2025

DISTRICT OF CHETWYND

COMMUNITY WATER SYSTEM ANNUAL REPORT

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1. Introduction

The District of Chetwynd Community Water System Annual Report provides annual operating information about our drinking water and supports the District's application for the water system annual Operating Permit. The District continues to deliver clean, safe, water to its residents and other users, and prioritizes ongoing maintenance and replacement of aging or problematic water infrastructure. The primary goals of the drinking water system are:

- Goal 1: Provide Clean, Safe Drinking Water
- Goal 2: Ensure the Sustainable Use of Water Resources
- Goal 3: Ensure the Efficient Supply of Water

2. Provincial and Federal Regulatory Requirements

The British Columbia Drinking Water Protection Regulation promulgated under the Drinking Water Protection Act requires suppliers of drinking water in British Columbia to hold an operating permit, demonstrate that the drinking water is appropriately treated and monitored from a microbial perspective, have appropriate emergency and public notification plans in place, and prepare and make public an annual report on the results of the previous year. In addition, the Federal Guidelines for Canadian Drinking Water Quality provide references for acceptable concentration values for various microbial, chemical and physical parameters for potable water.

The District of Chetwynd holds an operating permit that is prescribed by Northern Health. The permit stipulations are as follows.

- Conduct bacteriological sampling from representative sample sites throughout the distribution system every two weeks.
- Conduct continuous indirect integrity testing by monitoring treated water turbidity and ensuring <0.1 NTU is maintained.
- Conduct water chemistry sampling pre- and post- treatment and submit results to Northern Health Annually.

- Conduct direct integrity testing according to standard operating procedures and manufacturers specifications to ensure 3-log reduction of protozoa is being maintained.
- Maintain an Emergency Response and Contingency Plan. Review and update as needed or annually at minimum.
- Maintain a chlorine residual of at least 0.2 ppm throughout the distribution system.

3. Water System Description

3.1 Demand

The District of Chetwynd serves a population of approximately 2,300 (Statistics Canada, Census of Population 2021), and has roughly 1140 serviced buildings, including residential and commercial buildings. Many rural properties outside of the District's boundary also use the water produced by the District of Chetwynd Water Treatment Facilities by filling tanks at the bulk water filling station.

3.2 Water System Overview

The District sources its water from the Pine River, which is located south of town and flows east. The water is pumped from the river to settling/storage ponds. After the water has settled it is pumped into the water treatment plant, where it goes through strainers, membrane filtration and is chlorinated. The treated water is stored in two clear wells, while the backwash water is directed to the backwash ponds south of the settling ponds. The high lift pumping station pumps water from the clear wells to the distribution system and water reservoirs for storage. The figure below (Figure 1) shows a simplified overview of the water treatment process from the river intake to the distribution system.

3.3 Source Water & Raw Water Storage

In 2025, the primary raw water source for the District of Chetwynd was the Pine River. The water is gravity fed from the intake in the river to the low lift pump station wet well. The water is pumped from the low lift pump station to the raw water settling ponds, which also act as raw water storage. The raw water ponds are comprised of 3 cells providing a total storage capacity of 44 million gallons which accounts for approximately 80 days of water supply for Chetwynd.

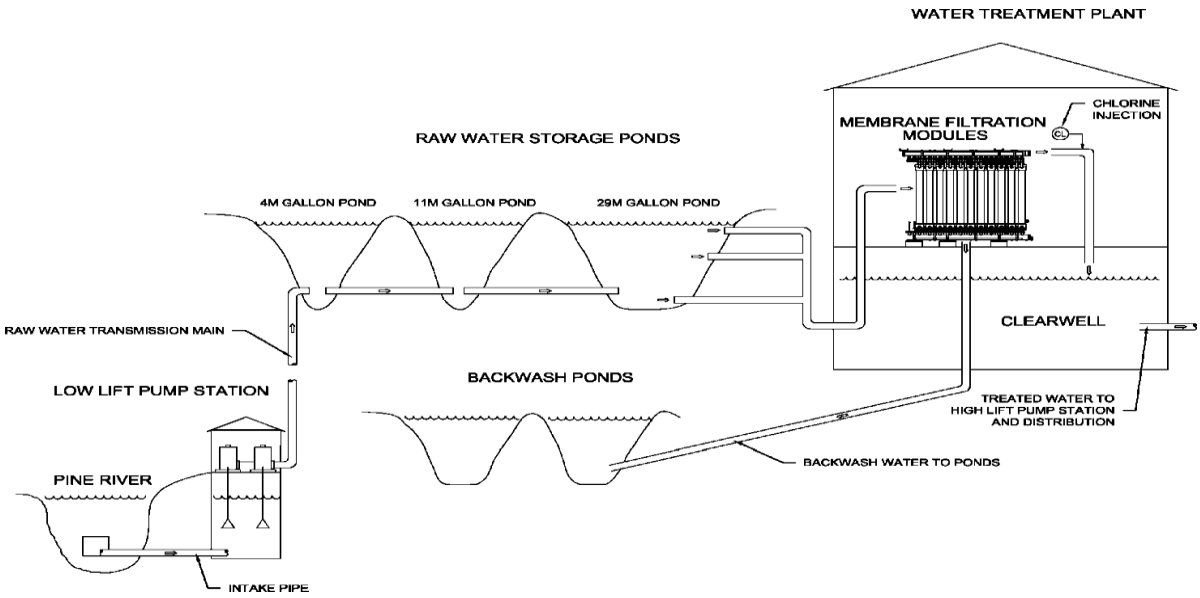

Figure 1. Simplified Overview of the Water Treatment Process

3.4 Water Treatment

The District of Chetwynd Water Treatment Facility was upgraded to a Pall Aria Microfiltration System in 2017. First the water is pumped from the raw water ponds to the balancing tanks, where it is stored until needed (Figure 2). When the water levels are low enough in the clear well the treatment plant will start up. The raw water is pumped from the balancing tank to the self-cleaning strainer (Figure 3).

Figure 2. Balancing Tanks

Figure 3. Self-cleaning Strainer

After the strainer removes larger particles, the water enters the microfiltration modules (Figure 4). The microfiltration modules work by forcing water through membranes. The membranes trap bacteria, cysts, and other tiny, suspended particles, which removes turbidity and brings us one step closer to providing the community with clean potable water.

