



Annual Water Quality Report

Table of contents

Table of contents	2
Executive Summary	4
Acronyms	5
Introduction	6
System Description	6
Northwest System	7
Southwest System.....	8
East System	9
AWTP.....	10
Acadia	11
Private Systems	11
Annual Water Demand	11
System Inventory	12
Cross Connection Control Program	16
System Maintenance	17
Flushing.....	17
Storage Reservoir Cleaning and Inspection.....	17
Reservoir Status.....	17
Staff Training and Operation Levels	18
Emergency Response and Contingency Plan	19
Auditor General for Local Government Audit Report Summary – Action Items and Updates	19
Operational Highlights for 2023	25
Planned Works for 2024	25
Water Sampling and Testing Program	26
Quarterly Microbial Testing.....	27
Semi-Annual Routine Parameter Testing.....	27
Annual Complex Parameter Testing	32
Source Water Protection	32
Distribution System Water Quality	33
Distribution System Microbial Testing	35
Microbial Results for 2023	35

Distribution System Physical Parameters Analysis 37

Distribution System Testing - Chemical Parameters 39

Conclusion..... 39

References 40

Appendix A – Source Water Test Results 41

Appendix B – Raw Data..... 45

Executive Summary

The Township of Langley has a population of approximately 147,000 people and provides water to an estimated 127,300 residents. Those not serviced by the Township's water utility typically access water from private or community wells.

In 2023 the Township's water was sourced from eight (8) groundwater wells and the Greater Vancouver Water District (GVWD). Six (6) additional groundwater wells were disconnected from the water distribution system and were scheduled for decommissioning in 2023 and 2024.

A staff of 49 maintain the water system from source to service connection including flushing, reservoir cleaning and inspection programs. Field staff hold a variety of Environmental Operator Certification Program (EOCP) certifications and are supported by several professional and technical personnel.

The Township's source water met the requirements of the British Columbia Drinking Water Protection Regulations (DWPR) and the Health Canada Guidelines for Drinking Water Quality (GCDWQ) for microbial parameters. There was no *E. coli* detected in source water samples. One sample taken at Aldergrove Well 4 tested positive for total coliforms; the well was flushed, and subsequent samples returned negative for total coliforms.

Some source water samples exceeded the health based Maximum Acceptable Concentration (MAC) and Aesthetic Objective (AO) for semi-annual routine parameters. Aldergrove Well 10 tested high for nitrates and most wells tested above the AO for manganese. Due to blending and treatment at the Aldergrove Water Treatment Plant (AWTP) the water conveyed to the distribution system is within the GCDWQ. The offline wells in Brookwood and Murrayville exceeded the MAC or AO for several parameters; however, water from these wells was not added into the distribution system in 2023 and once they were identified for decommissioning, they were removed from the sampling program.

Staff collected a total of 1,541 distribution system samples, 18 of which tested positive for total coliforms. There were no positive samples for *E. coli*. Positive samples were communicated to Fraser Health and the areas were flushed and resampled until two (2) consecutive samples tested negative in compliance with the Township's Water Emergency Response Plan (WERP).

The 2023 water quality monitoring results indicate that the water in the Township is potable and safe for public consumption. Staff continue to seek improvements to the water supply and distribution systems, in coordination with Fraser Health and GVWD to continue providing high quality water to consumers.

This report is prepared according to the BC DWPR (section 11) which requires all water suppliers publish an annual water quality report and ensure that the information be made public.

Acronyms

AC	Asbestos Cement
ALARA	As Low As Reasonably Achievable
AO	Aesthetic Objective
AWTP	Aldergrove Water Treatment Plant
BTEX	Benzene, Toluene, Ethyl Benzene, Xylene
CCCP	Cross Connection Control Program
CFU/ml	Colony Forming Unit/ml
DWPR	Drinking Water Protection Regulation
EMS	Environmental Monitoring System
EOCP	Environmental Operators Certification Program
GARP	Groundwater At Risk of Containing Pathogens
GCDWQ	Health Canada (September 2022) Guidelines for Canadian Drinking Water Quality
GVRD	Greater Vancouver Regional District
GVWD	Greater Vancouver Water District
HAA	Halo Acetic Acid
HPC	Heterotrophic Plate Count
MAC	Maximum Acceptable Concentration
MDL	Minimum Detectable Level
mg/L	Milligram per Litre
mL	Millilitre
ML	Megalitre
MLD	Megaliter per Day
MPN	Most Probable Number
NTA	Nitritotriacetic Acid
NTU	Nephelometric Turbidity Unit
PAH	Polycyclic Aromatic Hydrocarbon
pH	Measure of acidity, pH of 7 is neutral
PRV	Pressure Reducing Valve
SCADA	Supervisory Control and Data Acquisition
SRU	Salmon River Uplands
THM	Trihalomethane
TOC	Total Organic Carbon
TOL	Township of Langley
VOC	Volatile Organic Carbon
WERP	Water Emergency Response Plan
WQMRP	Water Quality Monitoring and Reporting Plan (For GVRD and Member municipalities)

Introduction

The BC DWPR (Section 11) requires all water suppliers to produce and make public an annual water quality report. This report, along with previous annual reports is available in PDF format at www.tol.ca. This report provides an overview of the Township's water system and documents the test results of its well water and distribution system water quality monitoring program throughout 2023.

System Description

Home to approximately 147,000 residents and sitting on the traditional territories of the ɔ́icə́y̓ (Katzie), ɔ́wɑ:ńłəń (Kwantlen), Máthxwi (Matsqui), and Se'mya'me (Semiahmoo) First Nations communities; the Township of Langley provides water to approximately 127,301 of these residents. Those not serviced by the Township water utility access water from either private or community wells. Township water is currently sourced from eight (8) groundwater wells as well as the Greater Vancouver Water District (GVWD).

Much of the Township's primary source of water is from Coquitlam Lake via GVWD. The Aldergrove community is supplied water by the AWTP which treats source water from six (6) groundwater wells and is supplemented by water from GVWD. The central community of Acadia is supplied by two (2) municipal groundwater wells. Figure 0 1 shows all the Township's communities and the infrastructure required to supply them with water. In 2023 GVWD provided 92% of the Township's drinking water with the remaining 8% coming from municipal groundwater wells.

The Township's water is interconnected to the neighboring City of Abbotsford, City of Langley, and City of Surrey in case of emergencies.

Below are Figures of the four (4) separate municipal water systems in the Township with a detailed list following on Table 1:

- Northwest Langley – Figure 2
- Southwest Langley – Figure 3
- East Langley – Figure 4
- Acadia – Figure 4

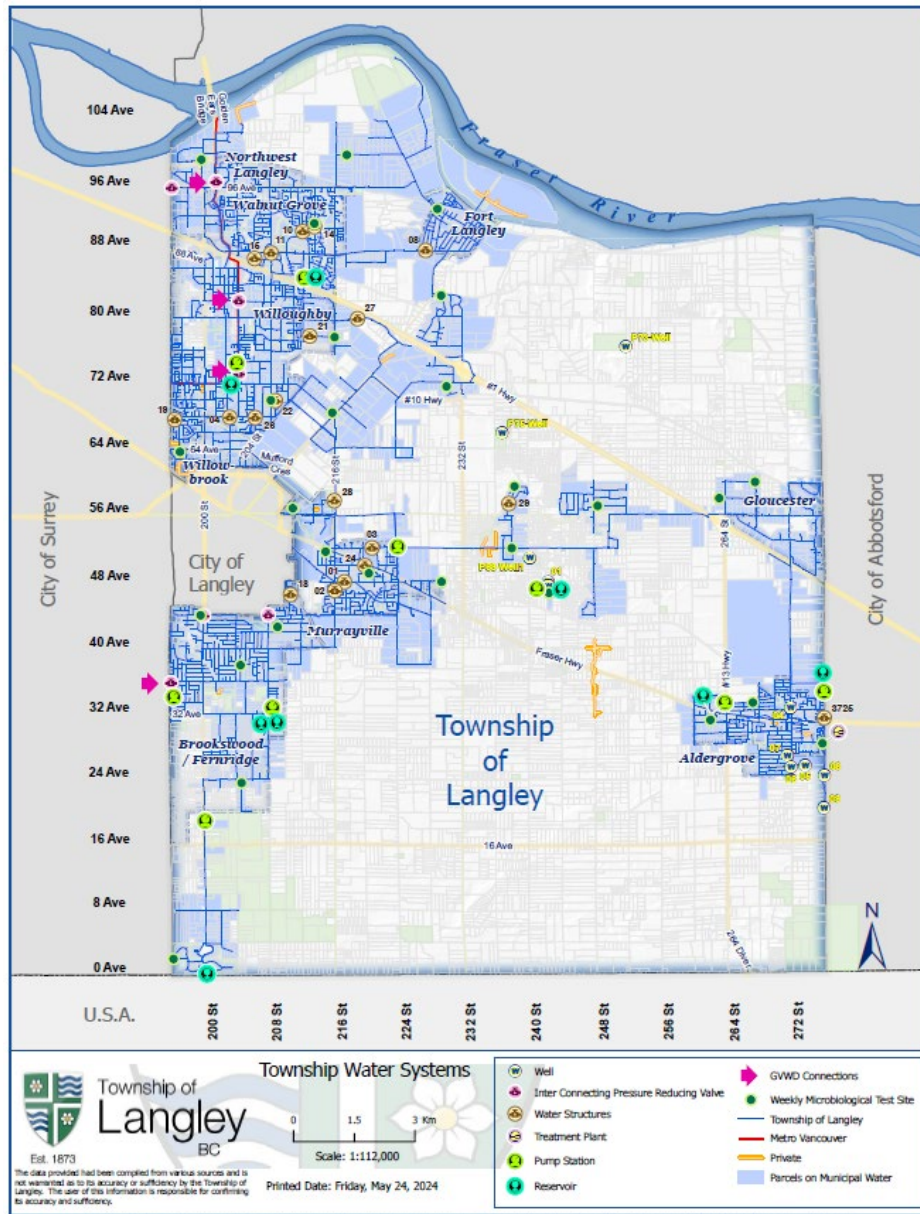


Figure 1: Map of the Township of Langley's water infrastructure

Northwest System

The Northwest water system provides GVWD water to the communities of Fort Langley, Forest Knolls, Northwest Langley, Walnut Grove, Willoughby, and Willowbrook through the 201 Street PRV, 82 Avenue PRV, and the Willoughby PRV and Pump Station.

Prior to 2023, Northwest Langley was also supplied water from the Fort Langley Well #2 which was disconnected from the water distribution system in December 2022 and subsequently decommissioned in October 2023.

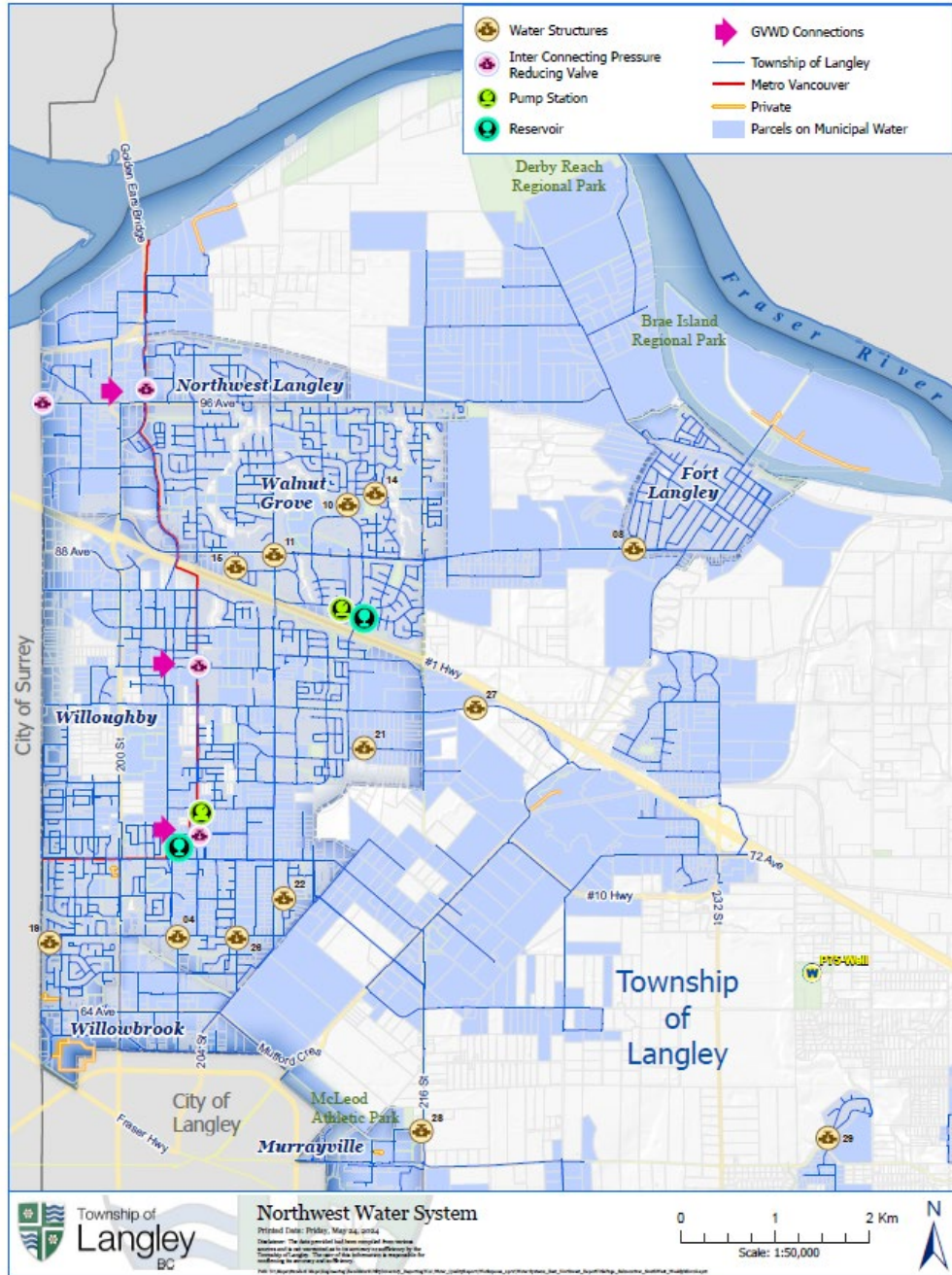


Figure 2: The northwest water system and its infrastructure

Southwest System

The Southwest Langley water system provides GVWD water to the communities of Murrayville, Brookwood/Ferridge and High Point through the Brookwood PRV and Pump station located at 36 Avenue and 196 Street and the Brawn Pump station connection. In 2023, the five (5) groundwater wells located in Murrayville and Brookwood remained offline due to aesthetic concerns and are scheduled for decommissioning in 2024.

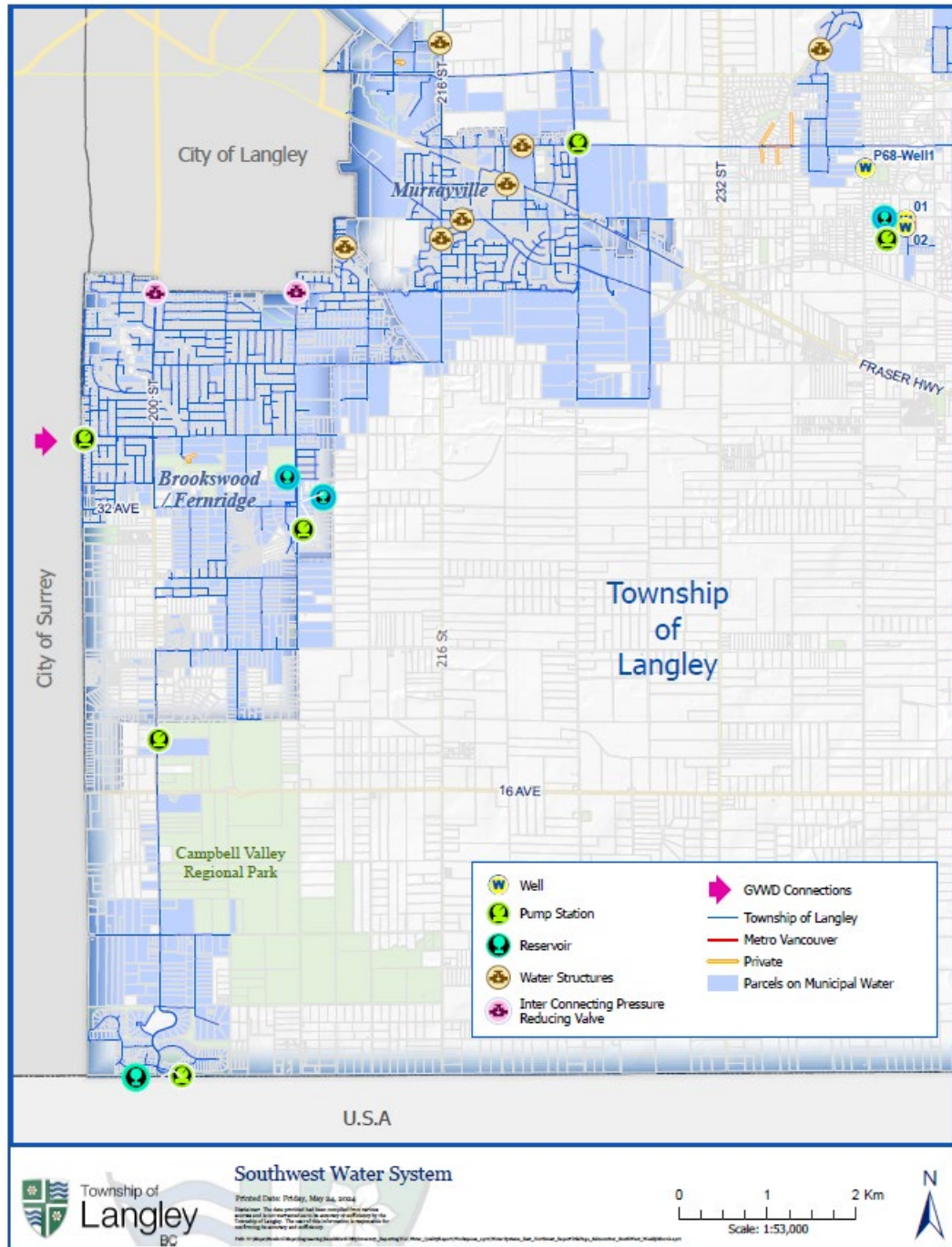


Figure 3: The southwest water system and its infrastructure

East System

The East Langley water system provides a blend of GVWD and Township groundwater to the communities of Aldergrove, Gloucester Industrial Estates, Salmon River Uplands, and Tall Timber. Water is supplied from GVWD through the ELWS connection at the Brawn Pump Station and from six (6) groundwater wells in Aldergrove through the AWTP.

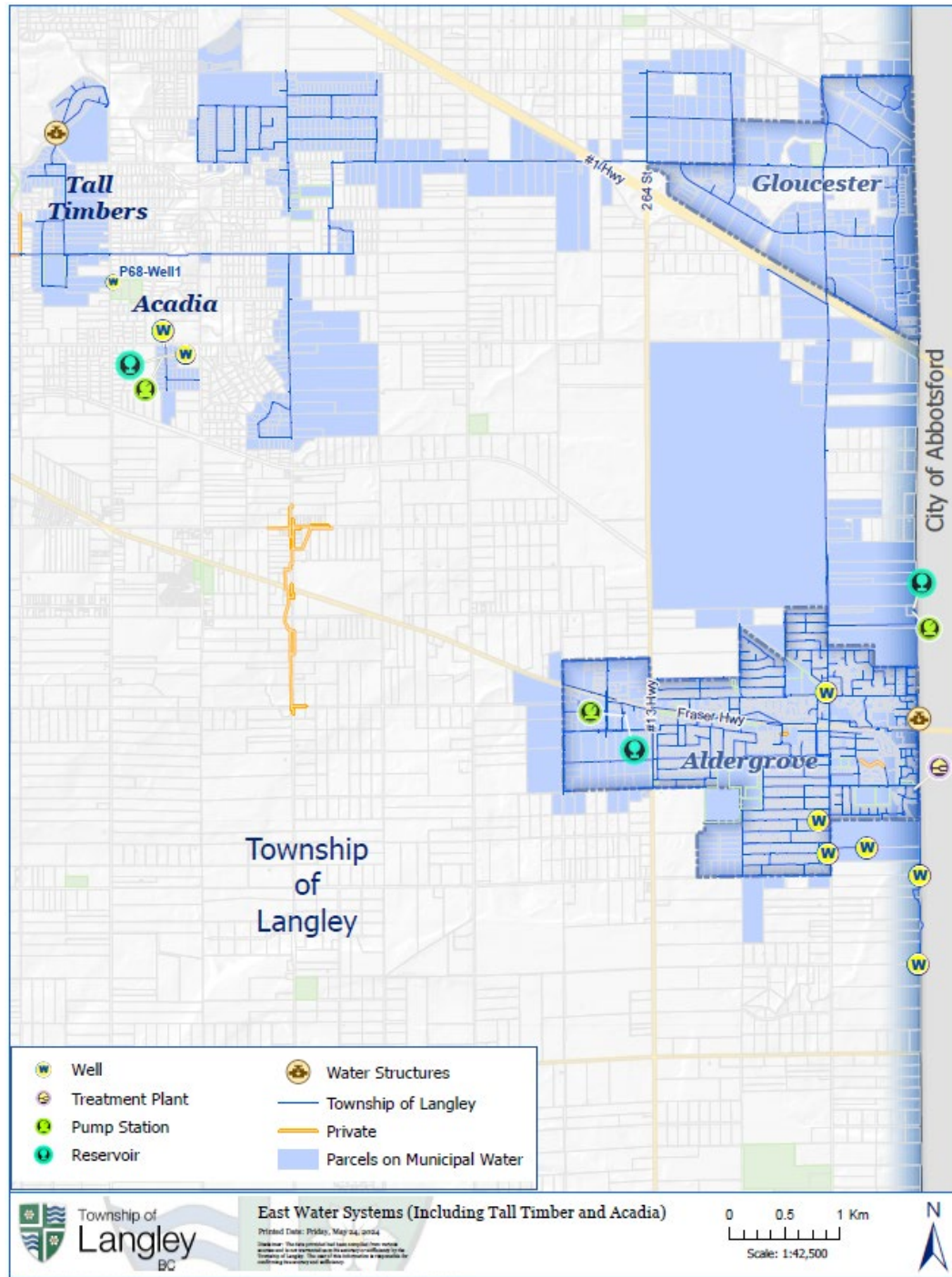


Figure 4: The east water system and Acadia and their infrastructure

AWTP

The AWTP provides multi-barrier treatment through the filtration of manganese and iron to meet the aesthetic parameters and to improve water quality in East Langley. AWTP was designed to meet or exceed the GCDWQ (in 1997) and for a maximum day design capacity of 10 MLD. The AWTP during normal operation supplies 5 MLD of water.

Acadia

The Acadia system is a centrally located water system consisting of 29 properties with source water being provided from two (2) municipal groundwater wells.

Private Systems

The Otter Road and Last Chance water systems, also centrally located within the Township, are privately owned water systems and are not operated or maintained by the Township.

Annual Water Demand

The Annual Water Demand was 18,451 ML of which 1,503 ML or 8% was supplied from Township wells and 16,968 ML or 92% from GVWD. In 2023, the Township population increased by 2.4% and had a 5.7% increase in water usage. British Columbia experienced severe drought conditions in 2023, that combined with the increase in development may have contributed to the increase in usage.

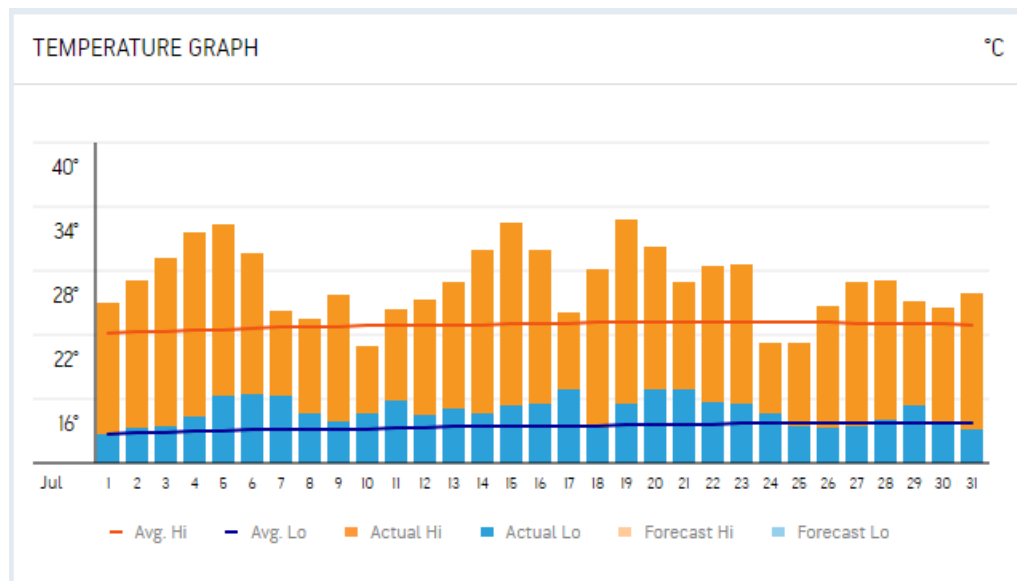


Figure 5: Temperature graph from July 2023, showing the higher-than-average temperatures [Langley, British Columbia, Canada Monthly Weather | AccuWeather](#)

Once estimated leakage, and industrial, commercial, and institutional demands are removed, the average daily residential per capita water consumption was 274 litres per day. This was an increase from 264 litres per capita in 2022.

