024-11-20 15:15	<1	<1	<2	0.71	0.1	10
2024-11-27 15:15	<1	<1	<2	0.72	0.11	10
2024-12-04 15:15	<1	<1	<2	0.74	0.17	8
2024-12-11 15:10	<1	<1	<2	0.92	0.15	8
2024-12-18 15:10	<1	<1	<2	0.75	0.1	8
2024-12-23 15:15	<1	<1	NA	0.68	0.12	8
2024-12-31 11:00	<1	<1	NA	0.73	0.1	7

Water Sampling | Type: GRAB | Station Number: RMD-269 | Address: 14951 Triangle Road

Sampled Date	Total Coliform (CFU/1000 ml)	E. coli (CFU/1000 ml)	HPC (CFU/ml)	Chlorine Free (mg/l)	Turbidity (NTU)	Temperature (°C)
2024-01-02 13:50	<1	<1	<2	0.67	0.18	9
2024-01-08 14:10	<1	<1	<2	0.61	0.14	6
2024-01-15 13:50	<1	<1	<2	0.67	0.13	6
2024-01-22 13:50	<1	<1	<2	0.74	0.23	5
2024-01-29 13:50	<1	<1	<2	0.7	0.19	6
2024-02-05 13:50	<1	<1	<2	0.76	2.1	8
2024-02-12 13:50	<1	<1	<2	0.64	0.22	7
2024-02-20 13:50	<1	<1	<2	0.69	0.16	5
2024-02-26 13:50	<1	<1	<2	0.66	0.32	6
2024-03-04 13:50	<1	<1	<2	0.72	0.27	6
2024-03-11 13:50	<1	<1	<2	0.76	0.14	7
2024-03-18 13:50	<1	<1	2	0.75	0.35	7
2024-03-25 13:50	<1	<1	<2	0.62	0.17	6
2024-04-02 14:00	<1	<1	<2	0.67	0.14	7
2024-04-08 13:50	<1	<1	<2	0.73	0.28	7
2024-04-15 13:50	<1	<1	2	0.68	0.13	7
2024-04-22 13:50	<1	<1	<2	0.66	0.14	8
2024-04-29 13:50	<1	<1	<2	0.71	0.11	8
2024-05-06 13:50	<1	<1	<2	0.63	0.37	10
2024-05-13 13:50	<1	<1	<2	0.84	0.16	9
2024-05-21 13:50	<1	<1	<2	0.51	0.16	10
2024-05-27 13:50	<1	<1	<2	0.74	0.09	11
2024-06-03 13:50	<1	<1	<2	0.79	0.11	10
2024-06-10 13:55	<1	<1	<2	0.58	0.19	11
2024-06-17 13:50	<1	<1	<2	0.68	0.12	11
2024-06-24 13:50	<1	<1	2	0.61	0.16	12
2024-07-02 13:50	<1	<1	2	0.69	0.16	11
2024-07-08 13:50	<1	<1	2	0.65	0.12	12
2024-07-15 13:50	<1	<1	<2	0.7	0.12	12
2024-07-22 13:50	<1	<1	8	0.66	0.13	13
2024-07-29 13:50	<1	<1	6	0.7	0.11	13
2024-08-07 13:50	<1	<1	8	0.74	0.12	14
2024-08-12 13:20	<1	<1	10	0.64	0.1	15
2024-08-19 13:50	<1	<1	4	0.65	0.1	17
2024-08-26 13:50	<1	<1	8	0.72	0.09	16
2024-09-03 13:50	<1	<1	<2	0.6	0.12	16
2024-09-09 13:50	<1	<1	<2	0.63	0.1	16
2024-09-16 13:50	<1	<1	<2	0.7	0.2	16
2024-09-23 13:50	<1	<1	2	0.77	0.12	16
2024-10-01 13:50	<1	<1	<2	0.76	0.14	16
2024-10-07 13:50	<1	<1	<2	0.6	0.17	15
2024-10-15 13:50	<1	<1	<2	0.62	0.11	14
2024-10-21 13:50	<1	<1	2	0.6	0.12	13
2024-10-28 13:50	<1	<1	<2	0.72	0.14	11
2024-11-04 13:50	<1	<1	2	0.71	0.15	10
2024-11-12 13:50	<1	<1	<2	0.56	0.22	9
2024-11-18 13:50	<1	<1	<2	0.65	0.11	9
2024-11-25 13:35	<1	<1	8	0.63	0.12	8
2024-12-02 13:50	<1	<1	<2	0.68	0.19	7
2024-12-09 13:50	<1	<1	2	0.7	0.12	9
2024-12-16 13:50	<1	<1	<2	0.59	0.15	6
2024-12-23 13:50	<1	<1	NA	0.67	0.12	6
2024-12-30 13:50	<1	<1	NA	0.7	0.09	6

PWT - 70

Water Sampling | Type: GRAB | Station Number: RMD-270 | Address: 8200 Jones Road

Sampled Date	Total Coliform (CFU/1000 ml)	E. coli (CFU/1000 ml)	HPC (CFU/ml)	Chlorine Free (mg/l)	Turbidity (NTU)	Temperature (°C)
2024-01-02 14:15	<1	<1	2	0.6	0.13	9
2024-01-08 14:30	<1	<1	8	0.58	0.13	7
2024-01-15 14:15	<1	<1	<2	0.69	0.54	7
2024-01-22 14:15	<1	<1	<2	0.67	0.2	5
2024-01-29 14:15	<1	<1	<2	0.72	0.22	7
2024-02-05 14:15	<1	<1	2	0.7	0.23	8
2024-02-12 14:15	<1	<1	10	0.66	0.19	7
2024-02-20 14:15	<1	<1	<2	0.62	0.12	7
2024-02-26 14:10	<1	<1	<2	0.64	0.16	7
2024-03-04 14:10	<1	<1	<2	0.65	0.27	7
2024-03-11 14:15	<1	<1	<2	0.73	0.19	7
2024-03-18 14:15	<1	<1	<2	0.74	0.14	7
2024-03-25 14:10	<1	<1	<2	0.53	0.27	8
2024-04-02 14:15	<1	<1	<2	0.72	0.14	9
2024-04-08 14:10	<1	<1	<2	0.7	0.3	8
2024-04-15 14:15	<1	<1	<2	0.69	0.1	8
2024-04-22 14:10	<1	<1	<2	0.66	0.12	10
2024-04-29 14:10	<1	<1	<2	0.69	0.18	9
2024-05-06 14:15	<1	<1	<2	0.73	0.54	10
2024-05-13 14:15	<1	<1	<2	0.57	0.12	11
2024-05-21 14:10	<1	<1	<2	0.52	0.11	11
2024-05-27 14:15	<1	<1	<2	0.81	0.09	11
2024-06-03 14:10	<1	<1	<2	0.6	0.12	12
2024-06-10 14:15	<1	<1	2	0.68	0.14	11
2024-06-17 14:15	<1	<1	6	0.62	0.13	13
2024-06-24 14:10	<1	<1	<2	0.68	0.11	14
2024-07-02 14:15	<1	<1	<2	0.63	0.1	14
2024-07-08 14:15	<1	<1	<2	0.76	0.14	14
2024-07-15 14:15	<1	<1	<2	0.62	0.17	15
2024-07-22 14:15	<1	<1	12	0.58	0.13	15
2024-07-29 14:15	<1	<1	140	0.71	0.1	15
2024-08-07 14:15	<1	<1	10	0.68	0.1	16
2024-08-12 13:40	<1	<1	8	0.64	0.19	17
2024-08-19 14:10	<1	<1	16	0.63	0.11	18
2024-08-26 14:15	<1	<1	18	0.7	0.08	16
2024-09-03 14:10	<1	<1	<2	0.55	0.08	16
2024-09-09 14:05	<1	<1	16	0.65	0.11	17
2024-09-16 14:15	<1	<1	14	0.67	0.09	15
2024-09-23 14:15	<1	<1	2	0.79	0.1	17
2024-10-01 14:15	<1	<1	4	0.72	0.11	16
2024-10-07 14:15	<1	<1	<2	0.65	0.12	16
2024-10-15 14:15	<1	<1	8	0.63	0.1	15
2024-10-21 14:10	<1	<1	<2	0.74	0.12	14
2024-10-28 14:15	<1	<1	26	0.54	0.14	12
2024-11-04 14:15	<1	<1	6	0.51	0.18	12
2024-11-12 14:15	<1	<1	<2	0.52	0.11	11
2024-11-18 14:15	<1	<1	2	0.61	0.1	10
2024-11-25 13:50	<1	<1	<2	0.65	0.46	10
2024-12-02 14:15	<1	<1	<2	0.66	0.13	9
2024-12-09 14:15	<1	<1	<2	0.98	0.14	9
2024-12-16 14:10	<1	<1	<2	0.72	0.13	8
2024-12-23 14:10	<1	<1	NA	0.76	0.1	8
2024-12-30 14:10	<1	<1	NA	0.74	0.1	8