After the water goes through the membrane modules it is injected with chlorine to kill any remaining pathogens. The District of Chetwynd generates its chlorine onsite using a Sodium Hypochlorite Generation System (Figure 5) After the chlorine is generated it is pumped through the injection line into the water using peristaltic pumps (Figure 6)

Figure 4. Microfiltration Modules

Figure 5. Sodium Hypochlorite Generation System

Figure 6. Peristaltic Pumps for Chemical Dosing

Compressed air is used to perform air scrubs, which clean the debris from the membranes, and integrity tests of the membrane filtration modules. The Chemical and Hot Water System (CHN) Skid (Figure 7) mixes chemicals with warm water to circulate through the membrane modules for Enhanced Flux Maintenance (EFM) and Clean in Place (CIP) processes.

Figure 7. CHN Skid

Once the water has gone through the entire treatment process it enters the clear well that is located under the water treatment facility. The water is gravity fed from this clear well to the clear well located beneath the high lift pumping station. Once the water storage reservoir levels get low enough the high lift will begin pumping water, Figure 8 shows the three high lift pumps. The water will go through the distribution system and service some of the buildings on its way to the storage reservoirs.

Figure 8. High Lift Pumps

The entire system is controlled and automated utilizing a Supervisory Control and Data Acquisition (SCADA) system. In case of a power outage, the backup generator provides power to operate the water treatment plant and the high lift pumping station. Other portions of the distribution system can be controlled manually in the case of a power outage.

4. Water Quality Data

4.1 Summary

The District of Chetwynd conducts various water quality sampling and testing processes. Samples and tests completed in 2025 include the following:

- 7 samples were taken throughout the water distribution system on a bi-weekly basis (~182 samples total in 2025) and analyzed for free chlorine residual, Total Coliforms and E.Coli. Figures 9-15 show the Chlorine residuals at each site.
- Daily tests were conducted to check temperature and pH on raw water at the water treatment plant (Figure 16)
- Daily tests were conducted to check temperature, and pH on treated tap water at the water treatment plant (Figures 17)

- Chlorine analyzers at the High Lift Pump Station and Water Treatment Plant were checked daily to ensure they were appropriately calibrated.
- Annually, water samples were collected from various locations within the treatment and distribution system for a comprehensive analysis of several parameters. Results are shown in Appendix A.

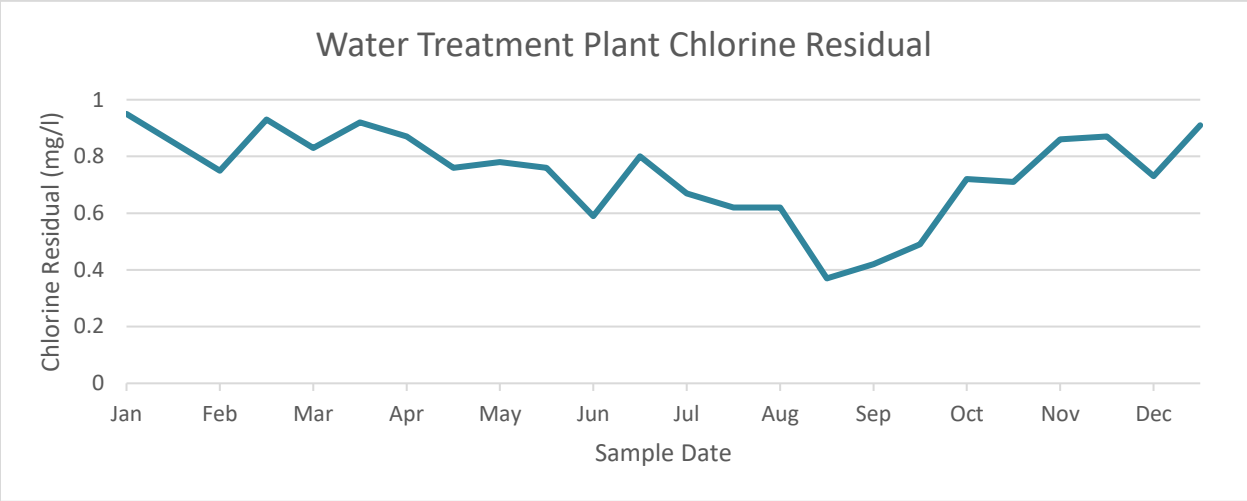

Figure 9. Graph of free chlorine residuals from each sampling date from the Water Treatment Plant lab tap

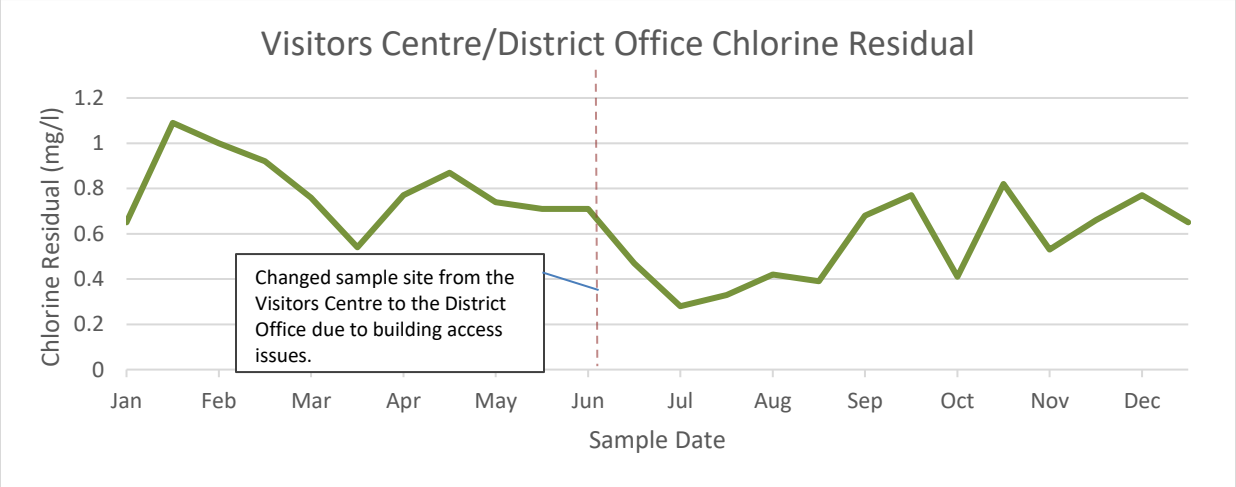

Figure 10. Graph of free chlorine residuals from each sampling date from the Visitors Center bathroom tap and the District Office bathroom tap.

