



Township of White River Annual Summary Report

2021



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ANNUAL REPORT 2020

Drinking Water System Number: 210000407
Drinking Water System Name: White River Drinking Water System
Drinking Water System Owner: Township of White River
Drinking Water System Category: Large Municipal Residential
Drinking Water Works Permit Number: 299-201
Municipal Drinking Water Licence Number: 299-101
Period being reported: Year 2021

Complete if your Category is Large Municipal Residential or Small Municipal Residential

Does your Drinking Water System serve more than 10,000 people? Yes No

**Is your annual report available to the public at no charge on a web site on the Internet?
Yes No**

Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.

Township of White River
102 Durham st.
White River, ON
P0M3G0

Note: For the following tables below, additional rows or columns may be added or an appendix may be attached to the report

List all Drinking Water Systems (if any), which receive all of their drinking water from your system:

Drinking Water System Name Drinking Water System Number
White River Drinking Water System - 210000407

**Did you provide a copy of your annual report to all Drinking Water System owners that are connected to you and to whom you provide all of its drinking water?
Yes No N/A**

Indicate how you notified system users that your annual report is available, and is free of charge.

- Public access/notice via the web
- Public access/notice via Government Office
- Public access/notice via a newspaper
- Public access/notice via Public Request
- Public access/notice via a Public Library
- Public access/notice via other method :

The following is a summary report prepared for the Township of White River as required under O.Reg. 170/03. The report itemizes the following items:

- ◆ *A summary of the quantity of water supplied during the reporting period compared to the rated capacity specified in the certificate of approval, including monthly average and maximum daily flows;*
- ◆ *A summary of the chemicals used in the treatment process.*
- ◆ *A summary of the results of the chemical and bacteriological sampling programs associated with the plant.*
- ◆ *A summary of all issues with regards to compliance or non-compliance during the year 2021*
- ◆ *A copy of the following report is made available to the general public at the Township of White River business office and at the Water Treatment Plant.*

System Description

In July of 2006 the new surface water treatment plant became the primary source of treated water for the town. The water treatment plant equipment includes low lift pumps at the Tukanee Lake intake and a backup generator. Treatment consists of ozonation, slow sand filtration and granular activated carbon (GAC) filtration. Primary disinfection is provided by Ultraviolet light (UV). Secondary disinfection is provided by the addition of sodium hypochlorite. Additional chlorination equipment is used to provide/ensure secondary disinfection at the reservoir.

In 1985 the oldest section of the distribution was upgraded, the rest of the system was installed in the 1970's. Pipes are constructed of PVC or ductile iron.

The reservoir was also built in 1985. It is located on a hill adjacent to the community and is an in ground concrete storage facility, covered in earth. The reservoir has a capacity of 1350 m³ (based on an average day use of 1,212 m³/day this is slightly more than one day of storage). Water travels through the distribution system to the reservoir. During periods of high demand or shut down at the water plant, water flows from the reservoir back into the distribution system. A Miltonic level indicator is used at the reservoir to convey water levels to the water treatment plant. A S.C.A.D.A at the water plant uses this information to tell the plant when to operate.

The distribution system currently services a population of approximately 645 residents. The White River Forest Products and C.P. rail yard are the main industry that is serviced by the system. There are approximately 400 homes and 70 fire hydrants on the distribution system. GEOSMART was used during the summer of 2004 to provide detailed information about the distribution system.

Tukanee Lake is located 6 kilometers northwest of the Town of White River. The lake is approximately 3.5 km long and 2.2 km at its widest point. The water intake is located in 5 meters of water, 25 meters from shore. The shoreline and bottom of the lake are rocky. The lake is used primarily for recreational purposes, there are no residential developments, there is however one commercial enterprise; a seaplane base.

