AEP WATERWORKS

INSPECTION REPORT

Submitted

Health Risk: PASS
Operational Risk: PASS
Administrative Risk: Administrative Risk

Waterworks System Name: Edgerton Waterworks System
Approval Registration#: 637
Approval Holder: Town of Edgerton
Approval Expiry Date:
Plant Classification (Type): Ground Water
Plant Classification (Level): WT Level 1 (Water Treatment) WD Level 1 (Water Distribution)

FACILITY

Address: Street: PO Box 57
Town: Town of Edgerton
Province: AB
Postal Code: T0B1K0
Facility Contact Number: 780 - 755 - 3933
Facility Emergency Contact Number: [redacted]

Facility Location GPS: Latitude: (e.g. 51.1235)
Longitude: (e.g.-114.2168)

Diversion Location GPS: Latitude: (e.g. 51.1235)
Longitude:(e.g.-114.2168)

Water Diversion Licence No: F17334
Municipal/Industrial Facility: Municipal
Source: Groundwater Well
Daily Peak Flows (m3):
Population served: 400
Number of Connections: 239

Renewal Application Submitted(yes/no): Yes ○ No: ◉
Daily Average Flows (m3):

OPERATOR AND INSPECTOR

Operator's Certification Level: (Interviewed only)

Operator's Name: Justin Pinel
Select Water Treatment Certification Level: WT Level 1
Select Water Distribution Certification Level: WD Level 1
Inspector's Name: Nicole.Lundberg
Inspector's District: RDNSR-Red Deer
Inspection Number: "TBD"
Date and Time of Inspection: 2025/02/27 3:58 PM
Date of previous Inspection: 2016-03-09

GENERAL CONDITIONS

A. Are there any Short-Term Approval Conditions? Yes ○ No ◉ (If Yes, answer B & C)

B. What are the Short Term Approval Condition required due dates?

C. Have these Short Term Approval Conditions been achieved?

D. Have there been any changes to the waterworks system since the last AEP inspection?

INSPECTION SUMMARY COMMENTS

Health Risk Assessment Questions

1	Are chlorine/ozone residual and contact time (CT) ratio requirements met entering the distribution system at the point where CT is calculated? This question applies to all waterworks facilities that have chlorine/ozone residual and contact time limits (for either Giardia and/or viruses) specified in their Approval or Code of Practice (COP) Registration.	○	N/A
		○	1. Unreported failure to achieve Approval/COP limit.
		○	2. Reported failure to achieve Approval/COP limit but appropriate follow up actions were not taken by the operator(s) and a drinking water safety concern resulted.
		◉	3. Meets Approval/COP limits at all times or if a contravention is reported the incident response resolved the issue so that no drinking water safety concerns resulted.
		○	4. Meets best practice with chlorine residuals between 0.2-2.00 mg/L at the point that CT's were achieved and all CT Disinfection ratios were greater than 1.0.

Comments:

February 27, 2025 Cl Total: 0.53 mg/l

LAST REPORT WAS SUBMITTED IN 2022. As per Section 8.1.8 of the COP, year end data is required to be submitted in a annual report. ***Ask DWOS for help

2	Are treated water turbidity (prior to entering clearwell reservoir) limits met?	◉	N/A
		○	1. Unreported failure to achieve approval limit.
		○	2. Reported failure to achieve Approval/COP limit but appropriate follow up actions were not taken by the operator(s) and a drinking water safety concern resulted.
		○	3. Meets approval limits for the monitoring required or if a turbidity contravention is reported the incident response resolved the issue so that no drinking water safety concerns resulted.
		○	4. The waterworks system has been upgraded to meet AEP's 2012 Standards and Guidelines for turbidity reduction for each filter (i.e. <0.3 NTU for dual media filtration systems or <0.1 NTU for membrane filtration systems in 99% of the samples) with continuous monitoring and data capture off each filter are in place to verify that treated water turbidity limits were met. The system also has filter to waste capability.

Comments:

		◉	N/A
		○	1. Unreported failure to achieve Approval limit.