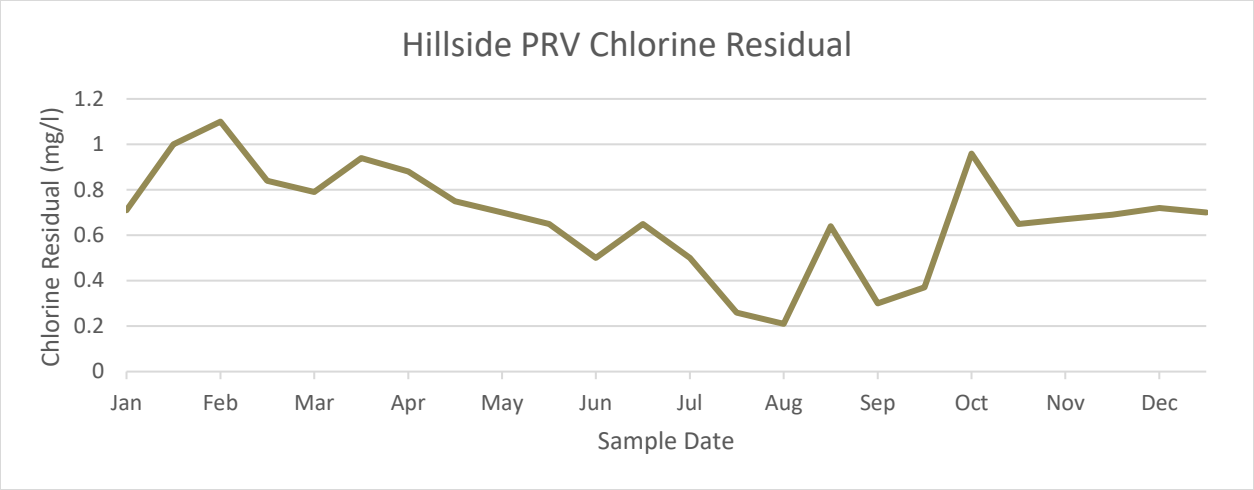

Figure 11. Graph of free chlorine residuals from each sampling date from the Hillside PRV.

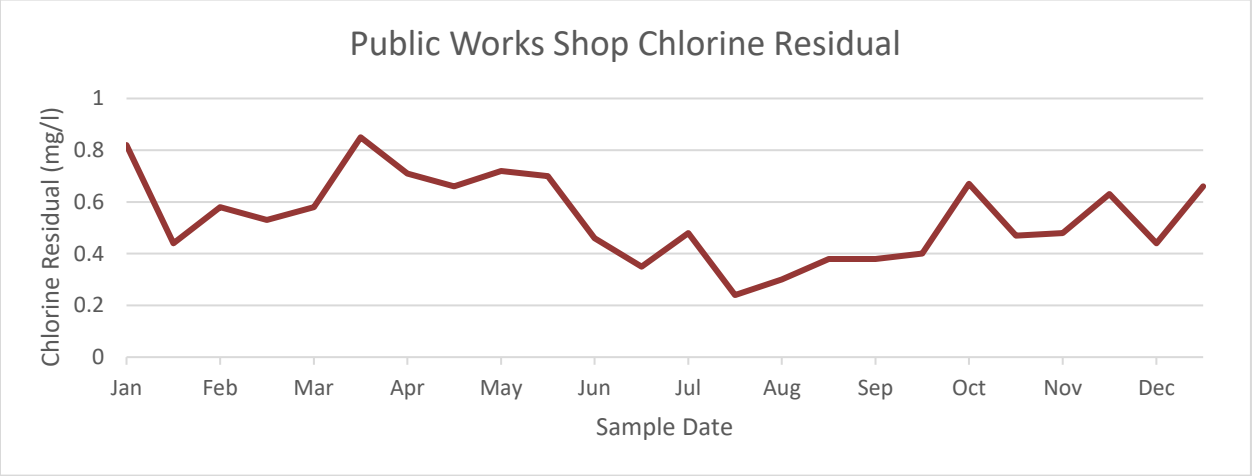

Figure 12. Graph of free chlorine residuals from each sampling date from the Public Works Shop time room tap

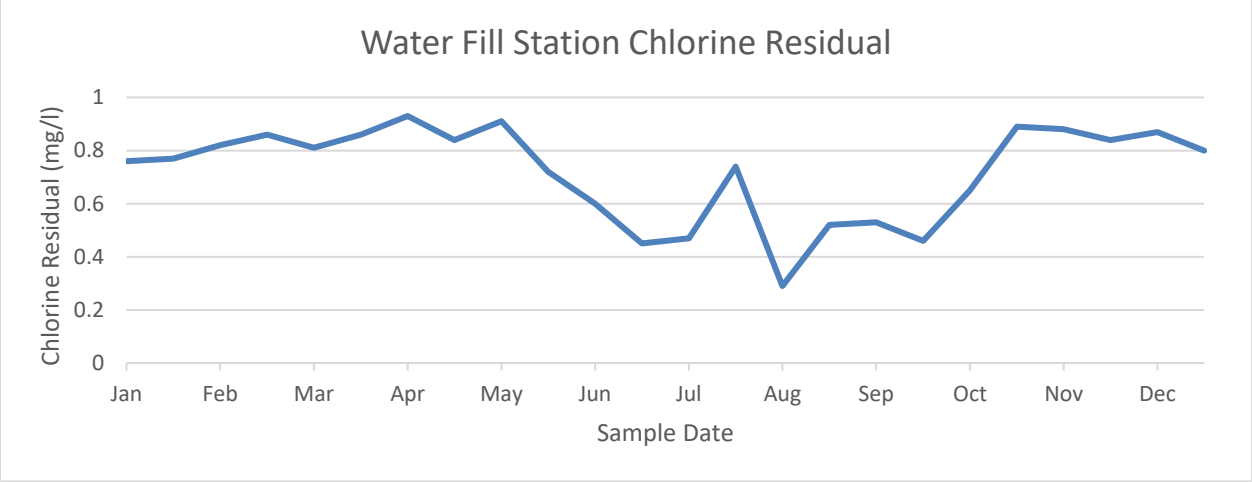

Figure 13. Graph of free chlorine residuals from each sampling date from the Water Fill Station sample port