Water Sampling | Type: GRAB | Station Number: RMD-271 | Address: 3800 Cessna Drive

Sampled Date	Total Coliform (CFU/1000 ml)	E. coli (CFU/1000 ml)	HPC (CFU/ml)	Chlorine Free (mg/l)	Turbidity (NTU)	Temperature (°C)
2024-01-02 15:15	<1	<1	<2	0.69	0.18	8
2024-01-08 15:30	<1	<1	<2	0.66	0.14	7
2024-01-15 15:15	<1	<1	<2	0.7	0.14	7
2024-01-22 15:15	<1	<1	<2	0.7	0.25	5
2024-01-29 15:15	<1	<1	<2	0.71	0.26	7
2024-02-05 15:15	<1	<1	4	0.78	0.19	8
2024-02-12 15:30	<1	<1	2	0.74	0.31	7
2024-02-20 15:15	<1	<1	<2	0.71	0.13	6
2024-02-26 15:10	<1	<1	<2	0.72	0.12	6
2024-03-04 15:10	<1	<1	<2	0.67	0.19	7
2024-03-11 15:15	<1	<1	<2	0.76	0.52	7
2024-03-18 15:15	<1	<1	<2	0.76	0.49	7
2024-03-25 15:15	<1	<1	<2	0.66	0.13	7
2024-04-02 15:15	<1	<1	<2	0.59	0.13	8
2024-04-08 15:15	<1	<1	<2	0.6	0.24	8
2024-04-15 15:15	<1	<1	<2	0.73	0.15	8
2024-04-22 15:10	<1	<1	<2	0.67	0.1	9
2024-04-29 15:10	<1	<1	<2	0.68	0.13	9
2024-05-06 15:15	<1	<1	6	0.77	0.1	10
2024-05-13 15:15	<1	<1	<2	0.74	0.15	10
2024-05-21 15:10	<1	<1	<2	0.64	0.11	11
2024-05-27 15:15	<1	<1	<2	0.85	0.09	11
2024-06-03 15:10	<1	<1	2	0.54	0.1	11
2024-06-10 15:15	<1	<1	2	0.71	0.12	12
2024-06-17 15:15	<1	<1	<2	0.64	0.14	11
2024-06-24 15:10	<1	<1	<2	0.61	0.12	12
2024-07-02 15:15	<1	<1	<2	0.74	0.1	13
2024-07-08 15:15	<1	<1	<2	0.83	0.14	14
2024-07-15 15:15	<1	<1	<2	0.78	0.17	13
2024-07-22 15:15	<1	<1	2	0.74	0.19	12
2024-07-29 15:15	<1	<1	4	0.8	0.12	14
2024-08-07 12:00	<1	<1	2	0.77	0.12	15
2024-08-12 14:20	<1	<1	<2	0.73	0.09	16
2024-08-19 15:15	<1	<1	<2	0.66	0.1	17
2024-08-26 15:15	<1	<1	<2	0.79	0.09	16
2024-09-03 15:10	<1	<1	<2	0.53	0.1	18
2024-09-09 15:10	<1	<1	2	0.66	0.12	17
2024-09-16 15:15	<1	<1	2	0.77	0.15	16
2024-09-23 15:15	<1	<1	<2	1.01	0.1	17
2024-10-01 15:15	<1	<1	<2	0.73	0.11	17
2024-10-07 15:15	<1	<1	2	0.79	0.22	16
2024-10-15 15:15	<1	<1	2	0.75	0.1	15
2024-10-21 15:15	<1	<1	<2	0.63	0.12	14
2024-10-28 15:15	<1	<1	<2	0.59	0.1	15
2024-11-04 15:15	<1	<1	<2	0.62	0.16	11
2024-11-12 15:15	<1	<1	<2	0.55	0.12	12
2024-11-18 15:15	<1	<1	<2	0.61	0.11	13
2024-11-25 14:55	<1	<1	<2	0.58	0.12	11
2024-12-02 15:15	<1	<1	2	0.68	0.12	10
2024-12-09 15:15	<1	<1	<2	0.69	0.15	10
2024-12-16 15:10	<1	<1	<2	0.61	0.14	7
2024-12-23 15:15	<1	<1	NA	0.65	0.1	9
2024-12-30 15:15	<1	<1	NA	0.8	0.07	10

PWT-171

Water Sampling | Type: GRAB | Station Number: RMD-272 | Address: 751 Catalina Crescent

Sampled Date	Total Coliform (CFU/1000 ml)	E. coli (CFU/1000 ml)	HPC (CFU/ml)	Chlorine Free (mg/l)	Turbidity (NTU)	Temperature (°C)
2024-01-02 15:30	<1	<1	<2	0.79	0.2	8
2024-01-08 15:45	<1	<1	2	0.63	0.18	6
2024-01-15 15:30	<1	<1	<2	0.73	0.17	6
2024-01-22 15:30	<1	<1	<2	0.76	0.16	5
2024-01-29 15:30	<1	<1	6	0.64	0.24	7
2024-02-05 15:30	<1	<1	<2	0.8	0.34	8
2024-02-12 15:15	<1	<1	<2	0.72	0.28	7
2024-02-20 15:30	<1	<1	4	0.7	0.19	6
2024-02-26 15:25	<1	<1	<2	0.78	0.18	6
2024-03-04 15:25	<1	<1	<2	0.72	0.2	6
2024-03-11 15:30	<1	<1	<2	0.81	0.14	8
2024-03-18 15:30	<1	<1	<2	0.81	0.21	7
2024-03-25 15:30	<1	<1	<2	0.82	0.33	6
2024-04-02 15:30	<1	<1	<2	0.57	0.2	6
2024-04-08 15:30	<1	<1	2	0.79	0.25	7
2024-04-15 15:30	<1	<1	<2	0.79	0.14	7
2024-04-22 15:25	<1	<1	2	0.79	0.15	8
2024-04-29 15:25	<1	<1	<2	0.69	0.14	8
2024-05-06 15:30	<1	<1	<2	0.84	0.17	10
2024-05-13 15:30	<1	<1	<2	0.82	0.17	9
2024-05-21 15:25	<1	<1	2	0.49	0.12	10
2024-05-27 15:30	<1	<1	<2	0.84	0.09	11
2024-06-03 15:25	<1	<1	<2	0.66	0.11	10
2024-06-10 15:30	<1	<1	<2	0.78	0.15	11
2024-06-17 15:30	<1	<1	2	0.74	0.13	11
2024-06-24 15:25	<1	<1	<2	0.68	0.15	12
2024-07-02 15:30	<1	<1	6	0.86	0.14	13
2024-07-08 15:30	<1	<1	<2	0.85	0.16	12
2024-07-15 15:30	<1	<1	<2	0.71	0.14	12
2024-07-22 15:30	<1	<1	2	0.83	0.2	13
2024-07-29 15:30	<1	<1	<2	0.95	0.12	13
2024-08-07 12:15	<1	<1	<2	0.77	0.1	14
2024-08-12 14:35	<1	<1	4	0.75	0.1	15
2024-08-19 15:30	<1	<1	4	0.73	0.12	16
2024-08-26 15:30	<1	<1	4	0.93	0.13	15
2024-09-03 15:25	<1	<1	8	0.55	0.1	16
2024-09-09 15:30	<1	<1	6	0.69	0.11	16
2024-09-16 15:30	<1	<1	2	0.9	0.1	15
2024-09-23 15:30	<1	<1	6	1	0.13	16
2024-10-01 15:30	<1	<1	16	0.68	0.11	16
2024-10-07 15:30	<1	<1	2	0.91	0.26	15
2024-10-15 15:30	<1	<1	2	0.87	0.15	15
2024-10-21 15:30	<1	<1	4	0.79	0.19	13
2024-10-28 15:30	<1	<1	110	0.62	0.24	11
2024-11-04 15:30	<1	<1	8	0.58	0.14	10
2024-11-12 15:30	<1	<1	<2	0.73	0.16	10
2024-11-18 15:30	<1	<1	<2	0.66	0.15	9
2024-11-25 15:15	<1	<1	<2	0.77	0.15	8
2024-12-02 15:30	<1	<1	<2	0.48	0.14	9
2024-12-09 15:30	<1	<1	<2	1.41	0.17	10
2024-12-16 15:25	<1	<1	<2	0.88	0.16	6
2024-12-23 15:30	<1	<1	NA	0.91	0.14	8
2024-12-30 15:30	<1	<1	NA	0.91	0.11	7

Water Sampling | Type: GRAB | Station Number: RMD-273 | Address: Across from 8331 Fairfax Place