3	Are UV disinfection approval requirements met (Typically includes UV reactor flow limits, UV transmittance (%T) limits and UV dose limits)?	○	2. Reported failure to achieve Approval/COP limit but appropriate follow up actions were not taken by the operator(s) and a drinking water safety concern resulted.
		○	3. Meets Approval limits at all times or if a contravention is reported the incident response resolved the issue so that no drinking water safety concerns resulted.
		○	4. Meets Approval limits at all times for UV reactor flow, UV dosage, and UV transmittance with alarms and system shutdowns in place to prevent any improperly UV disinfected water from entering the clearwell/distribution system. The approval/registration holder calibrates the UV sensor against a reference sensor on an annual basis (this device will compare the UV sensor dose generated by the reactor to a reference standard).

Comments:

4	Is the operator's certification (includes back-up operators) appropriate for the facility?	○	N/A
		○	1. Operator(s) is under certified with no supervision (or back-up) by an appropriately certified operator.
		○	2. Operator(s) is under certified and is working under the remote supervision of an appropriately certified operator(s) but does not meet the requirements of the 'Waterworks Systems Attendance' section of the Water and Wastewater Operators' Certification Guidelines.
		◉	3. Attending operator(s) is certified to the level of the facility and meets the requirements of the 'Waterworks Systems Attendance' section of the Water and Wastewater Operators' Certification Guidelines. Back-up operator(s) can be under certified, but working under the direction of a certified operator (s).
		○	4. For each level of certified operator required by the Approval or Code of Practice an equivalent number of certified operators must be available as back up. Note: A conditional certificate can't be used to achieve a rating of four.

Comments:

Justin Pinel #2434 WT1 WD1 exp Dec 2027

Danny Strayer - uncertified

		○	N/A
		○	1. Unreported failure to achieve Approval/COP limit.

5	Are Approval/Code of Practice (COP) chlorine residual (secondary disinfection in the distribution system) limits met?	○	2. Reported failure to achieve Approval/COP limit but appropriate follow up actions were not taken by the operator(s) and a drinking water safety concern resulted.
		◉	3. Meets Approval/COP limits at all times or if a contravention is reported the incident response resolved the issue so that no drinking water safety concerns resulted.
		○	4. Meets best practices (residuals between 0.1 – 2.0 mg/L) at all times.

Comments:

February 25, 2025 0.99 mg/l Total at the Day Care.

January 2022 - December 2022: 1.31 - 1.90 mg/l Cl Total

LAST REPORT WAS SUBMITTED IN 2022. As per Section 8.1.8 of the COP, year end data is required to be submitted in a annual report. ***Ask DWOS for help

6	Is the monitoring frequency being met for treated water bacteriological sampling in the distribution system as specified by the approval or COP registration, the "Guidelines for Canadian Drinking Water Quality (GCDWQ)" and "Action Protocol for Failed Bacteriological Sampling Results in Drinking Water" (Bac-T protocol)? Notes: - for Code of Practice for a Waterworks System Consisting Solely of a Water Distribution System for a small water system (less than 1500 people and less than 10 km of distribution system), only 1 sample per 500 population per month. - it is not considered additional bacteriological monitoring when bacteriological samples are collected once per week and 5 sample weeks occur in the month.	○	N/A
		○	1. Unreported failure to meet bacteriological monitoring frequency requirement.
		○	2. Reported failure to meet required bacteriological monitoring but appropriate follow up actions were not taken by the operator(s) and a drinking water safety concern resulted.
		○	3. The bacteriological monitoring conducted in the distribution system consists of evenly spaced, weekly samples collected throughout the distribution system as specified or if a contravention is reported the incident response resolved the issue so that no drinking water safety concerns resulted.
		◉	4. In addition to the requirements in 3, additional monthly bacteriological monitoring is conducted in each month of the year in the distribution system, in conjunction with chlorine residual monitoring. Re-samples and samples collected after repairs have been made in the distribution system are not counted for the purposes of additional compliance monitoring.

Comments:

Two (2) BacTs are collected every Tuesday, which meets the minimum requirement of four (4) BacTs are collected each month.

