

Nairn Centre Water Treatment

Large Municipal Residential Drinking Water System

January 1, 2022 – December 31, 2022

*Reg 170/03 Schedule 22 Summary Report
Reg 170/03 Section 11 Annual Report
&
Reg 387/04 Annual Record of Water Taking*

Prepared by the Ontario Clean Water Agency
For The Corporation of the Township of Nairn and Hyman



Ontario Clean Water Agency
Agence Ontarienne Des Eaux



Drinking-Water System Number: 210002138
Drinking-Water System Name: Nairn Centre Drinking Water System
Drinking-Water System Owner: The Corp. of the Township of Nairn and Hyman
Drinking-Water System Category: Large Municipal Residential

SECTION 1: INTRODUCTION

This document is prepared in accordance with Section 11 and Schedule 22 of O.Reg.170/03 under the Safe Drinking Water Act and with Section 9 of O.Reg.387/04 under the Ontario Water Resources Act. The reports are prepared by the Ontario Clean Water Agency. Acronyms and definitions can be found at the end of the report.

A copy of the Summary Report must be provided to the members of the municipal council by March 31, [2023](#).

SECTION 2: REQUIREMENTS OF THE REPORTS

Schedule 22 Report

The report must list the requirements of the Act, the regulations, the system's approval and any order that the system **failed to meet** at any time during the period covered by the report. It must also specify the duration of the failure, and for each failure referred to, describe the measures that were taken to correct the failure.

For the purpose of enabling the owner of the system to assess the rated capability of their system to meet existing and future planned water uses, the following information is required to be included in this report:

- A summary of the quantities and flow rates of the water supplied during the period covered by the report, including monthly average and maximum daily flows.
- A comparison of the summary to the rated capacity and flow rates approved in the systems approval.

Section 11 Report

The annual report must contain the following:

- A brief description of the drinking water system and a list of chemicals used by the system.
- A description of any major expenses incurred during the period covered by the report to install, repair or replace required equipment.
- A summary of all adverse water quality incidents (AWQI) reported to the Ministry
- A summary of corrective actions taken in response all AWQIs
- A summary of all test results required under the regulation, under an approval, municipal drinking water licence or order, including an OWRA order.
- A statement of where a Schedule 22 report will be available for inspection.

The report must be prepared not later than February 28 of the following year.

Regulation 387 Report

On or before March 31 in every year, every holder of a permit to take water (PTTW) shall submit to a Director the data collected and recorded for the previous year.

A record of annual water taking can be found in [Appendix A](#).



SECTION 3: SCHEDULE 22 REPORT

Flows - Treated

In accordance with the Municipal Drinking Water License (MDWL), the Nairn Centre WTP shall not be operated to exceed a maximum flow of 818 m³/d to the distribution system.

The daily treated water maximum flow was 276.9 m³/d in July and represents 34% of capacity. In 2022, the total volume of water sent to the distribution system was 45,836.4 m³

The quantity of treated water supplied during the reporting period **did not** exceed the rated maximum capacity.

