

November 10, 2017

Mr. Ron Lutz  
Wintergreen Woods Water Utility Ltd.  
PO Box 666  
Bragg Creek, AB T0L 0K0

Dear Mr. Lutz:

**Subject: Compliance Inspection of Wintergreen Woods Waterworks System**

Alberta Environment and Parks conducted an inspection of the above noted waterworks system on November 8, 2017. The purpose of the inspection was to assess compliance with the terms and conditions of the Wintergreen Woods Waterworks System Approval # 17543 and amendments as issued under the *Environmental Protection and Enhancement Act* (EPEA) and to identify any additional potential risks to the waterworks.

Attached for your information and attention is a copy of the inspection report prepared by Alberta Environment and Parks as documentation of the inspection. The inspection was conducted with operator Colby Faul of H2O Pro. A risk based assessment was completed by Alberta Environment and Parks and the Waterworks System passed the assessment and achieved an overall rating of 89%. A copy of the inspection assessment as well as the guidelines utilized is enclosed for your records.

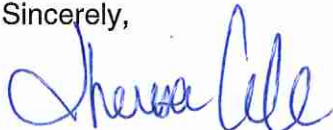
Although the Waterworks system did pass the risk assessment there were some items noted that require your attention.

**Please see questions See questions 13, 15, 16, 19, 25 and 26 of the attached Alberta Environment and Parks Waterworks Inspection Report for a more detailed explanation.**

All necessary steps must be immediately taken by the approval holder to rectify any non-compliance issues that may have been identified during the inspection and to comply with all approval and Potable Water Regulation requirements.

If you have any questions regarding this letter or would like any additional information, please contact the undersigned, [theresa.cole@gov.ab.ca](mailto:theresa.cole@gov.ab.ca) or 403-297-8298.

Sincerely,



Theresa Cole, B.T.Envh, CPHI(C)  
Environmental Protection Officer

Enclosure

cc: Craig Knaus, District Compliance Manager (Alberta Environment and Parks)  
Craig Reich, Approval Writer (Alberta Environment and Parks)  
Eric Faul, H2O Pro ([h2opro@icloud.com](mailto:h2opro@icloud.com))

# AEP WATERWORKS INSPECTION REPORT

Waterworks System Name:	Wintergreen Woods	Approval Registration #:	17543	Plant classification (Type):	SW
Approval Holder:	Wintergreen Woods Water Utility Ltd	Approval Expiry Date:	Monday, July 01, 2019	Plant classification (Level):	Level 2
Facility Address:		Facility Location GPS:		Diversion Location GPS:	Level 1
Street: Box 666		Latitude: (e.g. 51.1235)		Latitude: (e.g. 51.1235)	
Province: AB	Town: Bragg Creek	Longitude: (e.g. -114.2168)		Longitude: (e.g. -114.2168)	
Facility Contact Number: 403 - 966 - 8527	Postal Code:	Water Diversion Licence No.:		Municipal/Industrial Facility:	Municipal
Facility Emergency Contact Number: - -		08644/0205141		Source:	Municipal
Operator's Name: (Interviewed only)		Source:	Elbow River	Daily Peak Flows (m3):	
Colby Faul-H2O Pro		Population served:	85 homes plus clubhouse	Number of Connections:	86
Operator's Certification Level: (Interviewed only)	WD Level 2	Renewal Application Submitted (yes/no):	N/A	Daily Average Flows (m3):	
Inspector's Name:	Theresa.Cole@gov.ab.ca	SSR-Calgary		Date of previous Inspection:	Wednesday, November 30, 2016
Inspection Number:	November 08/2017	Date and Time of Inspection:	Wednesday, November 08, 2017	10:00	<input checked="" type="radio"/> am <input type="radio"/> pm
<b>Short Term Approval Conditions</b>					
A. Are there any Short-Term Approval Conditions?					
<input type="radio"/> NO <input checked="" type="radio"/> YES (If YES, answer B & C)					
B. What are the required due dates?					
December 31/2013.					
C. Have these Conditions been achieved?					
Yes.					
D. Have there been any changes to the waterworks system since the last AEP inspection?					
No.					
Comments:					
June 1, 2011: Operations program-completed. December 31, 2013: Drinking Water Safety Plan-completed. Data used for inspection is from January 1, 2017 to October 31, 2017.					