Sampled Date	Total Coliform (CFU/1000 ml)	E. coli (CFU/1000 ml)	HPC (CFU/ml)	Chlorine Free (mg/l)	Turbidity (NTU)	Temperature (C°)
2024-01-02 12:45	<1	<1	<2	0.59	0.17	10
2024-01-08 12:50	<1	<1	<2	0.57	0.15	8
2024-01-15 12:45	<1	<1	<2	0.63	0.17	7
2024-01-22 12:45	<1	<1	<2	0.69	0.26	6
2024-01-29 12:45	<1	<1	<2	0.64	0.35	7
2024-02-05 12:45	<1	<1	<2	0.59	0.31	9
2024-02-12 12:45	<1	<1	<2	0.57	0.17	8
2024-02-20 12:45	<1	<1	<2	0.58	0.13	7
2024-02-26 12:45	<1	<1	<2	0.62	0.11	8
2024-03-04 12:45	<1	<1	<2	0.64	0.31	8
2024-03-11 12:45	<1	<1	<2	0.69	0.29	8
2024-03-18 12:45	<1	<1	<2	0.68	0.2	9
2024-03-25 12:45	<1	<1	<2	0.6	0.2	9
2024-04-02 12:45	<1	<1	2	0.59	0.23	9
2024-04-08 12:45	<1	<1	<2	0.52	0.23	9
2024-04-15 12:45	<1	<1	<2	0.68	0.11	10
2024-04-22 12:45	<1	<1	<2	0.52	0.16	11
2024-04-29 12:45	<1	<1	<2	0.59	0.12	10
2024-05-06 12:45	<1	<1	<2	0.58	0.11	12
2024-05-13 12:45	<1	<1	<2	0.66	0.14	13
2024-05-21 12:45	<1	<1	<2	0.51	0.11	14
2024-05-27 12:45	<1	<1	<2	0.76	0.08	14
2024-06-03 12:45	<1	<1	2	0.51	0.12	14
2024-06-10 12:45	<1	<1	<2	0.57	0.16	14
2024-06-17 12:45	<1	<1	<2	0.56	0.13	15
2024-06-24 12:45	<1	<1	<2	0.63	0.12	16
2024-07-02 12:45	<1	<1	4	0.62	0.13	16
2024-07-08 12:45	<1	<1	<2	0.65	0.13	17
2024-07-15 12:45	<1	<1	6	0.68	0.13	17
2024-07-22 12:45	<1	<1	<2	0.6	0.17	18
2024-07-29 12:45	<1	<1	16	0.72	0.1	19
2024-08-07 12:45	<1	<1	2	0.54	0.09	19
2024-08-12 12:15	<1	<1	<2	0.73	0.09	19
2024-08-19 12:45	<1	<1	6	0.52	0.21	20
2024-08-26 12:45	<1	<1	10	0.81	1.8	19
2024-09-03 12:45	<1	<1	<2	0.5	0.1	20
2024-09-09 12:45	<1	<1	<2	0.61	0.12	20
2024-09-16 12:45	<1	<1	4	0.67	0.1	18
2024-09-23 12:45	<1	<1	2	0.66	0.1	19
2024-10-01 12:45	<1	<1	<2	0.53	0.09	18
2024-10-07 12:45	<1	<1	4	0.58	0.15	4
2024-10-15 12:45	<1	<1	<2	0.66	0.1	16
2024-10-21 12:45	<1	<1	2	0.65	0.1	15
2024-10-28 12:45	<1	<1	2	0.51	0.15	14
2024-11-04 12:45	<1	<1	<2	0.45	0.13	13
2024-11-12 12:45	<1	<1	<2	0.45	0.16	13
2024-11-18 12:45	<1	<1	<2	0.52	0.11	11
2024-11-25 12:15	<1	<1	2	0.58	0.11	10
2024-12-02 12:45	<1	<1	2	0.59	0.12	10
2024-12-09 12:45	<1	<1	<2	0.82	0.11	10
2024-12-16 12:45	<1	<1	<2	0.66	0.1	9
2024-12-23 12:45	<1	<1	NA	0.66	0.1	9
2024-12-30 12:45	<1	<1	NA	0.61	0.09	9

PWT-172

Water Sampling | Type: GRAB | Station Number: RMD-274 | Address: 10920 Springwood Court

Sampled Date	Total Coliform (CFU/1000 ml)	E. coli (CFU/1000 ml)	HPC (CFU/ml)	Chlorine Free (mg/l)	Turbidity (NTU)	Temperature (C°)
2024-01-02 13:15	<1	<1	4	0.53	0.23	9
2024-01-08 13:30	<1	<1	4	0.7	0.12	8
2024-01-15 13:15	<1	<1	<2	0.68	0.15	7
2024-01-22 13:15	<1	<1	<2	0.68	0.4	6
2024-01-29 13:15	<1	<1	2	0.65	0.45	7
2024-02-05 13:15	<1	<1	<2	0.62	0.34	9
2024-02-12 13:15	<1	<1	<2	0.58	0.16	7
2024-02-20 13:15	<1	<1	<2	0.65	0.12	7
2024-02-26 13:15	<1	<1	2	0.59	0.13	7
2024-03-04 13:15	<1	<1	<2	0.62	0.16	8
2024-03-11 13:15	<1	<1	<2	0.68	0.26	8
2024-03-18 13:15	<1	<1	8	0.55	0.27	8
2024-03-25 13:15	<1	<1	<2	0.64	0.17	9
2024-04-02 13:20	<1	<1	<2	0.65	0.22	9
2024-04-08 13:15	<1	<1	<2	0.63	0.24	9
2024-04-15 13:15	<1	<1	2	0.64	0.13	10
2024-04-22 13:15	<1	<1	4	0.56	0.26	11
2024-04-29 13:15	<1	<1	6	0.53	0.13	10
2024-05-06 13:15	<1	<1	<2	0.54	0.14	11
2024-05-13 13:15	<1	<1	<2	0.42	0.17	11
2024-05-21 13:15	<1	<1	2	0.58	0.1	14
2024-05-27 13:15	<1	<1	<2	0.79	0.08	13
2024-06-03 13:15	<1	<1	<2	0.6	0.1	12
2024-06-10 13:15	<1	<1	<2	0.66	0.11	14
2024-06-17 13:15	<1	<1	6	0.54	0.14	14
2024-06-24 13:15	<1	<1	6	0.56	0.21	15
2024-07-02 13:15	<1	<1	<2	0.62	0.24	15
2024-07-08 13:15	<1	<1	<2	0.63	0.12	16
2024-07-15 13:15	<1	<1	140	0.61	0.22	17
2024-07-22 13:15	<1	<1	22	0.57	0.2	17
2024-07-29 13:15	<1	<1	8	0.66	0.13	18
2024-08-07 13:15	<1	<1	4	0.57	0.1	19
2024-08-12 12:45	<1	<1	12	0.56	0.12	19
2024-08-19 13:15	<1	<1	50	0.54	0.12	19
2024-08-26 13:15	<1	<1	24	0.63	0.09	19
2024-09-03 13:15	<1	<1	8	0.48	0.09	18
2024-09-16 13:15	<1	<1	8	0.62	0.09	18
2024-09-23 13:15	<1	<1	2	0.6	0.13	18
2024-10-01 13:15	<1	<1	4	0.55	0.09	17
2024-10-07 13:15	<1	<1	6	0.59	0.11	17
2024-10-15 13:15	<1	<1	2	0.59	0.11	16
2024-10-21 13:15	<1	<1	8	0.6	0.11	15
2024-10-28 13:15	<1	<1	2	0.51	0.14	14
2024-11-04 13:15	<1	<1	6	0.43	0.15	13
2024-11-12 13:15	<1	<1	12	0.45	0.24	12
2024-11-18 13:15	<1	<1	<2	0.35	0.1	12
2024-11-25 12:50	<1	<1	<2	0.59	0.14	10
2024-12-02 13:15	<1	<1	<2	0.67	0.13	10
2024-12-09 13:15	<1	<1	<2	0.98	0.12	10
2024-12-16 13:15	<1	<1	<2	0.72	0.83	9
2024-12-23 13:15	<1	<1	NA	0.76	0.16	8
2024-12-30 13:15	<1	<1	NA	0.65	0.09	8

Water Sampling | Type: GRAB | Station Number: RMD-275 | Address: 5180 Smith Crescent