	Were emergency situations (such as failure to meet chlorine/ozone residual limits, contact times, ultra violet disinfection limits, membrane log reduction credits, turbidity	○	N/A
		○	1. Operators did not recognize emergency situations where action was mandated or failed to take the appropriate actions necessary to address emergency

			situations.
7	limits, bacteriological quality requirements, loss of positive pressure, etc.) dealt with as required by the Approval, Code of Practice (COP), or legislation? Definition: an emergency is defined as a situation where one or more of the treatment or disinfection barriers (coagulation, filtration, chlorine, ozone or UV) fail, an exceedance of the treated water quality limits specified in the approval/COP or an issue in the water distribution system that has or may, impact potable water quality (i.e. reservoir contamination, major or uncontrolled loss of pressure or possible contamination of water supply). This includes when a Boil Water Advisory or Water Use Advisory has been issued by Alberta Health Services.	○	2. Some emergency actions taken, but not as required.
		◉	3. Appropriate emergency actions taken as required, and reported in a complete and timely manner.
		○	4. No emergency actions were necessary during the previous two (or more) years or where emergency actions were required the Drinking Water Safety Plan was reviewed and/or revised to reflect the lessons learned from the emergency incident.

Comments:

No emergencies have been reported since the last inspection in 2016.

8	Have Approval/Code of Practice (COP) and Potable Water Regulation contraventions for the Health Risk assessment been properly reported? Reportable contraventions from the Health Risk section may include: not meeting monitoring limits or frequency (for chlorine residual, contact time, turbidity, or UV disinfection [flow, transmittance, or dose limits]) prior to entering or within the distribution system; not having required operator certification/attendance; not meeting bacteriological monitoring frequency; and/or not responding to an emergency situation as required.	○	N/A
		○	1. Have had unreported contraventions, or operator(s) failed to notice when contraventions occurred that should have been reported.
		○	2. Contraventions are reported but not as required (i.e. no written report(s) submitted, late reports, incomplete reports, or reports sent to the wrong location).
		◉	3. Contraventions reported properly with complete and appropriate written follow-up that resulted in the resolution of the issue(s) or no health related contravention reports were required during the reporting period
		○	4. In addition to the requirements of point 3 above, contraventions are tracked and reviewed to identify any reoccurring incidents or issues in an effort to minimize or prevent future reoccurrences.

Comments:

Since the last inspection in 2016 there have been eleven (11) incidents reported.

2016 - Loss of presure at the reservior and a failed BacT

2017 - failed BacT

2018 - Missing BacT (January) and not having a **Operations Plan**

2019 - Failed BacT

2021 - notification of a **potential structural issue of componants at the water treatment plant** and a depressurization due to a waterline break.

2022 - Depressurization (2) due to a leaking valve and a waterline break.

2023 - September, reporting no certified Operator

2024- January Missed approval conditions. Working with approvals to correct. Reported by AEPEA Guangyu Yan

		○	N/A
		○	1. One or more parameters exceed the Maximum Acceptable Concentration (MAC), or required MAC

			sampling data is incomplete (excludes naturally occurring fluoride up to 2.4 mg/L in which no treatment is provided).
8.1	Does treated water meet the GCDWQ parameters based on the sampling required for the facility?	○	2. All Maximum Acceptable Concentration requirements are met except Trihalomethanes (THMs), Halo Acetic Acids (HAA's), or bromate where required or one of the above parameters were missed.
		◉	3. All Maximum Acceptable Concentration requirements are met for the parameters required to be tested or if a MAC exceedance occurs the appropriate remedial actions are taken to deal with the exceedance (these actions would include immediate reporting to AEP/AHS, following the chemical exceedance protocol, completing a review of the waterworks system operations or infrastructure to see if changes can be made to address the MAC exceedance, implementation (if reasonably practical) of changes to waterworks system to address the MAC exceedance or formally bringing the issue to the attention of the water provider to see if actions can be taken to address the MAC exceedance.
		○	4. All Maximum Acceptable Concentration and Aesthetic Objective (AO) requirements are met. (Note: For a water distribution system to achieve a (4) rating additional sampling is required by the registration holder or the most recent sample results from their treated water supplier are to be obtained and provided to AEP).