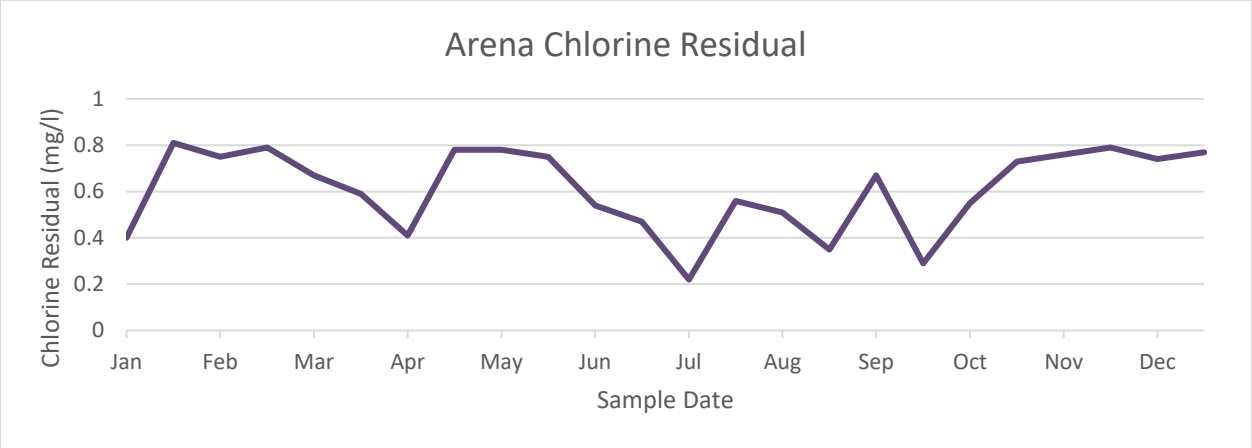

Figure 14. Graph of free chlorine residuals from each sampling date from the Arena bathroom tap

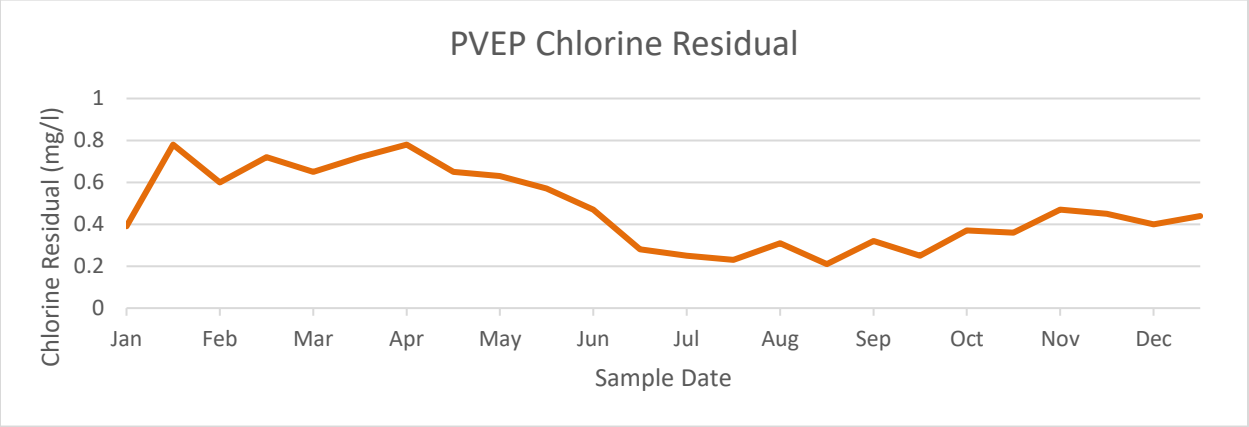

Figure 15. Graph of free chlorine residuals from each sampling date from the PVEP bathroom tap

