



Township of White River Annual Summary Report

2022



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ANNUAL REPORT 2022

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 2022

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 2022*
- ◆ *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. White River Forest Products, C.P. Rail and Silver Lake Resources are the main industry that are 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.

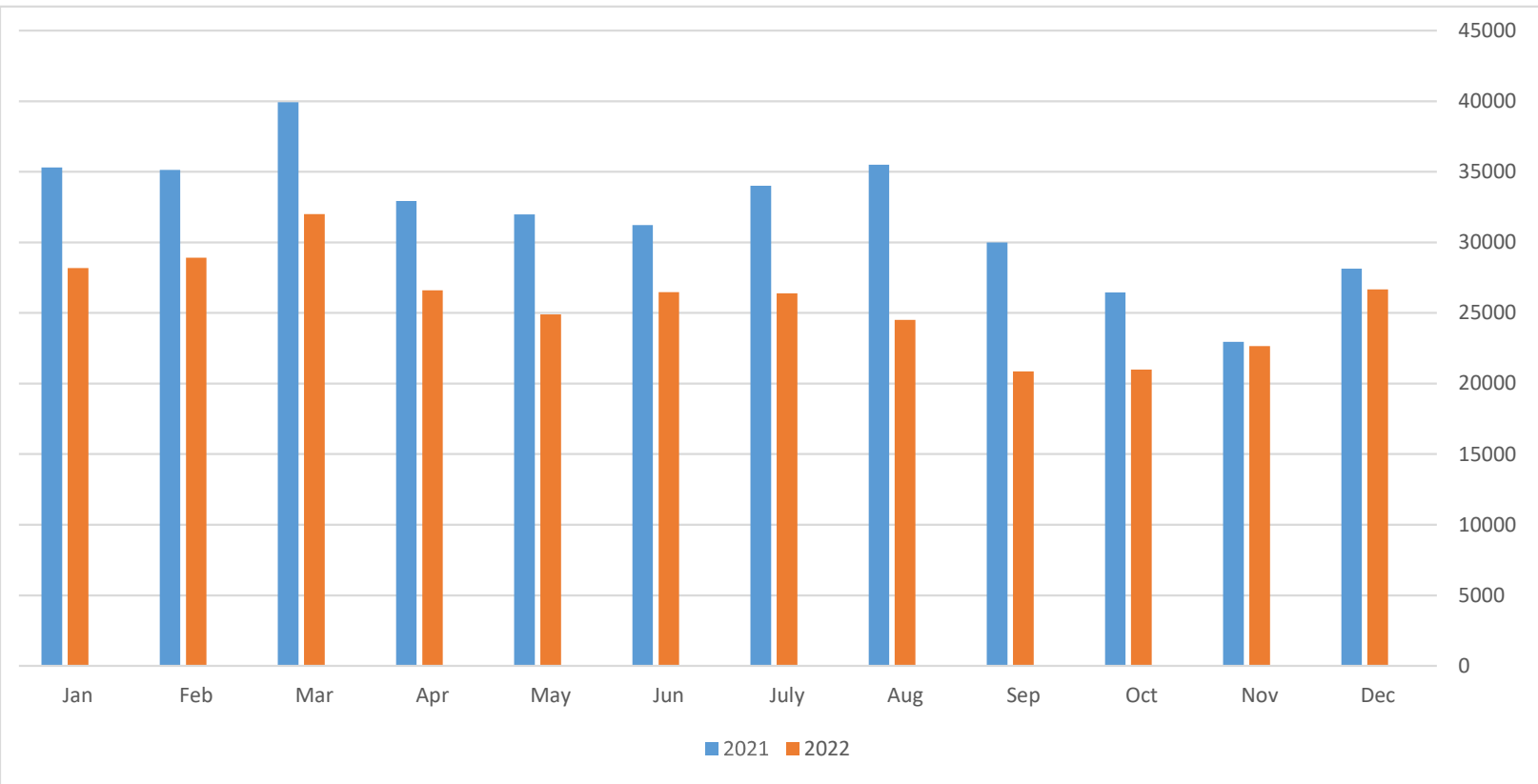
Compliance with Terms and Conditions of O. Reg. 170-03

Attached to this report is a summary of the water quality analysis results for the period January 1st to December 31st, 2022. 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 2022 (cubic meters)



System Upgrades

No new upgrades

Schedule 10 – Microbiological									
White River WTP	MAC	Q1		Q2		Q3		Q4	
Date Sampled	-	2022		2022		2022		2022	
Source –Raw/Treated	-	R	T	R	T	R	T	R	T
Number of samples	-	12	12	13	13	12	12	13	13
Total Coliform	0	3	0	9	0	10	0	7	0
E. Coli	0	0	0	0	0	3	0	0	0
Fecal coliform	0	0	0	0	0	0	0	0	0
H.P.C. taken/# less than	<500	0	12	0	13	0	12	0	13

Distribution System	MAC	Q1		Q2		Q3		Q4	
Date Sampled	-	2022		2022		2022		2022	
Number of samples	-	24		26		24		26	
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	12		13		12		13	