Comments:

ABCs were sampled in 2022, all paramators analysed were within guidelines however, TOC, Chlorate, Chlorite were not reported. N**ext sampling event required in 2025. Ensure all parameters required are listed on COC**

Trihalomethanes THM samples was collected in **2022**, All samples were within applicable guidelines, however, samples were not collected in the "four seasons" as per the COP.
As per S**ection 5.1.8.1(b)(i)** of the COP, the next sampling event in **required in 2025 - all four (4) seasons** (see definitions, four seasons of the COP).

Parameters D sampled in 2022 no exceedances were noted, however, there were several unreported parameters; Diquat, 1,4 Dioxane, , PFOA, PFOS, HAA's, NDMA's. **Next sampling event required in 2027. Ensure all parameters are listed on COC**

Lead sampling progam has been implemented and competed, as per the Approval 2022.

HEALTH RISK ASSESSMENT:		**PASS**

HEALTH RISK ASSESSMENT COMMENTS:

Operational Risk Assessment Questions

9	Is the monitoring equipment (portable, bench top, and continuous on-line meters) used to verify compliance properly maintained and calibrated? Has a data validation program been implemented and is it being followed? These components are to be completed by a qualified person(s). Notes: - the data validation portion of this question does not apply to those waterworks systems that do not use continuous monitoring equipment to verify compliance with their Approval or COP Registration. -All continuous monitoring equipment including turbidity/chlorine meter readings, flow rates, volumes, particle counts, UV Intensity/dose and Transmittance readings, etc., must be validated to ensure that the results reflect the actual quality of the water being sampled. Examples of erroneous data results are when air bubbles in the turbidity meter affect the readings or when reduced/increased sample flow through the chlorine residual analyzer or turbidity meter changes the readings. - A data validation program should also include an established protocol to compare continuous analyzer results with those of another representative sample and with tolerance limits established for how far apart the comparison readings shall be. Examples where comparable grab sample results are easily attainable include chlorine residuals, filter turbidity and UV transmittance readings.	○	N/A
		○	1. Equipment maintenance, calibration or accuracy checks are not being completed.
		○	2. Some equipment maintenance, calibration or accuracy checks are being completed but supporting documentation is incomplete.
		◉	3. Annual equipment maintenance, calibration or accuracy checks (on meters utilized for compliance monitoring) have been completed with supporting documentation available.
		○	4. All monitoring equipment reflects best available technology, maintenance, and calibration is done annually by a qualified person(s), and accuracy checks (i.e. using primary or secondary standards) are performed at minimum on a monthly basis, and all supporting documents are available as verification. Definition: a qualified person is an instrumentation technician, a representative of the manufacturer of the instrument(s) or an operator certified to the level of the waterworks.

Comments:

Calibrations were completed last in August 2024 by Cleartech as required with certificates readily available.

Secondary gel standards calabrated monthly for accuracy varification. Data validation procedure in place in the ops program.

10	Were treated water sample(s) taken as required, for all listed parameters at the required frequency and location and analyzed by a lab that is accredited to ISO/IEC 17025 standard for the parameters (accrediting bodies are CALA (Canadian Association for Laboratory Accreditation) or Standards Council of Canada)?	○	N/A
		○	1. Samples were not taken.
		○	2. Samples were taken, but did not meet frequency requirements and/or include all parameters.
		◉	3. All required samples were taken at the required frequency and analyzed for the required parameters by an appropriately accredited lab. The approval holder reviewed and understood the lab sample results and immediately reported any results which exceed the Maximum Acceptable Concentration values.
		○	4. In addition to point 3 all applicable parameters with maximum acceptable concentrations (MAC) and aesthetic objectives (AO) are being trended to show if water quality is changing over time (To show if any of the parameters tested are increasing/decreasing from historical values).

Comments:

11	Are waste streams that are being released from the water treatment plant meeting the approval requirements?	○	N/A
		○	1. All Waste streams being released from the water plant do not meet approval requirements.
		○	2. Some waste streams being released from the water plant do not meet the approval requirements.
		◉	3. All waste streams being released from the water plant meet the approval requirements.
		○	4. Waste streams are being recycled/reused in the water plant so that no releases to the environment occur and sanitary sewage is taken to an AEP approved treatment facility

Comments:

There are no filters inplace, waste water from the analyzer goes to the sanitary system.