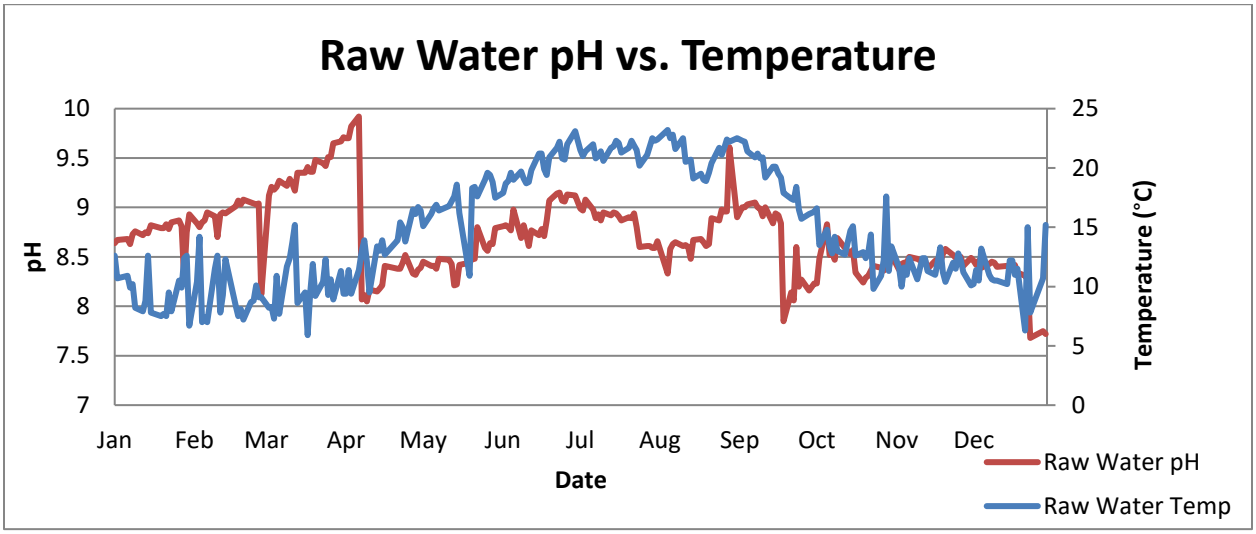

Figure 16. Graph of the raw water pH and temperature over the year of 2025

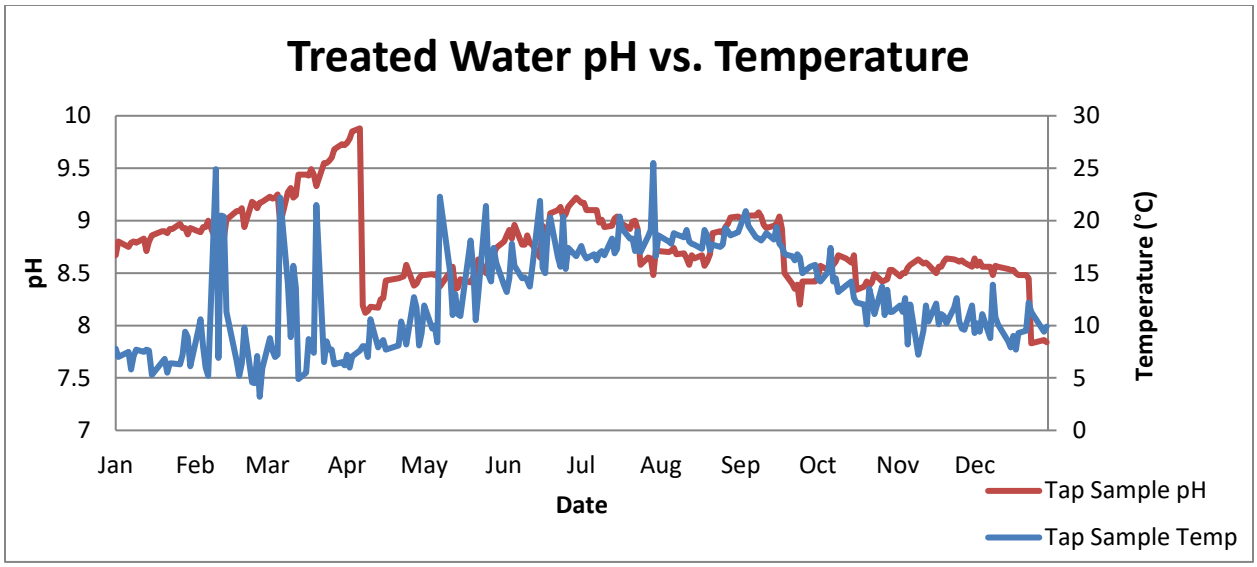

Figure 17. Graph of the treated water pH and temperature over the year of 2025

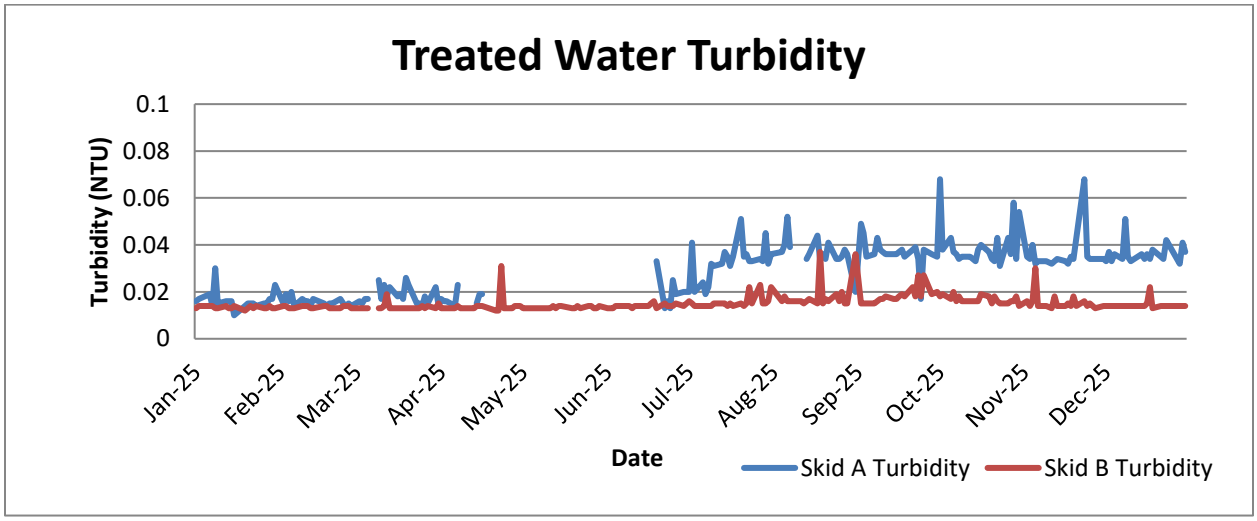

Figure 18. Graph of the treated water turbidity over the year of 2025

4.2 Sampling Results

4.2.1 Distribution System Samples

The results from the bacteriological analysis at all sample sites can be found at the link below. All samples tested negative for Total Coliforms and E.Coli in Chetwynd's distribution system during 2025 (Table 1.)

https://www.healthspace.ca/Clients/NHA/NHA_Website.nsf

Table 1. Results from the bacteriological analysis. All sample locations showed the same result

Date	Total Coliform	E. Coli	Date	Total Coliform	E. Coli
15-Jan-25	L1*	L1	02-Jul-25	L1	L1
22-Jan-25	L1	L1	16-Jul-25	L1	L1
05-Feb-25	L1	L1	06-Aug-25	L1	L1
19-Feb-25	L1	L1	20-Aug-25	L1	L1
05-Mar-25	L1	L1	03-Sep-25	L1	L1
19-Mar-25	L1	L1	17-Sep-25	L1	L1
02-Apr-25	L1	L1	01-Oct-25	L1	L1
16-Apr-25	L1	L1	15-Oct-25	L1	L1
07-May-25	L1	L1	05-Nov-25	L1	L1
21-May-25	L1	L1	19-Nov-25	L1	L1
04-Jun-25	L1	L1	03-Dec-25	L1	L1
18-Jun-25	L1	L1	17-Dec-25	L1	L1

*note: "L1" indicates less than 1 (<1); acceptable

4.2.2 Daily Sample Results

Daily sample results for temperature, pH, and turbidity for both the raw and treated water can be found in figures 16, 17, and 18. The benchtop pH analyzer was replaced in April, which explains the increased trend in pH on the graph from March to April. Skid A was under maintenance and wasn't running between May and June, which explains the gap in the graph.

5. Water Chemistry

On an annual basis, the District of Chetwynd collects water samples throughout the treatment and distribution system to be analyzed by ALS Laboratories for many other parameters including hardness, conductivity, pH, metals, organic compounds, and hydrocarbons. The results of these analyses are compared with the maximum acceptable concentrations (MAC) from the Guidelines for Canadian Drinking Water Quality (GCDWQ); the concentrations for all analytes were below the MACs, where applicable. Full results can be viewed in Appendix A.