System Inventory

A complete list of infrastructure required to deliver water can be found in Table 1, 3 and Table 4 below. Water is supplied though 597 kilometres of water main. Of the various pipe materials PVC comprises 67% of the watermains in the Township. A full breakdown can be found below on Table 4. A detailed breakdown of water volume by source is provided in Table 2.

Table 1: Locations for Figures 1, 2, 3, and 4

Name	Location	Name	Location
48 Avenue PRV	21720 48 Avenue	Brookwood Reservoirs and Pump Station	20771 32 Avenue
216 Street PRV	4681 216 Street	Brookwood PRV and Pump Station	19638 36 Avenue
52 Avenue PRV	22132 52 Avenue	Willoughby Reservoir, PRV and Pump Station	20400 73A Avenue
203 Street PRV	20302 68 Avenue	Strawberry Reservoir and Pump Station	21212 85 Avenue
88 Avenue PRV	22779 88 Avenue	Murrayville Reservoir and Pump Station	22566 Old Yale Road
212 Street PRV	9045 212 Street	Aldergrove West Reservoir and Pump Station	3120 262B Street
208 Street PRV	8790 208 Street	Aldergrove East Reservoir and Pump Station	27595 Quinton Road
201 Street PRV	9650 201 Street	High Point Reservoir and Pump Station	20020 1 Avenue
213 Street PRV	9120 213 Street	19 Avenue Pump Station	1898 200 Street
87 Avenue PRV	8749 206 Street	Brawn Pump Station	5202 224 Street
82 Avenue PRV	20415 82 Avenue	Acadia Well 1	4791 242A Street
Maysfield Crescent PRV	4604 Maysfield Crescent	Acadia Well 2	4791 242A Street
196B Avenue PRV	6739 196B Place	Aldergrove Well 4	3210 272 Street
Billy Brown PRV	22862 Billy Brown Road	Aldergrove Well 6	2520 272 Street
78 Avenue PRV	21282 78 Avenue	Aldergrove Well 7	27186 25 Avenue
70 Avenue PRV	7000 208A Street	Aldergrove Well 8	2623 271A Street
96 Avenue PRV	19603 96 Avenue	Aldergrove Well 9	27598 Simpson Road
50 Avenue PRV	4994 220 Street	Aldergrove Well 10	2071 Lefevre Road
Worrell PRV	6990 210 Street	Brookwood Well 7	19810 36 Avenue
206 Street PRV	6795 206 Street	Brookwood Well 9	20679 32 Avenue

Name	Location	Name	Location
Labonte PRV	21840 University Drive	Brookwood Well 10	19810 36 Avenue
McLeod PRV	21574 58 Avenue	Murrayville Well 1	4505 224 Street
Tall Timber PRV	5765 237A Street	Murrayville Well 2	22566 Old Yale Road
Acadia Reservoir and Pump Station	4761 242A Street		

Table 2: Annual Water Volume by Source (m3)

Source	2021	2022	2023
Aldergrove 4	140,091	84,514	116,951
Aldergrove 6	248,969	193,721	237,676
Aldergrove 7	232,776	173,273	207,430
Aldergrove 8	508,196	379,920	451,311
Aldergrove 9	259,429	139,438	169,128
Aldergrove 10	447,150	219,400	227,411
Brawn Pump Station (GVWD)	1,217,429	2,401,419	1,410,643
AWTP Inflow	1,999,495	1,287,492	1,531,584
AWTP Outflow	1,939,095	1,255,216	1,491,053
Aldergrove Total*	3,156,524	3,656,635	2,901,696
Brookwood PRV (GVWD)	2,954,226	2,522,136	1,702,958
McLeod PRV			406,203
Murrayville	1,051	2,745	-
Brawn to Murrayville	-	323,544	1,506,778
Brookwood and Murrayville Total	2,955,277	2,848,425	3,615,939
201 Street GVWD	1,915,343	2,135,602	4,608,252
82 Avenue GVWD	2,958,726	2,948,851	3,033,803
73A Avenue GVWD	2,028,795	1,889,670	2,087,389

Source	2021	2022	2023
Willoughby Pumped GVWD	636,928	865,047	1,005,424
72B Avenue GVWD	1,831,138	2,246,942	-
Worrell PRV	247,993	98,319	472,018
206 Street PRV		675,564	723,263
West Langley Total	9,618,932	10,859,995	11,930,149
Acadia Total	10,509	9,940	12,283

* Aldergrove total based on AWTP outflow and Brawn Pump Station.
The 72B Ave meter was removed due to construction of the Jericho Reservoir.

Table 3: Municipal Well Data

Well Name	EMS	Year Drilled	Rated Capacity (L/s)	Depth (m)	Year Redevelopment
Acadia Well 1	E243968	1973	4.5	49	2001/2011
Acadia Well 2	E218073	2008	3.5	43	
Aldergrove Well 4	E218079	1977	13	31	2000/2010
Aldergrove Well 6	E244334	1995	44	34	2007/2010/2013/2015
Aldergrove Well 7	E218082	1978	44	34	2004/2010/2014
Aldergrove Well 8	E218081	1985	57	44	2002/2003/2009
Aldergrove Well 10	E259838	2005	45	50	2012
Brookwood Well 7*	E218071	1977	32	59	2001/2003/2011
Brookwood Well 9*	E218072	1988	30	43	2001/2003/2010/2013
Brookwood Well 10*	E244194	1960	22	31	1998/2008/2012
Murrayville Well 1*	E218084	1978	15	117	2006
Murrayville Well 2*	E218085	1978	26	68	2007

* Offline and Scheduled for Decommissioning

Table 4: Distribution Pipe Inventory

Decade	Diameter (mm)	Asbestos Cement (m)	Cast Iron (m)	Ductile Iron (m)	HDPE (m)	Perma (m)	PVC (m)	PVCO (m)	Steel (m)	Unknown (m)	Grand Total (m)
Pre-2000	25	54					1				55
	38						304				304
	50	133			208		509				850
	100	4,509		650			6,499				11,658
	150	60,268		18,079	17	62	92,759			3	171,188
	200	7,251		8,462		117	60,982				76,811
	250	6,200		11,141		315	40,382			22	58,061
	300	2,976		12,276		2,008	21,767				39,027
	350	67	2,504	4,228			1,790				8,591
	400	4,410	1,231	6,096	2		7,349				19,089
	450	2,082		1,157	253		938				4,431
	500		2,547	5,077							7,623
600			634					1,627		2,261	
750								21		21	
<2000	TOTAL	87,950	6,282	67,800	480	2,502	233,280	1,648	25	399,970	
2000 .. 2009	50						143				143
	100			48			3,240		131		3,419
	150			54	1,045		8,209				9,308
	200			820	9		35,889		118		36,837
	250			156			13,953		6		14,114
	300			566	779	324	13,529				15,197
	350				920		1,267				2,186
	400			116			5,014				5,130
450			279							279	
2000 .. 2009	TOTAL			2,039	2,753	324	81,244	6	249	86,613	
2010 .. 2019	25						18				18
	100				59		931	316			1,306
	150			14			1,422	102	10		1,548
	200			5	3		33,010	1,123	6		34,147
	250			39	1,173		7,542				8,754
	300			1,079	103		5,694				6,875
	350			1,048			36				1,084
	400			1,102			416				1,518
	450			123							123
	500			148							148
	600			2,913							2,913
	750			3,247							3,247
	900								7,424		7,424
UNK									5	5	
2010 .. 2019	TOTAL			9,718	1,338		49,069	1,541	7,424	22	69,110

Table 4: Distribution Pipe Inventory

Decade	Diameter (mm)	Asbestos Cement (m)	Cast Iron (m)	Ductile Iron (m)	HDPE (m)	Perma (m)	PVC (m)	PVCO (m)	Steel (m)	Unknown (m)	Grand Total (m)
2020 .. 2029	100						240				240
	150			5			177			21	203
	200						3,963			13	3,976
	250			77			2,514				2,591
	300						1,877				1,877
	400				59			393			
2020 .. 2029	TOTAL			141			9,164			34	9,339
Unknown Install Date	100			2			157				158
	150			21			91			1	112
	200						20,289			88	20,377
	250			16			2,141				2,157
	300			1			6,301			0	6,302
	350						234				234
	400				109		348				457
	450						597				597
	600				781						781
	UNK									750	750
Date UNK	TOTAL			930			30,158			839	31,925
Grand Total (m)		87,950	6,282	80,628	4,571	2,826	402,915	1,541	9,078	1,168	596,957

Cross Connection Control Program

The DWPR (Section 15) states, “For the purpose of section 22(3) of the Act, an assessment response plan must include provisions to identify, eliminate and prevent cross connections with non-potable water sources”.

The Township’s Cross Connection Control Program (CCCP) derives its authority from the Waterworks Regulation Bylaw 2008 NO. 4697, as amended. Additionally, the Township’s WERP includes an action plan for response to unknown contamination and potential backflow events. A CCCP reduces the risk of contaminated water entering the drinking water and ensures that backflow events are properly responded to and investigated. Many solutions exist to protect the Township’s drinking water including but not limited to assessing risk, public education, as well as installing and testing backflow preventers.

Annual testing of backflow preventers is required by the Township of Langley’s Waterworks Regulation Bylaw 2008 NO. 4697, as amended; tests are submitted by the property owner or a Certified Backflow Preventer Tester to backflow@tol.ca. The Township received test reports for 6,008 privately owned backflow preventers in 2023, including 452 new installations, and 127 failed reports of which 38 have been repaired. Backflow preventers are installed in Industrial/Commercial/Institutional (ICI) facilities as well as residential properties with fire suppression and/or automatic irrigation systems. There were no backflow events warranting further investigation in 2023.

System Maintenance

In 2023 the Township employed four (4) exempt staff, five (5) technical engineering staff, and 40 field staff assigned to the operations management, maintenance, monitoring, and repair of the water system. Along with the Utilities Operations staff who perform operational and maintenance works, Utilities and Environment staff help design and plan new capital works and large-scale projects.

Programs intended to enhance water quality include and may not be limited to:

- Water main looping in areas of new construction to increase circulation.
- Auto Flushers operating on dead-end watermains to reduce stagnant water.
- Preventative system maintenance to water stations such as reservoirs, pump stations and PRV's.
- Secondary chlorination points to maintain chlorine residual in the system.
- Water sampling program including measurements for chlorine residual, flow, and pressure.
- Conducting station inspections with health authorities.
- Maintaining operations at the water treatment plant.
- Responding to resident service requests.

There are also several larger scale maintenance programs that Township staff are responsible for.

Flushing

The Township water distribution staff perform an annual unidirectional flushing to maintain high water quality throughout the water system. Regular water main flushing is an important component of a comprehensive water management program to prevent bacterial growth and stagnation in low circulation areas of the distribution system. The program aims to flush the entire water system on a biannual basis outside of seasonal water restrictions.

Storage Reservoir Cleaning and Inspection

Reservoirs are used to stabilize system pressures and meet peak daytime demand as well as provide adequate volumes for fire protection. The cleaning and inspection process ensures that the reservoirs are structurally sound, sealed and not exposed to external contamination including wildlife. The benefits of routine reservoir cleaning include decreased microbial growth and decreased turbidity in the water. Acadia and Cell 1 at High point were cleaned in 2023. All remaining reservoirs were inspected by drone. East Aldergrove Reservoir is scheduled for cleaning in 2024.

Reservoir Status

In 2021 an engineering consultant for the Township completed a post tensioning assessment on seven (7) water reservoirs by visually inspecting select areas of the horizontal structural tendons and provided the following recommendations.

- The Brookwood West and Willoughby reservoirs were assessed to be in fair condition with a recommendation to inspect periodically going forward.

- The Strawberry reservoir was assessed to be in very poor condition and temporary repairs were completed in 2022. This reservoir is scheduled for replacement in 2025.
- The Aldergrove East, Aldergrove West and Brookwood East reservoirs were assessed to be in poor condition. All had temporary repairs completed to in 2023 and are scheduled to be replaced between 2025 and 2035.
- The Murrayville Reservoir was assessed to be in critical condition and taken out of service in 2021. Plans are being reviewed for the demolition of the structure in the future.

Staff Training and Operation Levels

The Township of Langley water system infrastructure is maintained by EOCP certified operators in accordance with the Drinking Water Protection Regulation section 12 which states: “a person is qualified to operate, maintain or repair a water supply system if the person is certified by the Environmental Operators Certification Program.”

The EOCP has classified the Township’s water distribution as Levels I through IV and the water treatment plant as Level II. In addition to meeting the DWPR requirements, the Permit to Operate, issued by Fraser Health, requires the Township to have a water system operator with a certification level equivalent to the designated EOCP level. The Township continuously trains Operators to maximize the performance of the water system, minimize health and environmental risks as well as raise the number of certified operators and the level of certification.

The 2023 roster of EOCP certifications attained and employed by the Township include:

- Distribution Operators
 - Level IV - 3
 - Level III - 4
 - Level II - 12
 - Level I - 11
- Water Treatment Operator
 - Level II - 5

In addition, there are four (4) Applied Science Technologists and Technicians of BC (ASCTT BC) technical staff and one (1) Professional Engineer with in-depth knowledge of the water system to complement and support the Utilities Operations team.

Emergency Response and Contingency Plan

As a part of an overall Engineering Department Emergency Plan, WERP addresses potential threats or hazards such as earthquakes, floods, severe storms, and water security. Outlined in the plan are procedures dealing with the effects of various scenarios such as loss of water supply, loss of power, contamination, or damage to any pipelines or facilities. Currently the WERP is a standalone document that is managed by Utilities Operations staff.

Activation of the plan occurs when information is received that an emergency exists, either through staff or external agencies. Staff is directed to determine the event location and nature, and then isolate or eliminate the hazard in collaboration with other agencies if applicable, and ultimately restore normal water service. The plan encompasses risks and responses, problem indicators, and restoration plans. The WERP is reviewed and updated as needed on an ongoing basis.

Auditor General for Local Government Audit Report Summary – Action Items and Updates

In August 2017, the Township' water utility system was audited by the Auditor General for Local Government (AGLG). The Township was selected based on risks, potential relevance of findings to other local governments, the size, geographic location, and complexity of the water supply system. The overall goal of the audit was to provide an objective and independent examination of drinking water services in the Township to determine whether clean and safe drinking water is being provided to users.

The AGLG report focused on four (4) key audit objectives:

1. The local government's governance structure and activities supported the provision of clean and safe drinking water where and when needed.
2. The local government managed its drinking water supplies to meet current and expected future demand.
3. The local government ensured the safety and reliability of drinking water provided through its treatment and distribution systems.
4. Managing water supply infrastructure to meet current and future demand.

The AGLG developed the following action plan template with respect to the first three (3) audit objectives. It lists the recommendation of the AGLG, the steps taken by the Township to meet the objective as well as a target date to meet the objective:

Auditor General for Local Government Report: Summary of Recommendations for Objectives 1-3			
Recommendations	Description	Steps Taken	Target Date
	Audit Objective One:	How the local government's governance structure and activities supported the provision of clean and safe drinking water where and when needed.	
Recommendation One	Consider drinking water strategies that focus on sustainability, protecting water sources, explore rainwater capture as a long-term solution and assess land use applications that might impact groundwater sources.	The Township is currently developing a long-term drinking water supply plan to supplement the many existing related programs, plans, studies and strategies related to water conservation, groundwater protection and sustainable water management planning. The Township is currently in discussion with Fraser Health regarding long term source water protection planning.	TBD
Recommendation Two	Consider a cost recovery approach to its water service planning that focuses on costs associated with water delivery to residents and long-term capital planning.	The Township has established a water utility reserve fund to address replacement of aging infrastructure and will explore ways to further a full cost recovery approach building on existing practices.	Underway
Recommendation Three	Develop a formal framework for risk identification, mitigation and reporting that includes regular re-assessment and reporting of organizational risks with respect to drinking water.	The Township has established a water emergency response plan and commits to regular practice exercise. The Township will also consider conducting a risk hazard assessment related to the municipal water system as it has done with other areas of the services it provides.	TBD
Recommendation Four	Seek to improve data collection, analysis, monitoring and reporting on its water services as part of a continual improvement process.	Township staff currently reports to Council, and the public on key aspects of its water system, including quantity and quality, with senior management staff fully engaged in the reporting and aware of any concerns. This information is reported annually in the water quality reports and is made available on the Township's website. Staff will examine opportunities for improvements related to performance measures, monitoring and reporting.	Ongoing

Auditor General for Local Government Report: Summary of Recommendations for Objectives 1-3			
Recommendation Five	Improve its tracking and reporting on service requests and enquiries from the public relating to its water systems.	The Township is utilizing a new system for tracking and reporting on service requests. The Township will conduct an evaluation of this system on a regular basis to ensure it is meeting the needs of the municipality and its customers.	Ongoing
Recommendation Six	Improve the workflow of its water infrastructure work-order system to enhance its efficiency.	The Township has a tracking system that helps manage the workflow of the water infrastructure work-order system. The Township is currently exploring alternatives to the current system in order to improve efficiency	Ongoing
Recommendation Seven	Retain a record of its management team meetings in order to track organizational decisions.	Water related departments not already doing so, have implemented recording team meeting minutes as of 2019. Records will be retained.	Ongoing
Recommendation Eight	Enhance its human resource policies by reviewing and updating its ethical policies and by developing a whistle blower policy.	The Township will continue to enhance HR policies, procedures and practices in keeping with the overall goals of the organization, applicable legislation and to ensure employee related issues are appropriately addressed.	Ongoing
Recommendation Nine	Consider a more formal approach to measuring employee workplace engagement.	The Township will continue to evaluate opportunities for engagement through the involvement of employees in programs and initiatives as appropriate and applicable.	Ongoing
Recommendation Ten	Enhance its emergency and business continuity planning by ensuring its emergency plan is updated and tested regularly and completing business continuity planning for critical services.	The Township's water emergency response plan was recently completed. The plan will be updated periodically with regular practice to ensure relevant staff are versed and practiced.	Ongoing
	Audit Objective Two:	How the local government managed its drinking water supplies to meet current and expected future demand.	
Recommendation Eleven	Township should improve its water conservation and demand management efforts by developing a long-term approach that focuses on residents' water use habits, water conservation, draught response, water supply shortages, water reuse application, bylaw compliance and a leak detection program.	The Township continues to utilize community based social marketing to identify barriers to water conservation and design programs to reduce overall and per capita water use. Water conservation programs continue to evolve, and the water conservation bylaw is reviewed and revised regularly.	Ongoing

Auditor General for Local Government Report: Summary of Recommendations for Objectives 1-3

Audit Objective Three: How the local government ensured the safety and reliability of drinking water provided through its treatment and distribution systems.

Recommendation Twelve	Continue to improve its water quality reporting processes by reviewing its annual water quality report and reporting changes in practice due to water quality issues.	The Township meets all Fraser Health reporting requirements and continues to endeavor to ensure accuracy and error free reporting. Staff will examine opportunities for improvements related to reporting.	Ongoing
------------------------------	---	--	---------

With respect to objective 4 the AGLG audited the East Langley Water Supply project. During this audit the AGLG noted the successes of the Township of Langley in delivering the project as well as gaps in the Township of Langley’s approach to managing water supply infrastructure. The Township has developed a Quality Management Manual (the manual). The manual addresses audit objective 4 recommendations 1, 3, 6, 7, 8, 12, and 14.

The table below summarizes the list of recommendations with respect to objective 4:

Auditor General for Local Government Report: Summary of Recommendations for Objective 4

Recommendations	Description	Steps Taken	Target Date
Audit Objective Four:		How the Township of Langley is managing water supply infrastructure to meet current and future demand.	
Recommendation One	Develop and follow standards for project governance, defining when a project needs a project board, roles and responsibilities of the participants, guidelines related to stage gate review process, evaluate the project delivery method and meeting protocols.	The Township will look to further develop and expand on its 'Capital Project Procedure' document related to project governance especially for complex projects and projects over a certain size/threshold.	Covered under Section 2.3 of the manual
Recommendation Two	Develop a documented planning procedure to identify and assess the specific staff resources required for capital projects based on the scope and complexity of each project	Project teams are built based on specific project needs and internal resourcing. The Township will consider development of a formal planning procedure document for projects over a certain size/threshold.	TBD
Recommendation Three	Ensure project charters are complete and kept up to date throughout the project.	Project charters will be developed, monitored, and kept current for projects, especially for projects of size and/or complexity exceeding a pre-determined threshold.	Covered under Section 2.3 of the manual

Auditor General for Local Government Report: Summary of Recommendations for Objective 4			
Recommendation Four	Develop a project plan template as a tool for leading projects of high-value, high risk and/or public significance.	This is already being done on a case-by-case basis and through the Township's Capital Project Procedure' document; however, a standard template could be developed and utilized for projects exceeding a pre-determined threshold.	TBD
Recommendation Five	Broaden and formalize an approach to capital project risk management. This policy should be based on risk identification, risk assessment, monitoring of risks and ensuring project contingency is tied to risk management.	Risk management is currently considered on a project-by-project basis and contingencies are built into project budgets and schedules. Formal policies related to capital project risk management will be considered.	TBD
Recommendation Six	Develop guidance for how project scope is defined and how project scope change is authorized and implemented.	Project scope and scope change is managed internally via internally developed procedures and policy, and externally via contracts (typically MMCD contracts). The Township will look at developing and expanding internal procedure for projects of size and/or complexity that exceed a pre-determined threshold.	Covered under Section 2.3 of the manual

Auditor General for Local Government Report: Summary of Recommendations for Objective 4			
Recommendations	Description	Steps Taken	Target Date
Recommendation Seven	Develop a policy and procedure that outlines the process for development, approval, management and reporting of budgets for capital projects that includes guidance on financial contingencies, budgets, and other financial control procedures.	A formal document to provide guidance on the process for development, approval, management and reporting of budgets will be considered along side a project plan template as per recommendation four.	Covered under Section 2.3 of the manual
Recommendation Eight	Develop a baseline schedule at the time of project chartering, create a process of managing project schedules, and review progress reports against the baseline schedule.	Project timing needs are varied, and schedules are often dependant on multiple factors including budget approval, regulatory agency permitting, development needs, land requirement considerations, contractor availability and other factors outside of the Township control. Schedules are typically set via contract with construction contractors and managed according to the terms of the contract. It should be noted that worldwide supply chain issues have delayed many project schedules beyond the control of the municipality or the contractor.	Covered under Section 2.3 of the manual
Recommendation Nine	Review and update its procurement policy to align with evolving procurement practices and relevant trade agreements.	A regular review and update of the Township's procurement policy to be undertaken.	Ongoing

Auditor General for Local Government Report: Summary of Recommendations for Objective 4

Recommendation Ten	Township of Langley's purchasing department should monitor its procurement activities and ensure they are well documented and comply with its purchasing policies and procedures.	Monitoring of the Township's procurement activities to ensure they are well documented and comply with its purchasing policies and procedures is an ongoing effort.	Ongoing
Recommendation Eleven	Develop and implement a policy and related processes and tools to evaluate vendor performance formally and systematically.	The Township will explore the development and implementation of a policy and related processes and tools to evaluate vendor performance formally and systematically.	TBD
Recommendation Twelve	Define reporting requirements for capital projects to ensure that those accountable for the performance of a project receive regular and consistent status updates.	Internal reporting to project sponsors, etc. occurs regularly with frequency depending on project size and complexity. A formal document to provide guidance on reporting will be considered along side a project plan template as per recommendation four.	Covered under Section 2.3 of the manual
Recommendation Thirteen	Develop a stakeholder engagement plan and procedures for its capital projects.	Stakeholder engagement is currently considered on a project-by-project basis and is dependant on potential impacts to stakeholders. A formal plan and procedures document could be considered for projects meeting pre-determined thresholds.	Ongoing and TBD
Recommendation Fourteen	Develop a project close-out procedure and related checklist	Review and improvements to the Township's 'Capital Projects Procedures' document will be considered in conjunction with checklist.	Covered under Section 2.4 of the manual

Auditor General for Local Government Report: Summary of Recommendations for Objective 4

Recommendations	Description	Steps Taken	Target Date
Recommendation Fifteen	Further develop its asset management practices for water infrastructure	Asset management is a continuous process at the Township of Langley. The Township is developing the water asset management program by updating the water asset management plan and integrating it along with the Asset Management Policy and the Water Master Plan. The Township is also integrating its Risk and Criticality model with current data on waterman breaks and the leak detection program.	Asset Management Plane completed in 2023
Recommendation Sixteen	Improve its tracking of infrastructure maintenance, renewal and replacement activities by internally reporting on the status of work orders relative to its maintenance schedule.	The Township is reviewing the current level of service and work management practices including a review of current workflows and the current procedures for collecting and reporting on work related data as part of its continuous improvement process. This review would include establishing KPI's for both work management processes and the major asset systems.	Underway

The Township is actively working towards the remaining AGLG recommendations to support the provision of clean and safe drinking water to its residents, meet current and future water supply demands, ensure the safety and reliability of drinking water sources, and manage water supply infrastructure projects to meet future water demands.

