Township of White River

Annual Summary Report

2024

TABLE OF CONTENTS

ANNUAL REPORT 2024

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 2024

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 [x]

Is your annual report available to the public at no charge on a web site on the Internet?
Yes [x] 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 [x]

Indicate how you notified system users that your annual report is available, and is free of charge.
[x] Public access/notice via the web
[x] Public access/notice via Government Office
[ ] Public access/notice via a newspaper
[x] Public access/notice via Public Request
[x] 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 2024*
- *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.

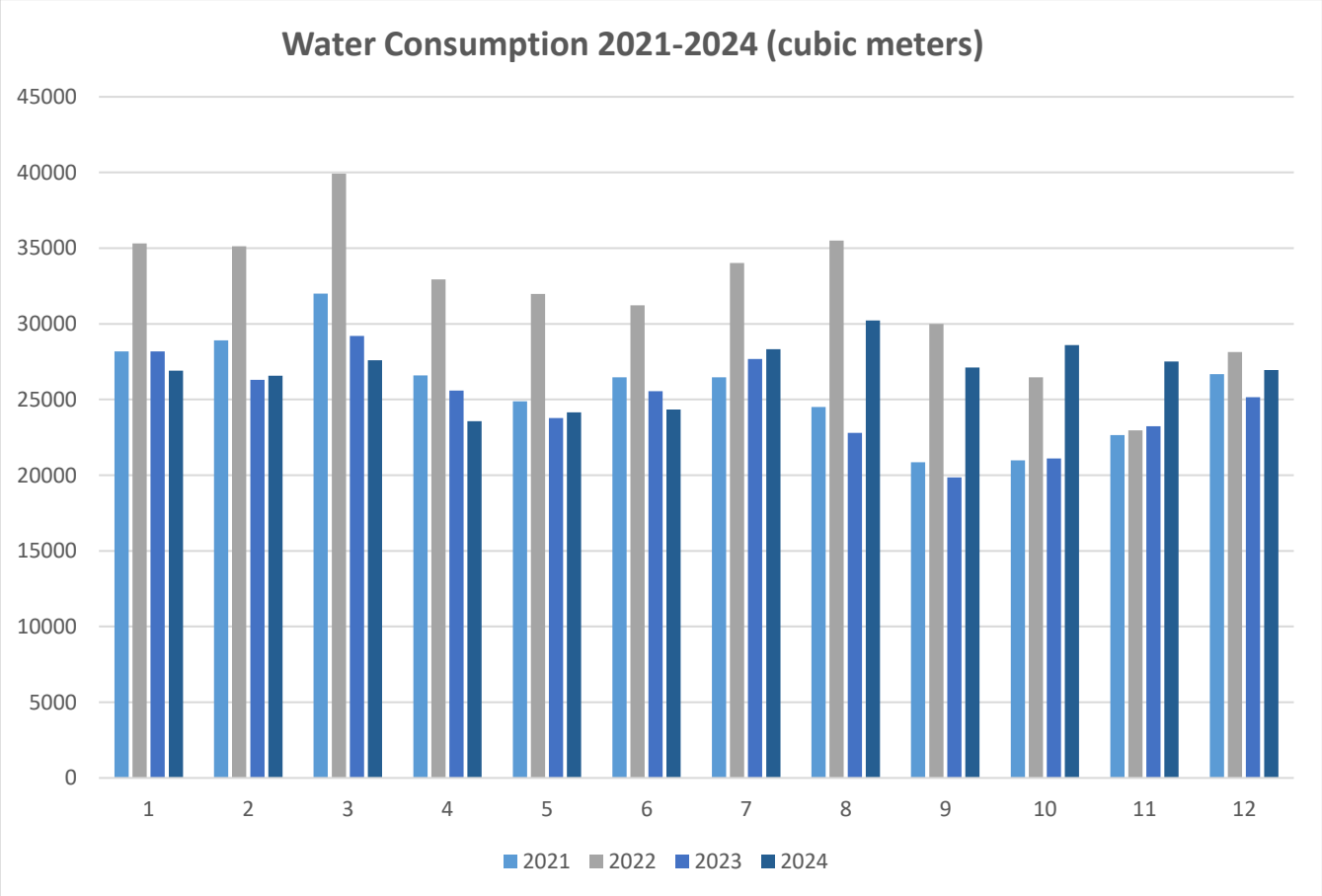
Tukanee Lake is located 6 kilometers northwest of the Town of White River. The lake is approximately 3.5 km long and 2.2 km at its widest point. The water intake is located in 5 meters of water, 25 meters from shore. The shoreline and bottom of the lake are rocky. The lake is used primarily for recreational 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, 2024. 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.