PRIMARY RISK ASSESSMENT QUESTIONS	ASSESSMENT	COMMENTS
1 Is the operator certification (including back-up operators) appropriate for this facility?	4 - <u>Excellent</u>	Plant is operated by H2O Pro. Operators include Colby Faul, WT2/WD2. Other operators include Eric Faul, WT3/WD2, Jay-Lynn Faul, WT2/WD2, Adam Doyle, WT1/WD1 and Doug Haase, WT4/WD2 and Aaron Gordon, small systems operator.
2 Have Approval/Code of Practice/Potable Water Regulation contraventions been properly reported?	3 - <u>Good</u>	No incidents reported since last inspection.
3 Is monitoring equipment (includes portable, bench top, and continuous on-line meters) used to verify compliance properly maintained and calibrated?	4 - <u>Excellent</u>	No external third party calibrations being done. Eric uses up to date gel standards to calibrate handheld instruments and, expiry is September 2017. Comparison checks completed daily and recorded. Gel standards are used weekly and recorded.
4 Were emergency situations dealt with as required by the Approval, Code of Practice (COP), or legislation?	4 - <u>Excellent</u>	No emergencies since last inspection.
5 Are treated water turbidity (prior to entering clear well reservoir) limits met?	4 - <u>Excellent</u>	Max turbidity was 0.20NTU in April 2017. Continuous monitoring with alarms, shut-downs and call-outs in place. Meets 2012 standards and guidelines.
6 Are chlorine/ozone residual and contact time (CT) ration requirements met entering the distribution system at the point where CT is achieved?	4 - <u>Excellent</u>	Range from 0.51mg/L(April 2017) to 1.60mg/L(February 2017). Minimum CT ratio 2 in June 2017. Meets best practice of 0.2-2.20mg/L chlorine and all CT ratios above 1.
7 Are UV disinfection approval requirements met (Typically includes UV reactor flow limits, UV transmittance (%T) limits and UV dose limits)?	N/A	No UV disinfection at this plant, not required under the current approval.
8 Are Approval/Code of Practice (COP) chlorine residual (in the distribution system) limits met?	3 - <u>Good</u>	Range from 0.50mg/L(May 2017) to 1.59mg/L(February 2017). Does not meet best practice of 0.1-1.50mg/L chlorine.
9 Is monitoring frequency for treated water bacteriological sampling in the distribution system being met?	3 - <u>Good</u>	4 bacteriological samples taken per month at random locations throughout the distribution system, meets GCDWQ. Occasionally one additional sample is taken but not being done every month.
<b>PRIMARY RISK ASSESSMENT TOTAL:</b>	29	Sum of ratings
<b>PRIMARY RISK ASSESSMENT RATING:</b>	90	Average rating of Applicable questions (in %)

**PRIMARY RISK ASSESSMENT:**

PASS

PASS requires a 3 or 4 Rating for all applicable questions

SECONDARY RISK ASSESSMENT QUESTIONS	ASSESSMENT	COMMENTS
10 Is the approval/Code of Practice holder diligent in ensuring that all bacteriological sampling is done properly?	4 - <u>Excellent</u>	No rejected or missed bacteriological samples in 2016 an up till August 2017 available data. A full bacteriological monitoring plan is in place.
11 Are operators familiar with the current signed Approval or Registration and related legislation for the waterworks system?	4 - <u>Excellent</u>	Current approval available at the time of the inspection. All operators are familiar with the approval and following the requirements of the approval.
12 Are raw water wells located, protected and maintained in a sanitary manner (including Groundwater Under Direct Influence Systems)?	N/A	
13 What raw surface water protection measures are in place to optimize water quality entering the Water Treatment Plant?	3 - <u>Good</u>	Intake in through infiltration gallery so no aeration. All waste streams go to waste ponds on golf course. No means to control raw water quality but operators can shut off intake from the raw water source(Elbow River). Raw water storage available for about two days. Treated water storage for about three days. Intake structures are being inspected weekly. They were cleaned out just after the flood in 2013 but nothing since then. <b>Operators are checking raw pH, temperature and turbidity daily through grab samples but no trending.</b> <b>No written preventative maintenance program in place for surface water protection.</b>
14 Are Water Treatment chemicals used to the facility listed and used as specified?	4 - <u>Excellent</u>	12% Sodium Hypochlorite used, max dosage was 4.07mg/L(May 2017). CTI 4900 used, max dosage was 35.71mg/L(January 2017). MSDS sheets available and up to date. Spill trays now in place for Sodium Hypochlorite and CTI 4900.
15 Are system water volumes metered?	3 - <u>Good</u>	Influent, effluent and backwash/filter to waste streams are metered. The homes in the new section are metered but there is no meters in the original development which accounts for most of the homes. This is still being reviewed and may be installed in the future. <b>Operators are not doing any meter readings for this facility, no water balancing.</b>
16 Have preventative maintenance measures been established in the distribution system and treated	3 - <u>Good</u>	Hydrants are flushed twice per year. <b>No uni-directional flushing.</b> <b>The two main valves are not being exercised.</b> <small>The reservoir was inspected in January 2014</small>

water quality?

Were treated water sample(s) taken as required, for 17 all listed parameters and analyzed by an independent lab accredited for all the parameters analyzed?

4 - Excellent

A return to service protocol is in place for new or repaired mains.  
**No written maintenance program in place.**

Chemical analysis completed February 22 and August 11/2017.  
TTHM's completed February 22, May 11, and August 11/2017, the  
October to December not finished yet.  
Full trending being done for all parameters for 2015 and 2016.