12	Are filter(s) effluent turbidity monitoring (entering clearwell reservoir) requirements met?	◉	N/A
		○	1. No filter effluent turbidity monitoring
		○	2. Common header turbidity (continuous/grab) monitoring.
		○	3. Individual filter continuous monitoring or meets approval requirements.
		○	4. Individual filter continuous turbidity monitoring with data trending, limit alarms and system shutdowns (before the turbidity exceeds the approval limits). Definition: data trending is the recording of continuous analyzer results in a format that enables the operator to look back over time and see the values produced by an analyzer (at a minimum of 5 minute intervals). This verifies that the data produced by the continuous analyzer is valid.

Comments:

		○	N/A
		○	1. Chlorine residual monitoring not conducted.
		○	2. Chlorine residual monitoring conducted, but not with adequate frequency.

13	Are treated water chlorine residual monitoring (entering distributon system at the point where CT's have been achieved) Approval/COP requirements met?	◉	3. Continuous chlorine residual monitoring conducted or meets approval/COP requirements.
		○	4. Continuous chlorine residual monitoring is conducted with data trending, limit alarms and operator call outs when limits are not met. Operators are using the lowest chlorine residual (off the continuous analyzer) for the day to calculate their CT disinfection ratio. Definition: data trending is the recording of continuous analyzer results in a format that enables the operator to look back over time and see the values produced by an analyzer (at a minimum of 5 minute intervals). This verifies that the data produced by the continuous analyzer is valid.

Comments:

Online continuous monitoring and call out alarms are in place, Low Cl alarm is set at 0.50 mg/l and the low reservoir alarm is set at 75 %

14	Are treated water chlorine residual monitoring (in the distribution system) requirements met?	○	N/A
		○	1. Chlorine residual monitoring frequency not met.
		○	2. Some distribution system chlorine residual monitoring is conducted, but not at random locations throughout the system.
		◉	3. Required approval/Code of Practice (COP) distribution system chlorine residual monitoring conducted at random locations throughout the distribution system.
		○	4. Additional daily distribution system chlorine residual monitoring is routinely conducted, with excellent representative coverage of the entire system. Definition: additional daily monitoring means that chlorine residuals are monitored, one or more days, per week than what is required by the approval or COP.

Comments:

Chlorine residuals are collected two (2) days/week in distribution. Samples are collected at random locations throughout the distribution system.

		○	N/A
		○	1. Bacteriological re-sampling required due to initial sampling error (total coliforms or E. coli present) and operator did not follow the Bac-T Protocol when re-sampling, or poor re-sample techniques were used resulting in additional false positives.
		○	2. Bacteriological re-sampling required due to operator sampling error (total coliforms or E. coli present) but operator followed the Bac-T Protocol. There are ongoing issues with sample management and delivery (i.e. no ice packs included, incorrect

15	Is the approval/registration holder diligent in ensuring that all bacteriological sampling is done properly - as determined by the Bac-T Protocol and the Environmental Public Health Field Manual for Private, Public and Communal Drinking Water Systems in Alberta?		labelling, courier issues, etc.).
		◉	3. All bacteriological samples are collected and submitted properly with no repeat samples required as a result of operator sampling errors. If bacteriological re- sampling was required due to the presence of total coliforms or E. coli the operator followed the Bac-T Protocol and no other sample management issues were identified. A Bacteriological Quality Monitoring Plan has been developed as part of the Operations program.
		○	4. All bacteriological samples are collected and submitted properly with no repeat samples required or samples rejected as a result of sample management issues. The system operator is following the Bacteriological Quality Monitoring Plan as set out in their Operations Program (i.e. where, when and how to sample).

Comments:

Meets minimum requirments of 4 sample collected per month, which are collected at random locations throughout the distribution system.