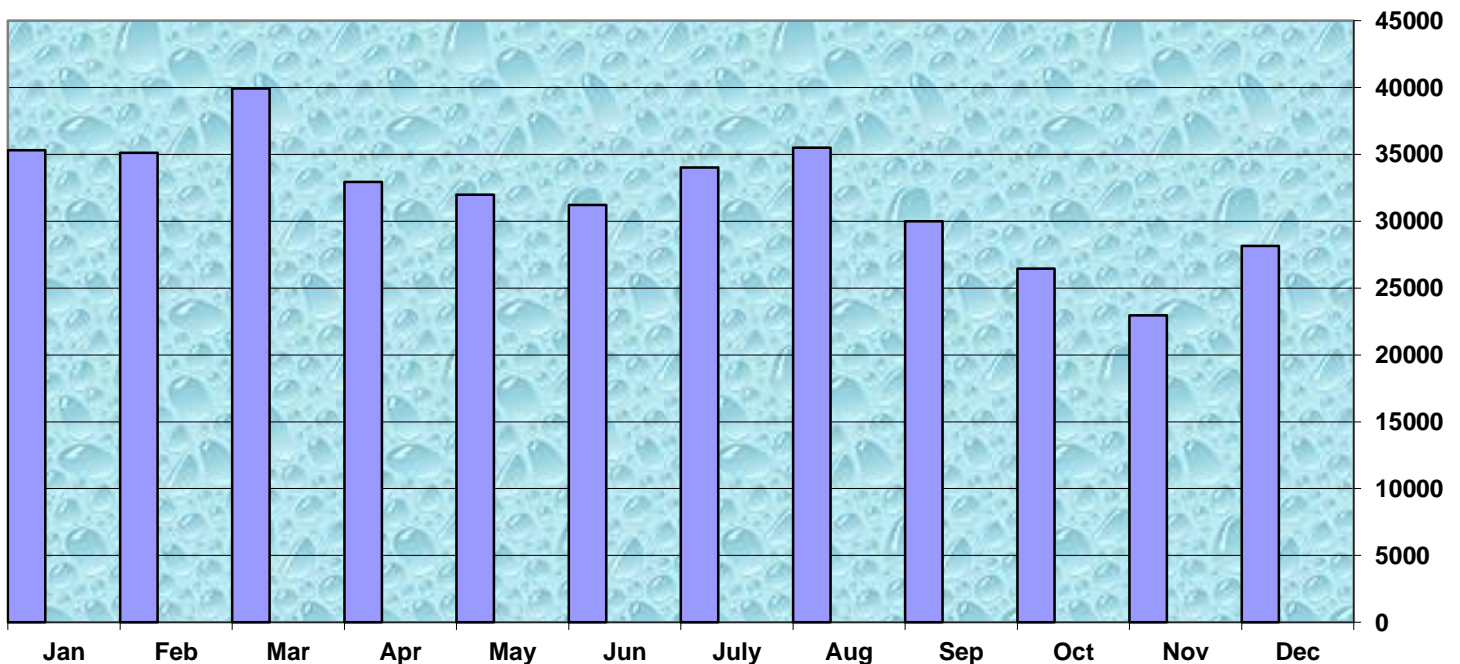
Compliance with Terms and Conditions of O. Reg. 170-03

Attached to this report is a summary of the water quality analysis results for the period January 1st to December 31st, 2021. Some parameters are only monitored on an annual basis.

All other parameters tested for under the tables of the ODWS for volatile organic, inorganic, pesticides showed no exceedences in this year.

In this report also, are results for the heterotrophic plate count taken on 25% of the distribution water samples. HPC is a method of measuring the aerobic bacterial content in water. Levels of bacteria detected by this test should not exceed 500 colonies per ml. of sample. HPC testing can be used to monitor disinfection efficiency at water treatment plants and to measure water quality deterioration in distribution systems and in reservoirs.

Water Consumption for 2021 (cubic meters)



System Upgrades

No new upgrades

Schedule 10 – Microbiological									
White River Wtp	MAC	Q1		Q2		Q3		Q4	
Date Sampled	-	2021		2021		2021		2021	
Source –Raw/Treated	-	R	T	R	T	R	T	R	T
Number of samples	-	13	13	11	11	13	13	12	12
Total Coliform	0	9	0	10	0	13	0	9	0
E. Coli	0	0	0	1	0	1	0	0	0
Fecal coliform	0	0	0	0	0	0	0	0	0
H.P.C. taken/# less than	<500	0	13	0	11	0	13	0	12

Distribution System	MAC	Q1		Q2		Q3		Q4	
Date Sampled	-	2021		2021		2021		2021	
Number of samples	-	26		22		26		24	
Total Coliform	0	0		0		0		0	
E. Coli	0	0		0		0		0	
Fecal coliform	0	0		0		0		0	
H.P.C. taken/# less than	<500	13		11		13		12	