SECONDARY RISK ASSESSMENT QUESTIONS	ASSESSMENT	COMMENTS
18 Does treated water meet the Guidelines for the Canadian Drinking Water Quality (GCDWQ) parameters based on the sampling required for the facility?	4 - <u>Excellent</u>	All MAC's and AO's met under the GCDWQ.
19 Were reports (monthly and annual) properly compiled and submitted on time?	3 - <u>Good</u>	2016 annual report submitted January 29/2017. <b>Ensure section 6.3.3(f), any changes to the operations program is included in the 2016 annual report.</b> Electronic reporting being completed.
20 Are treated water fluoride concentration limits and monitoring requirements met?	N/A	
21 Are filter(s) effluent turbidity monitoring (entering clear well reservoir) requirements met?	4 - <u>Excellent</u>	Continuous monitoring with alarms, shut-downs and call-outs. Alarm set point is over 0.27NTU for 30 seconds system will go into automatic backwash cycle, backwash cycle is 10 minutes, plant will shut down if over 0.28NTU for 24 seconds.
22 Are treated water chlorine residual monitoring (entering distribution system at the point where CT's have been achieved) Approval/COP requirements met?	4 - <u>Excellent</u>	Continuous monitoring with alarms and call-outs. Alarm set points: low alarm 0.50mg/L for 4 minutes, low low alarm 0.3mg/L for 4 minutes, high alarm 1.45mg/L for 20 minutes. Operators are using the minimum chlorine readings from trending for CT calculations.
23 Are treated water chlorine residual monitoring (in the distribution system) requirements met?	3 - <u>Good</u>	Done weekly, meets approval.
24 Is the Operations Program completed as per the Approval/Code of Practice?	4 - <u>Excellent</u>	Operations program is complete. Now completed by operator and not approval holder. Operators have completed a review in 2017 and signed off on the review. No changes in 2017.
25 Is the Drinking Water Safety Plan completed as per the Approval/COP?	3 - <u>Good</u>	DWSP completed, done by operator as the approval holder was going to wait till the upgrade was completed in 2019 or later. Copy will be printed and stored at the plant, this has been completed. Operators reviewed DWSP in 2017. No back in generators and waste water plant upstream of the

raw water reservoir.

A new generator will be installed with the upgrade to the plant in 2019.

**No actions have been taken to address key risks at this time.**



SECONDARY RISK ASSESSMENT QUESTIONS	ASSESSMENT	COMMENTS
<p>Are the data results of the on-line or continuous monitoring equipment (applies only to turbidity meters and/or chlorine/ozone residual meters) validated to ensure that the results reflect actual quality of the water (some examples of erroneous data results are when air bubbles in the turbidity meter influence the readings or with reduced/increased flow through the chlorine residual monitor)?</p>	<p>3 - <u>Good</u></p>	<p>No issues with data validation in the 2016 annual report. Operators are using a sheet for calibrations of instrumentation. <b>A written SOP is recommended for data validation that should include out of range tolerance levels for instrumentation, daily, monthly, and annual data review, etc.</b></p>
<p><b>SECONDARY RISK ASSESSMENT TOTAL:</b></p>	<p>53</p>	<p>Sum of Ratings</p>
<p><b>SECONDARY RISK ASSESSMENT RATING:</b></p>	<p>88</p>	<p>Average rating of applicable questions (in %)</p>

<p><b>Overall Waterworks Rating:</b></p>	<p>89</p>	<p>Overall rating of both Primary and Secondary (in %)</p>
<p><b>Overall Waterworks System Risk Assessment:</b></p>	<p>PASS</p>	<p>PASS requires PASS of both Primary and Secondary Assessments</p>

**INSPECTION SUMMARY:**

**See questions 13, 15, 16, 19, 25 and 26.**

FAC(AEP): 0.94mg/L (Operator): 0.87mg/L  
Turbidity(AEP): 0.15NTU (Operator): 0.16NTU

(Analyzer): 0.74mg/L(operator to calibrate)  
(Analyzer): 0.03NTU

Any rating of 1 or 2 may indicate a contravention of the Environmental Protection and Enhancement Act and /or applicable Regulations. You should immediately take all necessary steps to comply with the above. Within thirty (30) days of this audit, you are requested to provide a written response as to how the above noted contraventions were remedied.



Environment  
and Parks

### Compliance Inspection

The signing of this form hereby acknowledges that a compliance inspection was conducted at

the Wintargreen Woods Waterworks System, Approval # 17543

by Alberta Environment and Parks on the date indicated below.

Compliance Inspectors Signature: \_\_\_\_\_

Print Name: \_\_\_\_\_

Operators Signature: \_\_\_\_\_

Print Name: \_\_\_\_\_

Other Approval Holder Representative Signature: \_\_\_\_\_

Print Name: \_\_\_\_\_

Date: \_\_\_\_\_

November 8<sup>th</sup>/2017