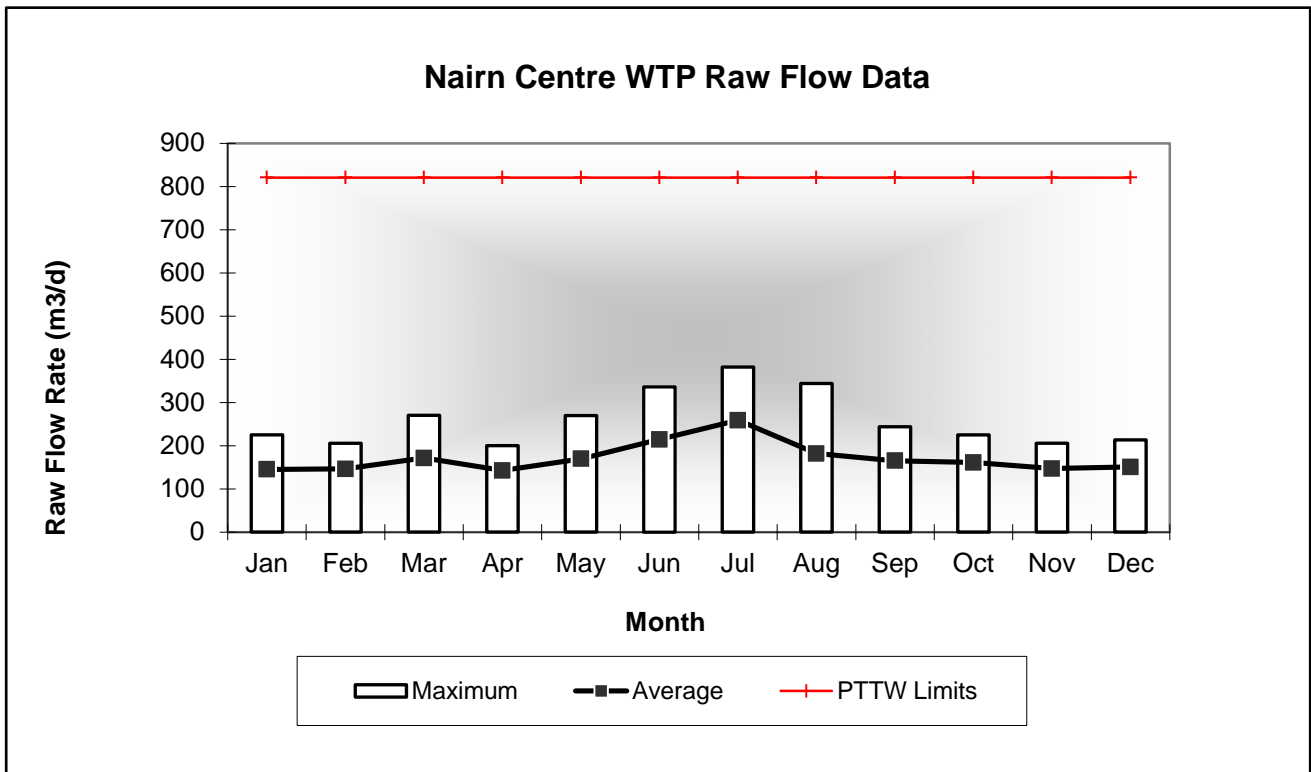
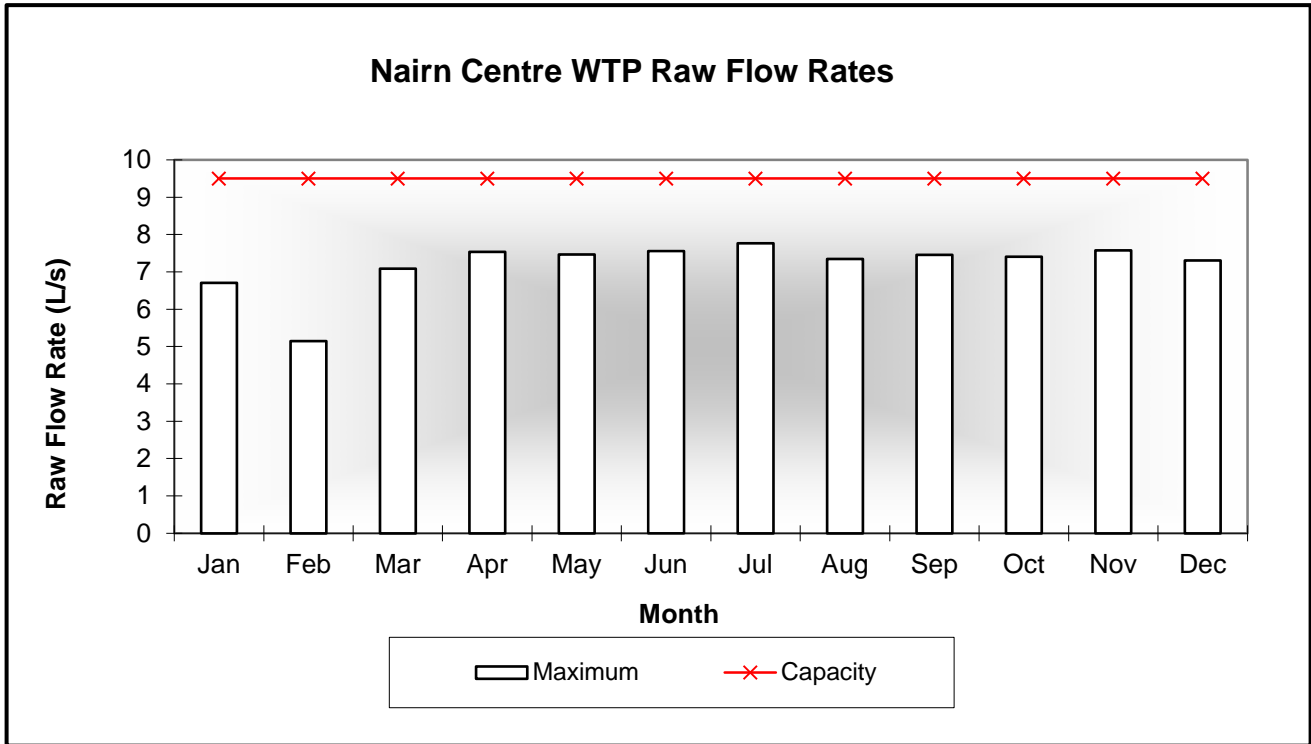
Flows - Raw

Daily raw maximum instantaneous flow is stated in the PTTW at a maximum rate of flow of 9.5 L/s and a maximum daily volume of 820.8 m³/d.

The average monthly raw water flow for this reporting period was 171.4 m³/d. The maximum daily flow was 381.9 m³/d representing 46.5% of water taking limits. In 2022, the total volume of water taken from the environment was 62,573.8 m³

The quantity of raw water taken **did not** exceed the limits stipulated within the PTTW..

<i>RAW WATER FLOW DATA - TOTAL ALL SOURCES</i>						
Month	Total Monthly Flow (m ³)	Average Flow (m ³ /d)	Maximum Flow (m ³ /d)	Maximum Flow Rate (L/s)	Limits	
					L/s (PTTW)	m ³ /d (PTTW)
January	4,498.8	145.12	225	6.71	9.5	820.8
February	4,098.1	146.36	205.5	5.15	9.5	820.8
March	5,319.9	171.61	270.2	7.09	9.5	820.8
April	4,280.1	142.67	200	7.54	9.5	820.8
May	5,262.3	169.75	269.6	7.47	9.5	820.8
June	6,431	214.37	336.1	7.56	9.5	820.8
July	8,023.2	258.81	381.9	7.77	9.5	820.8
August	5,633	181.71	343.9	7.35	9.5	820.8
September	4,956.4	165.21	243.7	7.46	9.5	820.8
October	4,990.2	160.97	224.9	7.41	9.5	820.8
November	4,413.8	147.13	205.6	7.58	9.5	820.8
December	4,667	150.55	213.3	7.31	9.5	820.8
Total	62,573.8					
Average		171.44				
Maximum			381.9	7.77	9.5	820.8





Annual Raw Water Review

Raw Water Taking	Total Taking m3/d	Average Day m3/d	Max Day m3/d	Max Day % of PTTW allowable 820.8 m3/d
2022	62,573.8	171.44	381.9	46.5%
2021	66,844.2	183.13	472.6	58%
2020	67,617.5	184.75	456.6	56%
2019	80,733.4	221.19	481.9	59%

System Failures and Corrective Actions

The latest inspection of the drinking water facility took place on [September 12, 2022](#). The facility scored [0/490](#) providing a rating of [100%](#).