Capacity Assessment – System									
Tukane Lake intake					Water Treatment Plant				
Month	Min	Max	Avg.	% of	Month	Min	Max	Avg.	% of
Rated Capacity m3/day				2,121	Rated Capacity m3/day				2,121
Jan - 21	984.2	1342.1	1175.8	55.4	Jan-21	969.3	1254.4	1139.1	53.7
Feb - 21	1091.8	1429	1264.8	59.6	Feb-21	1078.6	1419.4	1254.6	59.1
Mar - 21	118.77	1398.4	1229.2	57.9	Mar-21	983.1	1492	1287.7	60.7
Apr - 21	110.6	1323.6	1098.7	51.8	Apr-21	977.5	1292.9	1097.9	51.7
May -21	918.6	1211.7	1059.8	49.9	May-21	901.2	1164.4	1031.7	48.6
Jun - 21	929.3	1223.1	1056.6	49.8	Jun-21	911.0	2131	1040.8	49.1
Jul - 21	118.5	1296.6	1074.4	50.6	Jul-21	894.3	1303.1	1097.2	51.7
Aug - 21	904.9	1410.6	1165.6	54.9	Aug-21	886.9	1415.6	1145	53.9
Sep - 21	781.1	1362.1	1003.9	47.3	Sep-21	783.3	1366.3	1000.1	47.1
Oct - 21	648.5	1254.9	876.4	41.3	Oct-21	640.1	1187.3	853.6	40.2
Nov - 21	597.8	900.8	784.4	36.9	Nov-21	584.1	873.2	765.2	36.1
Dec - 21	714.3	1099.2	890.2	41.9	Dec-21	696.8	1074	871.2	41.1

Water Treatment Plant – Chemical Usage				
	<i>Raw Flow</i>	<i>Treated Flow</i>	<i>Chlorine</i>	<i>Cl. Dosage</i>
	<i>(cu.m.)</i>	<i>(cu.m.)</i>	<i>(l)</i>	<i>(mg./L)</i>
Jan – 21	36450	35313	1085	3.07
Feb – 21	35416	35128	1134	3.22
Mar – 21	38105	39919	1232	3.08
Apr – 21	32961	32936	1081	3.28
May – 21	32853	31981	939	2.93
Jun – 21	29934	30982	1165	3.76
Jul – 21	33306	34014	1064	3.12
Aug – 21	36133	35495	1140	3.21
Sep – 21	30116	30002	1065	3.54
Oct – 21	27169	26462	940	3.55
Nov – 21	23532	22955	716	3.11
Dec - 21	27598	27006	785	2.91

Schedule 7 – Operational Checks					
White River Wtp	MAC	Q1	Q2	Q3	Q4
<i>Date Sampled</i>	-	2021	2021	2021	2021
<i>Number of samples</i>	-	8760	8760	8760	8760
<i>Filter 1 Turbidity (ntu)– avg.</i>	1.00	0.096	0.083	0.052	0.048
<i>Filter 1 Turbidity (ntu) – min.</i>	1.00	0.070	0.080	0.040	0.037
<i>Filter 1 Turbidity (ntu) – max.</i>	1.00	0.130	0.090	0.080	0.082
<i>Filter 2 Turbidity (ntu)– avg.</i>	1.00	0.096	0.089	0.059	0.086
<i>Filter 2 Turbidity (ntu) – min.</i>	1.00	0.080	0.070	0.040	0.038
<i>Filter 2 Turbidity (ntu) – max.</i>	1.00	0.120	0.120	0.090	0.090
<i>Filter 3 Turbidity (ntu)– avg.</i>	1.00	0.096	0.091	0.096	0.095
<i>Filter 3 Turbidity (ntu) – min.</i>	1.00	0.070	0.070	0.060	0.043
<i>Filter 3 Turbidity (ntu) – max.</i>	1.00	0.120	0.120	0.110	0.120
<i>Filter 4 Turbidity (ntu)– avg.</i>	1.00	0.058	0.064	0.057	0.071
<i>Filter 4 Turbidity (ntu) – min.</i>	1.00	0.050	0.050	0.030	0.050
<i>Filter 4 Turbidity (ntu) – max.</i>	1.00	0.090	0.070	0.280	0.092
Indicates presence of particles in water due to treatment difficulties.					
<i>Number of samples</i>	-	8760	8760	8760	8760
<i>Free chlorine (mg/l) – avg.</i>	-	1.95	1.82	1.88	1.92
<i>Free chlorine (mg/l) – min.</i>	0.05	1.61	1.59	1.61	1.35
<i>Free chlorine (mg/l) – max.</i>	4.00	2.53	2.21	2.56	2.35
Free chlorine at discharge is used to maintain microbiological quality in the distribution system Samples taken from on-line continuous monitoring chlorine & turbidity analyzer's					