6. System Improvements

6.1 Distribution System Repairs & Replacements

Various small repairs were completed over 2025. Several curb stops were replaced, and numerous service connections were repaired.

6.2 Hydrant Repairs and Replacements

Various small hydrant repairs such as seal replacements were completed over 2025. One Hydrant was replaced, and more were identified to replace or repair in 2026.

7. Feedback and Response

7.1 Earthy Odour and Taste

The District of Chetwynd periodically receives complaints about an earthy or musty taste and odour in the drinking water. This typically occurs when fresh water cannot be drawn from the Pine River and stored water remains in the settling ponds for extended periods prior to treatment.

During these times, operators adjust intake depths to select the best available source water; however, the treatment system is not designed to remove taste or odour. As a result, the earthy smell may be noticeable in the treated water supplied to customers. The water remains safe for consumption.

River pumping is commonly reduced or suspended during the spring freshet, which usually occurs in April and May. Higher river flows during snowmelt and heavy rainfall increase sediment and turbulence, reducing source water quality and increasing wear on treatment equipment.

7.2 Discoloured Water

The District of Chetwynd receives a few complaints each year about the water being discoloured. These complaints occur during or shortly after the water mains and hydrants have been flushed. Water main flushing is important to remove any sediments or deposits in the pipe. Removing loose sediment and mineral deposits from the pipe will improve taste, odour, and colour in the long term, but can also disturb the sediment and introduce it to service connections. Although this water may not be pleasing to see or drink the District ensures it is still safe to consume.

8. Compliance

The District of Chetwynd continues to meet the conditions of the Northern Health Water System Operating Permit.

9. Conclusion

The upgraded water treatment plant is providing healthy drinking water for the community. All samples and test were within guidelines and regulations. As the distribution system ages, the district will continue to prioritize the upgrading, repairing and replacement of components that need it the most.

Contact for Additional Information

If you have any questions or concerns, or need additional information please contact the District of Chetwynd at 250-401-4100.

APPENDIX A

Water Chemistry Data

APPENDIX A- WATER CHEMISTRY DATA

Sample ID			Water Treatment Plant	Skid B	29 Million Gallon Pond	Lowlift	PVEP
Date Sampled			23-Sep-25	23-Sep-25	23-Sep-25	23-Sep-25	23-Sep-25
Time Sampled			8:00:00 AM	8:15:00 AM	8:30:00 AM	9:00:00 AM	9:30:00 AM
Analyte	Lowest Detection Limit	Units	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water
Physical Tests (Matrix: Water)							
Conductivity	2.0	µS/cm	234				
Absorbance, UV (@ 254nm)	0.0050	AU/cm			0.0390		0.0250
Alkalinity, total (as CaCO3)	1.0	mg/L	102				
Colour, true	5.0	CU	<5.0				
Hardness (as CaCO3), dissolved	0.60	mg/L	105				
Hardness (as CaCO3), from total Ca/Mg	0.60	mg/L	107				
Solids, total dissolved [TDS]	10	mg/L	164				
Solids, total suspended [TSS]	3.0	mg/L	<3.0				
Turbidity	0.10	NTU	<0.10				
pH	0.10	pH units	8.51				
Transmittance, UV (@ 254nm)	1.0	% T/cm			91.4		94.4
Anions and Nutrients (Matrix: Water)							
Ammonia, total (as N)	0.0050	mg/L	0.0076				
Bromide	0.050	mg/L	<0.050				
Chloride	0.50	mg/L	9.35				
Fluoride	0.020	mg/L	0.086				
Kjeldahl nitrogen, total [TKN]	0.050	mg/L	0.072				
Nitrate (as N)	0.0050	mg/L	<0.0050				
Nitrite (as N)	0.0010	mg/L	<0.0010				
Phosphorus, total	0.0020	mg/L	<0.0020				
Sulfate (as SO4)	0.30	mg/L	19.2				
Organic / Inorganic Carbon (Matrix: Water)							
Carbon, dissolved organic [DOC]	0.50	mg/L		2.21			
Carbon, total inorganic [TIC]	0.50	mg/L	18.0				
Carbon, total organic [TOC]	0.50	mg/L	2.87	2.56			

APPENDIX A- WATER CHEMISTRY DATA

Sample ID			Water Treatment Plant	Skid B	29 Million Gallon Pond	Lowlift	PVEP
Total Metals (Matrix: Water)							
Aluminum, total	0.0030	mg/L	0.0304	<0.0030	0.0082		
Antimony, total	0.00010	mg/L	<0.00010	<0.00010	<0.00010		
Arsenic, total	0.00010	mg/L	0.00065	0.00061	0.00065		
Barium, total	0.00010	mg/L	0.0742	0.0774	0.0772		
Beryllium, total	0.000100	mg/L	<0.000100	<0.000020	<0.000020		
Bismuth, total	0.000050	mg/L	<0.000050	<0.000050	<0.000050		
Boron, total	0.010	mg/L	0.021	0.020	0.021		
Cadmium, total	0.0000050	mg/L	<0.0000050	<0.0000050	<0.0000050		
Calcium, total	0.050	mg/L	27.1	26.4	27.2		
Cesium, total	0.000010	mg/L	<0.000010	<0.000010	<0.000010		
Chromium, total	0.00050	mg/L	<0.00050	<0.00050	<0.00050		
Cobalt, total	0.00010	mg/L	<0.00010	<0.00010	<0.00010		
Copper, total	0.00050	mg/L	0.0128	<0.00050	<0.00050		
Iron, total	0.010	mg/L	<0.010	<0.010	0.038		
Lead, total	0.000050	mg/L	0.000063	<0.000050	<0.000050		
Lithium, total	0.0010	mg/L	0.0113	0.0118	0.0119		
Magnesium, total	0.0050	mg/L	9.56	9.60	9.42		
Manganese, total	0.00010	mg/L	0.00068	0.00074	0.0120		
Mercury, total	0.0000050	mg/L	<0.0000050				
Molybdenum, total	0.000050	mg/L	0.00118	0.00119	0.00119		
Nickel, total	0.00050	mg/L	<0.00050	<0.00050	<0.00050		
Phosphorus, total	0.050	mg/L	<0.050	<0.050	<0.050		
Potassium, total	0.050	mg/L	0.561	0.559	0.565		
Rubidium, total	0.00020	mg/L	0.00037	0.00042	0.00034		
Selenium, total	0.000050	mg/L	0.000275	0.000246	0.000248		
Silicon, total	0.10	mg/L	1.72	1.77	1.84		
Silver, total	0.000010	mg/L	<0.000010	<0.000010	<0.000010		
Sodium, total	0.050	mg/L	7.63	2.92	2.85		
Strontium, total	0.00020	mg/L	0.252	0.248	0.246		
Sulfur, total	0.50	mg/L	6.63	6.62	6.73		
Tellurium, total	0.00020	mg/L	<0.00020	<0.00020	<0.00020		
Thallium, total	0.000010	mg/L	<0.000010	<0.000010	<0.000010		
Thorium, total	0.00010	mg/L	<0.00010	<0.00010	<0.00010		
Tin, total	0.00010	mg/L	<0.00010	<0.00010	<0.00010		
Titanium, total	0.00030	mg/L	<0.00030	<0.00030	<0.00030		
Tungsten, total	0.00010	mg/L	<0.00010	<0.00010	<0.00010		
Uranium, total	0.000010	mg/L	0.000343	0.000323	0.000336		
Vanadium, total	0.00050	mg/L	<0.00050	<0.00050	<0.00050		
Zinc, total	0.0030	mg/L	<0.0030	<0.0030	<0.0030		
Zirconium, total	0.00020	mg/L	<0.00020	<0.00020	<0.00020		