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 - 22	862	1160	993	47	Jan-22	837	1141	974	46
Feb - 22	892	1178	1039	49	Feb-22	861	1143	1001	47
Mar - 22	804	1192	1043	58	Mar-22	794	1189	1032	49
Apr - 22	746	1001	902	43	Apr-22	730	994	887	42
May -22	679	977	822	39	May-22	664	950	803	38
Jun - 22	706	1195	900	42	Jun-22	690	1174	883	42
Jul - 22	660	1016	867	41	Jul-22	646	995	852	40
Aug - 22	543	964	809	38	Aug-22	537	903	790	37
Sep - 22	526	909	712	34	Sep-22	516	875	695	33
Oct - 22	526	864	877	41	Oct-22	524	836	674	32
Nov - 22	643	965	777	37	Nov-22	628	934	755	36
Dec - 22	729	1072	873	41	Dec-22	719	1007	860	41

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 – 22	30796	30188	900	2.98
Feb – 22	29080	28039	931	3.32
Mar – 22	32317	32003	939	2.93
Apr – 22	27068	26602	801	3.01
May – 22	25479	24893	835	3.35
Jun – 22	27001	26476	1013	3.83
Jul – 22	26887	26397	915	3.46
Aug – 22	25071	24499	898	3.66
Sep – 22	21362	20856	822	3.91
Oct – 22	21597	20982	726	3.46
Nov – 22	23305	22652	817	3.60
Dec - 22	27071	26672	990	3.71

Schedule 7 – Operational Checks					
White River Wtp	MAC	Q1	Q2	Q3	Q4
<i>Date Sampled</i>	-	2022	2022	2022	2022
<i>Number of samples</i>	-	8760	8760	8760	8760
<i>Filter 1 Turbidity (ntu)– avg.</i>	1.00	0.032	0.044	0.077	0.052
<i>Filter 1 Turbidity (ntu) – min.</i>	1.00	0.026	0.028	0.033	0.031
<i>Filter 1 Turbidity (ntu) – max.</i>	1.00	0.038	0.060	0.121	0.074
<i>Filter 2 Turbidity (ntu)– avg.</i>	1.00	0.041	0.056	0.068	0.063
<i>Filter 2 Turbidity (ntu) – min.</i>	1.00	0.031	0.032	0.046	0.041
<i>Filter 2 Turbidity (ntu) – max.</i>	1.00	0.051	0.080	0.091	0.086
<i>Filter 3 Turbidity (ntu)– avg.</i>	1.00	0.045	0.049	0.096	0.059
<i>Filter 3 Turbidity (ntu) – min.</i>	1.00	0.031	0.037	0.034	0.028
<i>Filter 3 Turbidity (ntu) – max.</i>	1.00	0.059	0.061	0.106	0.090
<i>Filter 4 Turbidity (ntu)– avg.</i>	1.00	0.034	0.030	0.083	0.081
<i>Filter 4 Turbidity (ntu) – min.</i>	1.00	0.022	0.010	0.036	0.036
<i>Filter 4 Turbidity (ntu) – max.</i>	1.00	0.046	0.050	0.131	0.126
<i>Indicates presence of particles in water due to treatment difficulties.</i>					
<i>Number of samples</i>	-	8760	8760	8760	8760
<i>Free chlorine (mg/l) – avg.</i>	-	1.95	1.91	1.93	2.06
<i>Free chlorine (mg/l) – min.</i>	0.05	1.63	1.44	1.41	1.34
<i>Free chlorine (mg/l) – max.</i>	4.00	2.27	2.38	2.43	2.79
<i>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</i>					

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>	-	2022	2022	2022	2022
<i>Number of samples</i>	-	8760	8760	8760	8760
<i>Free chlorine (mg/l) – avg.</i>		0.95	0.98	0.77	0.73
<i>Free chlorine (mg/l) – min.</i>	0.05	0.38	0.47	0.34	0.28
<i>Free chlorine (mg/l) – max.</i>	4.00	1.52	1.49	1.20	1.17
<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. 30-22	July 31-22	Oct. 19-22	Dec. 30-22
<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	0.082	0.100	0.056	0.080
<i>Sodium</i>	0.005	200	3.04	-	-	-
<i>Selenium</i>	0.005	0.01	<0.001	-	-	-
<i>Uranium</i>	0.005	0.02	<0.002	-	-	-
<i>Total THM's</i>	0.002	0.100	0.0399	0.0783	0.0632	0.0727
<i>Total HAA's</i>	0.002	0.080	0.0504	0.089	0.0736	0.0886

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. 30-22	-	-	-
<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	<0.005	-	-	-
<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. 30-22	-	-	-
<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 2022**

Location Type	Number of Samples	Range of Lead Results (min #) - (max #)	Number of Exceedances
Plumbing	4	<1.0 mg/l – 7mg/l	0
Distribution	4	<1.0 mg/l - 15 mg/l	1

Non-compliance with Regulatory Requirements and Actions Required

On December 13th 2022 Stephen Rouleau conducted an inspection. The inspection report has not been received.

Dated: February 17th 2023

Craig Sanders

Township of White River