System Upgrades

- 5 new turbidity analyzers were installed at the Water Treatment Plant
- 2 new chlorine analyzers were installed at the Water Treatment Plant and Reservoir
- New ozone system was installed at the Water Treatment Plant
- 2 new fire hydrants were installed in the distribution system

Schedule 10 – Microbiological									
White River WTP	***MAC***	***Q1***		***Q2***		***Q3***		***Q4***	
Date Sampled	-	2024		2024		2024		2024	
Source –Raw/Treated	-	R	T	R	T	R	T	R	T
Number of samples	-	13	13	13	13	13	13	12	12
Total Coliform	0	3	0	6	0	14	0	12	0
E. Coli	0	0	0	1	0	2	0	1	0
Fecal coliform	0	0	0	0	0	0	0	0	0
H.P.C. taken/# less than	<500	0	13	0	13	0	13	0	12

Distribution System	***MAC***	***Q1***	***Q2***	***Q3***	***Q4***
Date Sampled	-	2024	2024	2024	2024
Number of samples	-	24	26	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	12	13	13	12

Capacity Assessment – System									
Tukanee 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 - 24	756	1053	906	43	Jan-24	738	999	868	41
Feb - 24	792	1044	964	45	Feb-24	766	984	916	43
Mar - 24	758	1136	952	45	Mar-24	739	1048	890	42
Apr - 24	735	876	803	39	Apr-24	715	886	785	37
May -24	451	1037	800	38	May-24	442	1012	779	37
Jun - 24	694	999	826	39	Jun-24	683	980	812	38
Jul - 24	757	1074	930	44	Jul-24	744	1046	914	43
Aug - 24	746	1215	1032	49	Aug-24	749	1168	975	55
Sep - 24	606	1194	962	45	Sep-24	586	1115	904	43
Oct - 24	713	1169	976	46	Oct-24	654	1072	923	44
Nov - 24	978	1214	1086	51	Nov-24	794	1069	917	43
Dec - 24	785	1085	946	45	Dec-24	747	971	869	41

Water Treatment Plant – Chemical Usage				
	Raw Flow	*Treated Flow*	*Chlorine*	*Cl. Dosage*
	(cu.m.)	*(cu.m.)*	*(l)*	*(mg./L)*
Jan – 24	28077	26901	776	2.88
Feb – 24	27954	26579	862	3.24
Mar – 24	29518	27603	830	3.01
Apr – 24	24101	23564	798	3.38
May – 24	24804	24157	747	3.09
Jun – 24	24786	24347	902	3.70
Jul – 24	28824	28328	899	3.17
Aug – 24	32005	30235	944	3.12
Sep – 24	28873	27112	847	3.12
Oct – 24	30246	28607	863	3.02
Nov – 24	32573	27507	906	3.29
Dec - 24	29341	26947	933	3.46