Operational Highlights for 2023

The Township achieved the following operational milestones:

- Commissioned the Brawn pump station to Murrayville connection to ensure peak usage and fire flow demands can be met in Murrayville.
- Completed the temporary reinforcement of East Aldergrove, West Aldergrove and Brookwood East Reservoirs.
- Completed piping improvements to allow AWTP to feed directly into the East Aldergrove Reservoir.

Planned Works for 2024

The Township plans to achieve the following works:

- Decommission the following wells:
 - Brookwood Wells 7, 9, and 10
 - Murrayville Wells 1 and 2
 - Willoughby Well 1
 - Fort Langley Well 1
- Pilot leak detection study.
- Start construction of Jericho pump station.
- Install chlorination at Brawn Pump Station for ELWS and Murrayville connection.

Water Sampling and Testing Program

The Township follows a routine BC DWPR water sampling and testing program to maintain the delivery of safe, high quality drinking water to its residents. EOCP certified Water Distribution Operators take samples and test water at local supply sources and various points throughout the water distribution system. Weekly water samples are tested at a Township contracted lab and the GVWD Lab, both of which are Canadian Association for Laboratory Accreditation (CALA) certified for testing of routine physical and microbiological parameters as per Schedule A of the BC DWPR. Quarterly, summer and winter samples are also collected and tested for microbial, chemical, and physical parameters. The GVWD also samples water prior to it entering the Township’s distribution system.

Table 5: Drinking Water Quality Guidelines - Water Quality Standards for Potable Water

Schedule A	
Water Quality Standards for Potable Water	
Parameter	Standard
Fecal coliform bacteria	No detectable fecal coliform bacteria per 100 ml
Escherichia coli	No detectable Escherichia coli per 100 ml
Total coliform bacteria	
a) 1 sample in a 30 day period	No detectable total coliform bacteria per 100 ml
b) more than 1 sample in a 30-day period	At least 90% of samples have no detectable total coliform bacteria per 100 ml and no sample has more than 10 total coliform bacteria per 100 ml

The BC DWPR, Schedule B, sets the minimum number of water samples required based on the population serviced. The Township, on average, collects 112 water samples monthly which exceeds the 93 samples required of a serviced population of 127,300.

Table 6: Drinking Water Quality Guidelines - Frequency of Monitoring Samples for Prescribed Water Supply Systems

Schedule B	
Frequency of Monitoring Samples for Prescribed Water Supply Systems	
Population Served by the Prescribed Water Supply System	Number of Samples per Month
Less than 5,000	4
5,000 to 90,000	1 per 1,000 of population
More than 90,000	90 plus 1 per 10,000 of population in excess of 90,000

In 2023, of the over 1,300 samples collected 19 did not meet regulatory requirements as set by the GCDWQ and the Water Quality Monitoring and Reporting Plan (September 2018) for municipalities in the GVWD. There was one (1) indication of positive coliforms in the groundwater wells and 18 samples in the distribution system indicating the presence of total coliforms. All samples not meeting the regulatory requirements were resampled and tested until two (2) consecutive samples passed the regulatory requirements. A further breakdown of the events is provided in the sections on Quarterly Microbial Testing and Distribution System Microbial Testing Of the 28 sampling locations, 17 weekly samples are sent to a CALA lab and 11 samples are tested by GVWD.

The weekly samples are tested for the following chemical, physical and microbiological parameters:

- colour
- pH
- turbidity
- free chlorine
- temperature
- conductivity
- HPC
- total coliforms
- E. coli

The GCDWQ promotes *“the use of a multi-barrier approach that includes source water protection, adequate treatment including disinfection, and the well maintained distribution system can reduce microorganisms to levels that have not been associated with illness, as well as meet the guidelines...”*

Quarterly Microbial Testing

Regular microbial testing is crucial for delivering safe drinking water. The Township tests its groundwater wells on a quarterly basis for E. coli and total coliform bacteria as a part of its source monitoring program. Total coliforms are an important indicator of the degree of contamination, low flow/stagnant water, and the treatment required to ensure a safe, potable water supply. Table 5 outlines Schedule A of the BC DWPR, which provides quality standards for potable water. For the Township water supply points which originate from wells, quarterly microbiological testing has been carried out. If problems were to develop, it is expected that they would appear in the distribution system’s weekly testing (see Microbial Results for 2023).

Table C.1 in the Appendix lists results for the 2023 quarterly microbiological analysis of the source water for total coliforms and E. coli. For 2023 sampling period there was only one indication of total coliforms detected in the source samples at Aldergrove Well 4. The Well was run to waste, and both resamples returned negative results for coliforms.

Semi-Annual Routine Parameter Testing

Source water sampling for routine parameters provides the Township with valuable information on water quality and enables Water Operators to plan treatment options based on historical trends. Parameters highlighted in this section have either exceeded the GCDWQ for MAC or AO or they are discussed for public information. Presented in Appendix A – Source Water Test Results are parameters that have health based or aesthetic guidelines for chemical and physical parameters in the GCDWQ. For common parameters of interest, see further details in Appendix B – Raw Data.

The extended dormant state of Brookwood and Murrayville Wells resulted in some high results of the parameters tested. While the following sections include sampling results for the Brookwood and Murrayville Wells, it is important to note that these Wells are isolated from the water system and the sampled water was discarded and not conveyed into the distribution system. Regular sampling was conducted on these Wells to maintain compliance for possible future use, however once identified for decommissioning in 2023 these Wells were removed from the sampling schedule.

Manganese

Manganese is naturally occurring in the environment and normally arises due to erosion and weathering of rocks and minerals. MAC parameters are based on high manganese levels effecting neurological development and deficits leading to memory problems, attention, and motor skills issues. AO concerns are due to high levels staining laundry and plumbing fixtures. Manganese releases with Iron during certain pH conditions.

The current MAC guideline of 0.12 mg/L was exceeded in Acadia Well 1, Acadia Well 2, AWTP. Aldergrove Well 4, Aldergrove Well 6, Aldergrove Well 7, Aldergrove Well 8, Brookswood Well 7, Brookswood Well 9, and Brookswood Well 10. In addition, the AO guideline of 0.02 mg/L was also exceeded in Murrayville Well 1, and Murrayville Well 2.

The levels in Aldergrove wells were reduced to acceptable levels during the treatment process at the AWTP prior to distribution. The Township conducts weekly tests at its Distribution sample stations to monitor instances of high manganese levels.

No action has been taken to counteract the high levels in the Acadia as plans include a connection to the East Langley system and decommissioning of the wells. The manganese levels in Acadia wells are higher than the MAC guideline but the levels are below the MAC in the distribution system. This is due to settling in the Acadia clear well as well as the manganese precipitating out of solution due to chlorine interaction.

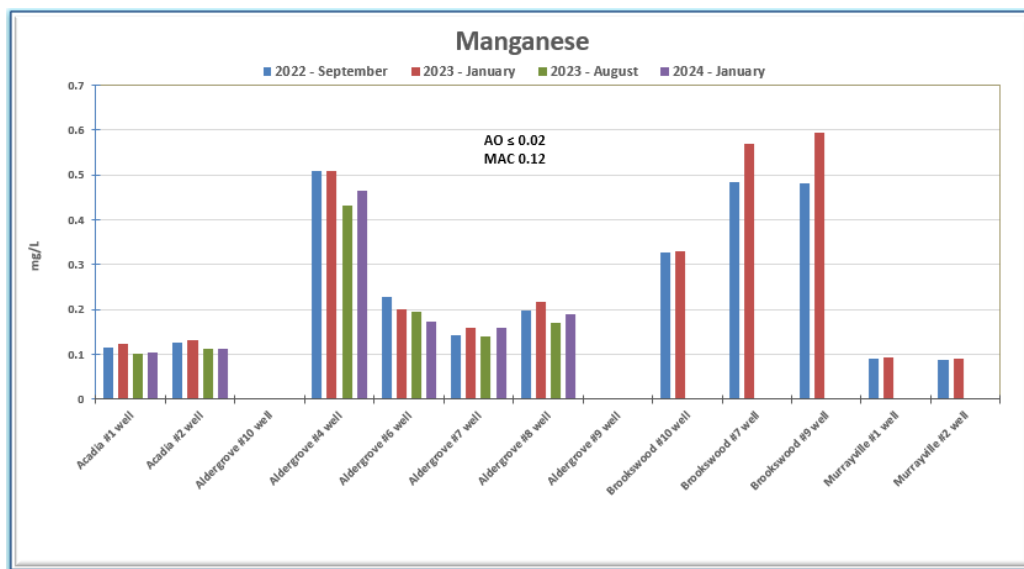


Figure 6: Manganese Readings for all Water Sources

Due to the Brookswood well shutdown, a sharp increase in manganese levels can be noticed in the Brookswood wells. This could be due to a combination of factors including anoxic conditions formed over time due to wells not pumping, or manganese settling in and around the pump and metal casing resulting in higher concentrations when the samples were taken.

Nitrate as Nitrogen

Water from Aldergrove Well 10 falls above the MAC of Nitrate. With the approval of Fraser Health, prior to distribution, the Township blends high and low nitrate containing water at the AWTP. The blending results in an acceptable nitrate level of less than 10 mg/L, measured quarterly at sample stations and weekly at AWTP to ensure treated water meets regulatory compliance.

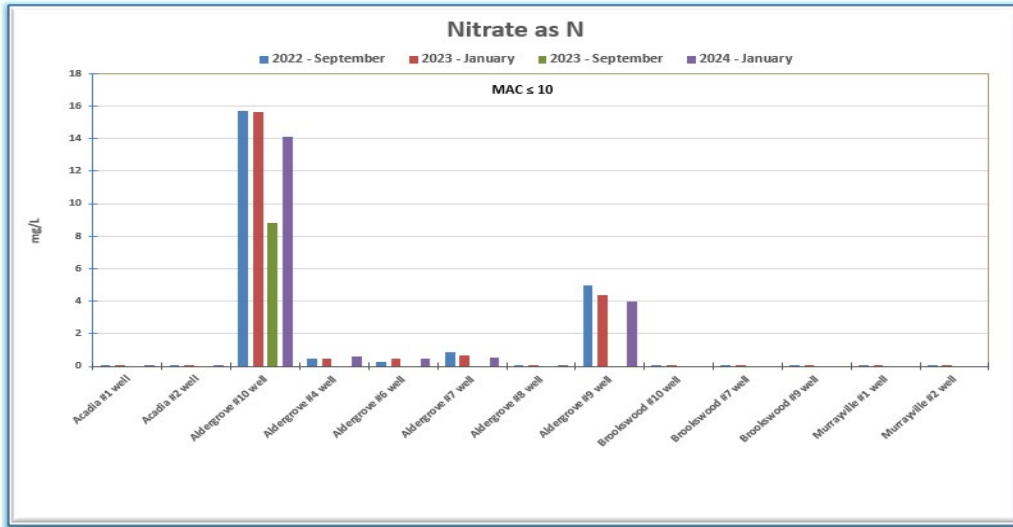


Figure 7: Nitrate Readings for all Water Sources

Ph

Ph is a measure of acidity/alkalinity of water. Ph does not have a MAC or AO, instead Health Canada recommends an operational guideline of 7.0 – 10.5. Ph within the operational guideline maximizes water treatment effectiveness, controls corrosion, and reduces leaching from the distribution system and plumbing.

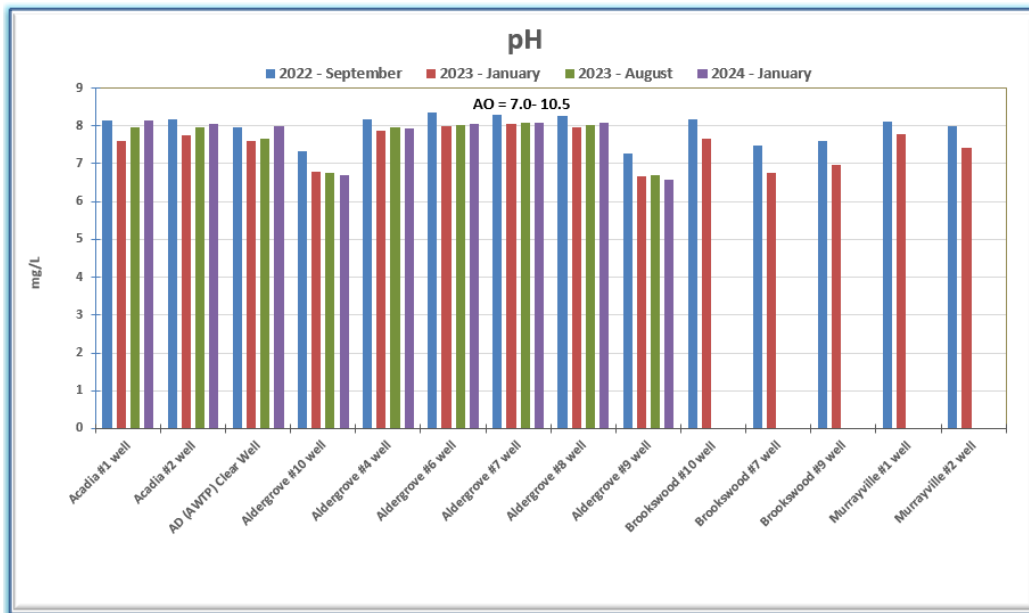


Figure 8: pH Readings for all Water Sources

As a part of its Corrosion Control Program: Copper Pipes Protection Initiative, Metro Vancouver has increased the pH of its finished water from 7.7 to 8.3-8.55. This pH change commenced in June 2021. Metro Vancouver is using natural minerals to achieve the higher pH which will:

- reduce the release of copper from pipes in buildings caused by low pH in the region’s water
- reduce leaks in pipes caused by copper corrosion
- help preserve the lifespan of pipes and hot water tanks
- reduce green stains on tubs, sinks, and grout

Older buildings and homes can have plumbing and fittings that have brass components that contain copper. This change may prompt some water users, such as health care facilities and breweries, to adjust and calibrate their operations to the change in pH. The Township is investigating installation of pH adjustment equipment at the AWTP to match the pH of the water supplied by Metro Vancouver.

Turbidity

Turbidity above the MAC of 1NTU was exceeded in Brookswood Well 7, Brookswood Well 9, Murrayville Well 1, and Aldergrove Well 4. Water from Aldergrove Well 4 is blended at the AWTP to reduce the turbidity levels to an acceptable level. Brookswood and Murrayville wells were not supplying water in 2023.

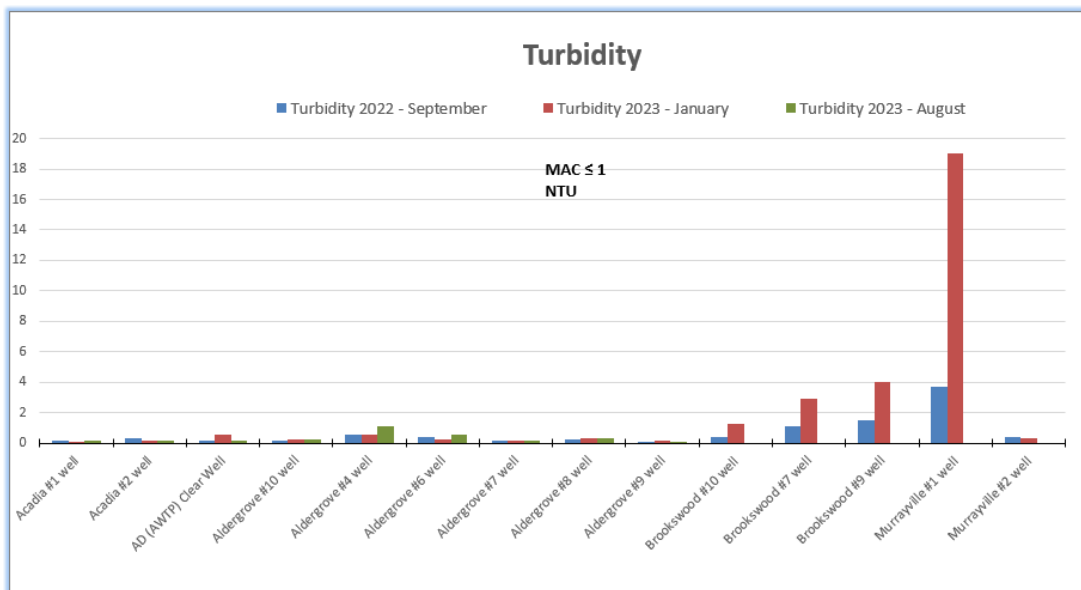


Figure 9: Turbidity Readings for all Water Sources

It should also be noted that minerals present in the water and holding time can reflect negatively on the turbidity results.

Iron

The AO for Iron was exceeded at Brookwood Well 7, Brookwood Well 9 and Murrayville Well 1. These wells are no longer connected to the distribution system.

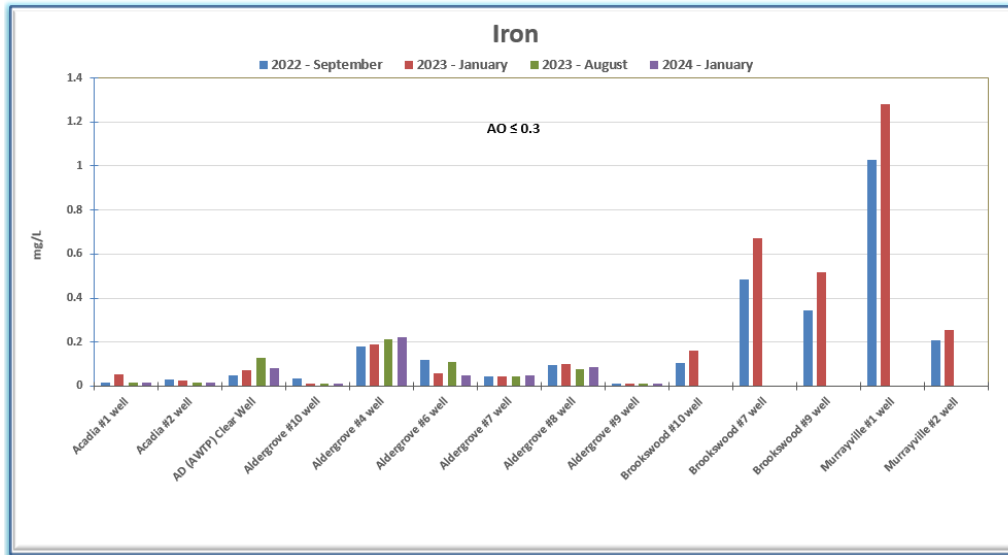


Figure 10: Iron Readings for all Water Sources

Lead

Health Canada has set the MAC associated with health concerns at 0.005 mg/L for lead. Health Canada also recognizes that most of the lead concentration is due to plumbing, leaching lead service lines, and lead solder. During the 2023 semi-annual chemical and physical parameter testing, all the distribution and source samples in the Township were below the MAC of 0.005 mg/L.

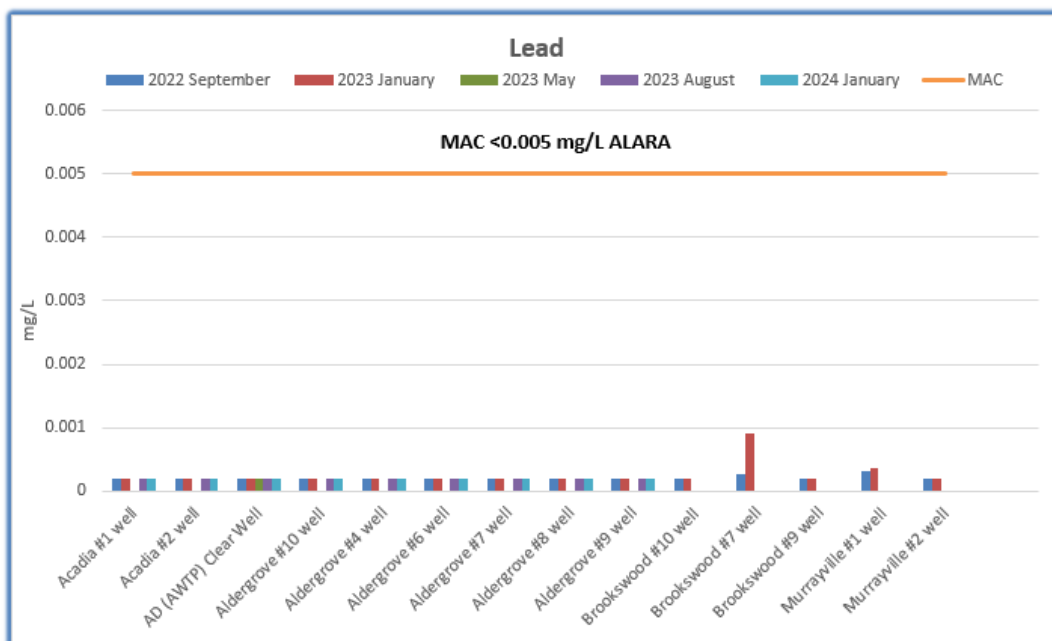


Figure 11: Lead Readings for all Water Sources

Fraser Health recommends that water sitting in private side plumbing pipes for longer than six hours be flushed by running water fixtures until a change in temperature is noted. This is due to private piping possibly containing lead or lead solder which can contribute to the above MAC levels of lead in drinking water. Rather than running water down the drain, the water can be used for watering plants. Only cold water should be used for drinking, cooking, and making baby formula. Hot water is likely to contain higher levels of lead.

Annual Complex Parameter Testing

Source water sampling for complex parameters complies with the GCDWQ and provides the Township with information on water quality for a given well. All annually tested parameters (refer to appendix B in 2023) were within acceptable limits of the GCDWQ.

Source Water Protection

A Water Demand Management Strategy to assist with long term management of municipal water supplies was completed in 2007. Since completing this strategy, Township staff has been working to implement its recommendations. The Township also completed work with the Province of British Columbia to develop a water management plan in 2009, which aims to provide safe and sustainable groundwater for our community. Implementation of recommendations from the Water Management Plan has included a contaminant inventory of potential threats to municipal well capture zones, and a pesticide awareness campaign. The Water Wise program has been in place for nearly 15 years and continues to provide education and incentives to the public to protect groundwater from contamination and to conserve water.

As of February 2016, the Water Sustainability Act came into force. This Act replaced the Water Act and ensured a commitment to secure and healthy water for current and future generations by protecting water flows for ecosystems and fish and including requirements for groundwater use and licensing, well construction and maintenance, dam safety, and compliance.

Distribution System Water Quality

Water in the Township's distribution system is tested weekly as outlined in appendix B. A map of the weekly sampling sites and list of the map labels by location can be seen in Table 7 and Figure 12, respectively. Distribution system microbial and physical parameter results are highlighted in Appendix B – Raw Data.