Sampled Date	Total Coliform (CFU/1000 ml)	E. coli (CFU/1000 ml)	HPC (CFU/ml)	Chlorine Free (mg/l)	Turbidity (NTU)	Temperature (°C)
2024-01-05 10:55	<1	<1	4	0.5	0.22	10
2024-01-11 11:15	<1	<1	<2	0.61	0.14	6
2024-01-25 10:45	<1	<1	<2	0.75	0.11	7
2024-02-02 10:55	<1	<1	<2	0.71	0.21	8
2024-02-08 11:15	<1	<1	<2	0.64	0.2	8
2024-02-16 10:55	<1	<1	<2	0.57	0.27	7
2024-02-22 10:55	<1	<1	<2	0.75	0.16	7
2024-03-01 10:45	<1	<1	2	0.61	0.14	7
2024-03-07 11:00	<1	<1	<2	0.6	0.13	6
2024-03-15 10:45	<1	<1	<2	0.66	0.18	7
2024-03-21 10:50	<1	<1	<2	0.7	0.19	11
2024-03-28 10:45	<1	<1	2	0.72	0.35	7
2024-04-04 11:15	<1	<1	<2	0.75	LA	8
2024-04-12 11:00	<1	<1	<2	0.73	0.09	9
2024-04-18 11:15	<1	<1	<2	0.64	0.12	9
2024-04-26 10:45	<1	<1	<2	0.66	0.08	9
2024-05-02 11:15	<1	<1	<2	0.65	0.11	10
2024-05-10 10:55	<1	<1	<2	0.64	0.21	10
2024-05-16 10:55	<1	<1	<2	0.43	0.27	12
2024-05-24 10:55	<1	<1	<2	0.55	0.12	12
2024-06-04 10:45	<1	<1	<2	0.66	0.11	11
2024-06-07 10:55	<1	<1	<2	0.59	0.12	12
2024-06-13 10:45	<1	<1	2	0.53	0.12	13
2024-06-21 10:55	<1	<1	<2	0.52	0.11	13
2024-06-27 11:15	<1	<1	4	0.55	0.18	12
2024-07-05 10:55	<1	<1	6	0.5	0.12	15
2024-07-11 10:55	<1	<1	<2	0.47	0.12	14
2024-07-25 11:00	<1	<1	6	0.5	0.13	17
2024-08-02 10:55	<1	<1	<2	0.48	0.17	16
2024-08-16 11:35	<1	<1	620	0.57	0.46	16
2024-08-22 10:45	<1	<1	8	0.61	0.25	16
2024-08-30 11:15	<1	<1	190	0.55	0.21	14
2024-09-05 11:15	<1	<1	160	0.6	0.24	15
2024-09-13 10:55	<1	<1	210	0.61	0.38	14
2024-09-19 10:45	<1	<1	50	0.54	0.22	15
2024-09-27 10:55	<1	<1	22	0.43	0.22	15
2024-10-03 11:25	<1	<1	40	0.38	0.21	14
2024-10-11 11:15	<1	<1	12	0.37	0.35	15
2024-10-17 10:45	<1	<1	<2	0.65	0.29	13
2024-10-25 10:45	<1	<1	<2	0.54	0.2	12
2024-10-31 10:55	<1	<1	28	0.46	0.22	13
2024-11-08 10:45	<1	<1	18	0.38	1	11
2024-11-14 10:45	<1	<1	6	0.38	0.9	10
2024-11-22 10:45	<1	<1	<2	0.42	0.52	9
2024-11-28 10:30	<1	<1	42	0.28	0.4	9
2024-12-06 10:55	<1	<1	30	0.32	0.39	9
2024-12-12 11:30	<1	<1	40	0.39	0.52	7
2024-12-20 10:55	<1	<1	NA	0.36	0.84	8
2024-12-23 10:45	<1	<1	NA	0.43	0.49	8

PWT - 73

Water Sampling | Type: GRAB | Station Number: RMD-276 | Address: 22271 Cochrane Drive

Sampled Date	Total Coliform (CFU/1000 ml)	E. coli (CFU/1000 ml)	HPC (CFU/ml)	Chlorine Free (mg/l)	Turbidity (NTU)	Temperature (°C)
2024-01-05 10:40	<1	<1	2	0.22	0.22	10
2024-01-11 10:45	<1	<1	<2	0.69	0.23	7
2024-01-25 10:30	<1	<1	<2	0.76	0.2	7
2024-02-02 10:40	<1	<1	<2	0.66	0.15	8
2024-02-08 10:45	<1	<1	<2	0.65	0.24	8
2024-02-16 10:40	<1	<1	<2	0.63	0.25	6
2024-02-22 10:40	<1	<1	<2	0.72	0.3	7
2024-03-01 10:30	<1	<1	<2	0.6	0.14	7
2024-03-07 10:45	<1	<1	<2	0.63	0.19	6
2024-03-15 10:30	<1	<1	<2	0.75	0.19	6
2024-03-21 10:30	<1	<1	<2	0.74	0.23	11
2024-03-28 11:00	<1	<1	<2	0.72	0.33	7
2024-04-04 11:00	<1	<1	<2	0.76	0.12	8
2024-04-12 10:45	<1	<1	<2	0.74	0.09	9
2024-04-18 11:00	<1	<1	<2	0.68	0.11	9
2024-04-26 10:30	<1	<1	<2	0.67	0.17	10
2024-05-02 11:00	<1	<1	<2	0.64	0.11	9
2024-05-10 10:40	<1	<1	<2	0.81	0.33	9
2024-05-16 10:40	<1	<1	2	0.72	0.34	10
2024-05-24 10:40	<1	<1	2	0.7	0.14	11
2024-05-30 10:30	<1	<1	2	0.7	0.18	11
2024-06-07 10:40	<1	<1	<2	0.71	0.13	11
2024-06-13 10:30	<1	<1	4	0.73	0.15	11
2024-06-21 10:40	<1	<1	<2	0.65	0.19	14
2024-06-27 11:00	<1	<1	<2	0.64	0.39	12
2024-07-05 10:40	<1	<1	<2	0.63	0.3	12
2024-07-11 10:40	<1	<1	<2	0.53	0.12	13
2024-07-25 10:45	<1	<1	<2	0.74	0.14	16
2024-08-02 10:40	<1	<1	2	0.68	0.26	15
2024-08-07 15:20	<1	<1	2	0.64	0.13	16
2024-08-16 11:25	<1	<1	4	0.59	0.26	15
2024-08-22 10:30	<1	<1	6	0.59	0.21	16
2024-08-30 10:45	<1	<1	22	0.64	0.24	14
2024-09-05 11:00	<1	<1	24	0.6	0.3	15
2024-09-13 10:40	<1	<1	8	0.63	0.55	15
2024-09-19 10:30	<1	<1	2	0.51	0.24	15
2024-09-27 10:40	<1	<1	<2	0.4	0.2	15
2024-10-03 11:10	<1	<1	<2	0.4	0.18	14
2024-10-11 11:00	<1	<1	<2	0.4	0.23	15
2024-10-17 10:30	<1	<1	<2	0.67	0.29	13
2024-10-25 10:30	<1	<1	<2	0.57	0.27	12
2024-10-31 10:40	<1	<1	<2	0.68	0.15	11
2024-11-08 10:30	<1	<1	<2	0.57	0.96	11
2024-11-14 10:30	<1	<1	<2	0.43	0.68	10
2024-11-22 10:30	<1	<1	<2	0.48	0.48	10
2024-11-28 10:45	<1	<1	4	0.55	0.2	9
2024-12-06 10:40	<1	<1	2	0.33	0.36	9
2024-12-12 11:15	<1	<1	2	0.37	0.34	8
2024-12-20 10:40	<1	<1	NA	0.3	0.65	8
2024-12-23 10:30	<1	<1	NA	0.29	0.3	8

Water Sampling | Type: GRAB | Station Number: RMD-277 | Address: 11280 Twigg Place