Schedule 7 – Operational Checks 2018						
Distribution System Reservoir	<i>MAC</i>	<i>Q1</i>	<i>Q2</i>	<i>Q3</i>	<i>Q4</i>	
<i>Date Sampled</i>	-	2021	2021	2021	2021	
<i>Number of samples</i>	-	8760	8760	8760	8760	
<i>Free chlorine (mg/l) – avg.</i>		0.89	0.60	0.72	0.89	
<i>Free chlorine (mg/l) – min.</i>	0.05	0.36	0.34	0.29	0.23	
<i>Free chlorine (mg/l) – max.</i>	4.00	1.56	0.82	1.39	1.30	
<i>Free chlorine in the distribution system is used to maintain microbiological quality. Samples taken from on-line continuous monitoring chlorine & turbidity analyzer's</i>						

Schedule 23 - Inorganic Parameters						
White River Wtp	<i>dl</i>	<i>MAC</i>	<i>Q1</i>	<i>Q2</i>	<i>Q3</i>	<i>Q4</i>
<i>Date Sampled</i>	mg/l	mg/l	Mar. 08-21	July 23-21	Oct. 04-21	Dec. 17-21
<i>Antimony</i>	0.001	0.006	<0.0006	-	-	-
<i>Arsenic</i>	0.001	0.01	<0.001	-	-	-
<i>Barium</i>	0.01	1.0	<0.01	-	-	-
<i>Boron</i>	0.05	5.0	<0.050	-	-	-
<i>Cadmium</i>	0.0001	0.005	<0.0001	-	-	-
<i>Chromium</i>	0.001	0.05	<0.001	-	-	-
<i>Fluoride</i>	0.03	1.5	<0.025	-	-	-
<i>Mercury</i>	0.0001	0.001	<0.0001	-	-	-
<i>Nitrite (quarterly)</i>	0.01	1.0	<0.01	<0.01	<0.01	<0.01
<i>Nitrate (quarterly)</i>	0.088	10.0	0.078	0.112	0.044	0.074
<i>Sodium</i>	0.005	200	3.04	-	-	-
<i>Selenium</i>	0.005	0.01	<0.005	-	-	-
<i>Uranium</i>	0.005	0.02	<0.005	-	-	-
<i>Total THM's</i>	0.002	0.100	0.0912	0.0619	0.0382	0.047
<i>Total HAA's</i>	0.002	0.080	0.0934	0.0815	0.0340	0.0363

Schedule 24 – Volatile Organic						
White River Wtp	<i>dl</i>	<i>MAC</i>	<i>Q1</i>	<i>Q2</i>	<i>Q3</i>	<i>Q4</i>
<i>Date Sampled</i>	mg/l	mg/l	Mar. 08-21	-	-	-
<i>Benzene</i>	0.0005	0.005	<0.0005	-	-	-
<i>Carbon Tetrachloride</i>	0.0002	0.002	<0.0002	-	-	-
<i>1,2-Dichlorobenzene</i>	0.0005	0.2	<0.0005	-	-	-
<i>1,4-Dichlorobenzene</i>	0.0005	0.005	<0.0005	-	-	-
<i>1,2-Dichloroethane</i>	0.0005	0.005	<0.0005	-	-	-
<i>1,1-Dichloroethylene</i>	0.0005	0.014	<0.0005	-	-	-
<i>Dichloromethane</i>	0.0005	0.05	<0.0005	-	-	-
<i>Monochlorobenzene</i>	0.0005	0.08	<0.0005	-	-	-
<i>Tetrachloroethylene</i>	0.0005	0.03	<0.0005	-	-	-
<i>Trichloroethylene</i>	0.0005	0.05	<0.0005	-	-	-
<i>Vinyl chloride</i>	0.0002	0.002	<0.0002	-	-	-