Table 7: Distribution Sample Station Locations

Map Label	Location	Map Label	Location
AB	5679 211 Street	K	19966 44 Avenue
AC	2340 204A Street	L	6350 197 Street
AD	AWTP	M	9844 199A Street
AJ	19620 3A Avenue	N	22870 96 Avenue
AK	22930 48 Avenue	O	21575 Crush Cres.
AM	23752 52 Avenue	P	26342 58 Avenue
C	21484 51B Avenue	R	26829 60 Avenue
D	7175 230 Street	S	4649 242A Street
E	23740 60 Avenue	T	9163 213 Street
F	24919 57 Avenue	U	7025 208 Street
G	3133 262 Street	V	22020 49 Avenue
H	23000 Rawlison Crescent	W	4257 209 Street
I	21736 100 Avenue	X	21584 78 Avenue
J	3781 204A Street	Y	26736 33 Avenue

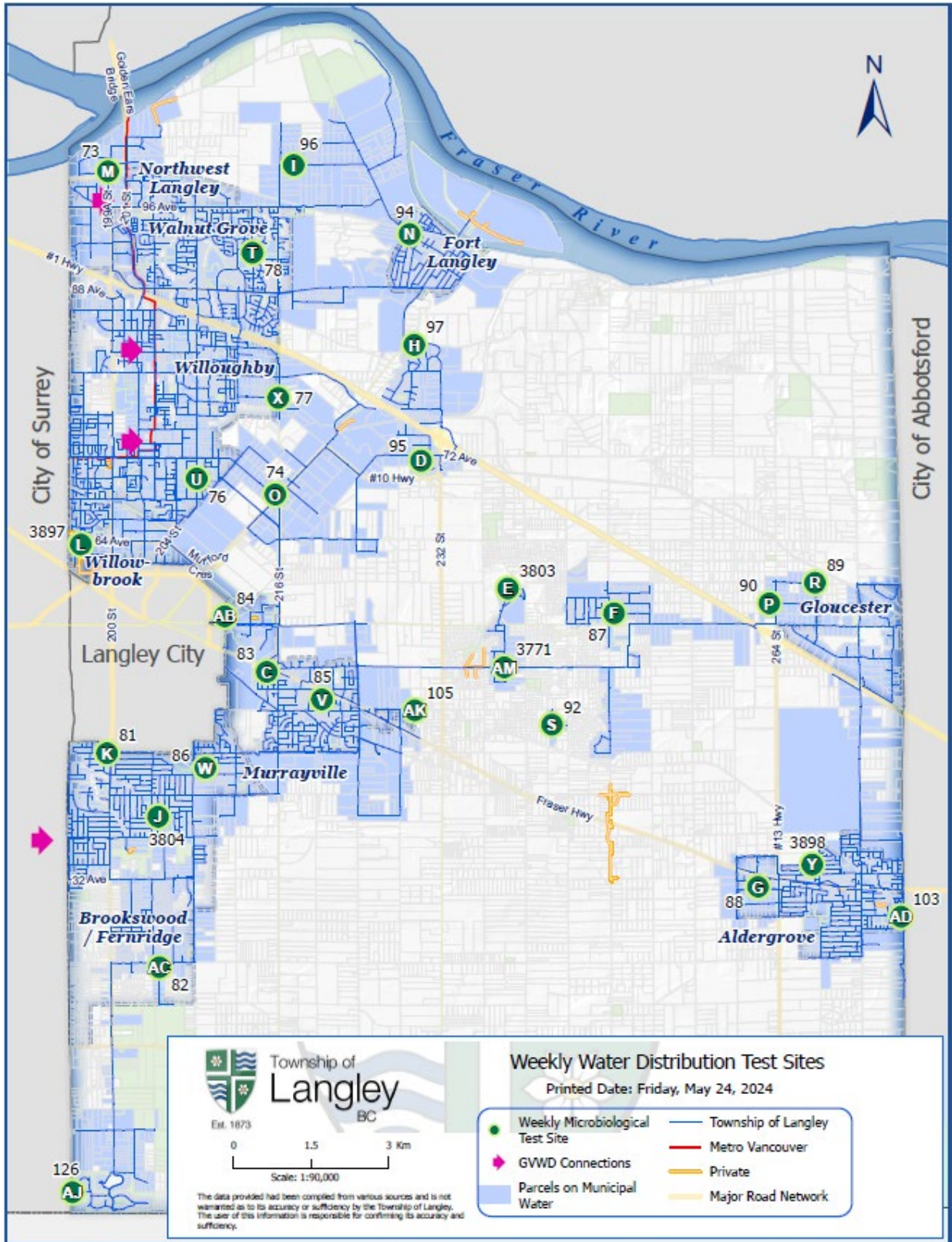


Figure 12: Locations of sample stations

Distribution System Microbial Testing

Total coliforms and E. coli testing indicate the effectiveness of system disinfection and ensures that the water supply system meets the MAC for microbials. HPCs are naturally occurring and their presence in drinking water is not indicative of a public health risk. No MAC is specified for HPC bacteria in drinking water but increases in HPC concentration above site baseline levels are considered undesirable.

As previously mentioned in Table 5, and the section on Water Sampling and Testing Program: BC DWPR provides microbial water quality standards for potable water which aligns with Health Canada guidelines for water sampling frequency of microbiological contaminants.

For a population of approximately 127,000 being served by Township water supply, the required number of samples should be on the order of 93 per month. Currently the Township exceeds the requirement by testing an average of 112 samples per month to address low flow areas and community growth.

Microbial Results for 2023

Distribution water system samples for E. coli and Total Coliform are collected and analysed weekly.

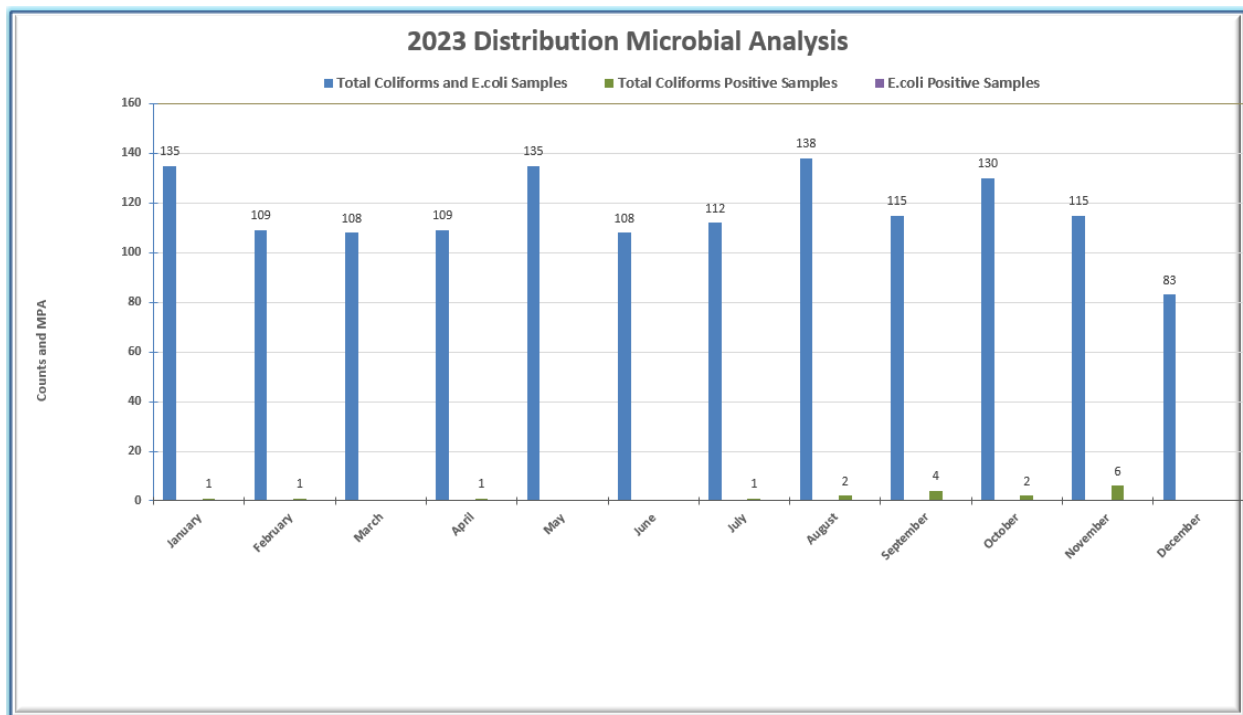


Figure 13: E. coli and total coliform counts by month in the distribution system

Total Coliforms were detected in 18 of the regular weekly sample stations. There were no E. coli positive samples in the regular weekly sampling.

Sample Station	Collection Date	Total Coliforms (CFU/100ml)
S	2023-01-03	1
C	2023-02-21	1
AK	2023-04-11	1
I	2023-07-25	1
AK	2023-08-22	1
D	2023-08-29	1
H	2023-09-26	15
H	2023-09-28	1
H	2023-09-29	3
I	2023-09-05	2
I	2023-10-24	1
T	2023-10-17	1
T	2023-11-28	2
W	2023-11-21	1
W	2023-11-23	7
W	2023-11-25	1
W	2023-11-27	1
W	2023-11-27	3

After each positive total coliform detection, the water main was flushed, and a new sample collected. There were two incidents of note in 2023:

- Station H in September. Likely caused by a low chlorine residual at the sample station due to low velocities in this area since the nearby Fort Langley Well #2 was shut down.
- Station W in November. Likely caused by the opening of the new Murrayville / Brookwood trunk main, the implementation of this water main changed the direction of water and as a result station W was being fed from two directions resulting in sitting water at the station.

Flushing was required to clear the water mains and obtain a negative result. Despite the multi-day incidents, the MAC was met on each occasion. During total coliform events, staff maintain daily communication with a Fraser Health Official.

The MAC for total coliforms is 90% of samples taken having no detectable total coliform bacteria.

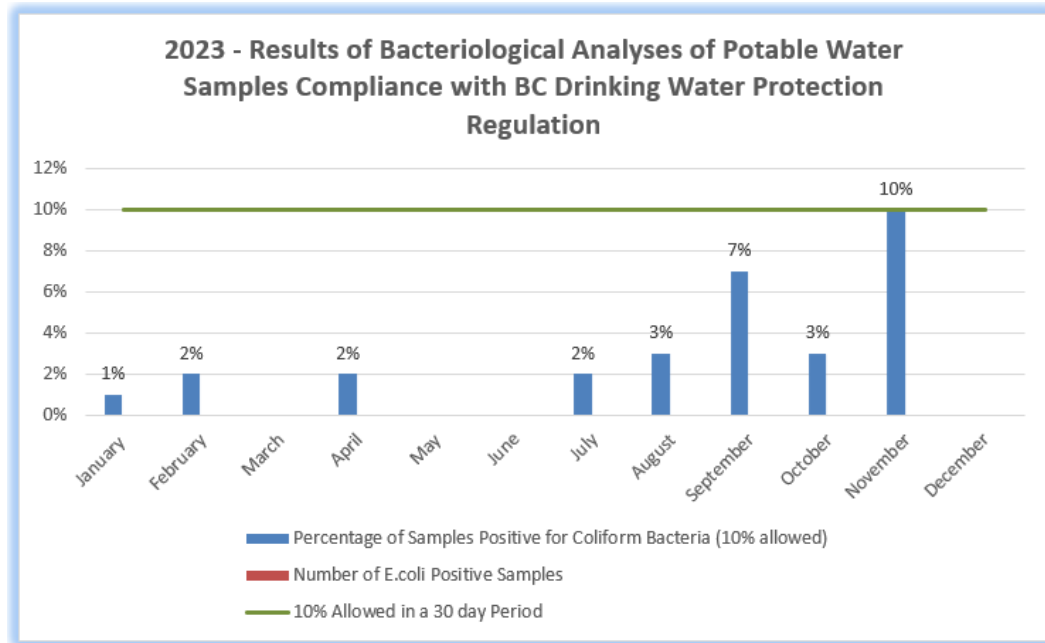


Figure 14: Percentage of positive samples for Total coliforms by month

In 2023, weekly testing of the distribution water resulted in 18 samples out of 1541 testing positive for total coliform bacteria: approximately 1.2%.

Distribution System Physical Parameters Analysis

Weekly evaluation of the turbidity, pH, conductivity, and free chlorine levels of the distribution system establishes a baseline level for each distribution point, as well as ensuring system compliance with provincial and federal guidelines. Although there is some variability, which is standard, the distribution water levels at sampling points tested as follows:

- Turbidity: 11 of 1387 samples or less than 1% of samples exceeded 1.0 NTU with an average turbidity of 0.35 NTU, within a range of 0.12-4.2 NTW. The isolated occurrence of high turbidity is likely due to flushing in the area.
- pH: 1536 samples taken, average pH of 7.58
- Conductivity: 835 samples taken, average of 91 $\mu\text{S}/\text{cm}$ within a range of 10.7-511 $\mu\text{S}/\text{cm}$.
- Free Chlorine: 861 samples taken; average free chlorine was 0.42 mg/L with 559 distribution samples being greater than 0.2mg/L of free chlorine.

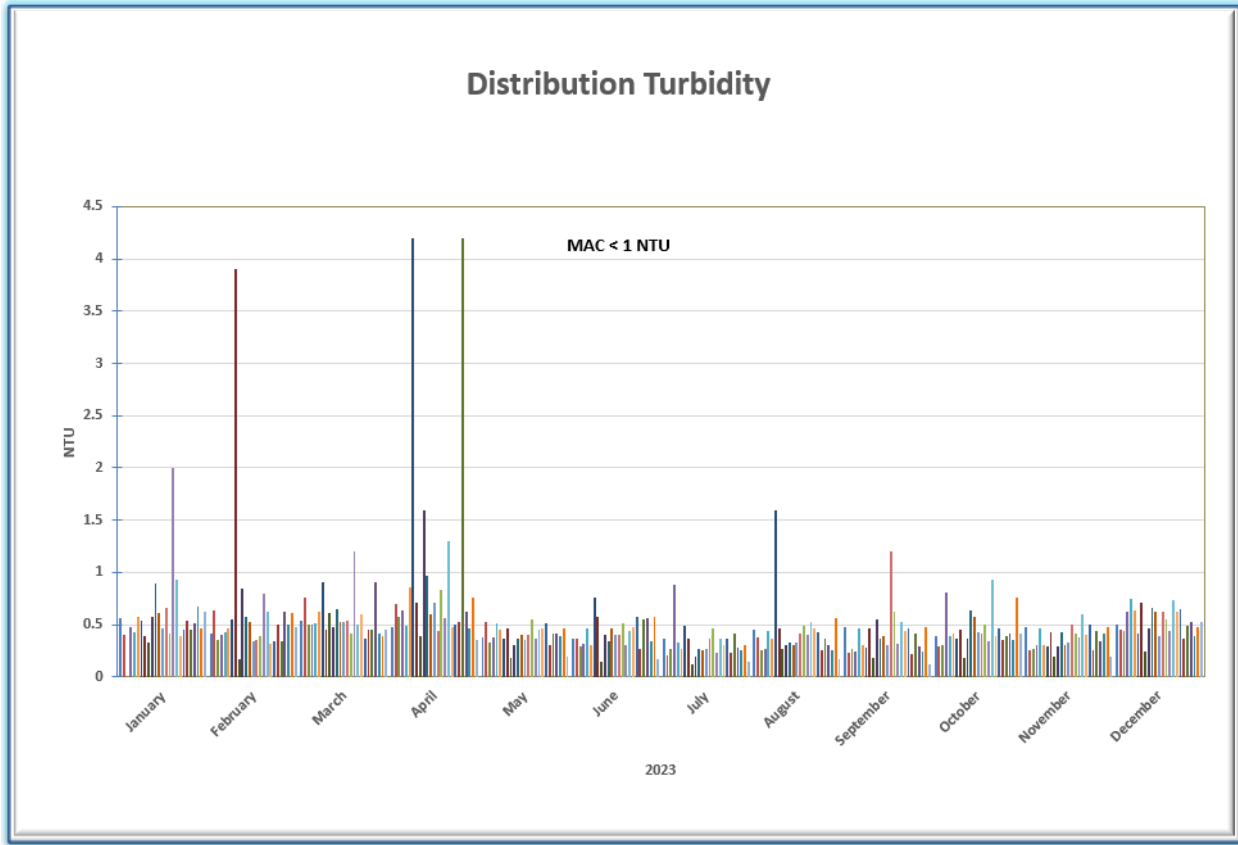


Figure 15: Turbidity readings within the distribution system

Turbidity is the measure of cloudiness or lack of transparency of water due to naturally occurring particles such as clay, silts or decomposed plant and animal debris in the water. Turbidity can harbour microorganisms and entrap heavy metals which can negatively affect the disinfection rate of chlorine. High levels of turbidity in the distribution system are likely a result of nearby construction or flushing in the area samples were collected.

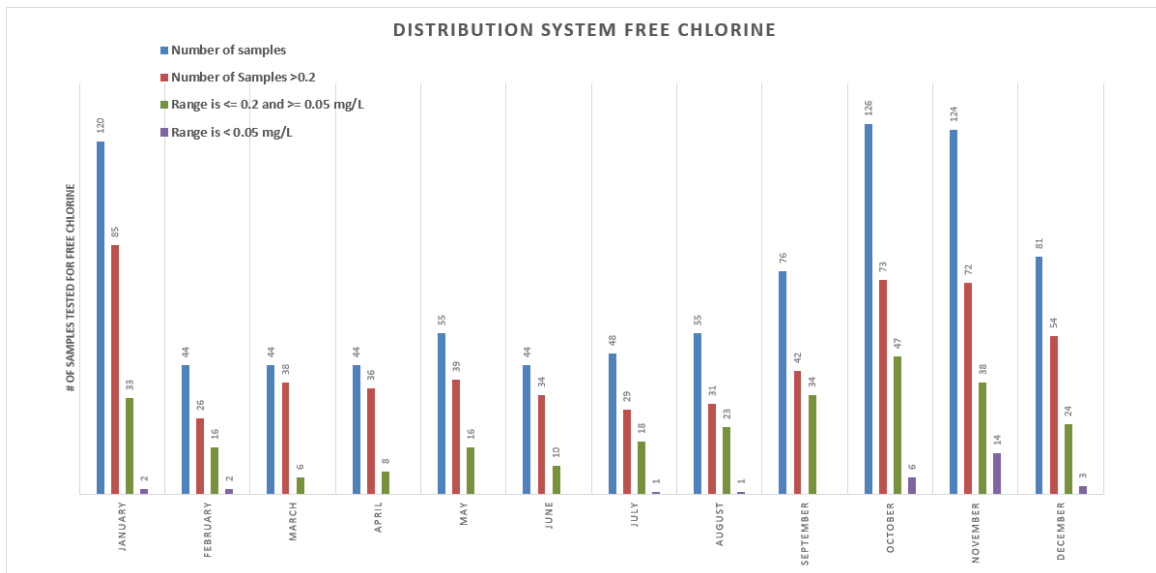


Figure 16: Chlorine readings ranges in the distribution system

Sodium hypochlorite is used as secondary disinfectant in the water treatment process to maintain a free chlorine residual in the distribution system. Free chlorine residual is one measure to reduce potential microbiological regrowth and contamination while monitoring operational efficiencies. Another aspect of maintaining a free chlorine residual includes limiting the growth of biofilm buildup, and its accompanying taste and odour problems.

Though the GCDWQ does not have a MAC for chlorine, the suggested range is between 0.04-2.0 mg/L. In the Township, any reading below 0.05 mg/L (yellow bar) resulted in the senior operator being informed which led to a further investigation and a possible mitigation via resampling or flushing.

On average, there were 30 weekly samples, with no samples taken during the annual winter shutdown. The green bar above indicates the ideal free chlorine range of 0.05-0.2 mg/L

Distribution System Testing - Chemical Parameters

The Township conducts quarterly chemical analysis. For detailed information see Appendix B – Raw Data.

Conclusion

The Township ensures that safe and high-quality drinking water is delivered to its residents every day through rigorous and frequent sampling conducted by EOCP certified water operators. The collaborative efforts with certified laboratories including the Township contracted CALA lab and GVWD ensure thorough monitoring and compliance with the DWPR and GCDWQ.

In 2023, over 1,500 water samples were collected, exceeding the required number of samples for the Township's population size. Despite a few instances where the water did not meet the MAC or AO, prompt resampling and flushing ensured that the water quality met all regulatory requirements. This demonstrates the Township's commitment to maintaining high water quality and its ability to address any concerns promptly; including the effective treatment and blending of water to manage manganese and nitrates as well as decommissioning wells that do not meet aesthetic requirements. The Township follows a multi-barrier approach as recommended by the GCDWQ including source water protection, adequate treatment, and distribution system maintenance programs.

The 2023 water quality monitoring results demonstrate that Township water is potable and safe for consumption. Staff continue to seek improvements to the water supply and distribution systems. The Township will continue to work closely with Fraser Health, GVWD, and the public to provide high quality water to its residents.

References

Health Canada. (2019, May 10). Guidelines for Canadian Drinking Water Quality: Guideline Technical Document – Manganese. <https://www.canada.ca/en/health-canada/services/publications/healthy-living/guidelines-canadian-drinking-water-quality-guideline-technical-document-manganese.html>

Health Canada. (2020, May 13). Guidelines for Canadian Drinking Water Quality. <https://www.canada.ca/en/health-canada/services/environmental-workplace-health/water-quality/drinking-water/canadian-drinking-water-guidelines.html>

Province of BC. (2018, November 20). Drinking Water Protection Regulation. http://www.bclaws.ca/civix/document/id/complete/statreg/200_2003