Sampled Date	Total Coliform (CFU/1000 ml)	E. coli (CFU/1000 ml)	HPC (CFU/ml)	Chlorine Free (mg/l)	Turbidity (NTU)	Temperature (C°)
2024-01-03 13:00	<1	<1	<2	0.64	0.24	8
2024-01-10 13:00	<1	<1	<2	0.72	0.15	8
2024-01-24 12:45	<1	<1	<2	0.77	0.21	5
2024-01-31 13:00	<1	<1	<2	0.71	0.21	8
2024-02-07 12:45	<1	<1	<2	0.7	0.2	6
2024-02-14 12:45	<1	<1	<2	0.68	0.19	8
2024-02-21 12:45	<1	<1	<2	0.7	0.17	6
2024-02-28 12:45	<1	<1	<2	0.67	0.15	7
2024-03-06 12:45	<1	<1	<2	0.71	0.25	6
2024-03-20 13:00	<1	<1	2	0.72	0.15	7
2024-03-27 12:50	<1	<1	<2	0.58	0.17	8
2024-04-10 12:45	<1	<1	2	0.75	0.17	7
2024-04-17 13:00	<1	<1	<2	0.72	0.13	8
2024-04-24 12:45	<1	<1	<2	0.75	0.16	9
2024-05-01 13:00	<1	<1	<2	0.63	0.16	10
2024-05-08 12:45	<1	<1	<2	0.74	0.15	9
2024-05-15 13:00	<1	<1	<2	0.87	0.18	10
2024-05-22 13:15	<1	<1	<2	0.7	0.11	11
2024-05-29 12:45	<1	<1	<2	0.63	0.13	11
2024-06-05 13:00	<1	<1	<2	0.73	0.11	11
2024-06-12 13:00	<1	<1	<2	0.75	0.18	11
2024-06-19 12:45	<1	<1	2	0.74	0.13	11
2024-06-26 12:45	<1	<1	<2	0.81	0.16	12
2024-07-03 12:45	<1	<1	<2	0.73	0.14	12
2024-07-10 13:00	<1	<1	8	0.54	0.13	14
2024-07-17 12:45	<1	<1	8	0.91	0.19	13
2024-07-24 12:45	<1	<1	<2	0.75	0.19	14
2024-07-31 13:15	<1	<1	<2	0.72	0.11	15
2024-08-07 12:45	<1	<1	4	0.81	0.12	15
2024-08-14 12:45	<1	<1	4	0.78	0.1	17
2024-08-21 13:00	<1	<1	22	0.6	0.1	17
2024-08-28 12:45	<1	<1	10	0.75	0.11	16
2024-09-04 13:00	<1	<1	<2	0.76	0.15	17
2024-09-11 13:00	<1	<1	<2	0.75	0.11	17
2024-09-18 13:00	<1	<1	4	0.53	0.11	17
2024-09-25 12:45	<1	<1	4	0.86	0.12	17
2024-10-02 12:45	<1	<1	2	0.63	0.12	16
2024-10-09 13:00	<1	<1	<2	0.76	0.14	15
2024-10-16 13:00	<1	<1	<2	0.58	0.16	15
2024-10-23 12:45	<1	<1	2	0.9	0.13	13
2024-10-30 12:45	<1	<1	<2	0.49	0.15	12
2024-11-07 13:00	<1	<1	<2	0.56	0.16	11
2024-11-13 13:00	<1	<1	<2	0.54	0.16	10
2024-11-20 13:00	<1	<1	2	0.52	0.21	9
2024-11-27 13:00	<1	<1	<2	0.35	0.16	9
2024-12-04 13:00	<1	<1	<2	0.75	0.16	8
2024-12-11 12:45	<1	<1	<2	0.82	0.15	7
2024-12-18 12:45	<1	<1	<2	0.82	0.11	8
2024-12-23 13:00	<1	<1	NA	0.73	0.12	8
2024-12-31 08:30	<1	<1	NA	0.71	0.09	8

PWT-174

Water Sampling | Type: GRAB | Station Number: RMD-278 | Address: 6651 Fraserwood Place

Sampled Date	Total Coliform (CFU/1000 ml)	E. coli (CFU/1000 ml)	HPC (CFU/ml)	Chlorine Free (mg/l)	Turbidity (NTU)	Temperature (C°)
2024-01-03 13:20	<1	<1	2	0.59	0.21	8
2024-01-10 13:35	<1	<1	16	0.65	0.14	8
2024-01-24 13:35	<1	<1	<2	0.66	0.17	5
2024-01-31 13:35	<1	<1	<2	0.75	0.21	8
2024-02-07 13:35	<1	<1	<2	0.67	0.14	6
2024-02-14 13:40	<1	<1	<2	0.65	0.18	7
2024-02-21 13:35	<1	<1	<2	0.63	0.17	6
2024-02-28 13:30	<1	<1	<2	0.65	0.15	7
2024-03-06 13:35	<1	<1	8	0.62	0.22	6
2024-03-20 13:35	<1	<1	2	0.73	0.22	6
2024-03-27 13:40	<1	<1	<2	0.42	0.15	8
2024-04-10 13:30	<1	<1	<2	0.61	0.12	7
2024-04-17 13:50	<1	<1	<2	0.69	0.22	9
2024-04-24 13:35	<1	<1	<2	0.68	0.13	9
2024-05-01 13:50	<1	<1	<2	0.67	0.14	9
2024-05-08 13:30	<1	<1	<2	0.66	0.2	9
2024-05-15 13:30	<1	<1	<2	0.88	0.38	10
2024-05-22 12:30	<1	<1	4	0.72	0.11	12
2024-05-29 13:35	<1	<1	2	0.74	0.14	10
2024-06-05 13:30	<1	<1	2	0.78	0.17	10
2024-06-12 13:30	<1	<1	2	0.64	0.25	12
2024-06-19 13:35	<1	<1	24	0.65	0.1	11
2024-06-26 13:35	<1	<1	2	0.62	0.32	11
2024-07-03 13:35	<1	<1	8	0.68	0.18	11
2024-07-10 13:35	<1	<1	10	0.73	0.16	14
2024-07-17 13:35	<1	<1	20	0.67	0.26	13
2024-07-24 14:00	<1	<1	10	0.71	0.2	14
2024-07-31 14:00	<1	<1	8	0.72	0.13	14
2024-08-07 13:45	<1	<1	6	0.64	0.11	15
2024-08-14 13:35	<1	<1	4	0.7	0.11	15
2024-08-21 13:35	<1	<1	18	0.47	0.51	16
2024-08-28 13:35	<1	<1	42	0.53	0.58	16
2024-09-04 13:30	<1	<1	28	0.5	1.4	17
2024-09-11 13:30	<1	<1	10	0.35	0.22	17
2024-09-18 13:35	<1	<1	46	0.38	0.39	15
2024-09-25 13:35	<1	<1	4	0.4	0.38	17
2024-10-02 13:35	<1	<1	4	0.42	0.36	15
2024-10-09 13:30	<1	<1	10	0.4	0.17	15
2024-10-16 13:35	<1	<1	2	0.25	0.44	15
2024-10-23 13:35	<1	<1	<2	0.58	0.18	13
2024-10-30 13:35	<1	<1	8	0.73	0.18	11
2024-11-07 13:35	<1	<1	10	0.58	0.41	12
2024-11-13 13:35	<1	<1	20	0.49	0.49	11
2024-11-20 13:35	<1	<1	2	0.46	0.34	10
2024-11-27 13:35	<1	<1	14	0.54	0.28	10
2024-12-04 13:35	<1	<1	<2	0.23	0.81	9
2024-12-11 13:35	<1	<1	<2	0.53	0.19	7
2024-12-18 13:35	<1	<1	2	0.52	0.12	8
2024-12-23 13:35	<1	<1	NA	0.23	0.2	8
2024-12-31 09:10	<1	<1	NA	0.41	0.12	8

Water Sampling | Type: GRAB | Station Number: RMD-279 | Address: 20371 Westminster Highway

Water Sampling | Type: GRAB | Station Number: RMD-280 | Address: 11500 McKenzie Road

Sampled Date	Total Coliform (CFU/1000 ml)	E. coli (CFU/1000 ml)	HPC (CFU/ml)	Chlorine Free (mg/l)	Turbidity (NTU)	Temperature (C°)
2024-01-03 13:35	<1	<1	4	0.7	0.17	7
2024-01-10 13:50	<1	<1	<2	0.64	0.2	7
2024-01-24 13:50	<1	<1	<2	0.64	0.16	4
2024-01-31 13:50	<1	<1	<2	0.78	0.15	8
2024-02-07 13:50	<1	<1	<2	0.72	0.12	6
2024-02-14 13:55	<1	4	4	0.66	0.16	7
2024-02-21 13:50	<1	<1	<2	0.65	0.13	5
2024-02-28 13:50	<1	<1	<2	0.7	0.24	6
2024-03-06 13:50	<1	<1	12	0.71	0.22	6
2024-03-20 13:50	<1	<1	<2	0.72	0.27	6
2024-03-27 13:55	<1	<1	<2	0.74	0.13	7
2024-04-10 13:45	<1	<1	<2	0.6	0.12	7
2024-04-17 14:10	<1	<1	<2	0.66	0.11	7
2024-04-24 13:50	<1	<1	<2	0.74	0.16	8
2024-05-01 14:05	<1	<1	2	0.68	0.19	9
2024-05-08 13:50	<1	<1	<2	0.75	0.39	9
2024-05-15 13:50	<1	0.91	<2	0.91	0.29	9
2024-05-22 12:45	<1	<1	<2	0.73	0.19	10
2024-05-29 13:50	<1	<1	<2	0.7	0.17	10
2024-06-05 13:50	<1	<1	<2	0.76	0.18	10
2024-06-12 13:50	<1	<1	<2	0.68	0.17	11
2024-06-19 13:50	<1	<1	<2	0.61	0.12	11
2024-06-26 13:50	<1	<1	<2	0.67	0.16	11
2024-07-03 13:50	<1	<1	<2	0.63	0.16	11
2024-07-10 13:50	<1	<1	<2	0.56	0.09	12
2024-07-17 13:50	<1	<1	<2	0.75	0.27	12
2024-07-24 13:45	<1	<1	10	0.71	0.12	13
2024-07-31 14:15	<1	<1	<2	0.74	0.12	14
2024-08-07 14:00	<1	<1	<2	0.82	0.11	14
2024-08-14 13:50	<1	<1	<2	0.74	0.11	16
2024-08-21 13:50	<1	<1	2	0.74	0.1	16
2024-08-28 13:50	<1	<1	4	0.55	0.25	16
2024-09-04 13:50	<1	<1	8	0.64	0.2	17
2024-09-11 13:50	<1	<1	2	0.63	0.1	17
2024-09-18 13:50	<1	<1	<2	0.57	0.13	16
2024-09-25 13:50	<1	<1	<2	0.58	0.14	17
2024-10-02 13:50	<1	<1	<2	0.71	0.13	15
2024-10-09 13:50	<1	<1	2	0.67	0.12	15
2024-10-16 13:50	4	<1	4	0.69	0.34	14
2024-10-23 13:50	<1	<1	NA	0.62	0.43	11
2024-10-30 13:50	<1	<1	<2	0.76	0.18	11
2024-11-07 13:50	<1	<1	2	0.76	0.19	11
2024-11-13 13:50	<1	<1	<2	0.65	0.13	10
2024-11-20 13:50	<1	<1	2	0.73	0.12	8
2024-11-27 13:50	<1	<1	6	0.75	0.26	8
2024-12-04 13:50	<1	<1	<2	0.53	0.18	10
2024-12-11 13:50	<1	<1	6	0.73	0.26	8
2024-12-18 13:50	<1	<1	<2	0.79	0.13	7
2024-12-23 13:50	<1	<1	NA	0.68	0.11	7