APPENDIX A- WATER CHEMISTRY DATA

Sample ID			Water Treatment Plant	Skid B	29 Million Gallon Pond	Lowlift	PVEP
Dissolved Metals (Matrix: Water)							
Aluminum, dissolved	0.0010	mg/L	0.0276	<0.0010	0.0024		
Antimony, dissolved	0.00010	mg/L	<0.00010	<0.00010	<0.00010		
Arsenic, dissolved	0.00010	mg/L	0.00069	0.00066	0.00069		
Barium, dissolved	0.00010	mg/L	0.0767	0.0814	0.0801		
Beryllium, dissolved	0.000100	mg/L	<0.000100	<0.000020	<0.000020		
Bismuth, dissolved	0.000050	mg/L	<0.000050	<0.000050	<0.000050		
Boron, dissolved	0.010	mg/L	0.020	0.020	0.019		
Cadmium, dissolved	0.0000050	mg/L	<0.0000050	<0.0000050	<0.0000050		
Calcium, dissolved	0.050	mg/L	26.3	26.7	26.0		
Cesium, dissolved	0.000010	mg/L	<0.000010	<0.000010	<0.000010		
Chromium, dissolved	0.00050	mg/L	<0.00050	<0.00050	<0.00050		
Cobalt, dissolved	0.00010	mg/L	<0.00010	<0.00010	<0.00010		
Copper, dissolved	0.00020	mg/L	0.0123	0.00035	0.00043		
Iron, dissolved	0.010	mg/L	<0.010	<0.010	0.016		
Lead, dissolved	0.000050	mg/L	0.000050	<0.000050	<0.000050		
Lithium, dissolved	0.0010	mg/L	0.0109	0.0111	0.0110		
Magnesium, dissolved	0.0050	mg/L	9.51	9.47	9.68		
Manganese, dissolved	0.00010	mg/L	0.00066	0.00073	0.00177		
Mercury, dissolved	0.0000050	mg/L	<0.0000050				
Molybdenum, dissolved	0.000050	mg/L	0.00118	0.00117	0.00118		
Nickel, dissolved	0.00050	mg/L	<0.00050	<0.00050	<0.00050		
Phosphorus, dissolved	0.050	mg/L	<0.050	<0.050	<0.050		
Potassium, dissolved	0.050	mg/L	0.576	0.581	0.600		
Rubidium, dissolved	0.00020	mg/L	0.00035	0.00032	0.00033		
Selenium, dissolved	0.000050	mg/L	0.000299	0.000303	0.000277		
Silicon, dissolved	0.050	mg/L	1.72	1.80	1.84		
Silver, dissolved	0.000010	mg/L	<0.000010	<0.000010	<0.000010		
Sodium, dissolved	0.050	mg/L	7.73	2.86	2.92		
Strontium, dissolved	0.00020	mg/L	0.244	0.244	0.245		
Sulfur, dissolved	0.50	mg/L	6.54	6.70	6.74		
Tellurium, dissolved	0.00020	mg/L	<0.00020	<0.00020	<0.00020		
Thallium, dissolved	0.000010	mg/L	<0.000010	<0.000010	<0.000010		
Thorium, dissolved	0.00010	mg/L	<0.00010	<0.00010	<0.00010		
Tin, dissolved	0.00010	mg/L	<0.00010	<0.00010	<0.00010		
Titanium, dissolved	0.00030	mg/L	<0.00030	<0.00030	<0.00030		
Tungsten, dissolved	0.00010	mg/L	<0.00010	<0.00010	<0.00010		
Uranium, dissolved	0.000010	mg/L	0.000314	0.000305	0.000314		
Vanadium, dissolved	0.00050	mg/L	<0.00050	<0.00050	<0.00050		
Zinc, dissolved	0.0010	mg/L	0.0012	<0.0010	0.0015		
Zirconium, dissolved	0.00020	mg/L	<0.00020	<0.00030	<0.00030		
Dissolved mercury filtration location			Field				
Dissolved metals filtration location			Field	Field	Field		

APPENDIX A- WATER CHEMISTRY DATA

Sample ID			Water Treatment Plant	Skid B	29 Million Gallon Pond	Lowlift	PVEP
Volatile Organic Compounds (Matrix: Water)							
Chlorobenzene	0.50	µg/L			<0.50	<0.50	
Chloromethane	5.0	µg/L			<5.0	<5.0	
Dichlorobenzene, 1,2-	0.50	µg/L			<0.50	<0.50	
Dichlorobenzene, 1,3-	0.50	µg/L			<0.50	<0.50	
Dichlorobenzene, 1,4-	0.50	µg/L			<0.50	<0.50	
Dichloropropane, 1,2-	0.50	µg/L			<0.50	<0.50	
Dichloropropylene, cis+trans-1,3-	0.75	µg/L			<0.75	<0.75	
Dichloropropylene, cis-1,3-	0.50	µg/L			<0.50	<0.50	
Tetrachloroethane, 1,1,1,2-	0.50	µg/L			<0.50	<0.50	
Tetrachloroethane, 1,1,2,2-	0.20	µg/L			<0.20	<0.20	
Trichloroethane, 1,1,2-	0.50	µg/L			<0.50	<0.50	
Trichlorofluoromethane	0.50	µg/L			<0.50	<0.50	
Volatile Organic Compounds [Drycleaning] (Matrix: Water)							
Carbon tetrachloride	0.50	µg/L			<0.50	<0.50	
Chloroethane	0.50	µg/L			<0.50	<0.50	
Dichloroethane, 1,1-	0.50	µg/L			<0.50	<0.50	
Dichloroethane, 1,2-	0.50	µg/L			<0.50	<0.50	
Dichloroethylene, 1,1-	0.50	µg/L			<0.50	<0.50	
Dichloroethylene, cis-1,2-	0.50	µg/L			<0.50	<0.50	
Dichloroethylene, trans-1,2-	0.50	µg/L			<0.50	<0.50	
Dichloromethane	1.0	µg/L			<1.0	<1.0	
Dichloropropylene, trans-1,3-	0.50	µg/L			<0.50	<0.50	
Tetrachloroethylene	0.50	µg/L			<0.50	<0.50	
Trichloroethane, 1,1,1-	0.50	µg/L			<0.50	<0.50	
Trichloroethylene	0.50	µg/L			<0.50	<0.50	
Vinyl chloride	0.40	µg/L			<0.40	<0.40	
Volatile Organic Compounds [Fuels] (Matrix: Water)							
Benzene	0.50	µg/L			<0.50	<0.50	
Ethylbenzene	0.50	µg/L			<0.50	<0.50	
Methyl-tert-butyl ether [MTBE]	0.50	µg/L			<0.50	<0.50	
Styrene	0.50	µg/L			<0.50	<0.50	
Toluene	0.40	µg/L			<0.40	<0.40	
Xylene, m+p-	0.40	µg/L			<0.40	<0.40	
Xylene, o-	0.30	µg/L			<0.30	<0.30	
Xylenes, total	0.50	µg/L			<0.50	<0.50	

Sample ID			Water Treatment Plant	Skid B	29 Million Gallon Pond	Lowlift	PVEP
Volatile Organic Compounds [THMs] (Matrix: Water)							
Bromodichloromethane	1.0	µg/L	8.0		<0.50	<0.50	7.0
Bromoform	1.0	µg/L	<1.0		<0.50	<0.50	<1.0
Chloroform	1.0	µg/L	58.1		<0.50	<0.50	68.3
Dibromochloromethane	1.0	µg/L	<1.0		<0.50	<0.50	<1.0
Trihalomethanes [THMs], total	2.0	µg/L	66.1				75.3
Volatile Organic Compounds [THMs] Surrogates (Matrix: Water)							
Bromofluorobenzene, 4-	1.0	%	94.5				77.6
Difluorobenzene, 1,4-	1.0	%	103				94.0
Volatile Organic Compounds Surrogates (Matrix: Water)							
Bromofluorobenzene, 4-	1.0	%			77.3	77.7	
Difluorobenzene, 1,4-	1.0	%			94.8	94.6	
Polycyclic Aromatic Hydrocarbons (Matrix: Water)							
Acenaphthene	0.010	µg/L			<0.010	<0.010	
Acenaphthylene	0.010	µg/L			<0.010	<0.010	
Acridine	0.010	µg/L			<0.010	<0.010	
Anthracene	0.010	µg/L			<0.010	<0.010	
Benz(a)anthracene	0.010	µg/L			<0.010	<0.010	
Benzo(a)pyrene	0.0050	µg/L			<0.0050	<0.0050	
Benzo(b+j)fluoranthene	0.010	µg/L			<0.010	<0.010	
Benzo(b+j+k)fluoranthene	0.015	µg/L			<0.015	<0.015	
Benzo(g,h,i)perylene	0.010	µg/L			<0.010	<0.010	
Benzo(k)fluoranthene	0.010	µg/L			<0.010	<0.010	
Chrysene	0.010	µg/L			<0.010	<0.010	
Dibenz(a,h)anthracene	0.0050	µg/L			<0.0050	<0.0050	
Fluoranthene	0.010	µg/L			<0.010	<0.010	
Fluorene	0.010	µg/L			<0.010	<0.010	
Indeno(1,2,3-c,d)pyrene	0.010	µg/L			<0.010	<0.010	
Methylnaphthalene, 1+2-	0.015	µg/L			<0.015	<0.015	
Methylnaphthalene, 1-	0.010	µg/L			<0.010	<0.010	
Methylnaphthalene, 2-	0.010	µg/L			<0.010	<0.010	
Naphthalene	0.050	µg/L			<0.050	<0.050	
Phenanthrene	0.020	µg/L			<0.020	<0.020	
Pyrene	0.010	µg/L			<0.010	<0.010	
Quinoline	0.050	µg/L			<0.050	<0.050	
B(a)P total potency equivalents [B(a)P TPE]	0.010	µg/L			<0.010	<0.010	
PAHs, high molecular weight (BC AWQ)	0.030	µg/L			<0.030	<0.030	
PAHs, low molecular weight (BC AWQ)	0.060	µg/L			<0.060	<0.060	
PAHs, total (EPA 16)	0.065	µg/L			<0.065	<0.065	

APPENDIX A- WATER CHEMISTRY DATA

Sample ID			Water Treatment Plant	Skid B	29 Million Gallon Pond	Lowlift	PVEP
Polycyclic Aromatic Hydrocarbons Surrogates (Matrix: Water)							
Chrysene-d12	0.1	%			94.7	91.0	
Naphthalene-d8	0.1	%			99.2	102	
Phenanthrene-d10	0.1	%			95.8	97.1	
Haloacetic Acids (Matrix: Water)							
Bromochloroacetic acid	1.00	µg/L	1.37				<1.00
Dibromoacetic acid	1.00	µg/L	<1.00				<1.00
Dichloroacetic acid	1.00	µg/L	14.5				3.55
Monobromoacetic acid	1.00	µg/L	<1.00				<1.00
Monochloroacetic acid	1.00	µg/L	1.21				<1.00
Trichloroacetic acid	1.00	µg/L	13.3				15.8
Haloacetic acids, total [HAA5]	5.00	µg/L	29.0				19.4