Appendix A – Source Water Test Results

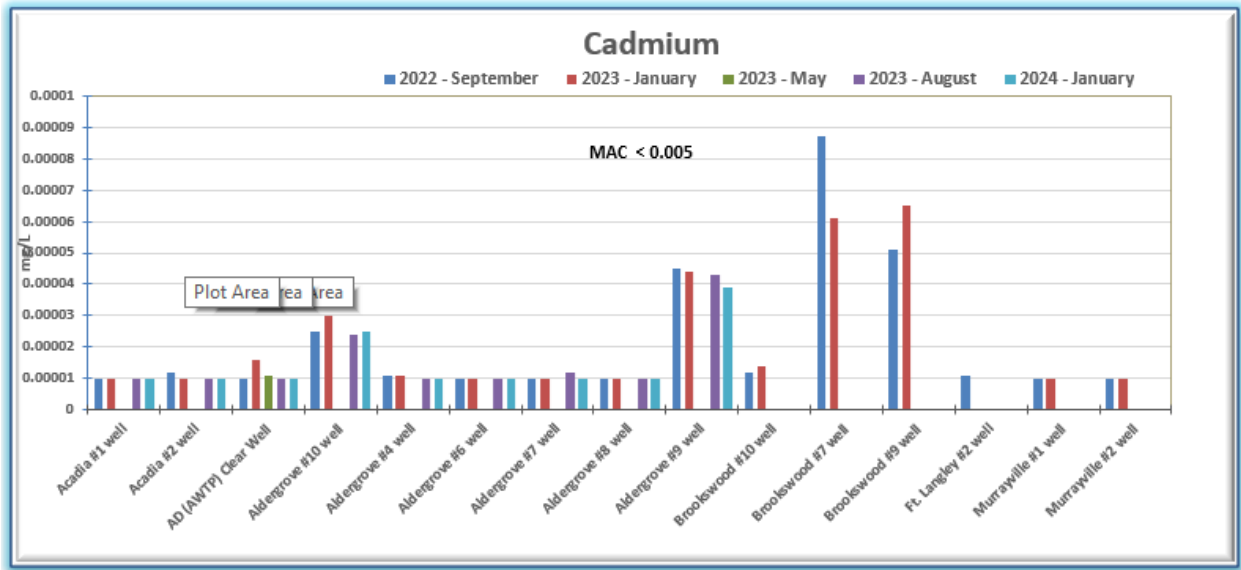


Figure A-1: Cadmium

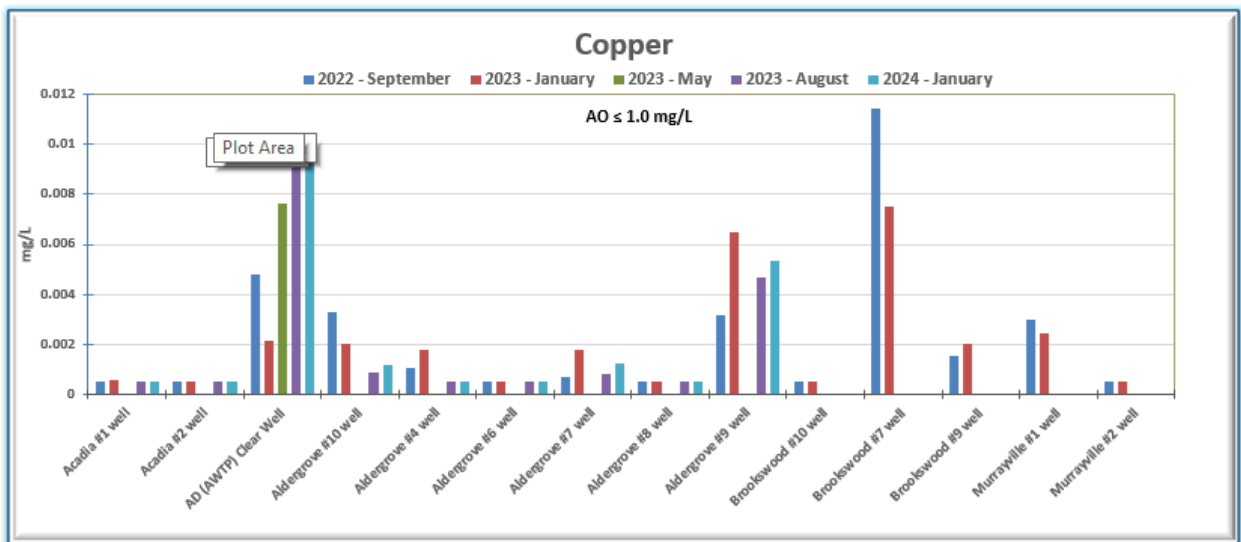


Figure A-2: Copper

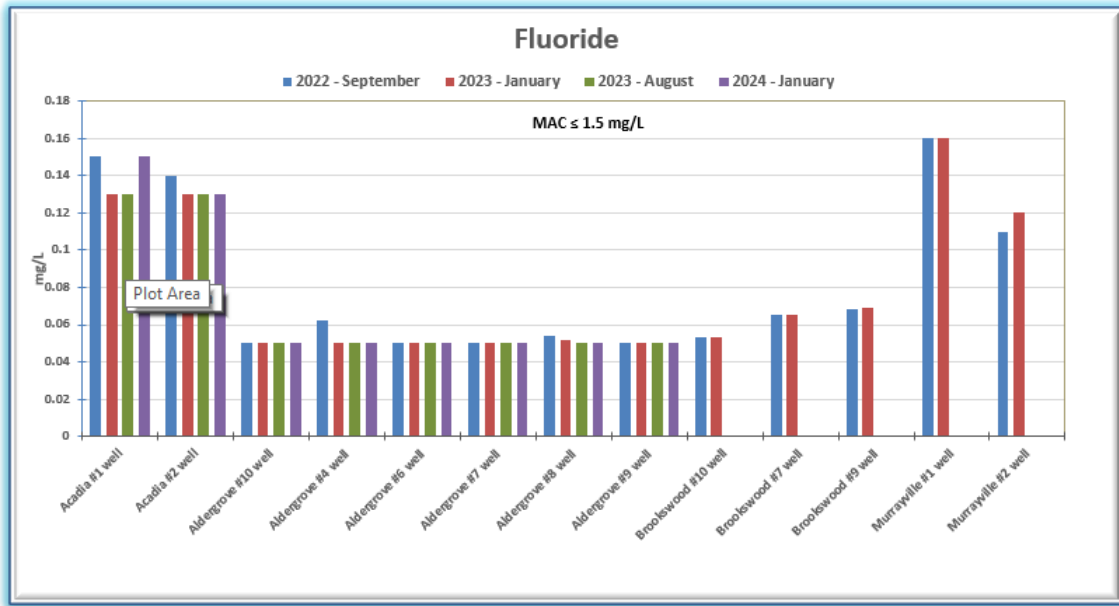


Figure A-3: Fluoride

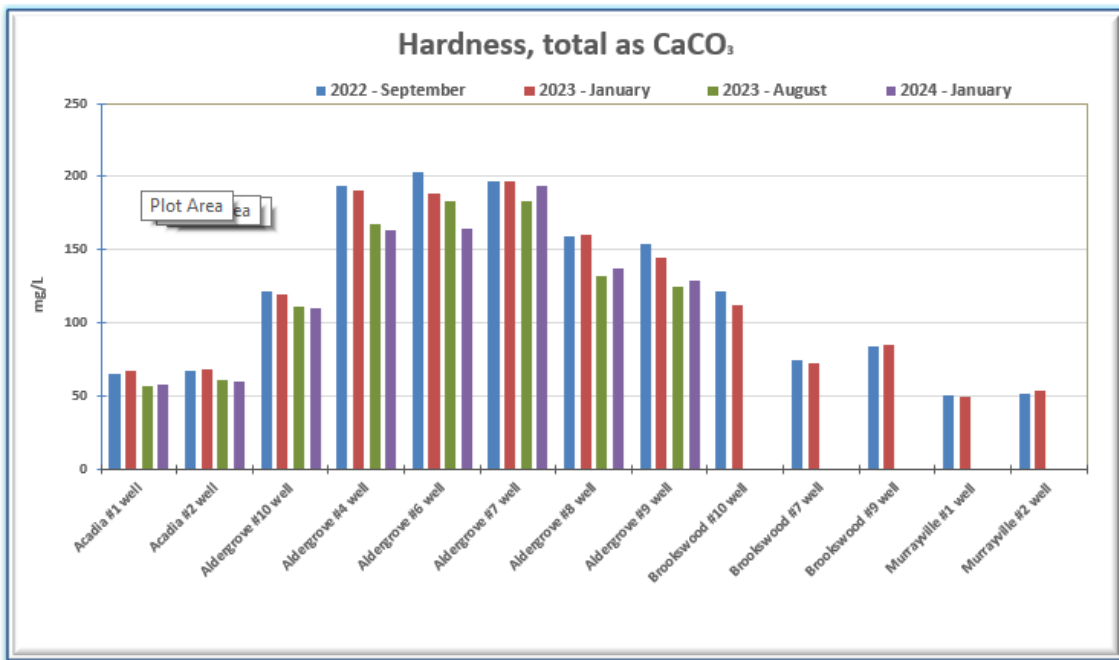


Figure A-4: Hardness

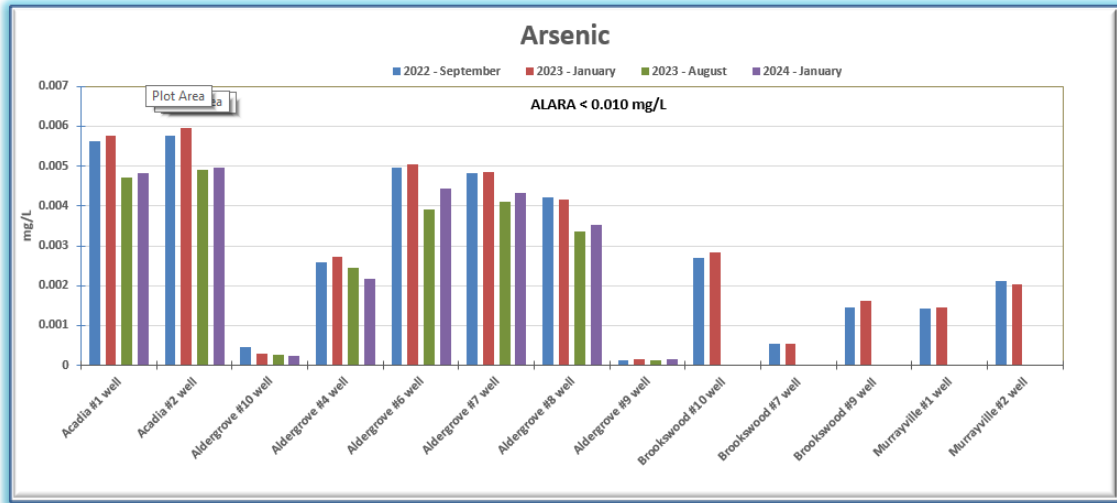


Figure A-5: Arsenic

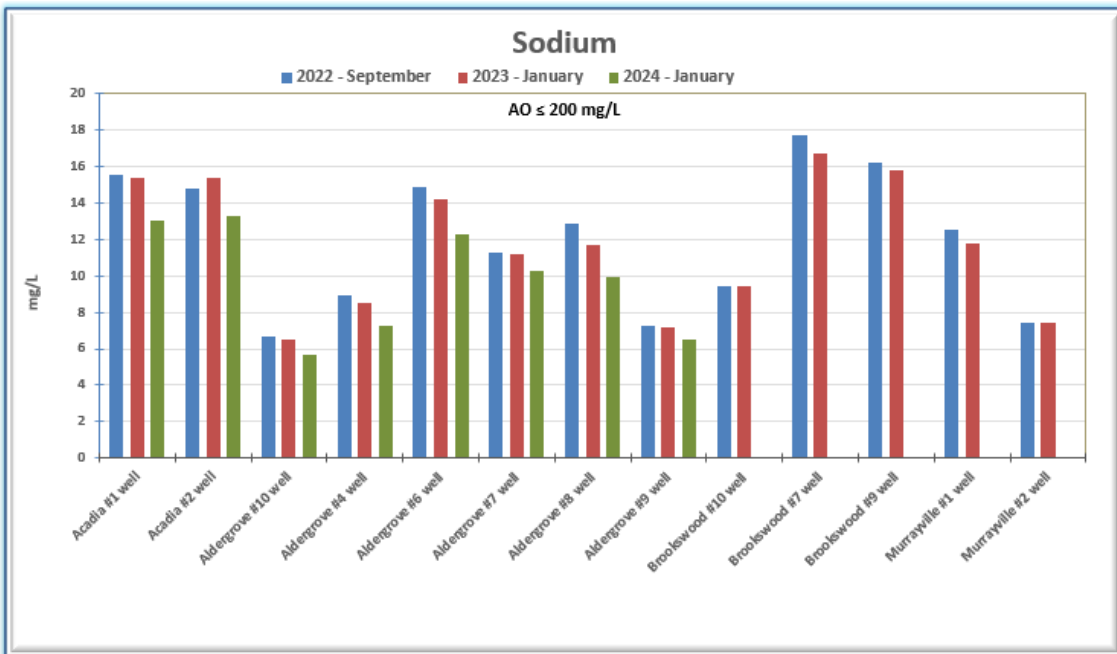


Figure A-6: Sodium

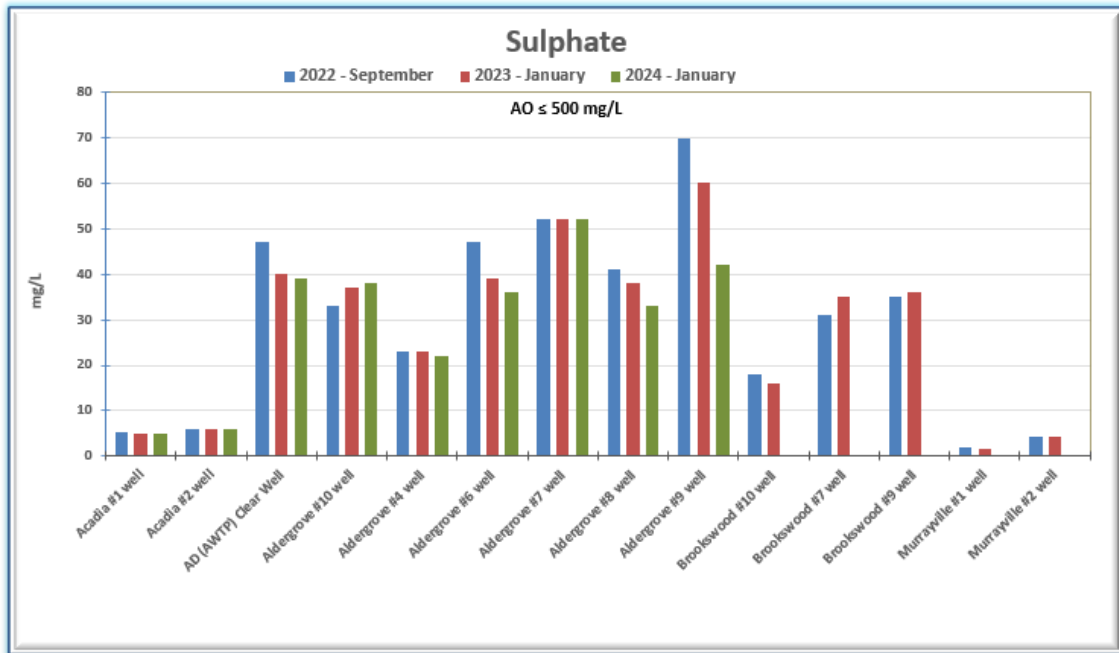


Figure A-7: Sulphate

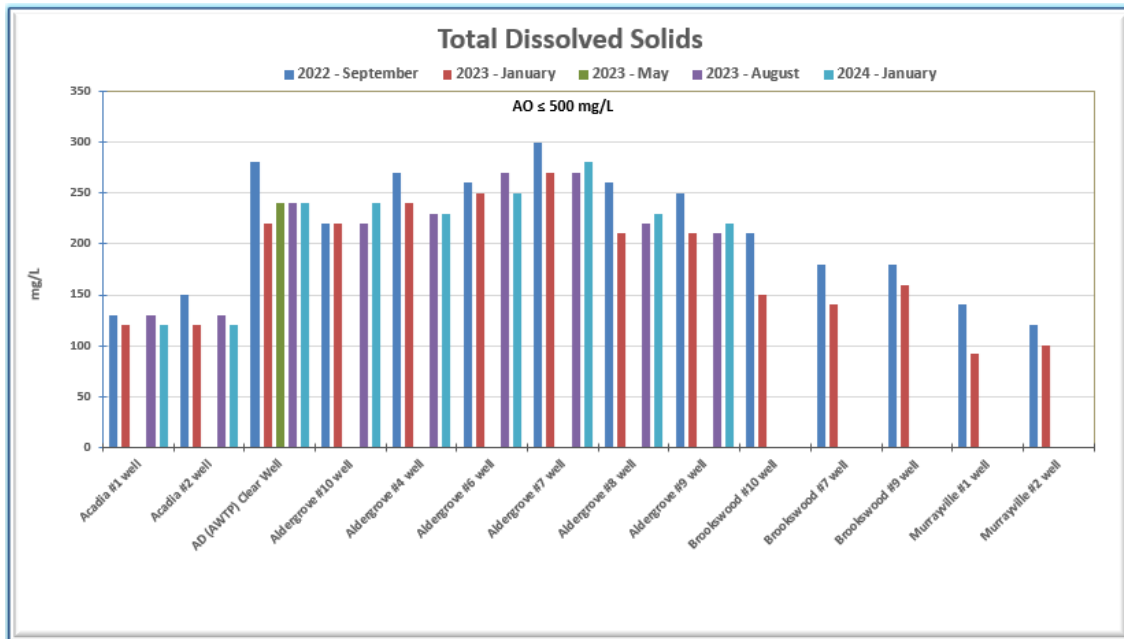


Figure A-8: Total Dissolved Solids

Appendix B – Raw Data

List of Tables:

Table B1 Source Water Bacteriological Results

Table B2 Distribution System Water Bacteriological Results

Table B3 Source Water Summer and Winter Routine Parameter Tested

Table B4 Quarterly Water Distribution Metal Samples by GVWD

Table B5 Distribution System Disinfection Byproducts Quarterly Results by GVWD

Sampling Point	Collection Date	E. coli (CFU/100ml)	Total Coliforms (CFU/100ml)
Acadia #1 well	01/11/2023	0	0
Acadia #1 well	07/18/2023	0	0
Acadia #1 well	11/01/2023	0	0
Acadia #1 well	01/10/2024	0	0
Acadia #2 well	01/11/2023	0	0
Acadia #2 well	07/18/2023	0	0
Acadia #2 well	11/01/2023	0	0
Acadia #2 well	01/10/2024	0	0
Aldergrove #10 well	01/11/2023	0	0
Aldergrove #10 well	07/18/2023	0	0
Aldergrove #10 well	11/01/2023	0	0
Aldergrove #10 well	01/10/2024	0	0
Aldergrove #4 well	01/11/2023	0	1.0
Aldergrove #4 well	07/18/2023	0	0
Aldergrove #4 well	11/01/2023	0	0
Aldergrove #4 well	01/10/2024	0	0
Aldergrove #6 well	01/11/2023	0	0
Aldergrove #6 well	07/18/2023	0	0
Aldergrove #6 well	11/01/2023	0	0
Aldergrove #6 well	01/10/2024	0	0
Aldergrove #7 well	07/18/2023	0	0
Aldergrove #7 well	11/01/2023	0	0
Aldergrove #7 well	01/10/2024	0	0
Aldergrove #8 well	01/11/2023	0	0
Aldergrove #8 well	07/18/2023	0	0
Aldergrove #8 well	11/01/2023	0	0
Aldergrove #8 well	01/10/2024	0	0
Aldergrove #9 well	01/11/2023	0	0
Aldergrove #9 well	07/18/2023	0	0
Aldergrove #9 well	11/01/2023	0	0
Aldergrove #9 well	01/10/2024	0	0
Brookwood #10 well	01/11/2023	0	0
Brookwood #7 well	01/11/2023	0	0
Brookwood #9 well	01/11/2023	0	0
Murrayville #1 well	01/11/2023	0	0
Murrayville #2 well	01/11/2023	0	0

Water System	Sampling Point	Collection Date	E. coli (CFU/100ml)	Total Coliforms (CFU/100ml)
Acadia	S	2023-01-03	0	1.0
Acadia	S	2023-01-05	0	0
Acadia	S	2023-01-10	0	0
Acadia	S	2023-01-17	0	0
Acadia	S	2023-01-24	0	0
Acadia	S	2023-01-31	0	0
Acadia	S	2023-02-07	0	0
Acadia	S	2023-02-14	0	0
Acadia	S	2023-02-21	0	0
Acadia	S	2023-02-28	0	0
Acadia	S	2023-03-07	0	0
Acadia	S	2023-03-14	0	0
Acadia	S	2023-03-21	0	0
Acadia	S	2023-03-28	0	0
Acadia	S	2023-04-04	0	0
Acadia	S	2023-04-11	0	0
Acadia	S	2023-04-18	0	0
Acadia	S	2023-04-25	0	0
Acadia	S	2023-05-02	0	0
Acadia	S	2023-05-09	0	0
Acadia	S	2023-05-16	0	0
Acadia	S	2023-05-23	0	0
Acadia	S	2023-05-30	0	0
Acadia	S	2023-06-06	0	0
Acadia	S	2023-06-12	0	0
Acadia	S	2023-06-20	0	0
Acadia	S	2023-06-27	0	0
Acadia	S	2023-07-04	0	0
Acadia	S	2023-07-11	0	0
Acadia	S	2023-07-18	0	0
Acadia	S	2023-07-25	0	0
Acadia	S	2023-08-01	0	0
Acadia	S	2023-08-08	0	0
Acadia	S	2023-08-15	0	0
Acadia	S	2023-08-22	0	0
Acadia	S	2023-08-29	0	0
Acadia	S	2023-09-05	0	0
Acadia	S	2023-09-12	0	0
Acadia	S	2023-09-19	0	0
Acadia	S	2023-09-26	0	0
Acadia	S	2023-10-03	0	0
Acadia	S	2023-10-10	0	0
Acadia	S	2023-10-17	0	0
Acadia	S	2023-10-24	0	0
Acadia	S	2023-10-31	0	0
Acadia	S	2023-11-07	0	0
Acadia	S	2023-11-16	0	0
Acadia	S	2023-11-21	0	0
Acadia	S	2023-11-28	0	0
Acadia	S	2023-12-05	0	0

Acadia	S	2023-12-12	0	0
Acadia	S	2023-12-19	0	0
Acadia	S	2024-01-02	0	0
Acadia	S	2024-01-09	0	0
Acadia	S	2024-01-16	0	0
Acadia	S	2024-01-23	0	0
Acadia	S	2024-01-30	0	0
East Langley	AD (AWTP)	2023-01-03	0	0
East Langley	AD (AWTP)	2023-01-10	0	0
East Langley	AD (AWTP)	2023-01-11	0	0
East Langley	AD (AWTP)	2023-01-17	0	0
East Langley	AD (AWTP)	2023-01-24	0	0
East Langley	AD (AWTP)	2023-01-31	0	0
East Langley	AD (AWTP)	2023-02-07	0	0
East Langley	AD (AWTP)	2023-02-14	0	0
East Langley	AD (AWTP)	2023-02-21	0	0
East Langley	AD (AWTP)	2023-02-28	0	0
East Langley	AD (AWTP)	2023-03-07	0	0
East Langley	AD (AWTP)	2023-03-14	0	0
East Langley	AD (AWTP)	2023-03-21	0	0
East Langley	AD (AWTP)	2023-03-28	0	0
East Langley	AD (AWTP)	2023-04-04	0	0
East Langley	AD (AWTP)	2023-04-11	0	0
East Langley	AD (AWTP)	2023-04-18	0	0
East Langley	AD (AWTP)	2023-04-25	0	0
East Langley	AD (AWTP)	2023-05-02	0	0
East Langley	AD (AWTP)	2023-05-09	0	0
East Langley	AD (AWTP)	2023-05-16	0	0
East Langley	AD (AWTP)	2023-05-23	0	0
East Langley	AD (AWTP)	2023-05-30	0	0
East Langley	AD (AWTP)	2023-06-06	0	0
East Langley	AD (AWTP)	2023-06-12	0	0
East Langley	AD (AWTP)	2023-06-20	0	0
East Langley	AD (AWTP)	2023-06-27	0	0
East Langley	AD (AWTP)	2023-07-04	0	0
East Langley	AD (AWTP)	2023-07-11	0	0
East Langley	AD (AWTP)	2023-07-18	0**	0**
East Langley	AD (AWTP)	2023-07-25	0	0
East Langley	AD (AWTP)	2023-08-01	0	0
East Langley	AD (AWTP)	2023-08-08	0	0
East Langley	AD (AWTP)	2023-08-15	0	0
East Langley	AD (AWTP)	2023-08-22	0	0
East Langley	AD (AWTP)	2023-08-29	0	0
East Langley	AD (AWTP)	2023-09-05	0	0
East Langley	AD (AWTP)	2023-09-12	0	0
East Langley	AD (AWTP)	2023-09-19	0	0
East Langley	AD (AWTP)	2023-09-26	0	0
East Langley	AD (AWTP)	2023-10-03	0	0
East Langley	AD (AWTP)	2023-10-10	0	0
East Langley	AD (AWTP)	2023-10-17	0	0
East Langley	AD (AWTP)	2023-10-24	0	0
East Langley	AD (AWTP)	2023-10-31	0	0

East Langley	AD (AWTP)	2023-11-01	0	0
East Langley	AD (AWTP)	2023-11-07	0	0
East Langley	AD (AWTP)	2023-11-16	0	0
East Langley	AD (AWTP)	2023-11-21	0	0
East Langley	AD (AWTP)	2023-11-28	0	0
East Langley	AD (AWTP)	2023-12-05	0	0
East Langley	AD (AWTP)	2023-12-12	0	0
East Langley	AD (AWTP)	2023-12-19	0	0
East Langley	AD (AWTP)	2024-01-02	0	0
East Langley	AD (AWTP)	2024-01-09	0	0
East Langley	AD (AWTP)	2024-01-10	0	0
East Langley	AD (AWTP)	2024-01-16	0	0
East Langley	AD (AWTP)	2024-01-23	0	0
East Langley	AD (AWTP)	2024-01-30	0	0
East Langley	F	2023-01-03	0	0
East Langley	F	2023-01-10	0	1
East Langley	F	2023-01-17	0	0
East Langley	F	2023-01-24	0	0
East Langley	F	2023-01-31	0	0
East Langley	F	2023-02-07	0	0
East Langley	F	2023-02-14	0	0
East Langley	F	2023-02-21	0	0
East Langley	F	2023-02-28	0	0
East Langley	F	2023-03-07	0	0
East Langley	F	2023-03-14	0	0
East Langley	F	2023-03-21	0	0
East Langley	F	2023-03-28	0	0
East Langley	F	2023-04-04	0	0
East Langley	F	2023-04-11	0	0
East Langley	F	2023-04-18	0	0
East Langley	F	2023-04-25	0	0
East Langley	F	2023-05-02	0	0
East Langley	F	2023-05-09	0	0
East Langley	F	2023-05-16	0	0
East Langley	F	2023-05-23	0	0
East Langley	F	2023-05-30	0	0
East Langley	F	2023-06-06	0	0
East Langley	F	2023-06-13	0	0
East Langley	F	2023-06-20	0	0
East Langley	F	2023-06-28	0	0
East Langley	F	2023-07-04	0	0
East Langley	F	2023-07-11	0	0
East Langley	F	2023-07-18	0	0
East Langley	F	2023-07-25	0	0
East Langley	F	2023-08-01	0	0
East Langley	F	2023-08-08	0	0
East Langley	F	2023-08-15	0	0
East Langley	F	2023-08-22	0	0
East Langley	F	2023-08-29	0	0
East Langley	F	2023-09-05	0	0
East Langley	F	2023-09-12	0	0
East Langley	F	2023-09-19	0	0

East Langley	F	2023-09-26	0	0
East Langley	F	2023-10-03	0	0
East Langley	F	2023-10-10	0	0
East Langley	F	2023-10-17	0	0
East Langley	F	2023-10-31	0	0
East Langley	F	2023-11-07	0	0
East Langley	F	2023-11-14	0	0
East Langley	F	2023-11-21	0	0
East Langley	F	2023-11-28	0	0
East Langley	F	2023-12-05	0	0
East Langley	F	2023-12-12	0	0
East Langley	F	2023-12-19	0	0
East Langley	F	2024-01-02	0	0
East Langley	F	2024-01-09	0	0
East Langley	F	2024-01-16	NT	NT
East Langley	F	2024-01-23	0	0
East Langley	F	2024-01-30	0	0
East Langley	G	2023-01-03	0	0
East Langley	G	2023-01-10	0	0
East Langley	G	2023-01-17	0	0
East Langley	G	2023-01-24	0	0
East Langley	G	2023-01-31	0	0
East Langley	G	2023-02-07	0	0
East Langley	G	2023-02-14	0	0
East Langley	G	2023-02-21	0	0
East Langley	G	2023-02-28	0	0
East Langley	G	2023-03-07	0	0
East Langley	G	2023-03-14	0	0
East Langley	G	2023-03-21	0	0
East Langley	G	2023-03-28	0	0
East Langley	G	2023-04-04	0	0
East Langley	G	2023-04-11	0	0
East Langley	G	2023-04-18	0	0
East Langley	G	2023-04-25	0	0
East Langley	G	2023-05-02	0	0
East Langley	G	2023-05-09	0	0
East Langley	G	2023-05-16	0	0
East Langley	G	2023-05-23	0	0
East Langley	G	2023-05-30	0	0
East Langley	G	2023-06-06	0	0
East Langley	G	2023-06-12	0	0
East Langley	G	2023-06-20	0	0
East Langley	G	2023-06-27	0	0
East Langley	G	2023-07-04	0	0
East Langley	G	2023-07-11	0	0
East Langley	G	2023-07-18	0	0
East Langley	G	2023-07-25	0	0
East Langley	G	2023-08-01	0	0
East Langley	G	2023-08-08	0	0
East Langley	G	2023-08-15	0	0
East Langley	G	2023-08-22	0	0
East Langley	G	2023-08-29	0	0