Schedule 24 – Organic Parameters						
White River Wtp	<i>dl</i>	<i>MAC</i>	<i>Q1</i>	<i>Q2</i>	<i>Q3</i>	<i>Q4</i>
<i>Date Sampled</i>	mg/l	mg/l	Mar. 08-21	-	-	-
<i>Alachlor</i>	0.0001	0.005	<0.0001	-	-	-
				-	-	-
				-	-	-
<i>Atrazine</i>	0.0001	0.005	<0.0001	-	-	-
<i>Azinphos-methyl</i>	0.0001	0.02	<0.0001	-	-	-
				-	-	-
				-	-	-
<i>Bromoxynil</i>	0.0002	0.005	<0.0002	-	-	-
<i>Carbaryl</i>	0.0002	0.09	<0.0002	-	-	-
<i>Carbofuran</i>	0.0002	0.09	<0.0002	-	-	-
				-	-	-
<i>Chlorpyrifos</i>	0.0001	0.09	<0.0001	-	-	-
				-	-	-
<i>Diazinon</i>	0.0001	0.02	<0.0001	-	-	-
<i>Dicamba</i>	0.0002	0.12	<0.0002	-	-	-
<i>2,4-Dichlorophenol</i>	0.0005	0.9	<0.0003	-	-	-
<i>DDT</i>	0.0004	0.03	<0.0004	-	-	-
<i>2,4-D</i>	0.0002	0.1	<0.0002	-	-	-
<i>Diclofop-methyl</i>	0.0002	0.009	<0.0002	-	-	-
<i>Dimethoate</i>	0.0001	0.02	<0.0001	-	-	-
<i>Dinoseb</i>	0.0002	0.01	<0.0002	-	-	-
<i>Diquat</i>	0.001	0.07	<0.001	-	-	-
<i>Diuron</i>	0.010	0.15	<0.001	-	-	-
<i>Glyphosate</i>	0.010	0.28	<0.005	-	-	-
				-	-	-
				-	-	-
<i>Lindane (Total)</i>	0.0001	0.004	<0.0001	-	-	-
<i>Malathion</i>	0.0001	0.19	<0.0001	-	-	-
<i>Methoxychlor</i>	0.0001	0.9	<0.0001	-	-	-
<i>Metolachlor</i>	0.0001	0.05	<0.0001	-	-	-
<i>Metribuzin</i>	0.0001	0.08	<0.0001	-	-	-
<i>Paraquat</i>	0.001	0.01	<0.001	-	-	-
<i>Parathion</i>	0.0001	0.05	<0.0001	-	-	-
<i>Pentachlorophenol</i>	0.0005	0.06	<0.0005	-	-	-
<i>Phorate</i>	0.0001	0.002	<0.0001	-	-	-
<i>Picloram</i>	0.0002	0.19	<0.0002	-	-	-
<i>PCB</i>	0.00002	0.003	<0.000035	-	-	-
<i>Prometryne</i>	0.0001	0.001	<0.0001	-	-	-
<i>Simazine</i>	0.0001	0.01	<0.0001	-	-	-
<i>Temephos</i>	0.0001	0.28	<0.0001	-	-	-
<i>Terbufos</i>	0.0002	0.001	<0.0002	-	-	-
<i>2,3,4,6-Tetrachlorophenol</i>	0.0005	0.1	<0.0005	-	-	-
<i>Triallate</i>	0.0001	0.23	<0.0001	-	-	-
<i>2,4,6-Trichlorophenol</i>	0.0005	0.005	<0.0005	-	-	-
<i>Trifluralin</i>	0.0001	0.045	<0.0001	-	-	-
<i>2,4,5-T</i>	0.0002	0.28	<0.0002	-	-	-

**Note: Units expressed in mg/L.*

**Summary of Lead Testing as per O. Reg. 170/03 - Schedule 15.1
During This Reporting Period 2021**

Location Type	Number of Samples	Range of Lead Results (min #) - (max #)	Number of Exceedances
Plumbing	2	<1.0 mg/l – 17mg/l	0
Distribution	5	<1.0 mg/l - 1.0 mg/l	0

Non-compliance with Regulatory Requirements and Actions Required

On December 16th 2021 Stephen Rouleau conducted an inspection. The inspection report was received. There were no Non-compliance issues reported in the above noted inspection.

Dated: February 23th 2022

Craig Sanders

Township of White River