AWQIs reported to the Ministry					
Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
n/a	n/a	n/a	n/a	n/a	n/a

SECTION 4: SECTION 11 REPORT

Information to be provided

Population Served	477 (Stats Canada – 2011)
Does your Drinking-Water System serve more than 10,000 people?	No
Is your annual report available to the public at no charge on a web site on the Internet?	Yes
Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.	Township of Nairn and Hyman, Municipal Office 64 McIntyre Street Nairn Centre, Ontario P0M 2L0
Number of Designated Facilities served:	0
Did you provide a copy of your annual report to all Designated Facilities you serve?	NA
Number of Interested Authorities you report to:	0
Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility?	NA
List all Drinking-Water Systems (if any), and their DWS Number which receive all of their drinking water from your system:	N/A
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?	NA



Indicate how you notified system users that your annual report is available, and is free of charge.	Public access/notice via the web
Indicate if you notified system users that your annual report is available and is free of charge using an alternate method	YES

Facility Description

A prefabricated package water treatment plant, comprising chemical addition, pre-chlorination, coagulation/flocculation, sedimentation, and dual media filtration, followed by pH adjustment, fluoridation and post chlorination, designed for conventional operating parameters at a rated capacity of 818 m³/day, with duty low lift pump starting and stopping the operation of the water treatment plant. Treated water storage consisting of two clear wells each having a capacity of 345 m³. High lift pumps comprising two vertical multistage pumps, each rated at 6.6 L/s and a fire pump with a capacity of 40.1 L/s. The discharge header fitted with pressure relief valve, a pressure gauge, a chlorine injection point, a magnetic flow meter, and sampling point for a chlorine residual analyzer with the discharge header having a system of three hydro-pneumatic tanks, each with 1.6m³ capacity. A 26m³ surge tank receives sludge from the clarifier and backwash waste from the dual media filters, equipped with two centrifugal submersible pumps each rated at 1.0 L/s with clarified supernatant from the 65 m³ settling chamber overflowing to an outfall chamber, and from there to the adjacent creek and from there to the Spanish River. Stand-by power is available from a 160 kW (200 kVa) diesel generator.

Chemicals Used

Poly Aluminum Chloride (PAC)	Coagulation
Magnafloc LT 27 AG (Polymer)	Coagulation aide
Sodium Hypochlorite 12%	Disinfection
Hydrofluorosilicic Acid (25% HFS)	Fluoride
Soda Ash (dense)	Alkalinity and pH control

Significant Expenses

Significant expenses incurred to

- Install required equipment
- Repair required equipment
- Replace required equipment

Work Order	Completion Date	Comment
2677915	14-Mar-22	Chlorine analyzer probe replacements – \$3,410.03
2675964	17-Jun-22	Clearwell #1 level indicator replacement – \$3,563.38

Adverse Water Quality Incidents

Provide details on the notices submitted in accordance with subsection 18(1) of the Safe Drinking-Water Act or section 16-4 of Schedule 16 of O.Reg.170/03 and reported to Spills Action Centre					
Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
n/a	n/a	n/a	n/a	n/a	n/a



Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03.

	No. of Samples	Range of E.Coli		Range of Total Coliform Results		Number of HPC Samples	Range of HPC Results	
	Collected	Min #	Max #	Min #	Max #		Min #	Max #
Raw Water	53	0	60	0	195	0		
Treated Water	53	0	0	0	87	53	0	900
Distribution	103	0	0	0	0	53	0	1480

Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03

	No. of Samples	Range of Results	
	Collected	Minimum	Maximum
Turbidity, On-Line (NTU) - Filt1	8760	0.01	1.82
Free Chlorine Residual, Treated (mg/L)	8760	0.67	1.93
Free Chlorine Residual, Distribution Location 1	104	0.89	1.66
Free Chlorine Residual, Distribution Location 2	104	0.73	1.55
Free Chlorine Residual, Distribution Location 3	104	0.77	1.54
Free Chlorine Residual, Distribution Location 4	52	0.43	1.20

Summary of additional testing and sampling carried out in accordance with the requirement of an approval, order or other legal instrument. (Use monitoring BW TSS sheet to Paste and Copy)

Date of legal instrument issued	Parameter and limits	Month Sampled	Day Sampled	Result	Unit of Measure
MDWL 281-101 Issue Date: August 11, 2020 Expiry Date: August 10, 2025	Backwash (BW) Total Suspended Solids (TSS) 25 mg/L annual average	Jan	24	9	mg/L
		Feb	22	23	mg/L
		Feb	24	12	
		Mar	28	54	mg/L
		Apr	27	4	mg/L
		May	25	3	mg/L
		Jun	27	12	mg/L
		Jul	19	4	mg/L
		Aug	22	28	mg/L
		Sep	26	48	mg/L
		Oct	24	6	mg/L
		Nov	21	5	mg/L
		Dec	28	5	mg/L
Annual Average				16.4	



Summary of Inorganic parameters tested during this reporting period or the most recent sample results

	Sample Date (yyyy/mm/dd)	Sample Result	MAC	No. of Exceedances	
				MAC	1/2 MAC
TREATED WATER				MAC	1/2 MAC
Antimony: Sb (ug/L) - TW	2022/01/18	<MDL 0.6	6.0	No	No
Arsenic: As (ug/L) - TW	2022/01/18	<MDL 0.2	25.0	No	No
Barium: Ba (ug/L) - TW	2022/01/18	4.66	1000.0	No	No
Boron: B (ug/L) - TW	2022/01/18	7.0	5000.0	No	No
Cadmium: Cd (ug/L) - TW	2022/01/18	0.008	5.0	No	No
Chromium: Cr (ug/L) - TW	2022/01/18	0.18	50.0	No	No
Mercury: Hg (ug/L) - TW	2022/01/18	<MDL 0.01	1.0	No	No
Selenium: Se (ug/L) - TW	2022/01/18	<MDL 0.04	50.0	No	No
Uranium: U (ug/L) - TW	2022/01/18	0.015	20.0	No	No

	Sample Date (yyyy/mm/dd)	Sample Result	MAC	No. of Exceedances	
				MAC	1/2 MAC
TREATED WATER				MAC	1/2 MAC
Fluoride (mg/L) - TW	2022/01/18	<MDL 0.06	1.5	No	No
Nitrite (mg/L) - TW	2022/01/18	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2022/04/04	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2022/07/11	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2022/10/03	<MDL 0.003	1.0	No	No
Nitrate (mg/L) - TW	2022/01/18	0.083	10.0	No	No
Nitrate (mg/L) - TW	2022/04/04	0.142	10.0	No	No
Nitrate (mg/L) - TW	2022/07/11	0.063	10.0	No	No
Nitrate (mg/L) - TW	2022/10/03	0.05	10.0	No	No
Sodium: Na (mg/L) - TW	2022/01/18	13.7	20*	No	Yes

*There is no "MAC" for Sodium. The aesthetic objective for sodium in drinking water is 200 mg/L. The local Medical Officer of Health should be notified when the sodium concentration exceeds 20 mg/L so that this information may be communicated to local physicians for their use with patients on sodium restricted diets.

Summary of Lead testing under Schedule 15.1 during this reporting period

Location Type	Number of Samples	Range of Results		MAC (ug/L)	Number of Exceedances
		Minimum	Maximum		
Distribution - Lead Results (ug/L)	n/a			10	0
Distribution - Alkalinity (mg/L)	3	20	22	n/a	n/a
Distribution - pH In-House	1	7.11	7.11	n/a	n/a



Summary of Organic parameters sampled during this reporting period or the most recent sample results

	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Number of Exceedances	
				MAC	1/2 MAC
TREATED WATER				MAC	1/2 MAC
Alachlor (ug/L) - TW	2022/01/18	<MDL 0.02	5.0	No	No
Atrazine + N-dealkylated metabolites (ug/L) - TW	2022/01/18	<MDL 0.01	5.0	No	No
Azinphos-methyl (ug/L) - TW	2022/01/18	<MDL 0.05	20.0	No	No
Benzene (ug/L) - TW	2022/01/18	<MDL 0.32	1.0	No	No
Benzo(a)pyrene (ug/L) - TW	2022/01/18	<MDL 0.004	0.01	No	No
Bromoxynil (ug/L) - TW	2022/01/18	<MDL 0.33	5.0	No	No
Carbaryl (ug/L) - TW	2022/01/18	<MDL 0.05	90.0	No	No
Carbofuran (ug/L) - TW	2022/01/18	<MDL 0.01	90.0	No	No
Carbon Tetrachloride (ug/L) - TW	2022/01/18	<MDL 0.17	2.0	No	No
Chlorpyrifos (ug/L) - TW	2022/01/18	<MDL 0.02	90.0	No	No
Diazinon (ug/L) - TW	2022/01/18	<MDL 0.02	20.0	No	No
Dicamba (ug/L) - TW	2022/01/18	<MDL 0.2	120.0	No	No
1,2-Dichlorobenzene (ug/L) - TW	2022/01/18	<MDL 0.41	200.0	No	No
1,4-Dichlorobenzene (ug/L) - TW	2022/01/18	<MDL 0.36	5.0	No	No
1,2-Dichloroethane (ug/L) - TW	2022/01/18	<MDL 0.35	5.0	No	No
1,1-Dichloroethylene (ug/L) - TW	2022/01/18	<MDL 0.33	14.0	No	No
Dichloromethane (Methylene Chloride) (ug/L) - TW	2022/01/18	<MDL 0.35	50.0	No	No
2,4-Dichlorophenol (ug/L) - TW	2022/01/18	<MDL 0.15	900.0	No	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L) - TW	2022/01/18	<MDL 0.19	100.0	No	No
Diclofop-methyl (ug/L) - TW	2022/01/18	<MDL 0.4	9.0	No	No
Dimethoate (ug/L) - TW	2022/01/18	<MDL 0.06	20.0	No	No
Diquat (ug/L) - TW	2022/01/18	<MDL 1.0	70.0	No	No
Diuron (ug/L) - TW	2022/01/18	<MDL 0.03	150.0	No	No
Glyphosate (ug/L) - TW	2022/01/18	<MDL 1.0	280.0	No	No
Malathion (ug/L) - TW	2022/01/18	<MDL 0.02	190.0	No	No
Metolachlor (ug/L) - TW	2022/01/18	<MDL 0.01	50.0	N/A	N/A
Metribuzin (ug/L) - TW	2022/01/18	<MDL 0.02	80.0	No	No
Monochlorobenzene (Chlorobenzene) (ug/L) - TW	2022/01/18	<MDL 0.3	80.0	No	No
Paraquat (ug/L) - TW	2022/01/18	<MDL 1.0	10.0	No	No
PCB (ug/L) - TW	2022/01/18	<MDL 0.04	3.0	No	No
Pentachlorophenol (ug/L) - TW	2022/01/18	<MDL 0.15	60.0	No	No
Phorate (ug/L) - TW	2022/01/18	<MDL 0.01	2.0	No	No
Picloram (ug/L) - TW	2022/01/18	<MDL 1.0	190.0	No	No
Prometryne (ug/L) - TW	2022/01/18	<MDL 0.03	1.0	No	No
Simazine (ug/L) - TW	2022/01/18	<MDL 0.01	10.0	No	No
Terbufos (ug/L) - TW	2022/01/18	<MDL 0.01	1.0	No	No
Tetrachloroethylene (ug/L) - TW	2022/01/18	<MDL 0.35	10.0	No	No
2,3,4,6-Tetrachlorophenol (ug/L) - TW	2022/01/18	<MDL 0.2	100.0	No	No



Triallate (ug/L) - TW	2022/01/18	<MDL 0.01	230.0	No	No
Trichloroethylene (ug/L) - TW	2022/01/18	<MDL 0.44	5.0	No	No
2,4,6-Trichlorophenol (ug/L) - TW	2022/01/18	<MDL 0.25	5.0	No	No
2-methyl-4-chlorophenoxyacetic acid (MCPA) (ug/L) - TW	2022/01/18	<MDL 0.12	100.0	No	No
Trifluralin (ug/L) - TW	2022/01/18	<MDL 0.02	45.0	No	No
Vinyl Chloride (ug/L) - TW	2022/01/18	<MDL 0.17	1.0	No	No
DISTRIBUTION WATER					
Trihalomethane: Total (ug/L) Annual Average - DW	2022/12/31	76.0	100.00	No	Yes
HAA Total (ug/L) Annual Average – DW	2022/12/31	65.125	80.0	No	Yes

SECTION 5: RAW WATER SUBMISSIONS

Raw water flows were submitted to the MECP on [February 13, 2023](#).

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Location: [WTRS](#) / [WT DATA](#) / [Input WT Record](#) WTRS-WT-008

Water Taking Data submitted successfully.

Confirmation:

Thank you for submitting your water taking data online.

Permit Number: 6410-BAPR97
 Permit Holder: THE CORPORATION OF THE TOWNSHIP OF NAIRN AND HYMAN.
 Received on: Feb 13, 2023 11:03 AM

This confirmation indicates that your data has been received by the Ministry, but should not be construed as acceptance of this data if it differs from that specified on the Permit Number, assigned to the Permit Holder stated above.

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SECTION 6: CONCLUSION

The Nairn Centre WTP delivers water that, in all its treated and distribution samples, indicates the water to be free of bacteriological contamination.

Based on information available for the [2022](#) operating year, the Nairn Centre WTP was able to meet the demand of water use without exceeding the PTTW or the MDWL.



List of Acronyms and Definitions

Alkalinity	The capacity of water for neutralizing an acid solution
AWQI	Adverse Water Quality Incident- when a water sample test result exceeds the Ontario Drinking Water Quality Standards
Backwash	Water pumped backwards to clean filters
BWA	Boil Water Advisory; Issued when risk of contamination is possible in drinking water
CFU	Colony Forming Units
Chlorine Residual	A low level of chlorine remaining in water after disinfection occurs
DW	Distribution Water
DWA	Drinking Water Advisory; Issued when water cannot be consumed by any means
DWWP	Drinking Water Works Permit - provides a description of the overall system
E.Coli	Bacteria used as indicators to measure the degree of pollution and sanitary quality of water
GUDI 170/03	Groundwater Under Direct Influence – Considered to be surface water under O.Reg
HPC	Heterotrophic Plant Count
L/s	Litres per Second
m ³ /d	Cubic Metres per Day
MAC	Maximum Acceptable Concentration
MDL	Minimum Detection Level
MDWL requirements	Municipal Drinking Water Licence - relates to the operation and performance requirements
mg/L	Miligrams per Litre
Ministry	Ministry of the Environment and Climate Change
MOECC	Ministry of the Environment and Climate Change
O.Reg	Ontario Regulation
PTTW water	Permit to Take Water – Permit which allows water taking from groundwater or surface water
RW	Raw Water
TC	Total Coliforms
TSS	Total Suspended Solids
Turbidity	Cloudiness or haziness of water
TW	Treated Water



Appendix A

Raw Water Flows

Ontario Clean Water Agency
Annual Water Taking and Transfer Report
 From 01/01/2022 To 12/31/2022

Facility: NAIRN CENTRE DRINKING WATER SYSTEM-5042
 Tag: Raw Flow: Sum (m3/d)
 Tag Group: Raw Water

Permit#: 6410-BAPR97
 Source Name: Spanish River
 Source: River
 Type:
 Purpose: Municipal

Coordinate Zone: 17
 Easting: 455049
 Northing: 5131662
 Method deter: Metered

Date Measured	Value (m³/d)	Value (Litres)
01/01/2022	141.1000	141100.0061
02/01/2022	175.7000	175699.9969
03/01/2022	100.4000	100400.0015
04/01/2022	124.2000	124199.9969
05/01/2022	161.7000	161699.9969
06/01/2022	176.4000	176399.9939
07/01/2022	149.4000	149399.9939
08/01/2022	133.2000	133199.9969
09/01/2022	225.0000	225000.0000
10/01/2022	124.8000	124800.0031
11/01/2022	127.5000	127500.0000
12/01/2022	165.5000	165500.0000
13/01/2022	174.6000	174600.0061
14/01/2022	114.2000	114199.9969
15/01/2022	130.8000	130800.0031
16/01/2022	144.4000	144399.9939
17/01/2022	156.9000	156899.9939
18/01/2022	114.1000	114099.9985
19/01/2022	201.3000	201300.0031
20/01/2022	119.1000	119099.9985
21/01/2022	118.8000	118800.0031
22/01/2022	134.1000	134100.0061
23/01/2022	130.5000	130500.0000
24/01/2022	187.6000	187600.0061
25/01/2022	142.7000	142699.9969
26/01/2022	117.1000	117099.9985
27/01/2022	123.8000	123800.0031
28/01/2022	127.5000	127500.0000
29/01/2022	212.6000	212600.0061
30/01/2022	132.1000	132100.0061
31/01/2022	111.7000	111699.9969
01/02/2022	188.5000	188500.0000
02/02/2022	120.0000	120000.0000
03/02/2022	108.1000	108099.9985
04/02/2022	122.6000	122599.9985
05/02/2022	205.5000	205500.0000
06/02/2022	126.9000	126900.0015
07/02/2022	120.4000	120400.0015
08/02/2022	119.2000	119199.9969
09/02/2022	130.0000	130000.0000
10/02/2022	177.0000	177000.0000
11/02/2022	143.3000	143300.0031

12/02/2022	113.3000	113300.0031
13/02/2022	133.6000	133600.0061
14/02/2022	129.7000	129699.9969
15/02/2022	191.9000	191899.9939
16/02/2022	95.5000	95500.0000
17/02/2022	193.4000	193399.9939
18/02/2022	167.0000	167000.0000
19/02/2022	145.8000	145800.0031
20/02/2022	142.3000	142300.0031
21/02/2022	162.7000	162699.9969
22/02/2022	166.2000	166199.9969
23/02/2022	126.7000	126699.9969
24/02/2022	203.0000	203000.0000
25/02/2022	120.5000	120500.0000
26/02/2022	155.3000	155300.0031
27/02/2022	163.8000	163800.0031
28/02/2022	125.9000	125900.0015
01/03/2022	177.2000	177199.9969
02/03/2022	170.9000	170899.9939
03/03/2022	127.0000	127000.0000
04/03/2022	122.6000	122599.9985
05/03/2022	121.3000	121300.0031
06/03/2022	214.4000	214399.9939
07/03/2022	161.5000	161500.0000
08/03/2022	240.4000	240399.9939
09/03/2022	142.4000	142399.9939
10/03/2022	245.2000	245199.9969
11/03/2022	157.8000	157800.0031
12/03/2022	191.2000	191199.9969
13/03/2022	231.8000	231800.0031
14/03/2022	143.0000	143000.0000
15/03/2022	270.2000	270200.0122
16/03/2022	168.2000	168199.9969
17/03/2022	172.2000	172199.9969
18/03/2022	218.1000	218100.0061
19/03/2022	154.4000	154399.9939
20/03/2022	248.3000	248300.0031
21/03/2022	176.6000	176600.0061
22/03/2022	243.7000	243699.9969
23/03/2022	160.8000	160800.0031
24/03/2022	101.5000	101500.0000
25/03/2022	125.1000	125099.9985
26/03/2022	182.9000	182899.9939
27/03/2022	121.0000	121000.0000
28/03/2022	120.1000	120099.9985
29/03/2022	196.9000	196899.9939
30/03/2022	101.6000	101599.9985
31/03/2022	111.6000	111599.9985
01/04/2022	159.2000	159199.9969
02/04/2022	120.0000	120000.0000
03/04/2022	199.3000	199300.0031
04/04/2022	111.7000	111699.9969
05/04/2022	178.9000	178899.9939
06/04/2022	142.1000	142100.0061
07/04/2022	108.6000	108599.9985
08/04/2022	114.5000	114500.0000
09/04/2022	189.8000	189800.0031
10/04/2022	123.8000	123800.0031
11/04/2022	111.8000	111800.0031
12/04/2022	199.1000	199100.0061
13/04/2022	94.3000	94300.0031

14/04/2022	128.5000	128500.0000
15/04/2022	196.3000	196300.0031
16/04/2022	104.2000	104199.9969
17/04/2022	200.0000	200000.0000
18/04/2022	96.8000	96800.0031
19/04/2022	144.1000	144100.0061
20/04/2022	127.3000	127300.0031
21/04/2022	181.0000	181000.0000
22/04/2022	87.8000	87800.0031
23/04/2022	157.2000	157199.9969
24/04/2022	162.9000	162899.9939
25/04/2022	162.2000	162199.9969
26/04/2022	110.1000	110099.9985
27/04/2022	146.5000	146500.0000
28/04/2022	146.1000	146100.0061
29/04/2022	99.1000	99099.9985
30/04/2022	176.9000	176899.9939
01/05/2022	124.4000	124400.0015
02/05/2022	111.7000	111699.9969
03/05/2022	198.7000	198699.9969
04/05/2022	88.7000	88699.9969
05/05/2022	194.1000	194100.0061
06/05/2022	108.5000	108500.0000
07/05/2022	192.0000	192000.0000
08/05/2022	125.0000	125000.0000
09/05/2022	213.4000	213399.9939
10/05/2022	113.0000	113000.0000
11/05/2022	212.7000	212699.9969
12/05/2022	136.6000	136600.0061
13/05/2022	172.8000	172800.0031
14/05/2022	241.4000	241399.9939
15/05/2022	154.5000	154500.0000
16/05/2022	214.1000	214100.0061
17/05/2022	114.6000	114599.9985
18/05/2022	155.9000	155899.9939
19/05/2022	204.8000	204800.0031
20/05/2022	147.1000	147100.0061
21/05/2022	107.7000	107699.9969
22/05/2022	149.1000	149100.0061
23/05/2022	149.5000	149500.0000
24/05/2022	248.2000	248199.9969
25/05/2022	133.3000	133300.0031
26/05/2022	123.3000	123300.0031
27/05/2022	148.4000	148399.9939
28/05/2022	246.4000	246399.9939
29/05/2022	204.0000	204000.0000
30/05/2022	258.8000	258799.9878
31/05/2022	269.6000	269600.0061
01/06/2022	207.0000	207000.0000
02/06/2022	143.6000	143600.0061
03/06/2022	180.7000	180699.9969
04/06/2022	180.1000	180100.0061
05/06/2022	230.0000	230000.0000
06/06/2022	130.9000	130899.9939
07/06/2022	209.9000	209899.9939
08/06/2022	117.6000	117599.9985
09/06/2022	170.9000	170899.9939
10/06/2022	117.8000	117800.0031
11/06/2022	234.3000	234300.0031
12/06/2022	157.9000	157899.9939
13/06/2022	175.1000	175100.0061

14/06/2022	298.1000	298100.0061
15/06/2022	310.7000	310700.0122
16/06/2022	284.0000	284000.0000
17/06/2022	120.9000	120900.0015
18/06/2022	229.0000	229000.0000
19/06/2022	162.6000	162600.0061
20/06/2022	183.3000	183300.0031
21/06/2022	300.6000	300600.0061
22/06/2022	265.2000	265200.0122
23/06/2022	288.0000	288000.0000
24/06/2022	277.9000	277899.9939
25/06/2022	336.1000	336100.0061
26/06/2022	265.0000	265000.0000
27/06/2022	195.3000	195300.0031
28/06/2022	230.2000	230199.9969
29/06/2022	264.8000	264799.9878
30/06/2022	163.5000	163500.0000
01/07/2022	257.5000	257500.0000
02/07/2022	266.6000	266600.0061
03/07/2022	276.9000	276899.9939
04/07/2022	228.5000	228500.0000
05/07/2022	212.9000	212899.9939
06/07/2022	130.8000	130800.0031
07/07/2022	246.4000	246399.9939
08/07/2022	242.0000	242000.0000
09/07/2022	281.9000	281899.9939
10/07/2022	290.6000	290600.0061
11/07/2022	198.6000	198600.0061
12/07/2022	258.6000	258600.0061
13/07/2022	255.2000	255199.9969
14/07/2022	289.4000	289399.9939
15/07/2022	372.0000	372000.0000
16/07/2022	353.2000	353200.0122
17/07/2022	361.2000	361200.0122
18/07/2022	381.9000	381899.9939
19/07/2022	315.1000	315100.0061
20/07/2022	218.7000	218699.9969
21/07/2022	216.8000	216800.0031
22/07/2022	254.7000	254699.9969
23/07/2022	311.4000	311399.9939
24/07/2022	311.4000	311399.9939
25/07/2022	255.2000	255199.9969
26/07/2022	224.3000	224300.0031
27/07/2022	200.8000	200800.0031
28/07/2022	197.2000	197199.9969
29/07/2022	155.3000	155300.0031
30/07/2022	146.2000	146199.9969
31/07/2022	311.9000	311899.9939
01/08/2022	159.3000	159300.0031
02/08/2022	199.2000	199199.9969
03/08/2022	113.4000	113400.0015
04/08/2022	169.1000	169100.0061
05/08/2022	151.0000	151000.0000
06/08/2022	215.5000	215500.0000
07/08/2022	143.1000	143100.0061
08/08/2022	165.4000	165399.9939
09/08/2022	228.6000	228600.0061
10/08/2022	115.9000	115900.0015
11/08/2022	242.3000	242300.0031
12/08/2022	191.8000	191800.0031
13/08/2022	189.3000	189300.0031

14/08/2022	194.1000	194100.0061
15/08/2022	225.9000	225899.9939
16/08/2022	131.4000	131399.9939
17/08/2022	267.8000	267799.9878
18/08/2022	200.5000	200500.0000
19/08/2022	169.4000	169399.9939
20/08/2022	205.6000	205600.0061
21/08/2022	343.9000	343899.9939
22/08/2022	125.0000	125000.0000
23/08/2022	218.3000	218300.0031
24/08/2022	187.4000	187399.9939
25/08/2022	126.8000	126800.0031
26/08/2022	206.7000	206699.9969
27/08/2022	116.3000	116300.0031
28/08/2022	185.7000	185699.9969
29/08/2022	123.8000	123800.0031
30/08/2022	157.1000	157100.0061
31/08/2022	163.4000	163399.9939
01/09/2022	152.7000	152699.9969
02/09/2022	163.5000	163500.0000
03/09/2022	197.6000	197600.0061
04/09/2022	125.3000	125300.0031
05/09/2022	243.7000	243699.9969
06/09/2022	207.9000	207899.9939
07/09/2022	207.8000	207800.0031
08/09/2022	174.8000	174800.0031
09/09/2022	186.0000	186000.0000
10/09/2022	189.9000	189899.9939
11/09/2022	207.7000	207699.9969
12/09/2022	114.8000	114800.0031
13/09/2022	203.0000	203000.0000
14/09/2022	92.0000	92000.0000
15/09/2022	212.4000	212399.9939
16/09/2022	118.3000	118300.0031
17/09/2022	206.6000	206600.0061
18/09/2022	121.8000	121800.0031
19/09/2022	107.8000	107800.0031
20/09/2022	188.4000	188399.9939
21/09/2022	111.2000	111199.9969
22/09/2022	211.0000	211000.0000
23/09/2022	154.6000	154600.0061
24/09/2022	147.2000	147199.9969
25/09/2022	165.5000	165500.0000
26/09/2022	152.7000	152699.9969
27/09/2022	191.1000	191100.0061
28/09/2022	90.5000	90500.0000
29/09/2022	191.1000	191100.0061
30/09/2022	119.5000	119500.0000
01/10/2022	198.1000	198100.0061
02/10/2022	105.3000	105300.0031
03/10/2022	221.6000	221600.0061
04/10/2022	95.9000	95900.0015
05/10/2022	185.1000	185100.0061
06/10/2022	130.6000	130600.0061
07/10/2022	194.6000	194600.0061
08/10/2022	224.9000	224899.9939
09/10/2022	156.4000	156399.9939
10/10/2022	156.7000	156699.9969
11/10/2022	205.1000	205100.0061
12/10/2022	112.4000	112400.0015
13/10/2022	188.3000	188300.0031

14/10/2022	139.0000	139000.0000
15/10/2022	133.5000	133500.0000
16/10/2022	209.5000	209500.0000
17/10/2022	101.8000	101800.0031
18/10/2022	204.1000	204100.0061
19/10/2022	114.3000	114300.0031
20/10/2022	180.6000	180600.0061
21/10/2022	100.9000	100900.0015
22/10/2022	186.9000	186899.9939
23/10/2022	135.6000	135600.0061
24/10/2022	221.9000	221899.9939
25/10/2022	107.5000	107500.0000
26/10/2022	152.4000	152399.9939
27/10/2022	210.5000	210500.0000
28/10/2022	99.9000	99900.0015
29/10/2022	204.7000	204699.9969
30/10/2022	128.4000	128399.9939
31/10/2022	183.7000	183699.9969
01/11/2022	109.7000	109699.9969
02/11/2022	141.4000	141399.9939
03/11/2022	190.0000	190000.0000
04/11/2022	119.1000	119099.9985
05/11/2022	181.1000	181100.0061
06/11/2022	127.3000	127300.0031
07/11/2022	108.4000	108400.0015
08/11/2022	189.7000	189699.9969
09/11/2022	108.3000	108300.0031
10/11/2022	175.7000	175699.9969
11/11/2022	109.4000	109400.0015
12/11/2022	187.6000	187600.0061
13/11/2022	126.4000	126400.0015
14/11/2022	205.4000	205399.9939
15/11/2022	97.9000	97900.0015
16/11/2022	165.8000	165800.0031
17/11/2022	143.0000	143000.0000
18/11/2022	167.7000	167699.9969
19/11/2022	102.0000	102000.0000
20/11/2022	200.5000	200500.0000
21/11/2022	103.0000	103000.0000
22/11/2022	200.7000	200699.9969
23/11/2022	92.5000	92500.0000
24/11/2022	197.2000	197199.9969
25/11/2022	115.3000	115300.0031
26/11/2022	205.6000	205600.0061
27/11/2022	102.9000	102900.0015
28/11/2022	132.9000	132899.9939
29/11/2022	202.7000	202699.9969
30/11/2022	104.6000	104599.9985
01/12/2022	202.0000	202000.0000
02/12/2022	97.1000	97099.9985
03/12/2022	198.2000	198199.9969
04/12/2022	159.5000	159500.0000
05/12/2022	115.4000	115400.0015
06/12/2022	123.3000	123300.0031
07/12/2022	132.9000	132899.9939
08/12/2022	205.3000	205300.0031
09/12/2022	121.4000	121400.0015
10/12/2022	108.3000	108300.0031
11/12/2022	193.9000	193899.9939
12/12/2022	121.8000	121800.0031
13/12/2022	208.2000	208199.9969

14/12/2022	89.4000	89400.0015
15/12/2022	168.6000	168600.0061
16/12/2022	137.6000	137600.0061
17/12/2022	133.6000	133600.0061
18/12/2022	213.3000	213300.0031
19/12/2022	99.1000	99099.9985
20/12/2022	200.8000	200800.0031
21/12/2022	101.9000	101900.0015
22/12/2022	205.2000	205199.9969
23/12/2022	84.1000	84099.9985
24/12/2022	183.6000	183600.0061
25/12/2022	114.2000	114199.9969
26/12/2022	202.2000	202199.9969
27/12/2022	99.5000	99500.0000
28/12/2022	148.7000	148699.9969
29/12/2022	176.7000	176699.9969
30/12/2022	115.1000	115099.9985
31/12/2022	206.1000	206100.0061