East Langley	G	2023-09-05	0	0
East Langley	G	2023-09-12	0	0
East Langley	G	2023-09-19	0	0
East Langley	G	2023-09-26	0	0
East Langley	G	2023-10-03	0	0
East Langley	G	2023-10-10	0	0
East Langley	G	2023-10-17	0	0
East Langley	G	2023-10-24	0	0
East Langley	G	2023-10-31	0	0
East Langley	G	2023-11-07	0	0
East Langley	G	2023-11-16	0	0
East Langley	G	2023-11-21	0	0
East Langley	G	2023-11-28	0	0
East Langley	G	2023-12-05	0	0
East Langley	G	2023-12-12	0	0
East Langley	G	2023-12-19	0	0
East Langley	G	2024-01-02	0	0
East Langley	G	2024-01-09	0	0
East Langley	G	2024-01-23	0	0
East Langley	G	2024-01-30	0	0
East Langley	P	2023-01-03	0	0
East Langley	P	2023-01-10	0	0
East Langley	P	2023-01-17	0	0
East Langley	P	2023-01-24	0	0
East Langley	P	2023-01-31	0	0
East Langley	P	2023-02-07	0	0
East Langley	P	2023-02-14	0	0
East Langley	P	2023-02-21	0	0
East Langley	P	2023-02-28	0	0
East Langley	P	2023-03-07	0	0
East Langley	P	2023-03-14	0	0
East Langley	P	2023-03-21	0	0
East Langley	P	2023-03-28	0	0
East Langley	P	2023-04-04	0	0
East Langley	P	2023-04-11	0	0
East Langley	P	2023-04-18	0	0
East Langley	P	2023-04-25	0	0
East Langley	P	2023-05-02	0	0
East Langley	P	2023-05-09	0	0
East Langley	P	2023-05-16	0	0
East Langley	P	2023-05-23	0	0
East Langley	P	2023-05-30	0	0
East Langley	P	2023-06-06	0	0
East Langley	P	2023-06-13	0	0
East Langley	P	2023-06-20	0	0
East Langley	P	2023-06-28	0	0
East Langley	P	2023-07-04	0	0
East Langley	P	2023-07-11	0	0
East Langley	P	2023-07-18	0	0
East Langley	P	2023-07-25	0	0
East Langley	P	2023-08-01	0	0
East Langley	P	2023-08-08	0	0

East Langley	P	2023-08-15	0	0
East Langley	P	2023-08-22	0	0
East Langley	P	2023-08-29	0	0
East Langley	P	2023-09-05	0	0
East Langley	P	2023-09-12	0	0
East Langley	P	2023-09-19	0	0
East Langley	P	2023-09-26	0	0
East Langley	P	2023-10-03	0	0
East Langley	P	2023-10-10	0	0
East Langley	P	2023-10-17	0	0
East Langley	P	2023-10-31	0	0
East Langley	P	2023-11-07	0	0
East Langley	P	2023-11-14	NT	NT
East Langley	P	2023-11-21	0	0
East Langley	P	2023-11-28	0	0
East Langley	P	2023-12-05	0	0
East Langley	P	2023-12-12	0	0
East Langley	P	2023-12-19	0	0
East Langley	P	2024-01-02	0	0
East Langley	P	2024-01-09	0	0
East Langley	P	2024-01-16	0	0
East Langley	P	2024-01-23	0	0
East Langley	P	2024-01-30	0	0
East Langley	R	2023-01-03	0	0
East Langley	R	2023-01-10	0	0
East Langley	R	2023-01-17	0	0
East Langley	R	2023-01-24	0	0
East Langley	R	2023-01-31	0	0
East Langley	R	2023-02-07	0	0
East Langley	R	2023-02-14	0	0
East Langley	R	2023-02-21	0	0
East Langley	R	2023-02-28	0	0
East Langley	R	2023-03-07	0	0
East Langley	R	2023-03-14	0	0
East Langley	R	2023-03-21	0	0
East Langley	R	2023-03-28	0	0
East Langley	R	2023-04-04	0	0
East Langley	R	2023-04-11	0	0
East Langley	R	2023-04-18	0	0
East Langley	R	2023-04-25	0	0
East Langley	R	2023-05-02	0	0
East Langley	R	2023-05-09	0	0
East Langley	R	2023-05-16	0	0
East Langley	R	2023-05-23	0	0
East Langley	R	2023-05-30	0	0
East Langley	R	2023-06-06	0	0
East Langley	R	2023-06-13	0	0
East Langley	R	2023-06-20	0	0
East Langley	R	2023-06-28	0	0
East Langley	R	2023-07-04	0	0
East Langley	R	2023-07-11	0	0
East Langley	R	2023-07-18	0	0

East Langley	R	2023-07-25	0	0
East Langley	R	2023-08-01	0	0
East Langley	R	2023-08-08	0	0
East Langley	R	2023-08-15	0	0
East Langley	R	2023-08-22	0	0
East Langley	R	2023-08-29	0	0
East Langley	R	2023-09-05	0	0
East Langley	R	2023-09-12	0	0
East Langley	R	2023-09-19	0	0
East Langley	R	2023-09-26	0	0
East Langley	R	2023-10-03	0	0
East Langley	R	2023-10-10	0	0
East Langley	R	2023-10-17	0	0
East Langley	R	2023-10-31	0	0
East Langley	R	2023-11-07	0	0
East Langley	R	2023-11-14	0	0
East Langley	R	2023-11-21	0	0
East Langley	R	2023-11-28	0	0
East Langley	R	2023-12-05	0	0
East Langley	R	2023-12-12	0	0
East Langley	R	2023-12-19	0	0
East Langley	R	2024-01-02	0	0
East Langley	R	2024-01-09	0	0
East Langley	R	2024-01-16	0	0
East Langley	R	2024-01-23	0	0
East Langley	R	2024-01-30	0	0
East Langley	Y	2023-01-03	0	0
East Langley	Y	2023-01-10	0	0
East Langley	Y	2023-01-17	0	0
East Langley	Y	2023-01-24	0	0
East Langley	Y	2023-02-07	0	0
East Langley	Y	2023-02-14	0	0
East Langley	Y	2023-02-28	0	0
East Langley	Y	2023-03-07	0	0
East Langley	Y	2023-03-14	0	0
East Langley	Y	2023-03-21	0	0
East Langley	Y	2023-03-28	0	0
East Langley	Y	2023-04-04	0	0
East Langley	Y	2023-04-11	0	0
East Langley	Y	2023-04-18	0	0
East Langley	Y	2023-04-25	0	0
East Langley	Y	2023-05-02	0	0
East Langley	Y	2023-05-09	0	0
East Langley	Y	2023-05-16	0	0
East Langley	Y	2023-05-23	0	0
East Langley	Y	2023-05-30	0	0
East Langley	Y	2023-06-06	0	0
East Langley	Y	2023-06-12	0	0
East Langley	Y	2023-06-20	0	0
East Langley	Y	2023-06-27	0	0
East Langley	Y	2023-07-04	0	0
East Langley	Y	2023-07-11	0	0

East Langley	Y	2023-07-18	0	0
East Langley	Y	2023-07-25	0	0
East Langley	Y	2023-08-01	0	0
East Langley	Y	2023-08-08	0	0
East Langley	Y	2023-08-15	0	0
East Langley	Y	2023-08-22	0	0
East Langley	Y	2023-08-29	0	0
East Langley	Y	2023-09-05	0	0
East Langley	Y	2023-09-12	0	0
East Langley	Y	2023-09-19	0	0
East Langley	Y	2023-09-26	0	0
East Langley	Y	2023-10-03	0	0
East Langley	Y	2023-10-10	0	0
East Langley	Y	2023-10-17	0	0
East Langley	Y	2023-10-24	0	0
East Langley	Y	2023-10-31	0	0
East Langley	Y	2023-11-07	0	0
East Langley	Y	2023-11-16	0	0
East Langley	Y	2023-11-21	0	0
East Langley	Y	2023-11-28	0	0
East Langley	Y	2023-12-05	0	0
East Langley	Y	2023-12-12	0	0
East Langley	Y	2023-12-19	0	0
East Langley	Y	2024-01-02	0	0
East Langley	Y	2024-01-09	0	0
East Langley	Y	2024-01-23	0	0
East Langley	Y	2024-01-30	0	0
Northwest Langley	D	2023-01-03	0	0
Northwest Langley	D	2023-01-10	0	0
Northwest Langley	D	2023-01-17	0	0
Northwest Langley	D	2023-01-24	0	0
Northwest Langley	D	2023-01-31	0	0
Northwest Langley	D	2023-02-07	0	0
Northwest Langley	D	2023-02-14	0	0
Northwest Langley	D	2023-02-21	0	0
Northwest Langley	D	2023-02-28	0**	0**
Northwest Langley	D	2023-03-07	0	0
Northwest Langley	D	2023-03-14	0	0
Northwest Langley	D	2023-03-21	0	0
Northwest Langley	D	2023-03-28	0	0
Northwest Langley	D	2023-04-04	0	0
Northwest Langley	D	2023-04-11	0	0
Northwest Langley	D	2023-04-18	0	0
Northwest Langley	D	2023-04-25	0	0
Northwest Langley	D	2023-05-02	0	0
Northwest Langley	D	2023-05-09	0	0
Northwest Langley	D	2023-05-16	0	0
Northwest Langley	D	2023-05-23	0	0
Northwest Langley	D	2023-05-30	0	0
Northwest Langley	D	2023-06-06	0	0
Northwest Langley	D	2023-06-12	0	0
Northwest Langley	D	2023-06-20	0	0

Northwest Langley	D	2023-06-27	0	0
Northwest Langley	D	2023-07-04	0	0
Northwest Langley	D	2023-07-11	0	0
Northwest Langley	D	2023-07-18	0	0
Northwest Langley	D	2023-07-25	0	0
Northwest Langley	D	2023-08-01	0	0
Northwest Langley	D	2023-08-08	0	0
Northwest Langley	D	2023-08-15	0	0
Northwest Langley	D	2023-08-22	0	0
Northwest Langley	D	2023-08-29	0	1.0
Northwest Langley	D	2023-08-31	0	0
Northwest Langley	D	2023-09-01	0	0
Northwest Langley	D	2023-09-05	0	0
Northwest Langley	D	2023-09-12	0	0
Northwest Langley	D	2023-09-19	0	0
Northwest Langley	D	2023-09-26	0	0
Northwest Langley	D	2023-10-03	0	0
Northwest Langley	D	2023-10-10	0	0
Northwest Langley	D	2023-10-17	0	0
Northwest Langley	D	2023-10-24	0	0
Northwest Langley	D	2023-10-31	0	0
Northwest Langley	D	2023-11-07	0	0
Northwest Langley	D	2023-11-16	0	0
Northwest Langley	D	2023-11-21	0	0
Northwest Langley	D	2023-11-28	0	0
Northwest Langley	D	2023-12-05	0	0
Northwest Langley	D	2023-12-12	0	0
Northwest Langley	D	2023-12-19	0	0
Northwest Langley	D	2024-01-02	0	0
Northwest Langley	D	2024-01-09	0	0
Northwest Langley	D	2024-01-16	0	0
Northwest Langley	D	2024-01-23	0	0
Northwest Langley	D	2024-01-30	0	0
Northwest Langley	H	2023-01-03	0	0
Northwest Langley	H	2023-01-10	0	0
Northwest Langley	H	2023-01-17	0	0
Northwest Langley	H	2023-01-24	0	0
Northwest Langley	H	2023-01-31	0	0
Northwest Langley	H	2023-02-07	0	0
Northwest Langley	H	2023-02-14	0	0
Northwest Langley	H	2023-02-21	0	0
Northwest Langley	H	2023-02-28	0	0
Northwest Langley	H	2023-03-07	0	0
Northwest Langley	H	2023-03-14	0	0
Northwest Langley	H	2023-03-21	0	0
Northwest Langley	H	2023-03-28	0	0
Northwest Langley	H	2023-04-04	0	0
Northwest Langley	H	2023-04-11	0	0
Northwest Langley	H	2023-04-18	0	0
Northwest Langley	H	2023-04-25	0	0
Northwest Langley	H	2023-05-02	0	0
Northwest Langley	H	2023-05-09	0	0

Northwest Langley	H	2023-05-16	0	0
Northwest Langley	H	2023-05-23	0	0
Northwest Langley	H	2023-05-30	0	0
Northwest Langley	H	2023-06-06	0	0
Northwest Langley	H	2023-06-12	0	0
Northwest Langley	H	2023-06-20	0	0
Northwest Langley	H	2023-06-27	0	0
Northwest Langley	H	2023-07-04	0	0
Northwest Langley	H	2023-07-11	0	0
Northwest Langley	H	2023-07-18	0	0
Northwest Langley	H	2023-07-25	0	0
Northwest Langley	H	2023-08-01	0	0
Northwest Langley	H	2023-08-08	0	0
Northwest Langley	H	2023-08-15	0	0
Northwest Langley	H	2023-08-22	0	0
Northwest Langley	H	2023-08-29	0	0
Northwest Langley	H	2023-09-05	0	0
Northwest Langley	H	2023-09-12	0	0
Northwest Langley	H	2023-09-19	0	0
Northwest Langley	H	2023-09-26	0	15
Northwest Langley	H	2023-09-28	0	1.0
Northwest Langley	H	2023-09-29	0	3.0
Northwest Langley	H	2023-09-30	0	0
Northwest Langley	H	2023-10-03	0	0
Northwest Langley	H	2023-10-10	0	0
Northwest Langley	H	2023-10-17	0	0
Northwest Langley	H	2023-10-24	0	0
Northwest Langley	H	2023-10-31	0	0
Northwest Langley	H	2023-11-07	0	0
Northwest Langley	H	2023-11-16	0	0
Northwest Langley	H	2023-11-21	0	0
Northwest Langley	H	2023-11-28	0	0
Northwest Langley	H	2023-12-05	0	0
Northwest Langley	H	2023-12-12	0	0
Northwest Langley	H	2023-12-19	0	0
Northwest Langley	H	2024-01-02	0	0
Northwest Langley	H	2024-01-09	0	0
Northwest Langley	H	2024-01-23	0	0
Northwest Langley	H	2024-01-30	0	0
Northwest Langley	I	2023-01-03	0	0
Northwest Langley	I	2023-01-10	0	0
Northwest Langley	I	2023-01-17	0	0
Northwest Langley	I	2023-01-24	0	0
Northwest Langley	I	2023-01-31	0	0
Northwest Langley	I	2023-02-07	0	0
Northwest Langley	I	2023-02-14	0	0
Northwest Langley	I	2023-02-21	0	0
Northwest Langley	I	2023-02-28	0	0
Northwest Langley	I	2023-03-07	0	0
Northwest Langley	I	2023-03-14	0	0
Northwest Langley	I	2023-03-21	0	0
Northwest Langley	I	2023-03-28	0	0

Northwest Langley	I	2023-04-04	0	0
Northwest Langley	I	2023-04-11	0	0
Northwest Langley	I	2023-04-18	0	0
Northwest Langley	I	2023-04-25	0	0
Northwest Langley	I	2023-05-02	0	0
Northwest Langley	I	2023-05-09	0	0
Northwest Langley	I	2023-05-16	0	0
Northwest Langley	I	2023-05-23	0	0
Northwest Langley	I	2023-05-30	0	0
Northwest Langley	I	2023-06-06	0	0
Northwest Langley	I	2023-06-12	0	0
Northwest Langley	I	2023-06-20	0	0
Northwest Langley	I	2023-06-27	0	0
Northwest Langley	I	2023-07-04	0	0
Northwest Langley	I	2023-07-11	0	0
Northwest Langley	I	2023-07-18	0	0
Northwest Langley	I	2023-07-25	0	1.0
Northwest Langley	I	2023-08-01	0	0
Northwest Langley	I	2023-08-08	0	0
Northwest Langley	I	2023-08-15	0	0
Northwest Langley	I	2023-08-22	0	0
Northwest Langley	I	2023-08-29	0	0
Northwest Langley	I	2023-09-05	0	2.0
Northwest Langley	I	2023-09-07	0	0
Northwest Langley	I	2023-09-08	0	0
Northwest Langley	I	2023-09-12	0	0
Northwest Langley	I	2023-09-19	0	0
Northwest Langley	I	2023-09-26	0	0
Northwest Langley	I	2023-10-03	0	0
Northwest Langley	I	2023-10-10	0	0
Northwest Langley	I	2023-10-17	0	0
Northwest Langley	I	2023-10-24	0	1.0
Northwest Langley	I	2023-10-26	0	0
Northwest Langley	I	2023-10-27	0	0
Northwest Langley	I	2023-10-31	0	0
Northwest Langley	I	2023-11-07	0	0
Northwest Langley	I	2023-11-16	0	0
Northwest Langley	I	2023-11-21	0	0
Northwest Langley	I	2023-11-28	0	0
Northwest Langley	I	2023-12-05	0	0
Northwest Langley	I	2023-12-12	0	0
Northwest Langley	I	2023-12-19	0	0
Northwest Langley	I	2024-01-02	0	0
Northwest Langley	I	2024-01-09	0	0
Northwest Langley	I	2024-01-23	0	0
Northwest Langley	I	2024-01-30	0	0
Northwest Langley	L	2023-01-03	0	0
Northwest Langley	L	2023-01-10	0	0
Northwest Langley	L	2023-01-17	0	0
Northwest Langley	L	2023-01-24	0	0
Northwest Langley	L	2023-01-31	0	0
Northwest Langley	L	2023-02-07	0	0

Northwest Langley	L	2023-02-14	0	0
Northwest Langley	L	2023-02-21	0	0
Northwest Langley	L	2023-02-28	0	0
Northwest Langley	L	2023-03-07	0	0
Northwest Langley	L	2023-03-14	0	0
Northwest Langley	L	2023-03-21	0	0
Northwest Langley	L	2023-03-28	0	0
Northwest Langley	L	2023-04-04	0	0
Northwest Langley	L	2023-04-11	0	0
Northwest Langley	L	2023-04-18	0	0
Northwest Langley	L	2023-04-25	0	0
Northwest Langley	L	2023-05-02	0	0
Northwest Langley	L	2023-05-09	0	0
Northwest Langley	L	2023-05-16	0	0
Northwest Langley	L	2023-05-23	0	0
Northwest Langley	L	2023-05-30	0	0
Northwest Langley	L	2023-06-06	0	0
Northwest Langley	L	2023-06-13	0	0
Northwest Langley	L	2023-06-20	0	0
Northwest Langley	L	2023-06-28	0	0
Northwest Langley	L	2023-07-04	0	0
Northwest Langley	L	2023-07-11	0	0
Northwest Langley	L	2023-07-18	0	0
Northwest Langley	L	2023-07-25	0	0
Northwest Langley	L	2023-08-01	0	0
Northwest Langley	L	2023-08-08	0	0
Northwest Langley	L	2023-08-15	0	0
Northwest Langley	L	2023-08-22	0	0
Northwest Langley	L	2023-08-29	0	0
Northwest Langley	L	2023-09-05	0	0
Northwest Langley	L	2023-09-12	0	0
Northwest Langley	L	2023-09-19	0	0
Northwest Langley	L	2023-09-26	0	0
Northwest Langley	L	2023-10-03	0	0
Northwest Langley	L	2023-10-10	0	0
Northwest Langley	L	2023-10-17	0	0
Northwest Langley	L	2023-10-31	0	0
Northwest Langley	L	2023-11-07	0	0
Northwest Langley	L	2023-11-14	0	0
Northwest Langley	L	2023-11-21	0	0
Northwest Langley	L	2023-11-28	0	0
Northwest Langley	L	2023-12-05	0	0
Northwest Langley	L	2023-12-12	0	0
Northwest Langley	L	2023-12-19	0	0
Northwest Langley	L	2024-01-02	0	0
Northwest Langley	L	2024-01-09	0	0
Northwest Langley	L	2024-01-16	0	0
Northwest Langley	L	2024-01-23	0	0
Northwest Langley	L	2024-01-30	0	0
Northwest Langley	M	2023-01-03	0	0
Northwest Langley	M	2023-01-10	0	0
Northwest Langley	M	2023-01-17	0	0

Northwest Langley	M	2023-01-24	0	0
Northwest Langley	M	2023-01-31	0	0
Northwest Langley	M	2023-02-07	0	0
Northwest Langley	M	2023-02-14	0	0
Northwest Langley	M	2023-02-21	0	0
Northwest Langley	M	2023-02-28	0	0
Northwest Langley	M	2023-03-07	0	0
Northwest Langley	M	2023-03-14	0	0
Northwest Langley	M	2023-03-21	0	0
Northwest Langley	M	2023-03-28	0	0
Northwest Langley	M	2023-04-04	0	0
Northwest Langley	M	2023-04-11	0	0
Northwest Langley	M	2023-04-18	0	0
Northwest Langley	M	2023-04-25	0	0
Northwest Langley	M	2023-05-02	0	0
Northwest Langley	M	2023-05-09	0	0
Northwest Langley	M	2023-05-16	0	0
Northwest Langley	M	2023-05-23	0	0
Northwest Langley	M	2023-05-30	0	0
Northwest Langley	M	2023-06-06	0	0
Northwest Langley	M	2023-06-13	0	0
Northwest Langley	M	2023-06-20	0	0
Northwest Langley	M	2023-06-28	0	0
Northwest Langley	M	2023-07-04	0	0
Northwest Langley	M	2023-07-11	0	0
Northwest Langley	M	2023-07-18	0	0
Northwest Langley	M	2023-07-25	0	0
Northwest Langley	M	2023-08-01	0	0
Northwest Langley	M	2023-08-08	0	0
Northwest Langley	M	2023-08-15	0	0
Northwest Langley	M	2023-08-22	0	0
Northwest Langley	M	2023-08-29	0	0
Northwest Langley	M	2023-09-05	0	0
Northwest Langley	M	2023-09-12	0	0
Northwest Langley	M	2023-09-19	0	0
Northwest Langley	M	2023-09-26	0	0
Northwest Langley	M	2023-10-03	0	0
Northwest Langley	M	2023-10-10	0	0
Northwest Langley	M	2023-10-17	0	0
Northwest Langley	M	2023-10-31	0	0
Northwest Langley	M	2023-11-07	0	0
Northwest Langley	M	2023-11-14	0	0
Northwest Langley	M	2023-11-21	0	0
Northwest Langley	M	2023-11-28	0	0
Northwest Langley	M	2023-12-05	0	0
Northwest Langley	M	2023-12-12	0	0
Northwest Langley	M	2023-12-19	0	0
Northwest Langley	M	2024-01-02	0	0
Northwest Langley	M	2024-01-09	0	0
Northwest Langley	M	2024-01-16	0	0
Northwest Langley	M	2024-01-23	0	0
Northwest Langley	M	2024-01-30	0	0

Northwest Langley	N	2023-01-03	0	0
Northwest Langley	N	2023-01-10	0	0
Northwest Langley	N	2023-01-17	0	0
Northwest Langley	N	2023-01-24	0	0
Northwest Langley	N	2023-01-31	0	0
Northwest Langley	N	2023-02-07	0	0
Northwest Langley	N	2023-02-14	0	0
Northwest Langley	N	2023-02-21	0	0
Northwest Langley	N	2023-02-28	0	0
Northwest Langley	N	2023-03-07	0	0
Northwest Langley	N	2023-03-14	0	0
Northwest Langley	N	2023-03-21	0	0
Northwest Langley	N	2023-03-28	0	0
Northwest Langley	N	2023-04-04	0	0
Northwest Langley	N	2023-04-11	0	0
Northwest Langley	N	2023-04-18	0	0
Northwest Langley	N	2023-04-25	0	0
Northwest Langley	N	2023-05-02	0	0
Northwest Langley	N	2023-05-09	0	0
Northwest Langley	N	2023-05-16	0	0
Northwest Langley	N	2023-05-23	0	0
Northwest Langley	N	2023-05-30	0	0
Northwest Langley	N	2023-06-06	0	0
Northwest Langley	N	2023-06-12	0	0
Northwest Langley	N	2023-06-20	0	0
Northwest Langley	N	2023-06-27	0	0
Northwest Langley	N	2023-07-04	0	0
Northwest Langley	N	2023-07-11	0	0
Northwest Langley	N	2023-07-18	0	0
Northwest Langley	N	2023-07-25	0	0
Northwest Langley	N	2023-08-01	0	0
Northwest Langley	N	2023-08-08	0	0
Northwest Langley	N	2023-08-15	0	0
Northwest Langley	N	2023-08-22	0	0
Northwest Langley	N	2023-08-29	0	0
Northwest Langley	N	2023-09-05	0	0
Northwest Langley	N	2023-09-12	0	0
Northwest Langley	N	2023-09-19	0	0
Northwest Langley	N	2023-09-26	0	0
Northwest Langley	N	2023-10-03	0	0
Northwest Langley	N	2023-10-10	0	0
Northwest Langley	N	2023-10-17	0	0
Northwest Langley	N	2023-10-24	0	0
Northwest Langley	N	2023-10-31	0	0
Northwest Langley	N	2023-11-07	0	0
Northwest Langley	N	2023-11-16	0	0
Northwest Langley	N	2023-11-21	0	0
Northwest Langley	N	2023-11-28	0	0
Northwest Langley	N	2023-12-05	0	0
Northwest Langley	N	2023-12-12	0	0
Northwest Langley	N	2023-12-19	0	0
Northwest Langley	N	2024-01-02	0	0