16	Are treated water fluoride concentration limits and monitoring requirements met?	◉	N/A
		○	1. Fluoride monitoring not conducted and/or unreported Approval/COP (Code of Practice) limit failure occurred.
		○	2. Fluoride monitoring conducted, but not with adequate frequency and/or reported Approval/COP limit failure occurred.
		○	3. Daily fluoride grab monitoring conducted and limits meet requirements of Approval/COP or if a contravention is reported the incident response resolved the issue so that no drinking water safety concerns resulted.
		○	4. In addition to the requirements of (3) above, the Approval/Registration Holder is splitting their samples and submitting (at least on a monthly basis) a fluoride sample to an accredited lab for comparison analysis.

Comments:

17	Are system water volumes metered?	○	N/A
		○	1. No metering of water volumes.
		○	2. Facility influent or effluent water volumes metered.
		◉	3. Facility influent (from the source) and effluent water volumes metered.

		○	4. Facility influent and effluent water volumes metered, including backwash/filter to waste volumes (or calculate) and a full water distribution system metering program is in place. Water balancing is conducted and a program is in place to address water losses that occur throughout the waterworks system (plan to systematically replace leaking valves, water lines, etc.).

Comments:

Influent and effluent water are metered and documented with a balancing program in place.

18	Are the chemicals used at the Water Treatment Plant (includes both direct and indirect additives) listed and used as specified by ANSI (American National Standards Institute)/NSF (National Sanitation Foundation) Standard 60 or IISO/IEC 9000 or ISO (International Standards Organization)/IEC 14001?	○	N/A
		○	1. Not all of the chemicals used at the facility are listed in the ANSI/NSF Standard and/or the operator is not aware of this requirement.
		○	2. All of the chemicals used at the facility are listed in the ANSI/NSF Standard, but the chemical feed dosage exceeds the dosage specified as the Maximum Use Limit (specified in NSF Standard 60) or the limits set out in a Letter of Authorization (LOA) issued by the Director.
		◉	3. All of the chemicals are specified in the ANSI/NSF Standard and the chemical feed dosages do not exceed the dosage specified as the Maximum Use Limit (MUL) or the Letter of Authorization limits.
		○	4. In addition to meeting the requirements of (3) above, all chemicals are stored properly with spills immediately cleaned up, secondary containment in place around the chemical storage area and current SDS records are kept on site. Operator(s) is aware of the Maximum Use Limits for all the chemicals added to the water supply.

Comments:

NSF certified Sodium Hypochlorate 12% barrels are provided by Cleartech and are stored on site in secondary containment.

Dosages are are tracked and understood, they use approx. 1 barrels every months.

19	Have Approval/Code of Practice (COP) and Potable Water Regulation contraventions for the Operational Risk assessment been properly reported? Reportable contraventions from the Operational Risk section may include: incomplete or improper frequency of sampling for all listed parameters required to be analyzed by a third party (accredited) lab; treated water samples do not meet the Guideline for Canadian Drinking Water Quality maximum acceptable concentration limits and were not immediately reported; not meeting fluoride monitoring frequency or limits, and/or water treatment chemicals are not certified (NSF/ISO/as authorized).	○	N/A
		○	1. Have had unreported contraventions, or operator(s) failed to notice when contraventions occurred that should have been reported.
		○	2. Contraventions are reported but not as required (i.e. no written report(s) submitted, late reports, incomplete reports, or reports sent to the wrong location).
		◉	3. Contraventions reported properly with complete and appropriate written follow-up that resulted in the resolution of the issue(s) or no contravention reports were required as the facility was operated to meet Approval/COP requirements.
		○	4. Addition to the requirements of point 3 above, contraventions are tracked and reviewed to identify any reoccurring incidents or issues in an effort to minimize or prevent future reoccurrences.