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Sampled Date	Total Coliform (CFU/1000 ml)	E. coli (CFU/1000 ml)	HPC (CFU/ml)	Chlorine Free (mg/l)	Turbidity (NTU)	Temperature (C°)
2024-01-05 08:20	<1	<1	<2	0.47	0.2	9
2024-01-11 08:45	<1	<1	<2	0.67	0.22	7
2024-01-25 08:15	<1	<1	<2	0.63	0.12	8
2024-02-02 08:20	<1	<1	<2	0.66	0.16	8
2024-02-08 08:45	<1	<1	<2	0.68	0.13	9
2024-02-16 08:20	<1	<1	<2	0.68	0.27	7
2024-02-22 08:20	<1	<1	<2	0.62	0.15	7
2024-03-01 08:15	<1	<1	2	0.62	0.14	7
2024-03-07 08:45	<1	<1	<2	0.76	0.12	10
2024-03-15 08:15	<1	<1	<2	0.88	0.15	7
2024-03-21 08:15	<1	<1	<2	0.8	0.58	10
2024-03-28 08:30	<1	<1	<2	0.66	0.14	8
2024-04-04 08:40	<1	<1	2	0.61	0.31	9
2024-04-12 08:45	<1	<1	2	0.71	0.13	9
2024-04-18 08:45	<1	<1	4	0.73	0.17	9
2024-04-26 08:15	<1	<1	<2	0.69	0.12	10
2024-05-02 08:45	<1	<1	<2	0.65	0.22	10
2024-05-10 08:20	<1	<1	2	0.69	0.15	10
2024-05-16 08:20	<1	<1	<2	0.68	0.18	11
2024-05-24 08:20	<1	<1	2	0.67	0.14	12
2024-05-30 08:15	<1	<1	2	0.63	0.12	12
2024-06-07 08:20	<1	<1	<2	0.69	0.13	12
2024-06-13 08:15	<1	<1	4	0.62	0.14	13
2024-06-21 08:20	<1	<1	<2	0.59	0.17	13
2024-06-27 08:45	<1	<1	<2	0.48	0.13	14
2024-07-05 08:20	<1	<1	6	0.65	0.14	14
2024-07-11 08:20	<1	<1	<2	0.62	0.16	14
2024-07-25 08:45	<1	<1	<2	0.58	0.14	15
2024-08-02 08:20	<1	0.6	<2	0.6	0.12	16
2024-08-07 13:15	<1	<1	<2	0.61	0.11	17
2024-08-16 08:45	<1	<1	6	0.61	0.13	17
2024-08-22 08:15	<1	<1	8	0.58	0.1	17
2024-08-30 08:45	<1	<1	<2	0.64	0.11	16
2024-09-05 08:45	<1	<1	4	0.61	0.13	17
2024-09-13 08:20	<1	<1	<2	0.61	0.11	18
2024-09-19 08:15	<1	<1	20	0.78	0.14	18
2024-09-27 08:20	<1	<1	6	0.63	0.12	17
2024-10-03 08:40	<1	<1	<2	0.66	0.14	16
2024-10-11 08:45	<1	<1	<2	0.65	0.17	15
2024-10-17 08:15	<1	<1	2	0.64	0.14	15
2024-10-25 08:15	<1	<1	2	0.67	0.2	13
2024-10-31 08:20	<1	<1	2	0.59	0.16	12
2024-11-14 08:15	<1	<1	2	0.58	0.13	12
2024-11-22 08:15	<1	<1	<2	0.63	0.15	9
2024-11-28 08:15	<1	<1	8	0.48	0.15	10
2024-12-06 08:20	<1	<1	<2	0.64	0.25	9
2024-12-12 08:50	<1	<1	<2	0.69	0.16	9
2024-12-20 08:20	<1	<1	NA	0.77	0.14	8
2024-12-23 08:15	<1	<1	NA	0.71	0.13	8

Appendix B | 2024 Trihalomethanes (THMs) and Haloacetic Acids (HAAs) Test Results

THM (ppb) Sample	Sampled Date	Bromodi-chloromethane	Chlorodibromomethane	Chloroform	Total Trihalo-methanes	Total THM Quarterly Average (Guideline Limit 100 ppb)
RMD 250	2023-11-29	<1	<1	33	35	36
	2024-02-01	<1	<1	23	24	28
	2024-04-25	<1	<1	27	28	29
	2024-09-11	1	<1	29	32	30
RMD 251	2024-11-28	<1	<1	30	31	28
	2023-11-29	<1	<1	33	34	35
	2024-02-01	<1	<1	24	25	27
	2024-04-25	<1	<1	29	30	29
RMD 258	2024-09-11	1	<1	28	31	30
	2024-11-28	<1	<1	31	32	29
	2023-11-29	<1	<1	37	38	43
	2024-02-01	<1	<1	24	25	31
RMD 259	2024-04-25	<1	<1	31	32	33
	2024-09-11	1	<1	31	34	32
	2024-11-28	<1	<1	36	36	30
	2023-11-29	<1	<1	38	40	40
RMD 250	2024-02-01	<1	<1	24	24	31
	2024-04-25	<1	<1	31	32	32
	2024-09-11	1	<1	33	35	33
	2024-11-28	<1	<1	34	36	30

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HAA (ppb) Sample	Dibromo-acetic Acid	Dichloro-acetic Acid	Monobromo-acetic Acid	Monochloro-acetic Acid	Trichloro-acetic Acid	Total Halo-acetic Acid	Total HAA Quarterly Average (Guideline Limit 50 ppb)
RMD 250	<0.5	13	<0.5	1	8.3	22	20
	<0.5	11	<0.5	1.1	6	18	19
	<0.5	12	<0.5	1	7.7	21	19
	<0.5	10	<0.5	0.9	6.8	18	20
RMD 251	<0.5	13	<0.5	0.8	11	24	19
	<0.5	12	<0.5	0.5	8	21	17
	<0.5	11	<0.5	0.6	7.3	19	18
	<0.5	13	<0.5	0.9	8.3	22	19
RMD 258	<0.5	9.7	<0.5	1.2	6.2	17	20
	<0.5	14	<0.5	0.9	11	26	19
	<0.5	14	<0.5	1.1	9	24	21
	<0.5	11	<0.5	1.1	6.8	19	20
RMD 259	<0.5	13	<0.5	0.6	6.9	18	21
	<0.5	13	<0.5	0.6	12	25	20
	<0.5	13	<0.5	0.8	9.2	23	20
	<0.5	12	<0.5	1.1	7.2	20	20
RMD 250	<0.5	13	<0.5	0.7	9	23	21
	<0.5	9	<0.5	0.8	6.7	16	21
	<0.5	12	<0.5	0.5	12	25	20
	<0.5	12	<0.5	0.5	12	25	20

Appendix C | 2024 Metal Level Guidelines

13Al

56Ba

19K

City of Richmond
Municipal Metals

Parameter	Canadian Guideline Limit	Reason Guideline Established	Guideline Recently Updated
Aluminum Total (µg/L)	2900	Health	2021
Antimony Total (µg/L)	6	Health	2024
Arsenic Total (µg/L)	10 (ALARA)	Health	
Barium Total (µg/L)	2000	Health	2020
Boron Total (µg/L)	5000	Health	2023
Cadmium Total (µg/L)	7	Health	2020
Calcium Total (µg/L)	none		
Chromium Total (µg/L)	50	Health	2018
Cobalt Total (µg/L)	none		
Copper Total (µg/L)	2000	Health	2019
Iron Total (µg/L)	≤ 300	Aesthetic	
Lead Total (µg/L)	5 (ALARA)	Health	2019
Magnesium Total (µg/L)	none		
Manganese Total (µg/L)	120	Health	2019
Mercury Total (µg/L)	1.0	Health	
Molybdenum Total (µg/L)	none		
Nickel Total (µg/L)	none		
Potassium Total (µg/L)	none		
Selenium Total (µg/L)	50	Health	
Silver Total (µg/L)	none		
Sodium Total (µg/L)	≤ 200,000	Aesthetic	
Zinc Total (µg/L)	≤ 5000	Aesthetic	

82Pb

42Mo

Guidelines Checked May 2, 2024
(ALARA)= As Low As Reasonably Achievable

Appendix D | 2024 Metal Testing Results

13Al

56Ba

19K

City of Richmond
Municipal Metals

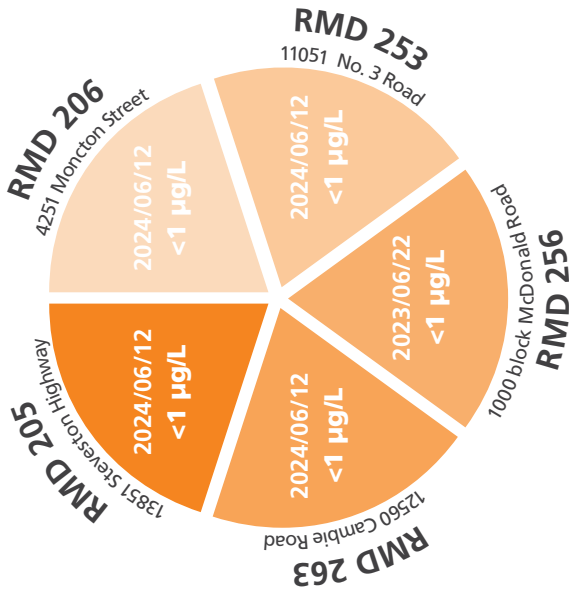
Analysis	Units	RMD 250 6071 Azure Road		RMD 257 6640 Blundell Road		RMD 263 12560 Cambie Road	
		2024-04-17	2024-10-11	2024-04-17	2024-10-11	2024-04-17	2024-10-11
Date							
Aluminum Total	µg/L	24	22	23	21	24	27
Antimony Total	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Arsenic Total	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Barium Total	µg/L	2.9	3.5	2.9	3.4	2.9	3.5
Boron Total	µg/L	<10	<10	<10	<10	<10	<10
Cadmium Total	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Calcium Total	µg/L	8790	8160	8700	7990	8870	7810
Chromium Total	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Cobalt Total	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Copper Total	µg/L	0.8	0.9	0.7	1	0.9	0.9
Iron Total	µg/L	<5	<5	6	<5	6	15
Lead Total	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Magnesium Total	µg/L	224	290	226	283	227	274
Manganese Total	µg/L	3.7	7.4	3.9	8.2	5.0	13.3
Mercury Total	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Molybdenum Total	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nickel Total	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Potassium Total	µg/L	161	243	159	241	164	239
Selenium Total	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Silver Total	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Sodium Total	µg/L	1720	2700	1710	2700	1840	3000
Zinc Total	µg/L	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0

26Fe

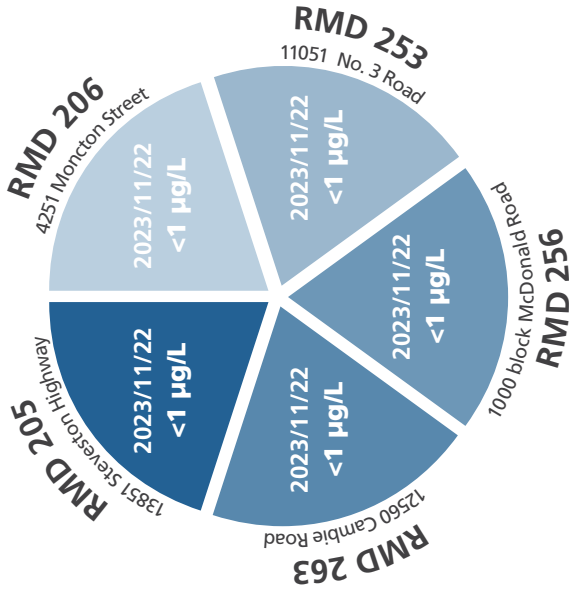
24Cr

Appendix E | 2024 Vinyl Chloride Results

June 2024



November 2024



Appendix F | Water Quality Testing Parameters

Weekly sampling is conducted at 40 specific locations throughout the City of Richmond. Sample testing is conducted at Metro Vancouver laboratories to ensure the City's drinking water meets the standards and parameters outlined in the British Columbia Drinking Water Protection Act. Testing is based on the parameters outlined below. Detailed testing results based on these parameters are included in Appendices A through G.

1. Bacterial Parameters

The City of Richmond and Metro Vancouver conduct bacteriological tests for total coliform, fecal coliform and heterotrophic plate counts (HPC). The presence of these organisms in drinking water indicates that the water may be contaminated and may contain potentially harmful bacteria, viruses or parasites.

TOTAL COLIFORMS

Total coliform bacteria reproduce in water, soil or digestive systems of animals. The presence of total coliforms indicates water may have been contaminated or that the disinfection process is inadequate. The number, frequency and location of samples for total coliform testing will vary depending on the type and size of the system and jurisdictional requirements. Provincial standards state that no sample contain more than 10 total coliforms per 100 ml, and that 90% of samples must have zero coliform bacteria in a sample over a 30-day period.

Fecal coliforms are present in large numbers in the feces and intestinal tracts of humans and other warm-blooded animals, and can enter bodies of water and water systems through contamination by human and animal waste. Due to the high risk of diseases and parasites, provincial standards state there can be no detectable fecal coliforms per 100 ml sample.

HETEROTROPHIC PLATE COUNT

HPC tests measure the level of the heterotrophic micro-organism population in the City's drinking water. HPC tests indicate the presence of nutrients that could facilitate the growth of harmful bacteria, and can be a sign of changes in water quality if levels are elevated during treatment and distribution. Higher than normal HPC levels inform operators that there is an unusual increase of stagnant water or low chlorine residuals in the water mains. By reducing the HPC levels through our flushing programs, the possibility of bacteriological growth is decreased because the pipes become an inhospitable environment for bacteria to thrive. The small amount of free chlorine residual in our water also disinfects and eliminates harmful substances within our distribution system.

2. Chemical Parameters

Testing is done for chemicals in the water to ensure the proper amount of chlorine is in the system, to confirm that by products from the disinfection process do not remain in the water and to ensure that naturally occurring chemicals in the water are at acceptable levels.

CHLORINE RESIDUAL

Chlorine residual is a measurement of the free chlorine remaining in the distribution system at the point of delivery to the customer. Chlorine is added to our drinking water by Metro Vancouver as part of the disinfection process to prevent bacterial growth during distribution. When the source lakes experience high turbidity (e.g., during a storm), Metro Vancouver will increase the chlorine that is added to the water at its plants to ensure that the water quality is maintained despite the higher-than-desired turbidity. Typically, the slightly higher concentration of free chlorine in the system dissipates by the time it reaches our system. Sometimes the higher concentration remains in the system and can cause a chlorine taste and smell in the water. Despite the increased chlorine, the water is still safe to drink.

There also needs to be a minimum level of chlorine residual to protect Richmond's water supply from bacteriological contamination or growth. The minimum parameter for free chlorine residual in the water is 0.2 mg/L. In recent years, the City has made great progress in improving chlorine residuals by executing our annual flushing program to clean and flush the water mains.

DISINFECTION BY PRODUCTS

Disinfection by products are potentially harmful compounds produced by the reaction of a water disinfectant (such as chlorine or ozone) with naturally occurring organic matter in water. Two common chlorination by products are trihalomethanes (THMs) and haloacetic acids (HAAs).

THMs that are present in drinking water can enter the human body via multiple routes of exposure. These include

ingestion by consuming water and inhalation, and skin absorption from showering and bathing. Under the Guidelines for Canadian Drinking Water Quality (GCDWQ), the maximum acceptable concentration for THMs is 100 parts per billion (ppb). The maximum level for THMs is based on a running annual average of samples taken every three months. High levels on a particular day are not of concern unless they are consistently high over the latest four samples. Typically, THM levels will be highest in the summer and lowest in the winter months.

Under the GCDWQ, the maximum acceptable concentration for HAAs is 80 ppb. Like THMs, HAAs are also monitored quarterly and are calculated on a running annual average of samples taken every three months.

The City utilizes the Metro Vancouver laboratory to perform quarterly tests for HAAs and THMs. These were carried out at representative sampling sites in accordance with a joint Metro Vancouver and City of Richmond monitoring plan.

ACIDITY (PH VALUE)

The measurement of acidity is known as pH. A pH below 7.0 is considered acidic, above 7.0 is considered basic and 7.0 is neutral. It is recognized that acidic water will accelerate the corrosion of metal pipes, often causing blue-green staining in household fixtures.

The acidity of our water is controlled by Metro Vancouver. The Seymour-Capilano filtration plant includes pH adjustment and corrosion control in its treatment processes. It is expected that the pH of drinking water will rise in the coming years as the filtration plant reaches its full capacity. Since natural acidity in water corrodes metal pipes over time, the pH increase will extend the lifespan of water plumbing systems and enhance water quality.

METALS

The City's water quality program also includes testing for metals that can be present in natural water sources, including copper, iron, lead and zinc.

Appendix G | Water Sampling Sites

MONDAY

RMD-250	6071 Azure Road
RMD-251	5951 McCallan Road
RMD-252	9751 Pendleton Road
RMD-253	11051 No. 3 Road
RMD-254	5300 No. 3 Road
RMD-255	6000 block Miller Road
RMD-256	1000 block McDonald Road
RMD-269	14951 Triangle Road
RMD-270	8200 Jones Road
RMD-271	3800 Cessna Drive
RMD-272	751 Catalina Crescent
RMD-273	Across from 8331 Fairfax Place
RMD-274	10920 Springwood Court

WEDNESDAY

RMD-257	6640 Blundell Road
RMD-258	7000 block Dyke Road
RMD-259	10020 Anethyst Avenue
RMD-260	11111 Horseshoe Way
RMD-261	9911 Sidaway Road
RMD-262	13799 Commerce Parkway
RMD-263	12560 Cambie Road
RMD-264	13100 Mitchell Road
RMD-266	9380 General Currie Road
RMD-268	13800 No. 3 Road
RMD-277	Across from 11280 Twigg Place
RMD-278	6651 Fraserwood Place
RMD-279	Across from 20371 Westminster Highway

FRIDAY

RMD-202	1500 Valmont Way
RMD-203	23260 Westminster Highway
RMD-204	3180 Granville Avenue
RMD-205	13851 Stevenson Highway
RMD-206	4251 Moncton Street
RMD-208	13200 No. 4 Road
RMD-212	Across from 8600 Ryan Road
RMD-214	11720 Westminster Highway
RMD-216	11080 No. 2 Road
RMD-249	23000 block Dyke Road
RMD-267	17240 Fedoruk Road
RMD-275	5180 Smith Crescent
RMD-276	22271 Cochrane Drive
RMD-280	11500 McKenzie Road

TEMPERATURE

High temperatures in the distribution system can affect the amount of chlorine residual and can contribute to bacterial growth. Typically, the temperature of drinking water in the distribution system rises during summer months.

TASTE AND ODOUR

Taste and odour are monitored through customer complaints. If the water quality meets all the other parameters set out in this report, the taste and odour of the water should not change. Most of the time the different taste and odour will be the result of an increase in free chlorine, which is safe to drink. However, it's important for the City and Water Services staff to track and react to complaints because it could mean that contamination has occurred somewhere in the system.

3 Physical Parameters

The water in Richmond's distribution system is tested for turbidity and temperature on a weekly basis. Information is also collected on the taste and odour of Richmond's water by actively tracking water quality complaints.

TURBIDITY

Turbidity is a measure of water clarity and cloudiness in the water, and is caused by dissolved substances that are present in the water. Turbidity is measured in Nephelometric Turbidity Units (NTU). The guideline for turbidity should not exceed 5 NTUs in a distribution system providing that source water protection, monitoring and water treatment requirements are met, including increased levels of residual chlorine. Turbidity is a concern because increased turbidity compromises the drinking water disinfection process and can allow microbes to grow or indicate that there is a presence of microbes in the system.

In general, sites with elevated turbidity are located in sections of the distribution network where there is low demand on the water system or where dead-end water mains exist. The increase may be attributed to sediment disturbance in the distribution system.



Multiple water samples are collected and tested every week.



Testing for sufficient levels of chlorine in water system.

Appendix H | Specific Emergency Response Plans

Specific Emergency Response Plans

Positive Response for E. Coli or Fecal Coliform

In the event of possible E. coli or fecal coliform contamination, all steps to ensure public health and safety will be taken, including banning water usage if necessary. If a water sample tests positive for fecal coliform, the following response plan will occur.

- The City of Richmond's water quality staff, the Drinking Water Officer and the Medical Health Officer will be notified by the Metro Vancouver Laboratory.

Interim samples from the site will be examined. Interim samples are samples in the period between when the fecal positive sample was taken and when it was determined to be fecal positive.

- Arrangements will be made for the immediate collection of a repeat sample, including, where possible, samples from upstream and downstream sources of the fecal-positive sample.
- Chlorine residual for the sample noted on the sampler's data sheet will be reviewed to determine if a localized loss of disinfectant occurred.
- Water Services staff will be contacted to determine if there was any loss of pressure or other unusual events that may have led to contaminants entering the system.

- The need for a boil-water advisory will be evaluated by the City, the Drinking Water Officer and the Medical Health Officer. If a boil water advisory is deemed necessary, the municipality will carry out various means to inform the public. Metro Vancouver will be informed of this public advisory.

- The City, in consultation with the Medical Health Officer, will determine the need for and extent of a boil water advisory.
- The Metro Vancouver laboratory will initiate procedures to identify species of the fecal positive organism with standard biochemical tests.
- The Medical Health Officer will be contacted with the repeat sample results and the results of the species identification on the fecal positive sample when these tests are complete.



Staff collecting a water sample in a vial for testing.



A variety of tools are used to test water quality.

Chemical or Biological Contamination Response

In the event of chemical or biological contamination in source waters or the City's distribution system, the following actions will be taken by the City of Richmond and Metro Vancouver:

- Immediately notify Vancouver Coastal Health.
- Identify the chemical and any public health risk factors associated with its presence in potable water.
- Isolate the contaminated zone area and determine the level of contamination.
- Issue a public advisory in consultation with the Drinking Water Officer and Medical Health Officer.
- In the event of possible biological or chemical contamination, all steps to safety will be taken to ensure public health, including banning water usage if necessary.

Turbidity Response

Turbidity (cloudy water) occurs during periods of heavy rain at and surrounding Metro Vancouver water sources. The City of Richmond, in collaboration with Vancouver Coastal Health, developed a turbidity response plan, which considers the City's responsibility for due diligence without unreasonably constraining the water utility's ability to operate the system.

Should there be a turbidity event, the results will be assessed and staff will:

- begin a rigorous sampling program for microbiological activity and residual chlorine;
- monitor the City's supervisory control and data acquisition (SCADA) system with updates sent to Vancouver Coastal Health on a predetermined schedule;
- flush areas and re-test; and
- if necessary (in consultation with Vancouver Coastal Health), issue a public communication and issue a boil-water advisory to residents receiving turbid water.

Response to Interruption of Primary and/or Secondary Disinfection

Upon notification by Metro Vancouver Operations that an interruption in disinfection has occurred, City staff implement several response measures.

- Staff will monitor residual levels of chlorine at strategic locations in the Metro Vancouver supply area.
- The City's SCADA system will be monitored, with updates sent to Vancouver Coastal Health on a predetermined schedule, as set by the health authority.

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- In cases where chlorine residual is less than 0.2 ppm, City crews will flush the affected area until an acceptable level is achieved.

The actions will continue until disinfection is resumed and adequate levels of residual chlorine have been reached in the distribution system.

Response to Loss of Pressure Due to High Demand

Staff will implement several response measures in the event of a pressure loss due to high demand.

- City staff will attempt to rectify the problem as soon as possible using various demand management techniques and by supplementing supply to problem areas.
- Metro Vancouver, the Drinking Water Officer and the Medical Health Officer will be notified of any water quality issues.

- City staff will perform chlorine residual tests at various locations to determine if adequate disinfectant is present in the distribution.

All water quality complaints from the public will be thoroughly investigated due to the potential for water contamination during times of low water pressure.

RESPONSE TO WATERMAIN BREAKS WITH SUSPECTED CONTAMINATION

- All watermain breaks where chemical or microbiological contamination of the system are suspected will be immediately reported to the Drinking Water Officer and the Medical Health Officer.
- The municipality will isolate the contaminated section from the rest of the distribution system. Once the watermain has been repaired, chlorine residual testing will be conducted at various locations affected by the main break.

If low chlorine residuals are found, necessary actions to increase the levels of free chlorine will be carried out. If bacterial contamination is suspected, water samples will be analyzed and appropriate action taken.

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