Northwest Langley	N	2024-01-09	0	0
Northwest Langley	N	2024-01-23	0	0
Northwest Langley	N	2024-01-30	0	0
Northwest Langley	O	2023-01-03	0	0
Northwest Langley	O	2023-01-10	0	0
Northwest Langley	O	2023-01-17	0	0
Northwest Langley	O	2023-01-24	0	0
Northwest Langley	O	2023-01-31	0	0
Northwest Langley	O	2023-02-07	0	0
Northwest Langley	O	2023-02-14	0	0
Northwest Langley	O	2023-02-21	0	0
Northwest Langley	O	2023-02-28	0	0
Northwest Langley	O	2023-03-07	0	0
Northwest Langley	O	2023-03-14	0	0
Northwest Langley	O	2023-03-21	0	0
Northwest Langley	O	2023-03-28	0	0
Northwest Langley	O	2023-04-04	0	0
Northwest Langley	O	2023-04-11	0	0
Northwest Langley	O	2023-04-18	0	0
Northwest Langley	O	2023-04-25	0	0
Northwest Langley	O	2023-05-02	0	0
Northwest Langley	O	2023-05-09	0	0
Northwest Langley	O	2023-05-16	0	0
Northwest Langley	O	2023-05-23	0	0
Northwest Langley	O	2023-05-30	0	0
Northwest Langley	O	2023-06-06	0	0
Northwest Langley	O	2023-06-13	0	0
Northwest Langley	O	2023-06-20	0	0
Northwest Langley	O	2023-06-28	0	0
Northwest Langley	O	2023-07-04	0	0
Northwest Langley	O	2023-07-11	0	0
Northwest Langley	O	2023-07-18	0	0
Northwest Langley	O	2023-07-25	0	0
Northwest Langley	O	2023-08-01	0	0
Northwest Langley	O	2023-08-08	0	0
Northwest Langley	O	2023-08-15	0	0
Northwest Langley	O	2023-08-22	0	0
Northwest Langley	O	2023-08-29	0	0
Northwest Langley	O	2023-09-05	0	0
Northwest Langley	O	2023-09-12	0	0
Northwest Langley	O	2023-09-19	0	0
Northwest Langley	O	2023-09-26	0	0
Northwest Langley	O	2023-10-03	0	0
Northwest Langley	O	2023-10-10	0	0
Northwest Langley	O	2023-10-17	0	0
Northwest Langley	O	2023-10-31	0	0
Northwest Langley	O	2023-11-07	0	0
Northwest Langley	O	2023-11-14	0	0
Northwest Langley	O	2023-11-21	0	0
Northwest Langley	O	2023-11-28	0	0
Northwest Langley	O	2023-12-05	0	0
Northwest Langley	O	2023-12-12	0	0

Northwest Langley	O	2023-12-19	0	0
Northwest Langley	O	2024-01-02	0	0
Northwest Langley	O	2024-01-09	0	0
Northwest Langley	O	2024-01-16	NT	NT
Northwest Langley	O	2024-01-23	0	0
Northwest Langley	O	2024-01-30	0	0
Northwest Langley	T	2023-01-03	0	0
Northwest Langley	T	2023-01-10	0	0
Northwest Langley	T	2023-01-17	0	0
Northwest Langley	T	2023-01-24	0	0
Northwest Langley	T	2023-01-31	0	0
Northwest Langley	T	2023-02-07	0	0
Northwest Langley	T	2023-02-14	0	0
Northwest Langley	T	2023-02-21	0	0
Northwest Langley	T	2023-02-28	0	0
Northwest Langley	T	2023-03-07	0	0
Northwest Langley	T	2023-03-14	0	0
Northwest Langley	T	2023-03-21	0	0
Northwest Langley	T	2023-03-28	0	0
Northwest Langley	T	2023-04-04	0	0
Northwest Langley	T	2023-04-11	0	0
Northwest Langley	T	2023-04-18	0	0
Northwest Langley	T	2023-04-25	0	0
Northwest Langley	T	2023-05-09	0	0
Northwest Langley	T	2023-05-16	0	0
Northwest Langley	T	2023-05-23	0	0
Northwest Langley	T	2023-05-30	0	0
Northwest Langley	T	2023-06-06	0	0
Northwest Langley	T	2023-06-12	0	0
Northwest Langley	T	2023-06-20	0	0
Northwest Langley	T	2023-06-27	0	0
Northwest Langley	T	2023-07-04	0	0
Northwest Langley	T	2023-07-11	0	0
Northwest Langley	T	2023-07-18	0	0
Northwest Langley	T	2023-07-25	0	0
Northwest Langley	T	2023-08-01	0	0
Northwest Langley	T	2023-08-08	0	0
Northwest Langley	T	2023-08-15	0	0
Northwest Langley	T	2023-08-22	0	0
Northwest Langley	T	2023-08-29	0	0
Northwest Langley	T	2023-09-05	0	0
Northwest Langley	T	2023-09-12	0	0
Northwest Langley	T	2023-09-19	0	0
Northwest Langley	T	2023-09-26	0	0
Northwest Langley	T	2023-10-03	0	0
Northwest Langley	T	2023-10-10	0	0
Northwest Langley	T	2023-10-17	0	1.0
Northwest Langley	T	2023-10-19	0	0
Northwest Langley	T	2023-10-20	0	0
Northwest Langley	T	2023-10-24	0	0
Northwest Langley	T	2023-10-31	0	0
Northwest Langley	T	2023-11-07	0	0

Northwest Langley	T	2023-11-16	0	0
Northwest Langley	T	2023-11-21	0	0
Northwest Langley	T	2023-11-28	0	2.0
Northwest Langley	T	2023-12-01	0	0
Northwest Langley	T	2023-12-02	0	0
Northwest Langley	T	2023-12-05	0	0
Northwest Langley	T	2023-12-12	0	0
Northwest Langley	T	2023-12-19	0	0
Northwest Langley	T	2024-01-02	0	0
Northwest Langley	T	2024-01-09	0	0
Northwest Langley	T	2024-01-16	0	0
Northwest Langley	T	2024-01-23	0	0
Northwest Langley	T	2024-01-30	0	0
Northwest Langley	U	2023-01-03	0	0
Northwest Langley	U	2023-01-10	0	0
Northwest Langley	U	2023-01-17	0	0
Northwest Langley	U	2023-01-24	0	0
Northwest Langley	U	2023-01-31	0	0
Northwest Langley	U	2023-02-07	0	0
Northwest Langley	U	2023-02-14	0	0
Northwest Langley	U	2023-02-21	0	0
Northwest Langley	U	2023-02-28	0	0
Northwest Langley	U	2023-03-07	0	0
Northwest Langley	U	2023-03-14	0	0
Northwest Langley	U	2023-03-21	0	0
Northwest Langley	U	2023-03-28	0	0
Northwest Langley	U	2023-04-04	0	0
Northwest Langley	U	2023-04-11	0	0
Northwest Langley	U	2023-04-18	0	0
Northwest Langley	U	2023-04-25	0	0
Northwest Langley	U	2023-05-02	0	0
Northwest Langley	U	2023-05-09	0	0
Northwest Langley	U	2023-05-16	0	0
Northwest Langley	U	2023-05-23	0	0
Northwest Langley	U	2023-05-30	0	0
Northwest Langley	U	2023-06-06	0	0
Northwest Langley	U	2023-06-13	0	0
Northwest Langley	U	2023-06-20	0	0
Northwest Langley	U	2023-06-28	0	0
Northwest Langley	U	2023-07-04	0	0
Northwest Langley	U	2023-07-11	0	0
Northwest Langley	U	2023-07-18	0	0
Northwest Langley	U	2023-07-25	0	0
Northwest Langley	U	2023-08-01	0	0
Northwest Langley	U	2023-08-08	0	0
Northwest Langley	U	2023-08-15	0	0
Northwest Langley	U	2023-08-22	0	0
Northwest Langley	U	2023-08-29	0	0
Northwest Langley	U	2023-09-05	0	0
Northwest Langley	U	2023-09-12	0	0
Northwest Langley	U	2023-09-19	0	0
Northwest Langley	U	2023-09-26	0	0

Northwest Langley	U	2023-10-03	0	0
Northwest Langley	U	2023-10-10	0	0
Northwest Langley	U	2023-10-17	0	0
Northwest Langley	U	2023-10-31	0	0
Northwest Langley	U	2023-11-07	0	0
Northwest Langley	U	2023-11-14	0	0
Northwest Langley	U	2023-11-21	0	0
Northwest Langley	U	2023-11-28	0	0
Northwest Langley	U	2023-12-05	0	0
Northwest Langley	U	2023-12-12	0	0
Northwest Langley	U	2023-12-19	0	0
Northwest Langley	U	2024-01-02	0	0
Northwest Langley	U	2024-01-09	0	0
Northwest Langley	U	2024-01-16	NT	NT
Northwest Langley	U	2024-01-23	0	0
Northwest Langley	U	2024-01-30	NT	NT
Northwest Langley	X	2023-01-03	0	0
Northwest Langley	X	2023-01-10	0	0
Northwest Langley	X	2023-01-17	0	0
Northwest Langley	X	2023-01-24	0	0
Northwest Langley	X	2023-01-31	0	0
Northwest Langley	X	2023-02-07	0	0
Northwest Langley	X	2023-02-14	0	0
Northwest Langley	X	2023-02-21	0	0
Northwest Langley	X	2023-02-28	0	0
Northwest Langley	X	2023-03-07	0	0
Northwest Langley	X	2023-03-14	0	0
Northwest Langley	X	2023-03-21	0	0
Northwest Langley	X	2023-03-28	0	0
Northwest Langley	X	2023-04-04	0	0
Northwest Langley	X	2023-04-11	0	0
Northwest Langley	X	2023-04-18	0	0
Northwest Langley	X	2023-04-25	0	0
Northwest Langley	X	2023-05-02	0	0
Northwest Langley	X	2023-05-09	0	0
Northwest Langley	X	2023-05-16	0	0
Northwest Langley	X	2023-05-23	0	0
Northwest Langley	X	2023-05-30	0	0
Northwest Langley	X	2023-06-06	0	0
Northwest Langley	X	2023-06-13	0	0
Northwest Langley	X	2023-06-20	0	0
Northwest Langley	X	2023-06-28	0	0
Northwest Langley	X	2023-07-04	0	0
Northwest Langley	X	2023-07-11	0	0
Northwest Langley	X	2023-07-18	0	0
Northwest Langley	X	2023-07-25	0	0
Northwest Langley	X	2023-08-01	0	0
Northwest Langley	X	2023-08-08	0	0
Northwest Langley	X	2023-08-15	0	0
Northwest Langley	X	2023-08-22	0	0
Northwest Langley	X	2023-08-29	0	0
Northwest Langley	X	2023-09-05	0	0

Northwest Langley	X	2023-09-12	0	0
Northwest Langley	X	2023-09-19	0	0
Northwest Langley	X	2023-09-26	0	0
Northwest Langley	X	2023-10-03	0	0
Northwest Langley	X	2023-10-10	0	0
Northwest Langley	X	2023-10-17	0	0
Northwest Langley	X	2023-10-31	0	0
Northwest Langley	X	2023-11-07	0	0
Northwest Langley	X	2023-11-14	0	0
Northwest Langley	X	2023-11-21	0	0
Northwest Langley	X	2023-11-28	0	0
Northwest Langley	X	2023-12-05	0	0
Northwest Langley	X	2023-12-12	0	0
Northwest Langley	X	2023-12-19	0	0
Northwest Langley	X	2024-01-02	0	0
Northwest Langley	X	2024-01-09	0	0
Northwest Langley	X	2024-01-16	0	0
Northwest Langley	X	2024-01-23	0	0
Northwest Langley	X	2024-01-30	0	0
South West Langley	AB	2023-01-03	0	0
South West Langley	AB	2023-01-10	0	0
South West Langley	AB	2023-01-17	0	0
South West Langley	AB	2023-01-24	0	0
South West Langley	AB	2023-01-31	0	0
South West Langley	AB	2023-02-07	0	0
South West Langley	AB	2023-02-14	0	0
South West Langley	AB	2023-02-21	0	0
South West Langley	AB	2023-02-28	0	0
South West Langley	AB	2023-03-07	0	0
South West Langley	AB	2023-03-14	0	0
South West Langley	AB	2023-03-21	0	0
South West Langley	AB	2023-03-28	0	0
South West Langley	AB	2023-04-04	0	0
South West Langley	AB	2023-04-11	0	0
South West Langley	AB	2023-04-18	0	0
South West Langley	AB	2023-04-25	0	0
South West Langley	AB	2023-05-02	0	0
South West Langley	AB	2023-05-09	0	0
South West Langley	AB	2023-05-16	0	0
South West Langley	AB	2023-05-23	0	0
South West Langley	AB	2023-05-30	0	0
South West Langley	AB	2023-06-06	0	0
South West Langley	AB	2023-06-13	0	0
South West Langley	AB	2023-06-20	0	0
South West Langley	AB	2023-06-28	0	0
South West Langley	AB	2023-07-04	0	0
South West Langley	AB	2023-07-11	0	0
South West Langley	AB	2023-07-18	0	0
South West Langley	AB	2023-07-25	0	0
South West Langley	AB	2023-08-01	0	0
South West Langley	AB	2023-08-08	0	0
South West Langley	AB	2023-08-15	0	0

South West Langley	AB	2023-08-22	0	0
South West Langley	AB	2023-08-29	0	0
South West Langley	AB	2023-09-05	0	0
South West Langley	AB	2023-09-12	0	0
South West Langley	AB	2023-09-19	0	0
South West Langley	AB	2023-09-26	0	0
South West Langley	AB	2023-10-03	0	0
South West Langley	AB	2023-10-10	0	0
South West Langley	AB	2023-10-17	0	0
South West Langley	AB	2023-10-24	0	0
South West Langley	AB	2023-10-31	0	0
South West Langley	AB	2023-11-07	0	0
South West Langley	AB	2023-11-14	0	0
South West Langley	AB	2023-11-21	0	0
South West Langley	AB	2023-11-28	0	0
South West Langley	AB	2023-12-05	0	0
South West Langley	AB	2023-12-12	0	0
South West Langley	AB	2023-12-19	0	0
South West Langley	AB	2024-01-02	0	0
South West Langley	AB	2024-01-09	0	0
South West Langley	AB	2024-01-16	0	0
South West Langley	AB	2024-01-23	0	0
South West Langley	AB	2024-01-30	0	0
South West Langley	AC	2023-01-03	0	0
South West Langley	AC	2023-01-10	0	0
South West Langley	AC	2023-01-17	0	0
South West Langley	AC	2023-01-24	0	0
South West Langley	AC	2023-01-31	0	0
South West Langley	AC	2023-02-07	0	0
South West Langley	AC	2023-02-14	0	0
South West Langley	AC	2023-02-21	0	0
South West Langley	AC	2023-02-28	0	0
South West Langley	AC	2023-03-07	0	0
South West Langley	AC	2023-03-14	0	0
South West Langley	AC	2023-03-21	0	0
South West Langley	AC	2023-03-28	0	0
South West Langley	AC	2023-04-04	0	0
South West Langley	AC	2023-04-11	0	0
South West Langley	AC	2023-04-18	0	0
South West Langley	AC	2023-04-25	0	0
South West Langley	AC	2023-05-02	0	0
South West Langley	AC	2023-05-09	0	0
South West Langley	AC	2023-05-16	0	0
South West Langley	AC	2023-05-23	0	0
South West Langley	AC	2023-05-30	0	0
South West Langley	AC	2023-06-06	0	0
South West Langley	AC	2023-06-12	0	0
South West Langley	AC	2023-06-20	0	0
South West Langley	AC	2023-06-27	0	0
South West Langley	AC	2023-07-04	0	0
South West Langley	AC	2023-07-11	0	0
South West Langley	AC	2023-07-18	0	0

South West Langley	AC	2023-07-25	0	0
South West Langley	AC	2023-08-01	0	0
South West Langley	AC	2023-08-08	0	0
South West Langley	AC	2023-08-15	0	0
South West Langley	AC	2023-08-22	0	0
South West Langley	AC	2023-08-29	0	0
South West Langley	AC	2023-09-05	0	0
South West Langley	AC	2023-09-12	0	0
South West Langley	AC	2023-09-19	0	0
South West Langley	AC	2023-09-26	0	0
South West Langley	AC	2023-10-03	0	0
South West Langley	AC	2023-10-10	0	0
South West Langley	AC	2023-10-17	0	0
South West Langley	AC	2023-10-24	0	0
South West Langley	AC	2023-10-31	0	0
South West Langley	AC	2023-11-07	0	0
South West Langley	AC	2023-11-16	0	0
South West Langley	AC	2023-11-21	0	0
South West Langley	AC	2023-11-28	0	0
South West Langley	AC	2023-12-05	0	0
South West Langley	AC	2023-12-12	0	0
South West Langley	AC	2023-12-19	0	0
South West Langley	AC	2024-01-02	0	0
South West Langley	AC	2024-01-09	0	0
South West Langley	AC	2024-01-16	0	0
South West Langley	AC	2024-01-23	0	0
South West Langley	AC	2024-01-30	0	0
South West Langley	AJ	2023-02-21	0**	0**
South West Langley	AJ	2023-03-14	0	0
South West Langley	AJ	2023-04-04	0	0
South West Langley	AJ	2023-05-09	0	0
South West Langley	AJ	2023-05-16	0	0
South West Langley	AJ	2023-05-23	0	0
South West Langley	AJ	2023-05-30	0	0
South West Langley	AJ	2023-06-06	0	0
South West Langley	AJ	2023-06-12	0	0
South West Langley	AJ	2023-06-20	0	0
South West Langley	AJ	2023-06-27	0	0
South West Langley	AJ	2023-07-04	0	0
South West Langley	AJ	2023-07-11	0	0
South West Langley	AJ	2023-07-18	0	0
South West Langley	AJ	2023-07-25	0	0
South West Langley	AJ	2023-08-01	0	0
South West Langley	AJ	2023-08-08	0	0
South West Langley	AJ	2023-08-15	0	0
South West Langley	AJ	2023-08-22	0	0
South West Langley	AJ	2023-08-29	0	0
South West Langley	AJ	2023-09-05	0	0
South West Langley	AJ	2023-09-12	0	0
South West Langley	AJ	2023-09-19	0	0
South West Langley	AJ	2023-09-26	0	0
South West Langley	AJ	2023-10-03	0	0

South West Langley	AJ	2023-10-10	0	0
South West Langley	AJ	2023-10-17	0	0
South West Langley	AJ	2023-10-24	0	0
South West Langley	AJ	2023-10-31	0	0
South West Langley	AJ	2023-11-07	0	0
South West Langley	AJ	2023-11-16	0	0
South West Langley	AJ	2023-11-21	0	0
South West Langley	AJ	2023-11-28	0	0
South West Langley	AJ	2023-12-05	0	0
South West Langley	AJ	2023-12-12	0	0
South West Langley	AJ	2023-12-19	0	0
South West Langley	AJ	2024-01-02	0	0
South West Langley	AJ	2024-01-09	0	0
South West Langley	AJ	2024-01-16	0**	0**
South West Langley	AJ	2024-01-23	0	0
South West Langley	AJ	2024-01-30	0	0
South West Langley	AK	2023-01-03	0	0
South West Langley	AK	2023-01-10	0	0
South West Langley	AK	2023-01-17	0	0
South West Langley	AK	2023-01-24	0	0
South West Langley	AK	2023-01-31	0	0
South West Langley	AK	2023-02-07	0	0
South West Langley	AK	2023-02-14	0	0
South West Langley	AK	2023-02-21	0	0
South West Langley	AK	2023-02-28	0	0
South West Langley	AK	2023-03-07	0	0
South West Langley	AK	2023-03-14	0	0
South West Langley	AK	2023-03-21	0	0
South West Langley	AK	2023-03-28	0	0
South West Langley	AK	2023-04-04	0	0
South West Langley	AK	2023-04-11	0	1.0
South West Langley	AK	2023-04-13	0	0
South West Langley	AK	2023-04-18	0	0
South West Langley	AK	2023-04-25	0	0
South West Langley	AK	2023-05-02	0	0
South West Langley	AK	2023-05-09	0	0
South West Langley	AK	2023-05-16	0	0
South West Langley	AK	2023-05-23	0	0
South West Langley	AK	2023-05-30	0	0
South West Langley	AK	2023-06-06	0	0
South West Langley	AK	2023-06-12	0	0
South West Langley	AK	2023-06-20	0	0
South West Langley	AK	2023-06-27	0	0
South West Langley	AK	2023-07-04	0	0
South West Langley	AK	2023-07-11	0	0
South West Langley	AK	2023-07-18	0	0
South West Langley	AK	2023-07-25	0	0
South West Langley	AK	2023-08-01	0	0
South West Langley	AK	2023-08-08	0	0
South West Langley	AK	2023-08-15	0	0
South West Langley	AK	2023-08-22	0	1.0
South West Langley	AK	2023-08-24	0	0

South West Langley	AK	2023-08-25	0	0
South West Langley	AK	2023-08-29	0	0
South West Langley	AK	2023-09-05	0	0
South West Langley	AK	2023-09-12	0	0
South West Langley	AK	2023-09-19	0	0
South West Langley	AK	2023-09-26	0	0
South West Langley	AK	2023-10-03	0	0
South West Langley	AK	2023-10-10	0	0
South West Langley	AK	2023-10-17	0	0
South West Langley	AK	2023-10-24	0	0
South West Langley	AK	2023-10-31	0	0
South West Langley	AK	2023-11-07	0	0
South West Langley	AK	2023-11-16	0	0
South West Langley	AK	2023-11-21	0	0
South West Langley	AK	2023-11-28	0	0
South West Langley	AK	2023-12-05	0	0
South West Langley	AK	2023-12-12	0	0
South West Langley	AK	2023-12-19	0	0
South West Langley	AK	2024-01-02	0	0
South West Langley	AK	2024-01-09	0	0
South West Langley	AK	2024-01-16	0	0
South West Langley	AK	2024-01-23	0	0
South West Langley	AK	2024-01-30	0	0
South West Langley	C	2023-01-03	0	0
South West Langley	C	2023-01-10	0	0
South West Langley	C	2023-01-17	0	0
South West Langley	C	2023-01-24	0	0
South West Langley	C	2023-01-31	0	0
South West Langley	C	2023-02-07	0	0
South West Langley	C	2023-02-14	0	0
South West Langley	C	2023-02-21	0	1.0
South West Langley	C	2023-02-23	0	0
South West Langley	C	2023-02-28	0	0
South West Langley	C	2023-03-07	0	0
South West Langley	C	2023-03-14	0	0
South West Langley	C	2023-03-21	0	0
South West Langley	C	2023-03-28	0	0
South West Langley	C	2023-04-04	0	0
South West Langley	C	2023-04-11	0	0
South West Langley	C	2023-04-18	0	0
South West Langley	C	2023-04-25	0	0
South West Langley	C	2023-05-02	0	0
South West Langley	C	2023-05-09	0	0
South West Langley	C	2023-05-16	0	0
South West Langley	C	2023-05-23	0	0
South West Langley	C	2023-05-30	0	0
South West Langley	C	2023-06-06	0	0
South West Langley	C	2023-06-12	0	0
South West Langley	C	2023-06-20	0	0
South West Langley	C	2023-06-27	0	0
South West Langley	C	2023-07-04	0	0
South West Langley	C	2023-07-11	0	0

South West Langley	C	2023-07-18	0	0
South West Langley	C	2023-07-25	0	0
South West Langley	C	2023-08-01	0	0
South West Langley	C	2023-08-08	0	0
South West Langley	C	2023-08-15	0	0
South West Langley	C	2023-08-22	0	0
South West Langley	C	2023-08-29	0	0
South West Langley	C	2023-09-05	0	0
South West Langley	C	2023-09-12	0	0
South West Langley	C	2023-09-19	0	0
South West Langley	C	2023-09-26	0	0
South West Langley	C	2023-10-03	0	0
South West Langley	C	2023-10-10	0	0
South West Langley	C	2023-10-17	0	0
South West Langley	C	2023-10-24	0	0
South West Langley	C	2023-10-31	0	0
South West Langley	C	2023-11-07	0	0
South West Langley	C	2023-11-16	0	0
South West Langley	C	2023-11-21	0	0
South West Langley	C	2023-11-28	0	0
South West Langley	C	2023-12-05	0	0
South West Langley	C	2023-12-12	0	0
South West Langley	C	2023-12-19	0	0
South West Langley	C	2024-01-02	0	0
South West Langley	C	2024-01-09	0	0
South West Langley	C	2024-01-16	0	0
South West Langley	C	2024-01-23	0	0
South West Langley	C	2024-01-30	0	0
South West Langley	J	2023-01-03	0	0
South West Langley	J	2023-01-10	0	0
South West Langley	J	2023-01-17	0	0
South West Langley	J	2023-01-24	0	0
South West Langley	J	2023-01-31	0	0
South West Langley	J	2023-02-07	0	0
South West Langley	J	2023-02-14	0	0
South West Langley	J	2023-02-21	0	0
South West Langley	J	2023-02-28	0	0
South West Langley	J	2023-03-07	0	0
South West Langley	J	2023-03-14	0	0
South West Langley	J	2023-03-21	0	0
South West Langley	J	2023-03-28	0	0
South West Langley	J	2023-04-04	0	0
South West Langley	J	2023-04-11	0	0
South West Langley	J	2023-04-18	0	0
South West Langley	J	2023-04-25	0	0
South West Langley	J	2023-05-02	0**	0**
South West Langley	J	2023-05-09	0	0
South West Langley	J	2023-05-16	0	0
South West Langley	J	2023-05-23	0	0
South West Langley	J	2023-05-30	0	0
South West Langley	J	2023-06-06	0	0
South West Langley	J	2023-06-12	0	0