Comments:

OPERATIONAL RISK ASSESSMENT:		PASS

OPERATIONAL RISK ASSESSMENT COMMENTS:

Administrative Risk Assessment Questions

20	Have preventative maintenance measures been established in the distribution system and treated water reservoir(s) to minimize adverse effects to water quality? Preventative maintenance program includes: a protocol that outlines when/how valves are to be exercised (annual exercising is recommended), a protocol for the scouring of water mains by high velocity unidirectional flushing, pigging of water mains or by other means, inspection/cleaning of clearwells/reservoirs, installation/inspection of backflow preventers (AEP Standards require backflow preventers at the entry into the waterworks system or at a truck fill station), a cross connection control program, a protocol for the return to service of a water main that has been repaired or for a newly installed water main.	○	N/A
		○	1. No scheduled maintenance program (valve exercising, water main flushing, treated water reservoir inspection) for the distribution system and treated water reservoir(s). Backflow preventers or air gaps are not installed on truck fill. No cross connection control program is in place.
		○	2. Distribution system and treated water reservoir maintenance program developed but cannot provide evidence it is being carried out and the system has had water main breaks occur each year resulting in a widespread loss of positive pressure and interruption of key water services.
		◉	3. Distribution system and treated water reservoir maintenance program in place with evidence supporting that it is being carried out. Cross connection (connections with a wastewater system, a storm water system or another unapproved waterworks system) control inspection program is in place. Return to service protocol in place for new and repaired water mains and evidence it is being followed.
		○	4. A full preventative maintenance program is in place that includes the requirements of point 3 as well as the completion of the following: a documented uni-directional flushing program, water valves to isolate water lines for repairs are located and exercised to ensure they are operational, documentation of a water main and valve replacement schedule and future life expectancy is completed. The water distribution system infrastructure has the ability to maintain service to the rest of the community, and minimize disruption to consumers, while repairs are conducted on isolated sections (i.e. looped water lines to allow water to be distributed from multiple directions).

Comments:

Previously the fire department has conducted the a annual hydrant flushing program, however moving forward in 2025 public works is planning to conduct annual hydrent flushing. A valve exercising program in place and is conducted biannually. There is no Cross connection program in place at this time.

The reservoir was last cleanned out and inspected in June 2024 by Aquatec.

21	For systems whose source is ground water from a well - Are raw water wells being maintained in a sanitary manner? (Examples of actions that support sanitary maintenance of a well include - a well maintenance program is in place, documented regular well maintenance, site inspections,	○	N/A
		○	1. Well(s) have never been maintained or inspected.
		○	2. Well(s) have no protection measures or maintenance program in place. (protection measure may include: fencing, caplocks installed, well head is accessible for maintenance, well casing vented, casing (s) extend above snowline, water tight caps etc.)

	documented protocols/schedules for pump and screen inspection/cleaning)	◉	3. Well(s) have protection measures in place. (protection measure may include: fencing, caplocks installed, well head is accessible for maintenance, well casing vented, casing(s) extend above snowline, water tight caps etc.)
		○	4. Well(s) have protection measures in place and documented preventative maintenance program is in place and being followed.

Comments:

All wells are protected from damage, with locking caps inplace and well heads accessible for maintenance and extend above snowline.

There are two (2) blended wells

22	Do the operators demonstrate awareness of applicable legislation as required in the operators' Code of Conduct (Approval or Registration under the Code of Practice, the Potable Water Regulations (PWR) and AEP Standards and Guidelines (Standards))?	○	N/A
		○	1. Approval/COP, PWR and Standards not immediately available and operator cannot demonstrate awareness of requirements.
		○	2. Approval/COP, PWR and Standards are available, however operator is not aware of the requirements.
		◉	3. Approval/COP, PWR and Standards documents were available at the time of inspection and the operator is aware and following the requirements.
		○	4. Approval/COP, PWR and Standards were available at the time of inspection and all operators are aware of and following the requirements. All operators have completed a review of the Approval/COP and have signed off on the review.

Comments:

The COP, Standards and guidelines and Potable Water Regulation are readily available online and onsite.

23	Were reports (monthly and annual) properly compiled and submitted on time?	○	N/A
		○	1. No reports and no records are available.
		◉	2. Reports and records retained, but do not include all required information; either the monthly or annual report was incomplete. Required monthly e-reporting not completed.
		○	3. Complete reports were properly and accurately compiled, retained and available or submitted as required. This includes the electronic submission of annual reports to the correct district address as specified by the AEP Report Submission Guidelines and if applicable monthly data is being submitted electronically to the AEP drinking water quality website.
			4. In addition to all the requirements of (3) above, the

		◯	annual report includes: a cover page, the name and approval/registration number of the waterworks facility, a list of all the operators currently working (or had worked) at the waterworks in that year, the date the Annual report was submitted to AEP, the date(s) of when the DWSP was updated and the signature of person in charge of the waterworks system.