Schedule 7 – Operational Checks					
White River Wtp	***MAC***	***Q1***	***Q2***	***Q3***	***Q4***
Date Sampled	-	2024	2024	2024	2024
Number of samples	-	8760	8760	8760	8760
Filter 1 Turbidity (ntu)– avg.	1.00	0.038	0.054	0.069	0.068
Filter 1 Turbidity (ntu) – min.	1.00	0.030	0.021	0.025	0.025
Filter 1 Turbidity (ntu) – max.	1.00	0.048	0.092	0.158	0.123
Filter 2 Turbidity (ntu)– avg.	1.00	0.079	0.065	0.074	0.083
Filter 2 Turbidity (ntu) – min.	1.00	0.069	0.039	0.060	0.051
Filter 2 Turbidity (ntu) – max.	1.00	0.111	0.112	0.144	0.980
Filter 3 Turbidity (ntu)– avg.	1.00	0.045	0.056	0.079	0.079
Filter 3 Turbidity (ntu) – min.	1.00	0.039	0.021	0.060	0.050
Filter 3 Turbidity (ntu) – max.	1.00	0.059	0.088	0.194	0.164
Filter 4 Turbidity (ntu)– avg.	1.00	0.068	0.066	0.076	0.081
Filter 4 Turbidity (ntu) – min.	1.00	0.052	0.060	0.062	0.062
Filter 4 Turbidity (ntu) – max.	1.00	0.102	0.093	0.252	0.155
Indicates presence of particles in water due to treatment difficulties.					
Number of samples	-	8760	8760	8760	8760
Free chlorine (mg/l) – avg.	-	1.90	1.87	1.92	1.99
Free chlorine (mg/l) – min.	0.05	1.49	1.49	1.34	1.55
Free chlorine (mg/l) – max.	4.00	2.18	2.20	2.64	2.37
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	***MAC***	***Q1***	***Q2***	***Q3***	***Q4***
Date Sampled	-	2024	2024	2024	2024
Number of samples	-	8760	8760	8760	8760
Free chlorine (mg/l) – avg.	-	0.81	0.71	0.70	0.77
Free chlorine (mg/l) – min.	0.05	0.43	0.27	0.18	0.42
Free chlorine (mg/l) – max.	4.00	1.32	1.30	1.29	1.68
Free chlorine in the distribution system is used to maintain microbiological quality. Samples taken from on-line continuous monitoring chlorine & turbidity analyzer's					

Schedule 23 - Inorganic Parameters						
White River Wtp	***dl***	***MAC***	***Q1***	***Q2***	***Q3***	***Q4***
Date Sampled	mg/l	mg/l	Apr. 09-24	July 19-24	Oct. 02-24	Dec. 20-24
Antimony	0.001	0.006	-	-	<0.0006	-
Arsenic	0.001	0.01	-	-	<0.001	-
Barium	0.01	1.0	-	-	<0.01	-
Boron	0.05	5.0	-	-	<0.050	-
Cadmium	0.0001	0.005	-	-	<0.0001	-
Chromium	0.001	0.05	-	-	<0.001	-
Fluoride	0.03	1.5	-	-	<0.025	-
Mercury	0.0001	0.001	-	-	<0.0001	-
Nitrite (quarterly)	0.01	1.0	<0.01	<0.01	<0.01	<0.01
Nitrate (quarterly)	0.088	10.0	0.099	0.132	0.046	0.057
Sodium	0.005	200	-	-	3.04	-
Selenium	0.005	0.01	-	-	<0.001	-
Uranium	0.005	0.02	-	-	<0.002	-
Total THM's	0.002	0.100	0.0340	0.0690	0.0455	0.0373
Total HAA's	0.002	0.080	0.0396	0.0741	0.0639	0.0922

Schedule 24 – Volatile Organic						
White River Wtp	***dl***	***MAC***	***Q1***	***Q2***	***Q3***	***Q4***
Date Sampled	mg/l	mg/l	-		Oct. 02-24	-
Benzene	0.0005	0.005	-		<0.0005	-
Carbon Tetrachloride	0.0002	0.002	-		<0.0002	-
1,2-Dichlorobenzene	0.0005	0.2	-		<0.0005	-
1,4-Dichlorobenzene	0.0005	0.005	-		<0.0005	-
1,2-Dichlorethane	0.0005	0.005	-		<0.0005	-
1,1-Dichloroethylene	0.0005	0.014	-		<0.0005	-
Dichloromethane	0.0001	0.05	-		<0.001	-
Monochlorobenzene	0.0005	0.08	-		<0.0005	-
Tetrachloroethylene	0.0005	0.010	-		<0.0005	-
Trichlorethylene	0.0005	0.05	-		<0.0005	-
Vinyl chloride	0.0005	0.001	-		<0.0005	-

Schedule 24 – Organic Parameters						
White River Wtp	***dl***	***MAC***	***Q1***	***Q2***	***Q3***	***Q4***
Date Sampled	mg/l	mg/l	-	-	Oct. 02-24	-
Alachlor	0.0005	0.005	-	-	<0.0005	-
	-	-	-	-	-	-
	-	-	-	-	-	-
Atrazine	0.0001	0.001	-	-	<0.0001	-
Azinphos-methyl	0.0001	0.02	-	-	<0.0001	-
	-	-	-	-	-	-
	-	-	-	-	-	-
Bromoxynil	0.0002	0.005	-	-	<0.00025	-
Carbaryl	0.0005	0.09	-	-	<0.0005	-
Carbofuran	0.00025	0.09	-	-	<0.00025	-
	-	-	-	-	-	-
Chlorpyrifos	0.0001	0.09	-	-	<0.0001	-
	-	-	-	-	-	-
Diazinon	0.00025	0.02	-	-	<0.00025	-
Dicamba	0.0001	0.12	-	-	<0.0001	-
2,4-Dichlorophenol	0.0002	0.9	-	-	<0.0002	-
DDT	0.0004	0.03	-	-	<0.0004	-
2,4-D	0.0002	0.1	-	-	<0.0002	-
Diclofop-methyl	0.0001	0.009	-	-	<0.0001	-
Dimethoate	0.0005	0.02	-	-	<0.0005	-
Dinoseb	0.0002	0.01	-	-	<0.0002	-
Diquat	0.001	0.07	-	-	<0.001	-
Diuron	0.005	0.15	-	-	<0.005	-
Glyphosate	0.0020	0.28	-	-	<0.0020	-
	-	-	-	-	-	-
	-	-	-	-	-	-
Lindane (Total)	0.0001	0.004	-	-	<0.0001	-
Malathion	0.00025	0.19	-	-	<0.00025	-
Methoxychlor	0.0001	0.9	-	-	<0.0001	-
Metolachlor	0.00025	0.05	-	-	<0.00025	-
Metribuzin	0.0001	0.08	-	-	<0.0001	-
Paraquat	0.001	0.01	-	-	<0.0001	-
Parathion	0.0001	0.05	-	-	<0.0001	-
Pentachlorophenol	0.0005	0.06	-	-	<0.0005	-
Phorate	0.00025	0.002	-	-	<0.00025	-
Picloram	0.0001	0.19	-	-	<0.0005	-
PCB	0.00003	0.003	-	-	<0.00003	-
Prometryne	0.00025	0.001	-	-	<0.00025	-
Simazine	0.0001	0.01	-	-	<0.0001	-
Temephos	0.0001	0.28	-	-	<0.0001	-
Terbufos	0.0005	0.001	-	-	<0.0005	-
2,3,4,6-Tetrachlorophenol	0.0005	0.1	-	-	<0.0005	-
Triallate	0.0001	0.23	-	-	<0.0001	-
2,4,6-Trichlorphenol	0.00052	0.005	-	-	<0.0002	-
Trifluralin	0.0001	0.045	-	-	<0.0001	-
2,4,5-T	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 2024

Location Type	Number of Samples	Range of Lead Results (min #) - (max #)	Number of Exceedances
Plumbing	10	<1.0 mg/l – 60mg/l	1
Distribution	4	<1.0 mg/l – 2 mg/l	0

Non-compliance with Regulatory Requirements and Actions Required

On November 07th 2023 Kristy Mitchell conducted and inspection. The report was received on March 22, 2024 with no non-compliances or actions required.

Dated: February 25th 2025

Craig Sanders

Township of White River