South West Langley	J	2023-06-20	0	0
South West Langley	J	2023-06-27	0	0
South West Langley	J	2023-07-04	0	0
South West Langley	J	2023-07-11	0	0
South West Langley	J	2023-07-18	0	0
South West Langley	J	2023-07-25	0	0
South West Langley	J	2023-08-01	0	0
South West Langley	J	2023-08-08	0	0
South West Langley	J	2023-08-15	0	0
South West Langley	J	2023-08-22	0	0
South West Langley	J	2023-08-29	0	0
South West Langley	J	2023-09-05	0	0
South West Langley	J	2023-09-12	0	0
South West Langley	J	2023-09-19	0	0
South West Langley	J	2023-09-26	0	0
South West Langley	J	2023-10-03	0	0
South West Langley	J	2023-10-10	0	0
South West Langley	J	2023-10-17	0	0
South West Langley	J	2023-10-24	0	0
South West Langley	J	2023-10-31	0	0
South West Langley	J	2023-11-07	0	0
South West Langley	J	2023-11-16	0	0
South West Langley	J	2023-11-21	0	0
South West Langley	J	2023-11-28	0	0
South West Langley	J	2023-12-05	0	0
South West Langley	J	2023-12-12	0	0
South West Langley	J	2023-12-19	0	0
South West Langley	J	2024-01-02	0	0
South West Langley	J	2024-01-09	0	0
South West Langley	J	2024-01-23	0	0
South West Langley	J	2024-01-30	0	0
South West Langley	K	2023-01-03	0	0
South West Langley	K	2023-01-10	0	0
South West Langley	K	2023-01-17	0	0
South West Langley	K	2023-01-24	0	0
South West Langley	K	2023-01-31	0	0
South West Langley	K	2023-02-07	0	0
South West Langley	K	2023-02-14	0	0
South West Langley	K	2023-02-21	0	0
South West Langley	K	2023-02-28	0	0
South West Langley	K	2023-03-07	0	0
South West Langley	K	2023-03-14	0	0
South West Langley	K	2023-03-21	0**	0**
South West Langley	K	2023-03-28	0**	0**
South West Langley	K	2023-04-04	0	0
South West Langley	K	2023-04-11	0**	0**
South West Langley	K	2023-04-18	0**	0**
South West Langley	K	2023-04-25	0**	0**
South West Langley	K	2023-05-02	0**	0**
South West Langley	K	2023-05-09	0	0
South West Langley	K	2023-05-16	0	0
South West Langley	K	2023-05-23	0	0

South West Langley	K	2023-05-30	0	0
South West Langley	K	2023-06-06	0	0
South West Langley	K	2023-06-12	0	0
South West Langley	K	2023-06-20	0	0
South West Langley	K	2023-06-27	0	0
South West Langley	K	2023-07-04	0	0
South West Langley	K	2023-07-11	0	0
South West Langley	K	2023-07-18	0	0
South West Langley	K	2023-07-25	0	0
South West Langley	K	2023-08-01	0	0
South West Langley	K	2023-08-08	0	0
South West Langley	K	2023-08-15	0	0
South West Langley	K	2023-08-22	0	0
South West Langley	K	2023-08-29	0	0
South West Langley	K	2023-09-05	0	0
South West Langley	K	2023-09-07	0	0
South West Langley	K	2023-09-12	0	0
South West Langley	K	2023-09-19	0	0
South West Langley	K	2023-09-26	0	0
South West Langley	K	2023-10-03	0	0
South West Langley	K	2023-10-10	0	0
South West Langley	K	2023-10-17	0	0
South West Langley	K	2023-10-24	0	0
South West Langley	K	2023-10-31	0	0
South West Langley	K	2023-11-07	0	0
South West Langley	K	2023-11-16	0	0
South West Langley	K	2023-11-21	0	0
South West Langley	K	2023-11-28	0	0
South West Langley	K	2023-12-05	0	0
South West Langley	K	2023-12-12	0	0
South West Langley	K	2023-12-19	0	0
South West Langley	K	2024-01-02	0	0
South West Langley	K	2024-01-09	0	0
South West Langley	K	2024-01-16	0	0
South West Langley	K	2024-01-23	0	0
South West Langley	K	2024-01-30	0	0
South West Langley	V	2023-01-03	0	0
South West Langley	V	2023-01-10	0	0
South West Langley	V	2023-01-17	0	0
South West Langley	V	2023-01-24	0	0
South West Langley	V	2023-01-31	0	0
South West Langley	V	2023-02-07	0	0
South West Langley	V	2023-02-14	0	0
South West Langley	V	2023-02-21	0	0
South West Langley	V	2023-02-28	0	0
South West Langley	V	2023-03-07	0	0
South West Langley	V	2023-03-14	0	0
South West Langley	V	2023-03-21	0	0
South West Langley	V	2023-03-28	0	0
South West Langley	V	2023-04-04	0	0
South West Langley	V	2023-04-11	0	0
South West Langley	V	2023-04-18	0	0

South West Langley	V	2023-04-25	0	0
South West Langley	V	2023-05-02	0	0
South West Langley	V	2023-05-09	0	0
South West Langley	V	2023-05-16	0	0
South West Langley	V	2023-05-23	0	0
South West Langley	V	2023-05-30	0	0
South West Langley	V	2023-06-06	0	0
South West Langley	V	2023-06-12	0	0
South West Langley	V	2023-06-20	0	0
South West Langley	V	2023-06-27	0	0
South West Langley	V	2023-07-04	0	0
South West Langley	V	2023-07-11	0	0
South West Langley	V	2023-07-18	0	0
South West Langley	V	2023-07-25	0	0
South West Langley	V	2023-08-01	0	0
South West Langley	V	2023-08-08	0	0
South West Langley	V	2023-08-15	0	0
South West Langley	V	2023-08-22	0	0
South West Langley	V	2023-08-29	0	0
South West Langley	V	2023-09-05	0	0
South West Langley	V	2023-09-12	0	0
South West Langley	V	2023-09-19	0	0
South West Langley	V	2023-09-26	0	0
South West Langley	V	2023-10-03	0	0
South West Langley	V	2023-10-10	0	0
South West Langley	V	2023-10-17	0	0
South West Langley	V	2023-10-24	0	0
South West Langley	V	2023-10-31	0	0
South West Langley	V	2023-11-07	0	0
South West Langley	V	2023-11-16	0	0
South West Langley	V	2023-11-21	0	0
South West Langley	V	2023-11-28	0	0
South West Langley	V	2023-12-05	0	0
South West Langley	V	2023-12-12	0	0
South West Langley	V	2023-12-19	0	0
South West Langley	V	2024-01-02	0	0
South West Langley	V	2024-01-09	0	0
South West Langley	V	2024-01-23	0	0
South West Langley	V	2024-01-30	0	0
South West Langley	W	2023-01-03	0	0
South West Langley	W	2023-01-10	0	0
South West Langley	W	2023-01-17	0	0
South West Langley	W	2023-01-24	0	0
South West Langley	W	2023-01-31	0	0
South West Langley	W	2023-02-07	0	0
South West Langley	W	2023-02-14	0	0
South West Langley	W	2023-02-21	0	0
South West Langley	W	2023-03-07	0	0
South West Langley	W	2023-03-14	0	0
South West Langley	W	2023-03-21	0	0
South West Langley	W	2023-03-28	0	0
South West Langley	W	2023-04-04	0	0

South West Langley	W	2023-04-11	0	0
South West Langley	W	2023-04-18	0	0
South West Langley	W	2023-04-25	0	0
South West Langley	W	2023-05-02	0	0
South West Langley	W	2023-05-09	0	0
South West Langley	W	2023-05-16	0	0
South West Langley	W	2023-05-23	0	0
South West Langley	W	2023-05-30	0	0
South West Langley	W	2023-06-06	0	0
South West Langley	W	2023-06-12	0	0
South West Langley	W	2023-06-20	0	0
South West Langley	W	2023-06-27	0	0
South West Langley	W	2023-07-04	0	0
South West Langley	W	2023-07-11	0	0
South West Langley	W	2023-07-18	0	0
South West Langley	W	2023-07-25	0	0
South West Langley	W	2023-08-01	0	0
South West Langley	W	2023-08-08	0	0
South West Langley	W	2023-08-15	0	0
South West Langley	W	2023-08-22	0	0
South West Langley	W	2023-08-29	0	0
South West Langley	W	2023-09-05	0	0
South West Langley	W	2023-09-12	0	0
South West Langley	W	2023-09-19	0	0
South West Langley	W	2023-09-26	0	0
South West Langley	W	2023-10-03	0	0
South West Langley	W	2023-10-10	0	0
South West Langley	W	2023-10-17	0	0
South West Langley	W	2023-10-24	0	0
South West Langley	W	2023-10-31	0	0
South West Langley	W	2023-11-07	0	0
South West Langley	W	2023-11-16	0	0
South West Langley	W	2023-11-21	0	1.0
South West Langley	W	2023-11-23	0	7.0
South West Langley	W	2023-11-24	0	0
South West Langley	W	2023-11-25	0	1.0
South West Langley	W	2023-11-27	0**	2.0**
South West Langley	W	2023-11-28	0	0
South West Langley	W	2023-11-29	0	0
South West Langley	W	2023-11-30	0	0
South West Langley	W	2023-12-05	0	0
South West Langley	W	2023-12-12	0	0
South West Langley	W	2023-12-19	0	0
South West Langley	W	2024-01-02	0	0
South West Langley	W	2024-01-09	0	0
South West Langley	W	2024-01-23	0	0
South West Langley	W	2024-01-30	0	0
Tall Timber	E	2023-01-03	0	0
Tall Timber	E	2023-01-10	0	0
Tall Timber	E	2023-01-17	0	0
Tall Timber	E	2023-01-24	0	0
Tall Timber	E	2023-01-31	0	0

Tall Timber	E	2023-02-07	0	0
Tall Timber	E	2023-02-14	0	0
Tall Timber	E	2023-02-21	0	0
Tall Timber	E	2023-02-28	0	0
Tall Timber	E	2023-03-07	0	0
Tall Timber	E	2023-03-14	0	0
Tall Timber	E	2023-03-21	0	0
Tall Timber	E	2023-03-28	0	0
Tall Timber	E	2023-04-04	0	0
Tall Timber	E	2023-04-11	0	0
Tall Timber	E	2023-04-18	0	0
Tall Timber	E	2023-04-25	0	0
Tall Timber	E	2023-05-02	0	0
Tall Timber	E	2023-05-09	0	0
Tall Timber	E	2023-05-16	0	0
Tall Timber	E	2023-05-23	0	0
Tall Timber	E	2023-05-30	0	0
Tall Timber	E	2023-06-06	0	0
Tall Timber	E	2023-06-13	0	0
Tall Timber	E	2023-06-20	0	0
Tall Timber	E	2023-06-28	0	0
Tall Timber	E	2023-07-04	0	0
Tall Timber	E	2023-07-11	0	0
Tall Timber	E	2023-07-18	0	0
Tall Timber	E	2023-07-25	0	0
Tall Timber	E	2023-08-01	0	0
Tall Timber	E	2023-08-08	0	0
Tall Timber	E	2023-08-15	0	0
Tall Timber	E	2023-08-22	0	0
Tall Timber	E	2023-08-29	0	0
Tall Timber	E	2023-09-05	0	0
Tall Timber	E	2023-09-12	0	0
Tall Timber	E	2023-09-19	0	0
Tall Timber	E	2023-09-26	0	0
Tall Timber	E	2023-10-03	0	0
Tall Timber	E	2023-10-10	0	0
Tall Timber	E	2023-10-17	0	0
Tall Timber	E	2023-10-24	0	0
Tall Timber	E	2023-10-31	0	0
Tall Timber	E	2023-11-07	0	0
Tall Timber	E	2023-11-14	0	0
Tall Timber	E	2023-11-21	0	0
Tall Timber	E	2023-11-28	0	0
Tall Timber	E	2023-12-05	0	0
Tall Timber	E	2023-12-12	0	0
Tall Timber	E	2023-12-19	0	0
Tall Timber	E	2024-01-02	0	0
Tall Timber	E	2024-01-09	0	0
Tall Timber	E	2024-01-16	0	0
Tall Timber	E	2024-01-23	0	0
Tall Timber	E	2024-01-30	0	0

indicates Geometric Mean
indicates Intraday Average

Sampling Point	Collection Date	Trichlorofluoromethane	Turbidity	Uranium (dissolved)	Uranium (total)	Vanadium (dissolved)	Vanadium (total)	Vinyl chloride	Volatile Hydrocarbons water C6-C10 (VHw)	Volatile Petroleum Hydrocarbons C06-C10 (less BTEX)	Zinc (dissolved)	Zinc (total)	Zirconium (dissolved)	Zirconium (total)
		ug/L	NTU	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Acadia #1 well	2023-01-11	< 4.0	< 0.10	< 0.10	< 0.10	< 5.0	< 5.0	< 0.50	< 300	< 300	< 5.0	< 5.0	< 0.10	< 0.10
Acadia #1 well	2023-08-02	< 4.0	0.16	< 0.10	< 0.10	< 5.0	< 5.0	< 0.50	< 300	< 300	< 5.0	< 5.0	< 0.10	< 0.10
Acadia #1 well	2024-01-24	< 4.0	0.16	< 0.10	< 0.10	< 5.0	< 5.0	< 0.50	< 300	< 300	< 5.0	< 5.0	< 0.10	< 0.10
Acadia #2 well	2023-01-11	< 4.0	0.13	< 0.10	< 0.10	< 5.0	< 5.0	< 0.50	< 300	< 300	< 5.0	< 5.0	< 0.10	< 0.10
Acadia #2 well	2023-08-02	< 4.0	0.20	< 0.10	< 0.10	< 5.0	< 5.0	< 0.50	< 300	< 300	< 5.0	< 5.0	< 0.10	< 0.10
Acadia #2 well	2024-01-24	< 4.0	0.27	< 0.10	< 0.10	< 5.0	< 5.0	< 0.50	< 300	< 300	21.8	< 5.0	< 0.10	< 0.10
Aldergrove #10 well	2023-01-11	< 4.0	0.24	0.12	0.12	< 5.0	< 5.0	< 0.50	< 300	< 300	< 5.0	5.7	< 0.10	< 0.10
Aldergrove #10 well	2023-08-02	< 4.0	0.27	0.14	0.12	< 5.0	< 5.0	< 0.50	< 300	< 300	< 5.0	< 5.0	< 0.10	< 0.10
Aldergrove #10 well	2024-01-24	< 4.0	< 0.10	0.12	0.10	< 5.0	< 5.0	< 0.50	< 300	< 300	8.3	< 5.0	< 0.10	< 0.10
Aldergrove #4 well	2023-01-11	< 4.0	0.54	0.21	0.22	< 5.0	< 5.0	< 0.50	< 300	< 300	< 5.0	< 5.0	< 0.10	< 0.10
Aldergrove #4 well	2023-08-02	< 4.0	1.1	0.19	0.19	< 5.0	< 5.0	< 0.50	< 300	< 300	< 5.0	< 5.0	< 0.10	< 0.10
Aldergrove #4 well	2024-01-24	< 4.0	1.9	0.17	0.16	< 5.0	< 5.0	< 0.50	< 300	< 300	16.5	< 5.0	< 0.10	< 0.10
Aldergrove #6 well	2023-01-11	< 4.0	0.24	0.63	0.64	< 5.0	< 5.0	< 0.50	< 300	< 300	< 5.0	< 5.0	< 0.10	< 0.10
Aldergrove #6 well	2023-08-02	< 4.0	0.54	0.83	0.75	< 5.0	< 5.0	< 0.50	< 300	< 300	< 5.0	< 5.0	< 0.10	< 0.10
Aldergrove #6 well	2024-01-24	< 4.0	0.45	0.57	0.51	< 5.0	< 5.0	< 0.50	< 300	< 300	17.7	< 5.0	< 0.10	< 0.10
Aldergrove #7 well	2023-01-11	< 4.0	0.13	1.02	1.06	< 5.0	< 5.0	< 0.50	< 300	< 300	< 5.0	< 5.0	< 0.10	< 0.10
Aldergrove #7 well	2023-08-02	< 4.0	0.14	1.03	0.99	< 5.0	< 5.0	< 0.50	< 300	< 300	< 5.0	< 5.0	< 0.10	< 0.10
Aldergrove #7 well	2024-01-24	< 4.0	0.15	1.00	0.95	< 5.0	< 5.0	< 0.50	< 300	< 300	7.2	< 5.0	< 0.10	< 0.10
Aldergrove #8 well	2023-01-11	< 4.0	0.29	0.51	0.52	< 5.0	< 5.0	< 0.50	< 300	< 300	< 5.0	< 5.0	< 0.10	< 0.10
Aldergrove #8 well	2023-08-02	< 4.0	0.30	0.46	0.40	< 5.0	< 5.0	< 0.50	< 300	< 300	< 5.0	< 5.0	< 0.10	< 0.10
Aldergrove #8 well	2024-01-24	< 4.0	0.38	0.47	0.42	< 5.0	< 5.0	< 0.50	< 300	< 300	9.6	< 5.0	< 0.10	< 0.10
Aldergrove #9 well	2023-01-11	< 4.0	0.19	< 0.10	< 0.10	< 5.0	< 5.0	< 0.50	< 300	< 300	< 5.0	< 5.0	< 0.10	< 0.10
Aldergrove #9 well	2023-08-02	< 4.0	0.10	< 0.10	< 0.10	< 5.0	< 5.0	< 0.50	< 300	< 300	< 5.0	< 5.0	< 0.10	< 0.10
Aldergrove #9 well	2024-01-24	< 4.0	0.11	< 0.10	< 0.10	< 5.0	< 5.0	< 0.50	< 300	< 300	7.9	5.1	< 0.10	< 0.10
AD (AWTP) Clear Well	2023-01-11	< 4.0	0.53	0.47	0.49	< 5.0	< 5.0	< 0.50	< 300	< 300	< 5.0	6.1	< 0.10	< 0.10
AD (AWTP) Clear Well	2023-05-31	< 4.0	0.21	0.46	0.47	< 5.0	< 5.0	< 0.50	< 300	< 300	< 5.0	< 5.0	< 0.10	< 0.10
AD (AWTP) Clear Well	2023-08-02	< 4.0	0.12	0.52	0.48	< 5.0	< 5.0	< 0.50	< 300	< 300	< 5.0	< 5.0	< 0.10	< 0.10
AD (AWTP) Clear Well	2024-01-24	< 4.0	0.10	0.48	0.46	< 5.0	< 5.0	< 0.50	< 300	< 300	8.7	< 5.0	< 0.10	< 0.10
Brookwood #10 well	2023-01-11	< 4.0	1.3	0.25	0.25	< 5.0	< 5.0	< 0.50	< 300	< 300	< 5.0	< 5.0	< 0.10	< 0.10
Brookwood #7 well	2023-01-11	< 4.0	2.9	< 0.10	< 0.10	< 5.0	< 5.0	< 0.50	< 300	< 300	40.9	22.0	< 0.10	< 0.10
Brookwood #9 well	2023-01-11	< 4.0	4.0	< 0.10	< 0.10	< 5.0	< 5.0	< 0.50	< 300	< 300	10.9	5.8	< 0.10	< 0.10
Murrayville #1 well	2023-01-11	< 4.0	19	< 0.10	< 0.10	< 5.0	< 5.0	< 0.50	< 300	< 300	< 5.0	5.2	< 0.10	0.25
Murrayville #2 well	2023-01-11	< 4.0	0.34	< 0.10	< 0.10	< 5.0	< 5.0	< 0.50	< 300	< 300	< 5.0	< 5.0	< 0.10	< 0.10

Analysis	Units	TOL-463	TOL-467	TOL-469	TOL-691	TOL-694	TOL-4632	TOL-4673	TOL-4694	TOL-6915	TOL-6946
		19951 - 99A Ave.	7025 - 208 Street	5679 - 211 Street	26829 - 60 Avenue	23752 - 52 Avenue	19951 - 99A Ave.	7025 - 208 Street	5679 - 211 Street	26829 - 60 Avenue	23752 - 52 Avenue
		2023-02-14	2023-02-14	2023-02-14	2023-02-14	2023-02-14	2023-09-19	2023-09-19	2023-09-19	2023-09-19	2023-09-19
		GRAB	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB
Aluminum Total	µg/L	84	75	81	82	90	58	62	69	63	59
Antimony Total	µg/L	<0.5	<0.5	<0.5	<0.5	<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	<0.5	<0.5	<0.5	<0.5
Barium Total	µg/L	2.3	2.2	2.1	2.3	2.3	2.3	2.1	2.1	2.2	2.2
Boron Total	µg/L	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Cadmium Total	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Calcium Total	µg/L	863	858	1050	1080	1000	860	868	1100	1190	950
Chromium Total	µg/L	0.07	0.06	0.07	0.07	0.09	0.06	0.05	0.05	0.06	0.05
Cobalt Total	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Copper Total	µg/L	2.2	2.2	1.8	1.4	4	5.8	4.2	2.5	2.0	7.1
Iron Total	µg/L	53	48	46	47	53	74	65	64	64	69
Lead Total	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5
Magnesium Total	µg/L	103	98	91	99	107	90	90	84	87	92
Manganese Total	µg/L	5	2.1	1.8	1.9	2.2	11.6	5.0	5.1	4.3	5.5
Mercury Total	µg/L	<0.05	<0.05	<0.05	<0.05	<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	<0.5	<0.5	<0.5	<0.5
Nickel Total	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Potassium Total	µg/L	120	119	120	129	133	135	134	138	143	139
Selenium Total	µg/L	<0.5	<0.5	<0.5	<0.5	<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	<0.5	<0.5	<0.5	<0.5
Sodium Total	µg/L	10800	10700	10800	11000	10800	9890	9890	10600	10600	10700
Zinc Total	µg/L	<3.0	<3.0	<3.0	<3.0	<3.0	3.4	<3.0	<3.0	<3.0	<3.0

Sample	Date Sampled	THM (ppb)					Total THM Quarterly Average (Guideline Lmint 100 ppb)	HAA (ppb)						Total HAA Quarterly Average (Guideline Limit 80 ppb)
		Bromodichloromethane	Bromoform	Chlorodibromomethane	Chloroform	THM-Total Trihalomethane:		Dibromoacetic Acid	Dichloroacetic Acid	Monobromoacetic Acid	Monochloroacetic Acid	Trichloroacetic Acid	HAA - Total Halacetic Acid	
TOL-463	2023-01-31	<1	<1	<1	37	37	29	<0.5	7.3	<0.5	<5.0	8.9	16	22
TOL-463	2023-05-30	<1	<1	<1	16	18	26	<0.5	6.9	<0.5	<0.5	6.2	13	20
TOL-463	2023-08-22	1	<1	<1	15	17	25	<0.5	11	<0.5	<0.5	11	22	17
TOL-463	2023-11-28	<1	<1	<1	25	26	28	<0.5	11	<0.5	<0.5	12	23	15
TOL-465	2023-01-31	<1	<1	<1	51	52	42	<0.5	3.5	<0.5	<0.5	14	18	19
TOL-465	2023-05-30	1	<1	<1	31	33	40	<0.5	1.5	<0.5	0.9	11	14	18
TOL-465	2023-08-22	1	<1	<1	24	26	39	<0.5	1.4	<0.5	<0.5	11	13	16
TOL-465	2023-11-28	<1	<1	<1	35	36	43	<0.5	2.5	<0.5	<0.5	16	18	16
TOL-469	2023-01-31	<1	<1	<1	55	56	43	<0.5	6.3	<0.5	<0.5	22	28	33
TOL-469	2023-05-30	1	<1	<1	26	28	39	<0.5	6.5	<0.5	<0.5	15	21	30
TOL-469	2023-08-22	1	<1	<1	26	28	39	<0.5	3.4	<0.5	0.5	19	23	27
TOL-469	2023-11-28	<1	<1	<1	36	38	42	<0.5	3.4	<0.5	<0.5	28	32	25
TOL-691	2023-01-31	1	<1	<1	62	63	48	<0.5	1.9	<0.5	<0.5	25	26	29
TOL-691	2023-05-30	1	<1	<1	26	28	43	<0.5	2.6	<0.5	<0.5	20	23	28
TOL-691	2023-08-22	1	<1	<1	24	27	43	<0.5	1.9	<0.5	<0.5	22	23	28
TOL-691	2023-11-28	<1	<1	<1	33	34	46	<0.5	7.3	<0.5	<0.5	26	33	25
TOL-694	2023-01-31	<1	<1	<1	56	57	44	<0.5	8.7	<0.5	<0.5	23	31	36
TOL-694	2023-05-30	1	<1	<1	24	27	40	<0.5	8	<0.5	<0.5	17	25	34
TOL-694	2023-08-22	1	<1	<1	23	25	39	<0.5	7.4	<0.5	<0.5	22	29	31
TOL-694	2023-11-28	<1	<1	<1	38	40	42	<0.5	11	<0.5	0.9	27	39	28