Comments:

Annual Reports have not been submitted to the Department since 2022. As per Section 8.1.7 of the COP, annual reports must be in electonic format and submitted to the Department by February 28 of each calander year.

As discussed during the inspection the 2024 Annual Report is to be submitted to the Department by May 30, 2025 and the 2023 Annual Report by June 30, 2025.

Monthly BacT reporting is up to date, however Chlorine and CT Ratio need to be added to the online monthly reporting.

**Requires help from the DWOS for a report template.

24	Is the Operations Program completed as per the Approval/Code of Practice	◯	N/A
		◯	1. The operations program has not been started.
		◯	2. The operations program has been started but is not complete.
		◉	3. The operations program is completed and readily available for AEP to review.
		◯	4. The operations program is completed, being followed, reviewed annually and signed off by all staff involved in the operation of the waterworks system.

Comments:

The Operations manual is up to date and readily available online and onsite. Annual review and updates scheduled every second year.

See Schedual 1 of the COP for a reference of requirements.

25	Is the Drinking Water Safety Plan completed as per the Approval/Code of Practice (COP)? Completed means in accordance with the requirements in the Standards and Guidelines for Municipal Waterworks, Wastewater and Storm Drainage Systems; Part 1 Standards for Municipal Waterworks (2012), as amended. It also means that the completed Drinking Water Safety Plan has been presented to and reviewed by the person(s) responsible for the operation of the waterworks system (this could include the CAO, mayor, reeve, council, system owner, condo board, president of the water co-op, etc.)	◯	N/A
		◯	1. The Drinking Water Safety Plan has not been started.
		◯	2. The Drinking Water Safety Plan has been started but is not complete.
		◉	3. The Drinking Water Safety Plan has been completed, is updated as required by the authorization, and is readily available for AEP to review.
		◯	4. Drinking Water Safety Plan has been completed, reviewed annually, and signed off by all staff involved with the waterworks system. Actions have been taken to address one or more key risks that have been identified (if applicable).

Comments:

The DWSP is completed and readily available at the office and is reviewed every two years.

See Section 3.1.5.2 of the COP for reference.

26	For Approvals with upgrading requirements only - Has the approval holder completed the upgrade, or portions of the upgrade, in accordance with the approval, and met the deadlines set out by the approval?	◉	N/A
		○	1. Approval holder has not started the upgrade at all.
		○	2. Approval holder has started the upgrade but has not completed it and has not received authorization for an extension from AEP.
		○	3. Approval holder has completed the upgrade (including commissioning) prior to the deadline set out by the approval, or has not completed the upgrade but has received written authorization for an extension of completion date.
		○	4. Approval holder has completed the upgrade, and the upgraded portions are running as part of the plant and has been included in the OP and DWSP.

Comments:

27	Have Approval/Code of Practice (COP) and Potable Water Regulation contraventions for the Administrative Risk assessment been properly reported? Reportable contraventions from the Administrative Risk section may include: late/missing reports (monthly/annually); a missing/incomplete Operations Program; a missing/incomplete Drinking Water Safety Plan.	○	N/A
		○	1. Have had unreported contraventions, or operator(s) failed to notice when contraventions occurred that should have been reported.
		○	2. Contraventions are reported but not as required (i.e. no written report(s) submitted, late reports, incomplete reports, or reports sent to the wrong location).
		◉	3. Contraventions reported properly with complete and appropriate written follow-up that resulted in the resolution of the issue(s) or no contravention reports were required as the facility was operated to meet Approval/COP requirements.
		○	4. In addition to the requirements of point 3 above, contraventions are tracked and reviewed to identify any reoccurring incidents or issues in an effort to minimize or prevent future reoccurrences.

Comments:

ADMINISTRATIVE RISK ASSESSMENT:		Administrative Risk

ADMINISTRATIVE RISK ASSESSMENT COMMENTS: