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Conservation and Parks

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Ministère de l'Environnement, de la  
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December 20, 2018

Mr. Robert Deschene  
CAO, Clerk Treasurer  
The Corporation of the Township of Nairn and Hyman  
64 McIntyre Street  
Nairn Centre, Ontario  
P0M 2L0

Dear Mr. Deschenes:

**Re: Nairn Centre Drinking Water System Final Inspection Report 2018-19**

Please find attached the 2018-19 Annual Inspection Report for the Nairn Centre Drinking Water System.

The components of the system that were reviewed at the time of inspection, and the documentation provided, were generally found to be in proper order.

There was however one minor item of concern that was identified during the course of the inspection, with respect to the Suspended Solids levels in the Wastewater Final Effluent.

Several possibilities for the cause of these elevated levels were discussed on Dec. 6, 2018, as well as proposed solutions. (Please see pages 13-14 of the attached Report).

Please review these findings, and if any improvements can be made (operationally or otherwise), it is strongly recommended that such improvements be considered.

This matter will be reviewed at the next Annual Inspection.

Also included with the Report is the Inspection Rating Record (IRR) for the Nairn Centre Drinking Water System; please feel free to share this information with your Municipal council.

Please note that a copy of this Inspection Report has been provided to the Sudbury and District Health Unit as per the Ministry's Drinking Water Inspection Protocol.

Also please note that Section 19 of the Safe Drinking Water Act (Standard of Care) creates a number of obligations for individuals who exercise decision-making authority over municipal drinking water systems. As such, the Ministry has encouraged such individuals, particularly municipal councillors, to take steps to be better informed about the drinking water systems over which they have decision-making authority. These steps could include asking for a copy of this Inspection Report and a review of its findings. Further information about Section 19 can be found in "Taking Care of Your Drinking Water: A guide for members of municipal council" found under "Resources" on the Drinking Water Ontario website at [www.ontario.ca/drinkingwater](http://www.ontario.ca/drinkingwater).

At this time I would like to thank OCWA staff for their cooperation during the inspection, as it was much appreciated.

Should you have any questions regarding the attached document, please feel free to contact me at 705-564-3282.

Yours truly,



**Marc Chalifoux | Water Inspector**

**Ministry of the Environment, Conservation and Parks  
Drinking Water and Environmental Compliance Division  
Sudbury District Office**

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cc: Natalie Wager, Process and Compliance Technician, OCWA, Espanola Hub  
Keith Stringer, Operations Manager, OCWA, Espanola Hub  
Burgess Hawkins, Manager-Environmental Health Division, SDHU

File SI DS NC FE 540



**Ministry of the Environment, Conservation and Parks**

**NAIRN CENTRE DRINKING WATER SYSTEM**

**Inspection Report**

<b>Site Number:</b>	210002138
<b>Inspection Number:</b>	1-I9R0R
<b>Date of Inspection:</b>	Nov 06, 2018
<b>Inspected By:</b>	Marc Chalifoux

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APPENDIX I	MUNICIPAL DRINKING WATER LICENCE
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APPENDIX IV	INSPECTION RATING RECORD

**OWNER INFORMATION:**

**Company Name:** NAIRN AND HYMAN, THE CORPORATION OF THE TOWNSHIP  
**Street Number:** 64 **Unit Identifier:**  
**Street Name:** MCINTYRE St  
**City:** NAIRN CENTRE  
**Province:** ON **Postal Code:** P0M 2L0

**CONTACT INFORMATION**

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**Type:** Main Contact **Name:** Robert Deschene  
**Phone:** (705) 869-4232 **Fax:** (705) 869-5248  
**Email:** nairncentre@personainternet.com  
**Title:** CAO, Clerk Treasurer

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**Type:** Operating Authority **Name:** Natalie Wager  
**Phone:** (705) 869-5578 **Fax:** (705) 869-4374  
**Email:** nwager@ocwa.com  
**Title:** Process Compliance Technician

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**Type:** Operating Authority **Name:** Keith Stringer  
**Phone:** (705) 368-0922 **Fax:** (705) 368-0922  
**Email:** kstringer@ocwa.com  
**Title:** Manager

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**INSPECTION DETAILS:**

**Site Name:** NAIRN CENTRE DRINKING WATER SYSTEM  
**Site Address:** 26 FERRY ST NAIRN CENTRE ON P0M 2L0  
**County/District:** Nairn And Hyman  
**MECP District/Area Office:** Sudbury District  
**Health Unit:** SUDBURY AND DISTRICT HEALTH UNIT  
**Conservation Authority:**  
**MNR Office:** Espanola Regional Office  
**Category:** Large Municipal Residential  
**Site Number:** 210002138  
**Inspection Type:** Announced  
**Inspection Number:** 1-19R0R  
**Date of Inspection:** Nov 06, 2018  
**Date of Previous Inspection:** Oct 19, 2017

**COMPONENTS DESCRIPTION**

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**Site (Name):** MOE DWS Mapping  
**Type:** DWS Mapping Point **Sub Type:**

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**Site (Name):** RAW WATER

**Type:** Source**Sub Type:****Comments:**

The plant draws raw water from the Spanish River. Logging operations, landfilling and mining operations are all located within the overall watershed and may impact the raw water quality. Locally, residential septic beds and recreational boating may also impact raw water quality. Both the public boat launch and the plant's field bed are located very close to the low lift pumping station on the shores of the Spanish River. A zebra mussel system is not currently in use, however a sodium hypochlorite 75 mm diameter pipe is in place should such a system be required in the future.

**Site (Name):** TREATED WATER**Type:** Treated Water POE**Sub Type:****Comments:**

The Nairn Centre Water Treatment Plant is a Class 3 System, operating under Certificate No. 2810, issued October 27, 2005. The plant was originally commissioned in 1995, and is currently operated by the Ontario Clean Water Agency (OCWA).

The raw water intake is located in the Spanish River and is comprised of a polyethylene drum weighted down with rock ballast. The intake pipe is ~ 33 meters in length, and the raw water is gravity fed to a low lift pumping station, where two low lift pumps (alternating as duty and standby) are utilized to move water through a 150 mm supply line to the plant.

The package plant is designed to provide treatment elements in a compact setting, consisting of coagulation, flocculation, clarification and filtration through sand and anthracite dual media filters.

Liquid coagulant (PAC) and soda ash (pre-filtration) are injected upstream of the static mixer, with a liquid polymer injected just downstream. The three chemical additions are injected at manually set rates based on low lift pumping rates.

Soda ash (post-filtration) is also injected at the filter effluent line to control pH and provide corrosion control for the distribution system components.

Chlorination is by injection of Sodium Hypochlorite solution (stored in a 200L day tank ), using two metering pumps (one duty, one standby). The chlorine is injected after the filters, upstream of the clear wells.

Filter backwash is gravity fed to a surge tank. Waste from this tank is pumped via two submersible pumps to a settling chamber. Supernatant, which is tested monthly for suspended solids, flows to a ditch and then to the Spanish River. Sludge from the settling tank is pumped as required via pumper truck and sent for proper disposal.

NOTE: It should be noted that Fluoride is no longer added to this Drinking Water System as part of the treatment process.

**Site (Name):** DISTRIBUTION (WATER INSPECTION)**Type:** Other**Sub Type:****Comments:**

The Nairn Centre Distribution System is a Class 1 system, operating under Certificate No. 3400, issued July 13, 2005. The system is operated by the Ontario Clean Water Agency (OCWA).

The distribution system serves a population of ~ 357 residents including 150 service connections. The system includes 50 hydrants and approximately 5 kilometers of PVC pipes. There are 13 dead ends within the distribution system.

## INSPECTION SUMMARY:

### Introduction

- The primary focus of this inspection is to confirm compliance with Ministry of the Environment and Climate Change (MOECC) legislation as well as evaluating conformance with ministry drinking water related policies and guidelines during the inspection period. The ministry utilizes a comprehensive, multi-barrier approach in the inspection of water systems that focuses on the source, treatment and distribution components as well as management practices.

This drinking water system is subject to the legislative requirements of the Safe Drinking Water Act, 2002 (SDWA) and regulations made therein, including Ontario Regulation 170/03, "Drinking Water Systems" (O.Reg. 170/03). This inspection has been conducted pursuant to Section 81 of the SDWA.

This report is based on a "focused" inspection of the system. Although the inspection involved fewer activities than those normally undertaken in a detailed inspection, it contained critical elements required to assess key compliance issues. This system was chosen for a focused inspection because the system's performance met the ministry's criteria, most importantly that there were no deficiencies as identified in O.Reg. 172/03 over the past 3 years. The undertaking of a focused inspection at this drinking water system does not ensure that a similar type of inspection will be conducted at any point in the future.

This inspection report does not suggest that all applicable legislation and regulations were evaluated. It remains the responsibility of the owner to ensure compliance with all applicable legislative and regulatory requirements.

The Nairn Centre Water Treatment Plant, owned by the Corporation of the Township of Nairn and Hyman, and Operated by the Ontario Clean Water Agency (OCWA), is a conventional surface water treatment plant that operates under "Municipal Drinking Water License Number 281-101" (Issue 2), dated November 25, 2015, and "Drinking Water Works Permit Number 281-201" (Issue 3), dated September 6, 2016, at a rated capacity of 818 cubic meters/day.

The treatment process is a "prefabricated package water treatment plant" that uses conventional treatment which includes chemical addition, alkalinity adjustment, coagulation/ flocculation, sedimentation, and dual media filtration, followed by pH adjustment and chlorination.

An inspection of the system was conducted on November 6, 2018, with the assistance of OCWA staff, Bill Hanson (Operator-in-Training), Alex Nahwegahbow (Operator-in-Training), and Natalie Wagar (Process Compliance Technician), and included a tour and physical review of the components of the Water Treatment Plant as identified under "Municipal Drinking Water License Number 281-101", (Issue 2), dated November 25, 2015, and "Drinking Water Works Permit Number 281-201", (Issue 3), dated September 6, 2016. Operations Manuals were also reviewed at the time of inspection.

As part of the overall inspection, specific documentation, including log books, Daily Facility Reports, daily work sheets, calibration records, and analytical data were also requested and reviewed, covering the period of September 1, 2017 to September 30, 2018.

NOTE: It should also be noted that FLUORIDE IS NO LONGER ADDED TO THIS DRINKING WATER SYSTEM as part of the treatment process.

### Capacity Assessment

### Capacity Assessment

- **There was sufficient monitoring of flow as required by the Municipal Drinking Water Licence or Drinking Water Works Permit issued under Part V of the SDWA.**

The Nairn Centre Water Treatment Plant is a Surface Water Supply that operates under "Municipal Drinking Water License Number 281-101" (Issue 2), dated November 25, 2015, and "Drinking Water Works Permit Number 281-201" (Issue 3), dated September 6, 2016, at a rated capacity of 818 cubic meters/day.

Section 2.1, Schedule C, of "Municipal Drinking Water License Number 281-101" (Issue No. 2), dated November 25, 2015, requires (among other things), that there be continuous flow measurement and recording for:

2.1.1 - "the flow rate and daily volume of treated water that flows from the treatment subsystem to the distribution system"; and

2.1.2 - "the flow rate and daily volume of water that flows into the treatment system".

Continuous flow measuring devices on both the raw water and treated water satisfy this requirement. No concerns were identified in this regard.

- **The owner was in compliance with the conditions associated with maximum flow rate or the rated capacity conditions in the Municipal Drinking Water Licence issued under Part V of the SDWA.**

The Nairn Centre Water Treatment Plant operates under "Permit To Take Water, Surface Water, Number 2003-7TDPEP", issued June 26, 2009, which restricts the water taking to a total of 820,800 litres/day.

The Plant also operates under "Municipal Drinking Water License Number 281-101" (Issue 2), dated November 25, 2015, at a rated capacity of 818 cubic meters/day, which is consistent with the above noted Permit To Take Water.

Raw water flow data for the facility was reviewed for the period between September 1, 2017 to September 30, 2018, and found to be in order, maintained consistently below the Permit to Take Water allowance of 820,800 litres/day.

Treated water flow data for the facility was also reviewed for the period between September 1, 2017 to September 30, 2018, and also found to be in order, consistently maintained below the plant's rated capacity of 818 cubic meters/day. No concerns were identified.

### Treatment Processes

- **The owner had ensured that all equipment was installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit.**

The Nairn Centre Water Treatment Plant operates under "Municipal Drinking Water License Number 281-101" (Issue 2), dated November 25, 2015, and "Drinking Water Works Permit Number 281-201" (Issue 3), dated September 6, 2016. The equipment as identified on the above noted documents was reviewed at the time of inspection, and generally found to be in order.

NOTE: It should be noted that FLUORIDE IS NO LONGER ADDED TO THIS DRINKING WATER SYSTEM as part of the treatment process, and as such, all equipment previously used for the addition of fluoride has now been removed. No concerns were identified in this regard.

- **Records indicated that the treatment equipment was operated in a manner that achieved the design capabilities required under Ontario Regulation 170/03 or a Drinking Water Works Permit and/or Municipal Drinking Water Licence issued under Part V of the SDWA at all times that water was being supplied to consumers.**



## Treatment Processes

The Nairn Centre Water Treatment Plant operates as a conventional surface water treatment plant under "Municipal Drinking Water License Number 281-101" (Issue 2), dated November 25, 2015, and "Drinking Water Works Permit Number 281-201" (Issue 3), dated September 6, 2016, at a rated capacity of 818 cubic meters/day.

The treatment process is a "prefabricated package water treatment plant" that uses conventional treatment which includes chemical addition, alkalinity adjustment, coagulation/ flocculation, sedimentation, and dual media filtration, followed by pH adjustment and chlorination.

The system is designed to meet the minimum 2-log removal of *Cryptosporidium* oocysts and 2.5-log removal of *Giardia* cysts, through chemically assisted filtration; and the minimum 0.5-log removal/inactivation of *Giardia* cysts and 4-log removal/inactivation of viruses, through disinfection by chlorination using sodium hypochlorite.

Process data and supporting documentation provided during the course of the inspection indicates that the Nairn Centre Water Treatment Plant is operating in accordance with these requirements.

With respect to Filter Effluent Turbidity, the Procedure for Disinfection of Drinking Water in Ontario, requires among other things, that the process meet the performance criterion for filtered water turbidity of less than or equal to 0.3 NTU in 95% of the measurements each month.

Filter Effluent Turbidity Data provided during the course of the inspection, was reviewed for the period of September 1, 2017 to September 30, 2018, and generally found to be in order, meeting the performance criterion for filtered water turbidity of less than or equal to 0.3 NTU in 95% of the measurements each month. No concerns were identified.

- **Records confirmed that the water treatment equipment which provides chlorination or chloramination for secondary disinfection purposes was operated so that at all times and all locations in the distribution system the chlorine residual was never less than 0.05 mg/l free or 0.25 mg/l combined.**

The secondary disinfectant residual in the distribution system was previously measured using a continuous chlorine residual analyzer located at the Nairn Centre Community Centre.

Due to re-occurring problems with the analyzer however, it was decided in 2015-16, that the chlorine residual in the distribution system would best be monitored using an approved "4-3 sampling system".

This method, as allowed under Section 7-2 (3) and Section 7-2 (4) of O.Reg. 170/03, requires that:

7-2.(3) The owner of a large municipal residential system that provides secondary disinfection and the operating authority for the system shall ensure that at least seven distribution samples are taken each week in accordance with subsection (4) and are tested immediately for:

(a) free chlorine residual, if the system provides chlorination and does not provide chloramination;

7-2.(4) The following rules apply to the distribution samples referred to in subsection (3) unless at least one sample is taken on each day of the week:

1. At least four of the samples must be taken on one day of the week, at least 48 hours after the last sample was taken in the previous week.

2. At least three of the samples must be taken on a second day of the week, at least 48 hours after the last sample was taken on the day referred to in paragraph 1.

3. When more than one sample is taken on the same day of the week under paragraph 1 or 2, each sample must

### Treatment Processes

be taken from a different location.

Chlorine residual data for the distribution system (as collected using the "4-3 monitoring system") was reviewed for the period of September 1, 2017 to September 30, 2018, and found to be in order. No concerns were identified.

### Treatment Process Monitoring

- **Primary disinfection chlorine monitoring was conducted at a location approved by Municipal Drinking Water Licence and/or Drinking Water Works Permit issued under Part V of the SDWA, or at/near a location where the intended CT has just been achieved.**

The Nairn Centre Water Treatment Plant operates under "Municipal Drinking Water License Number 281-101" (Issue 2), dated November 25, 2015, and "Drinking Water Works Permit Number 281-201" (Issue 3), dated September 6, 2016, at a rated capacity of 818 cubic meters/day.

The treatment process is a "prefabricated package water treatment plant" that uses conventional treatment which includes chemical addition, alkalinity adjustment, coagulation/ flocculation, sedimentation, and dual media filtration, followed by pH adjustment, and chlorination using sodium hypochlorite.

The system is designed to meet the minimum 2-log removal of *Cryptosporidium* oocysts and 2.5-log removal of *Giardia* cysts, through chemically assisted filtration; and the minimum 0.5-log removal/inactivation of *Giardia* cysts and 4-log removal/inactivation of viruses, through disinfection by chlorination.

Primary disinfection chlorine residual is monitored at or near the location where the intended CT had just been achieved, and Operators are fully aware of the operational criteria necessary to achieve primary disinfection. The facility now uses an "automatic CT calculator" to ensure that adequate CT is maintained at all times, and plant CT can now be tracked via the plant's SCADA system.

Process data and supporting documentation provided during the course of the inspection for the period of September 1, 2017 to September 30, 2018, indicates that the Nairn Centre Water Treatment Plant is operating in accordance with the above noted requirements. No concerns were identified.

- **Continuous monitoring of each filter effluent line was being performed for turbidity.**

Filter effluent turbidity is monitored on-line via a continuous turbidity analyzer. Filter Effluent turbidity data was reviewed for the period of September 1, 2017 to September 30, 2018, and generally found to be in order, confirming that the process consistently met the performance criteria for filtered water turbidity of less than or equal to 0.3 NTU in 95% of the measurements each month. No concerns were identified in this regard.

- **The secondary disinfectant residual was measured as required for the distribution system.**

The secondary disinfectant residual in the distribution system was previously measured using a continuous chlorine residual analyzer located at the Nairn Centre Community Centre.

Due to re-occurring problems with the analyzer however, it was decided in 2015-16, that the chlorine residual in the distribution system would best be monitored using an approved "4-3 sampling system".

This method, as allowed under Section 7-2 (3) and Section 7-2 (4) of O.Reg. 170/03, requires that:

7-2.(3) The owner of a large municipal residential system that provides secondary disinfection and the operating authority for the system shall ensure that at least seven distribution samples are taken each week in accordance

### Treatment Process Monitoring

with subsection (4) and are tested immediately for:

(a) free chlorine residual, if the system provides chlorination and does not provide chloramination;

7-2.(4) The following rules apply to the distribution samples referred to in subsection (3) unless at least one sample is taken on each day of the week:

1. At least four of the samples must be taken on one day of the week, at least 48 hours after the last sample was taken in the previous week.
2. At least three of the samples must be taken on a second day of the week, at least 48 hours after the last sample was taken on the day referred to in paragraph 1.
3. When more than one sample is taken on the same day of the week under paragraph 1 or 2, each sample must be taken from a different location.

Chlorine residual data for the distribution system (as collected using the "4-3 monitoring system") was reviewed for the period of September 1, 2017 to September 30, 2018, and found to be in order. No concerns were identified.

- **Operators were examining continuous monitoring test results and they were examining the results within 72 hours of the test.**

Facility Log Books are maintained by OCWA staff for both the Distribution System and Water Treatment Plant. These log books were reviewed during the course of the inspection, and it was noted that Operators were reviewing the continuous monitoring data, typically within 48-72 hours of the test.

OCWA staff are reminded to continue to ensure that when they are unable to visit the plant within 72 hours, and that data is reviewed remotely, that this is documented in the "Facility Log Books" and/or on the "Daily Report" sheets. No concerns were identified in this regard.

- **All continuous monitoring equipment utilized for sampling and testing required by O. Reg.170/03, or Municipal Drinking Water Licence or Drinking Water Works Permit or order, were equipped with alarms or shut-off mechanisms that satisfy the standards described in Schedule 6.**

It was noted during the course of the inspection that all continuous monitoring equipment utilized for sampling and testing, is equipped with alarms as required by O.Reg.170/03. No concerns were identified.

- **Continuous monitoring equipment that was being utilized to fulfill O. Reg. 170/03 requirements was performing tests for the parameters with at least the minimum frequency specified in the Table in Schedule 6 of O. Reg. 170/03 and recording data with the prescribed format.**

- **All continuous analysers were calibrated, maintained, and operated, in accordance with the manufacturer's instructions or the regulation.**

It was identified during the course of the inspection that all continuous analyzers are calibrated, maintained, and operated in accordance with the manufacturers instructions or the Regulation. Calibration Records and Work Order Summaries were provided in this regard. No concerns were identified.

### Operations Manuals

- **The operations and maintenance manuals contained plans, drawings and process descriptions sufficient for the safe and efficient operation of the system.**

### Operations Manuals

Operations and Maintenance Manual(s) for the Water Treatment Plant were briefly reviewed at the time of inspection and found to be in order, containing plans, drawings, and process descriptions sufficient for the safe and efficient operation of the system. The manuals are kept at the Water Treatment Plant, readily available to all OCWA staff. No concerns were identified.

- **The operations and maintenance manuals met the requirements of the Drinking Water Works Permit and Municipal Drinking Water Licence issued under Part V of the SDWA.**

Operations and Maintenance Manual(s) for the Water Treatment Plant were briefly reviewed at the time of inspection and found to be in order, containing plans, drawings, and process descriptions sufficient for the safe and efficient operation of the system. The manuals are kept at the Water Treatment Plant, readily available to all OCWA staff. No concerns were identified.

### Logbooks

- **Records or other record keeping mechanisms confirmed that operational testing not performed by continuous monitoring equipment was being done by a certified operator, water quality analyst, or person who suffices the requirements of O. Reg. 170/03 7-5.**

According to OCWA staff and operational logs, only certified operators make adjustments to the treatment equipment at the Nairn Centre Water Treatment Plant.

The main operator at the Nairn Centre Water Treatment Plant during the review period in question was primarily Todd Lampron (Class 2 Operator). Bill Hanson (Operator-in-Training), and Alex Nahwegahbow (Operator-in-Training), also provided operational assistance.

It was also identified that Keith Stringer is available as a back-up OIC (Operator in Charge) when Todd Lampron is absent or unable to act. Assistance was also provided on occasion by Dillon Duxbury (Class 1 Operator), Kyle Lefebvre (Operator Class 1), and James Tyson (Operator Class 2).

All have the required certifications. Operator Certificates were properly displayed at the plant. No concerns were identified in this regard.

### Security

- **The owner had provided security measures to protect components of the drinking water system.**

All major components of the drinking water system were found to be completely covered and secure, and under lock and key at all times.

There are no exterior storage facilities (reservoirs or standpipes) for this drinking water system. The only storage is in the clearwells which are located within the Water Treatment Plant building itself. The Water Treatment Plant building was found to be covered and secure, and under lock and key at all times.

The raw water low lift pumps however, are housed in a separate concrete pumping station located near the water intake at the Spanish River's edge. And although the pumping station is a concrete structure that is covered and secure, and under lock and key, the station is located adjacent to a public boat launch, and there is no signage or security fencing.

As such, as noted in previous inspection reports, security fencing and proper signage is a measure that should be considered to properly protect this component of the system.

### Certification and Training

### Certification and Training

- **The overall responsible operator had been designated for each subsystem.**

The Nairn Centre Water Treatment Plant is a Class 3 facility, operating under Classification Certificate No. 2810, issued October 27, 2005.

It was identified at the time of inspection that Keith Stringer (Class 4 License) is the main Overall Responsible Operator (ORO) for this facility. It was further identified that Todd Lampron (Class 2 License), and Jeff St. Pierre (Class 3 License), are also available as back-up Overall Responsible Operators (OROs), whenever Keith Stringer is absent or unable to act. No concerns were identified.

- **Operators in charge had been designated for all subsystems which comprised the drinking-water system.**

According to OCWA staff and operational logs, only certified operators make adjustments to the treatment equipment at the Nairn Centre Water Treatment Plant.

The main Operator in Charge (OIC) at the Nairn Centre Water Treatment Plant during the review period in question was primarily Todd Lampron (Class 2 Operator).

Bill Hanson (Operator-in-Training), and Alex Nahwegahbow (Operator-in-Training ), also provided operational assistance. It was also identified that Keith Stringer is available as a back-up OIC (Operator in Charge) when Todd Lampron is absent or unable to act. Assistance was also provided on occasion by Dillon Duxbury (Class 1 Operator), Kyle Lefebvre (Operator Class 1), and James Tyson (Operator Class 2).

All have the required certifications. Operator Certificates were properly displayed at the plant. No concerns were identified in this regard.

- **All operators possessed the required certification.**

According to OCWA staff and operational logs, only certified operators make adjustments to the treatment equipment at the Nairn Centre Water Treatment Plant.

The main Operator in Charge (OIC) at the Nairn Centre Water Treatment Plant during the review period in question was primarily Todd Lampron (Class 2 Operator).

Bill Hanson (Operator-in-Training), and Alex Nahwegahbow (Operator-in-Training ), also provided operational assistance. It was also identified that Keith Stringer is available as a back-up OIC (Operator in Charge) when Todd Lampron is absent or unable to act. Assistance was also provided on occasion by Dillon Duxbury (Class 1 Operator), Kyle Lefebvre (Operator Class 1), and James Tyson (Operator Class 2).

All have the required certifications. Operator Certificates were properly displayed at the plant. No concerns were identified in this regard.

- **Only certified operators made adjustments to the treatment equipment.**

According to OCWA staff and operational logs, only certified operators make adjustments to the treatment equipment at the Nairn Centre Water Treatment Plant.

The main Operator in Charge (OIC) at the Nairn Centre Water Treatment Plant during the review period in question was primarily Todd Lampron (Class 2 Operator).

Bill Hanson (Operator-in-Training), and Alex Nahwegahbow (Operator-in-Training ), also provided operational

### Certification and Training

assistance. It was also identified that Keith Stringer is available as a back-up OIC (Operator in Charge) when Todd Lampron is absent or unable to act. Assistance was also provided on occasion by Dillon Duxbury (Class 1 Operator), Kyle Lefebvre (Operator Class 1), and James Tyson (Operator Class 2).

All have the required certifications. Operator Certificates were properly displayed at the plant. No concerns were identified in this regard.

### Water Quality Monitoring

- **All microbiological water quality monitoring requirements for distribution samples were being met.**

According to information identified during the course of the inspection, the total permanent residential population served by the Nairn Centre Drinking Water System is approximately 357. Based on that population (<1000), the total number of distribution samples required per month is 8.

A review of the water quality monitoring data for the period of September 1, 2017 to September 30, 2018, confirmed that the microbiological monitoring requirements for the Nairn Centre Water Drinking Water System were being met. No concerns were identified.

- **All microbiological water quality monitoring requirements for treated samples were being met.**

Section 10-3 of Schedule 10, O. Reg. 170/03, requires that a treated water sample be taken at least once a week and tested for the required microbiological parameters. A review of the water quality monitoring data for the period of September 1, 2017 to September 30, 2018, confirmed that the all microbiological monitoring requirements for the treated water were being met. No concerns were identified.

- **All inorganic water quality monitoring requirements prescribed by legislation were conducted within the required frequency.**

Section 13-2 of Schedule 13, O. Reg. 170/03 requires that at least one sample be taken every 12 months and tested for the required inorganic parameters identified under Schedule 23, O. Reg. 170/03. A review of the inorganic water quality monitoring data for the period of September 1, 2017 to September 30, 2018, confirmed that the required samples were collected on January 16, 2018 and that the monitoring requirements prescribed by the legislation were met. No concerns were identified.

- **All organic water quality monitoring requirements prescribed by legislation were conducted within the required frequency.**

Section 13-4 of Schedule 13, O. Reg. 170/03 requires that at least one sample be taken every 12 months and tested for the required organic parameters identified under Schedule 24, O. Reg. 170/03. A review of the organic water quality monitoring data for the period of September 1, 2017 to September 30, 2018, confirmed that the required samples were collected on January 16, 2018 and that the monitoring requirements prescribed by the legislation were met. No concerns were identified.

- **All haloacetic acid water quality monitoring requirements prescribed by legislation are being conducted within the required frequency and at the required location.**

Section 13-6.1 of Schedule 13, O. Reg. 170/03 requires that at least one sample be taken every 3 months and tested for Haloacetic Acids. A review of the water quality monitoring data for the period in question, confirmed that the required samples were collected in accordance with the monitoring requirements prescribed by the legislation. No concerns were identified.

- **All trihalomethane water quality monitoring requirements prescribed by legislation were conducted within the required frequency and at the required location.**

### Water Quality Monitoring

Section 13-6 of Schedule 13, O. Reg. 170/03 requires that at least one sample be taken every three months and tested for trihalomethanes. A review of the water quality monitoring data for the period in question, confirmed that trihalomethane samples were collected in accordance with the monitoring requirements prescribed by the legislation.

Monitoring results were found to be:

October 5, 2017: THM = 88 ug/L;

January 16, 2018: THM = 33 ug/L;

April 3, 2018: THM = 46 ug/L;

July 23, 2018: THM = 74 ug/L;

Running Annual Average (Sept. 1, 2017 to Sept. 30, 2018):

THM = 60.25 ug/L, which is below the 100 ug/L required under O.Reg. 169/03. No concerns were identified.

- **All nitrate/nitrite water quality monitoring requirements prescribed by legislation were conducted within the required frequency for the DWS.**

Section 13-7 of Schedule 13, O. Reg. 170/03 requires that at least one sample be taken every three months and tested for nitrates/nitrites. A review of the water quality monitoring data for the period between September 1, 2017 to September 30, 2018, confirmed that the nitrate/nitrite samples were collected as required in accordance with the monitoring requirements prescribed by the legislation. No concerns were identified.

- **All sodium water quality monitoring requirements prescribed by legislation were conducted within the required frequency.**

Section 13-8 of Schedule 13, O. Reg. 170/03 requires that at least one sample be taken every 60 months and tested for sodium. A review of the water quality monitoring data for the period in question, confirmed that the last set of sodium samples were collected on January 26, 2017 with a result of 10.4 mg/L, all in accordance with the monitoring requirements prescribed by the legislation. No concerns were identified.

- **All fluoride water quality monitoring requirements prescribed by legislation were conducted within the required frequency.**

In previous years, the fluoride concentrations in the treated water had typically been monitored by a continuous analyzer located at the Nairn Centre Water Treatment Plant. The analyzer (when functioning), had been set to alarm and "lock-out" the High Lift Pumps if the fluoride concentration in the treated water reached 0.8 mg/L.

During one of the previous inspections conducted on September 10, 2015, it was noted that the Fluoride Analyzer was not working properly, and according to the Facility Log Books, had not been working properly since ~ December 2014.

It was indicated at that time, that in spite of numerous efforts to get it to work properly, it had continued to malfunction. As such, it was indicated that a new analyzer would be required, and that in the interim, fluoride residuals in the treated water would continue to be monitored on a daily basis, and recorded on daily works sheets, as allowed under Section 7-4 of Schedule 7, of O. Reg. 170/03. Copies of the daily work sheets were provided at the time of inspection.

In January of 2016, the Municipality and OCWA started to make inquiries regarding the requirements to formally

### Water Quality Monitoring

discontinue the fluoridation process. In April 2016, a formal Municipal By-law to discontinue the fluoridation of the municipal water supply, was passed by Municipal Council, and subsequent to this, an application was submitted to the Ministry to have the fluoridation component formally removed from the Municipal Drinking Water Works Permit.

On September 26, 2016, Formal Notice was received from the Ministry of the Environment and Climate Change, Approvals and Licensing Section, advising that "Drinking Water Works Permit Number 281-20" (Issue Number 3), dated September 6, 2016, had been issued, and that Section 1.1, Schedule A, of the Drinking Water Works Permit, had been amended to remove all references to the requirement for fluoridation. As such, the Municipality now had formal approval to discontinue the fluoridation process.

On September 28, 2016, Formal Notification was received from OCWA advising that effective immediately, fluoridation of the drinking water would no longer be implemented at the Nairn Centre Water Treatment Plant. No further action was required in this regard.

As such, with Fluoride no longer being added as part of the treatment process, Section 13-9 of Schedule 13, O. Reg. 170/03 now applies, and requires that at least one sample be taken every 60 months and tested for Fluoride.

A review of the water quality monitoring data for the period in question, confirmed that the last set of Fluoride samples were collected on January 26, 2017, all in accordance with the monitoring requirements prescribed by the legislation. No concerns were identified, and no further action is required in this regard.

- **All water quality monitoring requirements imposed by the Municipal Drinking Water Licence and Drinking Water Works Permit were being met.**

The only additional monitoring requirement identified under "Municipal Drinking Water License Number 281-101" (Issue 2), dated November 25, 2015, is for the process wastewater effluent discharge to be sampled and analyzed on a monthly basis for Suspended Solids. The License requires that the "average annual concentration" of suspended solids in the effluent discharge, from the backwash wastewater facilities, not exceed 25 mg/L.

A review of the monitoring data for the period of September 1, 2017 to September 30, 2018, confirmed that the analysis for Suspended Solids in the effluent discharge, was being conducted on a monthly basis as required.

There were however several months, where the Suspended Solids values were found to be abnormally high. These were:

2017:

- a) September 18, 2017: TSS = 76;
- b) October 24, 2017: TSS = 28;
- c) November 21, 2017: TSS = 33;
- d) December 19, 2017: TSS = 29;

2018:

- e) January 22, 2018: TSS = 19;
- f) February 20, 2018: TSS = 69;
- g) March 19, 2018: TSS = 3;
- h) April 23, 2018: TSS = < 2;
- i) May 22, 2018: TSS = 4;
- j) June 18, 2018: TSS = 19;
- k) July 16, 2018: TSS = < 2;
- l) August 27, 2018: TSS = 2;



### Water Quality Monitoring

m) October 22, 2018: TSS = 2;

When asked for an explanation for these high values, it was identified that during the time period of September 2017 to February 2018, the Water Treatment Plant was experiencing process difficulties, which may have contributed to the high suspended solids.

It was also identified that the Sludge Tank had not been emptied in over a year (which may have contributed to the problem).

Upon further investigation, it was also identified that the Water Treatment Plant had been operated primarily by an Operator-in-Training (OIT), and that there may have been sampling technique errors in the effluent sampling method which may have contributed to the problem (The effluent sampling involves a 3 stage composite sampling method).

In discussing the matter further, it was emphasized to OCWA Staff that the Operator in Charge (OIC), is responsible for all work (including all sampling) conducted by the Operator-in-Training.

It should be noted that the above sampling concerns appear to have been addressed in subsequent samples collected between March 2018 and October 2018.

Also in discussing the high Suspended Solids, it was suggested by the Operator in Charge, that there may be a relatively simple "valving" solution that could be implemented between the "Surge Tank" and the "Sludge Tank", that would help the situation. This minor modification however still needs capital approval.

Finally, it was also indicated that the plant will now move to a minimum annual (but preferably semi-annual), sludge disposal schedule.

In this regard, it is highly recommended that the Nairn Centre Water Treatment Plant, move to a minimum semi-annual sludge removal schedule, and even consider a Quarterly sludge removal schedule.

This matter will be reviewed at the next annual inspection.

- **Records confirmed that chlorine residual tests were being conducted at the same time and at the same location that microbiological samples were obtained.**

A review of the microbiological water quality monitoring data for the period between September 1, 2017 to September 30, 2018, confirmed that chlorine residual tests were being conducted at the same time and at the same location that microbiological samples were obtained. No concerns were identified.

### Water Quality Assessment

- **Records showed that all water sample results taken during the inspection review period did not exceed the values of tables 1, 2 and 3 of the Ontario Drinking Water Quality Standards (O.Reg. 169/03).**

Analytical results provided for the Nairn Centre Drinking Water System for the period between September 1, 2017 to September 30, 2018, were reviewed and found to be in order, meeting the requirements of the prescribed Ontario Drinking Water Standards (O.Reg. 169/03). No concerns were identified.

### Reporting & Corrective Actions

- **Corrective actions (as per Schedule 17) had been taken to address adverse conditions, including any other steps that were directed by the Medical Officer of Health.**

### Reporting & Corrective Actions

There were no Adverse Water Quality Incident Reports (AWQIs) identified for the Nairn Centre Drinking Water System during the review period of September 1, 2017 to September 30, 2018.

There were also no Adverse Water Quality Incident Reports (AWQIs) identified during the previous review period of June 1, 2016 to August 31, 2017.

The most recent Adverse Water Quality Incident Reports (AWQIs) for the Nairn Centre Drinking Water System was identified on August 7, 2015. It was:

1) AWQI # 125654, reported on August 7, 2015: A TC=98 was identified in samples collected at the Nairn Centre Water Treatment Plant. A sampling error was suspected as the chlorine residual at the time of sampling was 1.06 mg/L. Nevertheless, all required Notifications to the Spills Action Centre and the Medical Officer of Health (SDHU) were provided, and all required Corrective Actions were taken. The system was subsequently restored, and all re-sample results came back clear. The required Notice of Issue Resolution was subsequently provided. No further action was required.

- **All required notifications of adverse water quality incidents were immediately provided as per O. Reg. 170/03 16-6.**

There were no Adverse Water Quality Incident Reports (AWQIs) identified for the Nairn Centre Drinking Water System during the review period of September 1, 2017 to September 30, 2018.

There were also no Adverse Water Quality Incident Reports (AWQIs) identified during the previous review period of June 1, 2016 to August 31, 2017.

The most recent Adverse Water Quality Incident Reports (AWQIs) for the Nairn Centre Drinking Water System was identified on August 7, 2015. It was:

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- **Where required continuous monitoring equipment used for the monitoring of chlorine residual and/or turbidity triggered an alarm or an automatic shut-off, a qualified person responded in a timely manner and took appropriate actions.**

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## NON-COMPLIANCE WITH REGULATORY REQUIREMENTS AND ACTIONS REQUIRED

This section provides a summary of all non-compliance with regulatory requirements identified during the inspection period, as well as actions required to address these issues. Further details pertaining to these items can be found in the body of the inspection report.

Not Applicable

## **SUMMARY OF RECOMMENDATIONS AND BEST PRACTICE ISSUES**

This section provides a summary of all recommendations and best practice issues identified during the inspection period. Details pertaining to these items can be found in the body of the inspection report. In the interest of continuous improvement in the interim, it is recommended that owners and operators develop an awareness of the following issues and consider measures to address them.

**Not Applicable**

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**SIGNATURES**

Inspected By:

Marc Chalifoux

Signature: (Provincial Officer)



Reviewed &amp; Approved By:

Marnie Managhan

Signature: (Supervisor)



Review &amp; Approval Date:

Dec 2018

Note: This inspection does not in any way suggest that there is or has been compliance with applicable legislation and regulations as they apply or may apply to this facility. It is, and remains, the responsibility of the owner and/or operating authority to ensure compliance with all applicable legislative and regulatory requirements.

# APPENDIX I

## Municipal Drinking Water Licence



## MUNICIPAL DRINKING WATER LICENCE

**Licence Number: 281-101**  
**Issue Number: 2**

Pursuant to the *Safe Drinking Water Act, 2002*, S.O. 2002, c. 32, and the regulations made thereunder and subject to the limitations thereof, this municipal drinking water licence is issued under Part V of the *Safe Drinking Water Act, 2002*, S.O. 2002, c. 32 to:

### **The Corporation of the Township of Nairn and Hyman**

**64 McIntyre Street**  
**Nairn Centre ON P0M 2L0**

For the following municipal residential drinking water system:

### **Nairn Centre Drinking Water System**

This municipal drinking water licence includes the following:

<b>Schedule</b>	<b>Description</b>
Schedule A	Drinking Water System Information
Schedule B	General Conditions
Schedule C	System-Specific Conditions
Schedule D	Conditions for Relief from Regulatory Requirements
Schedule E	Pathogen Log Removal/Inactivation Credits

DATED at TORONTO this 25th day of November, 2015

Signature

Aziz Ahmed, P.Eng.  
Director  
Part V, *Safe Drinking Water Act, 2002*

## Schedule A: Drinking Water System Information

System Owner	<b>The Corporation of the Township of Nairn and Hyman</b>
Licence Number	<b>281-101</b>
Drinking Water System Name	<b>Nairn Centre Drinking Water System</b>
Schedule A Issue Date	<b>November 25th, 2015</b>

The following information is applicable to the above drinking water system and forms part of this licence:

### Licence

Licence Issue Date	2015-11-25
Licence Expiry Date	2020-11-23
Application for Licence Renewal Date	2020-05-24

### Drinking Water Works Permit

Drinking Water System Name	Permit Number	Issue Date
Nairn Centre Drinking Water System	281-201	November 25, 2015

### Permits to Take Water

Water Taking Location	Permit Number	Issue Date
Spanish River	2003-7TDPEP	June 26, 2009

### Financial Plans

The Financial Plan Number for the Financial Plan required to be developed for this drinking water system in accordance with O. Reg. 453/07 shall be:	281-301
Alternately, if one Financial Plan is developed for all drinking water systems owned by the owner, the Financial Plan Number shall be:	281-301A

### Accredited Operating Authority

Drinking Water System or Operational Subsystems	Accredited Operating Authority	Operational Plan No.	Operating Authority No.
Nairn Centre Drinking Water System	Ontario Clean Water Agency	281-401	281-OA1



## Schedule B: General Conditions

System Owner	The Corporation of the Township of Nairn and Hyman
Licence Number	281-101
Drinking Water System Name	Nairn Centre Drinking Water System
Schedule B Issue Date	November 25th, 2015

### 1.0 Definitions

1.1 Words and phrases not defined in this licence and the associated drinking water works permit shall be given the same meaning as those set out in the SDWA and any regulations made in accordance with that act, unless the context requires otherwise.

1.2 In this licence and the associated drinking water works permit:

“**adverse effect**”, “**contaminant**” and “**natural environment**” shall have the same meanings as in the EPA;

“**alteration**” may include the following in respect of this drinking water system:

- (a) An addition to the system,
- (b) A modification of the system,
- (c) A replacement of part of the system, and
- (d) An extension of the system;

“**compound of concern**” means a contaminant that, based on generally available information, may be emitted from a component of the drinking water system to the atmosphere in a quantity that is significant either in comparison to the relevant point of impingement limit or if a point of impingement limit is not available for the compound, then based on generally available toxicological information, the compound has the potential to cause an adverse effect as defined by the EPA at a point of impingement;

“**Director**” means a Director appointed pursuant to section 6 of the SDWA for the purposes of Part V of the SDWA;

“**drinking water works permit**” means the drinking water works permit for the drinking water system, as identified in Schedule A of this licence and as amended from time to time;

“**emission summary table**” means the table that was prepared by a Professional Engineer in accordance with O. Reg. 419/05 and the procedure document listing the appropriate point of impingement concentrations of each compound of concern emitted from a component of the drinking water system and providing comparison to the corresponding point of impingement limit;

“**EPA**” means the *Environmental Protection Act*, R.S.O. 1990, c. E.19;

“**financial plan**” means the financial plan required by O. Reg. 453/07;

“**licence**” means this municipal drinking water licence for the municipal drinking water system identified in Schedule A of this licence;

“**operational plan**” means an operational plan developed in accordance with the Director’s Directions – Minimum Requirements for Operational Plans made under the authority of subsection 15(1) of the SDWA;

“**owner**” means the owner of the drinking water system as identified in Schedule A of this licence;

“**permit to take water**” means the permit to take water that is associated with the taking of water for purposes of the operation of the drinking water system, as identified in Schedule A of this licence and as amended from time to time;

“**point of impingement**” means any point in the natural environment that is not on the same property as the source of the contaminant and as defined by section 2 of O. Reg. 419/05;

“**point of impingement limit**” means the appropriate standard from Schedule 1, 2 or 3 of O. Reg. 419/05 and if a standard is not provided for a compound of concern, the appropriate criteria listed in the Ministry of the Environment and Climate Change publication titled “Summary of Standards and Guidelines to support Ontario Regulation 419: Air Pollution – Local Air Quality (including Schedule 6 of O. Reg. 419 on Upper Risk Thresholds)”, dated February 2008, as amended;

“**procedure document**” means the Ministry of the Environment and Climate Change procedure titled “Procedure for Preparing an Emission Summary and Dispersion Modelling Report” dated July 2005, as amended;

“**Professional Engineer**” means a Professional Engineer who has been licenced to practice in the Province of Ontario;

“**provincial officer**” means a provincial officer appointed pursuant to section 8 of the SDWA;

“**publication NPC-300**” means the Ministry of the Environment and Climate Change publication titled “Environmental Noise Guideline: Stationary and Transportation Sources – Approval and Planning” dated August 2013, as amended;

“**SDWA**” means the *Safe Drinking Water Act*, 2002, S.O. 2002, c. 32;

“**sensitive populations**” means any one or a combination of the following locations where the health effects of nitrogen oxides emissions from emergency generators shall be considered using the point of impingement limit instead of the Ministry of the Environment and Climate Change screening level for emergency generators:

- (a) health care units (e.g., hospitals and nursing homes),
- (b) primary/junior public schools,
- (c) day-care facilities, and
- (d) playgrounds;

“**subsystem**” has the same meaning as in Ontario Regulation 128/04 (Certification of Drinking Water System Operators and Water Quality Analysts);

“**surface water**” means water bodies (lakes, wetlands, ponds - including dug-outs), water courses (rivers, streams, water-filled drainage ditches), infiltration trenches, and areas of seasonal wetlands;

## 2.0 Applicability

- 2.1 In addition to any other requirements, the drinking water system identified above shall be established, altered and operated in accordance with the conditions of the drinking water works permit and this licence.

## 3.0 Licence Expiry

- 3.1 This licence expires on the date identified as the licence expiry date in Schedule A of this licence.

## 4.0 Licence Renewal

- 4.1 Any application to renew this licence shall be made on or before the date identified as the application for licence renewal date set out in Schedule A of this licence.

## 5.0 Compliance

- 5.1 The owner and operating authority shall ensure that any person authorized to carry out work on or to operate any aspect of the drinking water system has been informed of the SDWA, all applicable regulations made in accordance with that act, the drinking water works permit and this licence and shall take all reasonable measures to ensure any such person complies with the same.

## 6.0 Licence and Drinking Water Works Permit Availability

- 6.1 At least one copy of this licence and the drinking water works permit shall be stored in such a manner that they are readily viewable by all persons involved in the operation of the drinking water system.

## 7.0 Permit to Take Water and Drinking Water Works Permit

- 7.1 A permit to take water identified in Schedule A of this licence is the applicable permit on the date identified as the Schedule A Issue Date.
- 7.2 A drinking water works permit identified in Schedule A of this licence is the applicable permit on the date identified as the Schedule A Issue Date.

## 8.0 Financial Plan

- 8.1 For every financial plan prepared in accordance with subsections 2(1) and 3(1) of O. Reg. 453/07, the owner of the drinking water system shall:

- 8.1.1 Ensure that the financial plan contains on the front page of the financial plan, the appropriate financial plan number as set out in Schedule A of this licence; and
- 8.1.2 Submit a copy of the financial plan to the Ministry of Municipal Affairs and Housing within three (3) months of receiving approval by a resolution of municipal council or the governing body of the owner.

## 9.0 Interpretation

- 9.1 Where there is a conflict between the provisions of this licence and any other document, the following hierarchy shall be used to determine the provision that takes precedence:
  - 9.1.1 The SDWA;
  - 9.1.2 A condition imposed in this licence that explicitly overrides a prescribed regulatory requirement;
  - 9.1.3 A condition imposed in the drinking water works permit that explicitly overrides a prescribed regulatory requirement;
  - 9.1.4 Any regulation made under the SDWA;
  - 9.1.5 Any provision of this licence that does not explicitly override a prescribed regulatory requirement;
  - 9.1.6 Any provision of the drinking water works permit that does not explicitly override a prescribed regulatory requirement;
  - 9.1.7 Any application documents listed in this licence, or the drinking water works permit from the most recent to the earliest; and
  - 9.1.8 All other documents listed in this licence, or the drinking water works permit from the most recent to the earliest.
- 9.2 If any requirement of this licence or the drinking water works permit is found to be invalid by a court of competent jurisdiction, the remaining requirements of this licence and the drinking water works permit shall continue to apply.
- 9.3 The issuance of and compliance with the conditions of this licence and the drinking water works permit does not:
  - 9.3.1 Relieve any person of any obligation to comply with any provision of any applicable statute, regulation or other legal requirement, including the *Environmental Assessment Act*, R.S.O. 1990, c. E.18; and
  - 9.3.2 Limit in any way the authority of the appointed Directors and provincial officers of the Ministry of the Environment and Climate Change to require certain steps be taken or to require the owner to furnish any further information related to compliance with the conditions of this licence or the drinking water works permit.

- 9.4** For greater certainty, nothing in this licence or the drinking water works permit shall be read to provide relief from regulatory requirements in accordance with section 46 of the SDWA, except as expressly provided in the licence or the drinking water works permit.

## **10.0 Adverse Effects**

- 10.1** Nothing in this licence or the drinking water works permit shall be read as to permit:
- 10.1.1 The discharge of a contaminant into the natural environment that causes or is likely to cause an adverse effect; or
- 10.1.2 The discharge of any material of any kind into or in any waters or on any shore or bank thereof or into or in any place that may impair the quality of the water of any waters.
- 10.2** All reasonable steps shall be taken to minimize and ameliorate any adverse effect on the natural environment or impairment of the quality of water of any waters resulting from the operation of the drinking water system including such accelerated or additional monitoring as may be necessary to determine the nature and extent of the effect or impairment.
- 10.3** Fulfillment of one or more conditions imposed by this licence or the drinking water works permit does not eliminate the requirement to fulfill any other condition of this licence or the drinking water works permit.

## **11.0 Change of Owner or Operating Authority**

- 11.1** This licence is not transferable without the prior written consent of the Director.
- 11.2** The owner shall notify the Director in writing at least 30 days prior to a change of any operating authority identified in Schedule A of this licence.
- 11.2.1 Where the change of operating authority is the result of an emergency situation, the owner shall notify the Director in writing of the change as soon as practicable.

## **12.0 Information to be Provided**

- 12.1** Any information requested by a Director or a provincial officer concerning the drinking water system and its operation, including but not limited to any records required to be kept by this licence or the drinking water works permit, shall be provided upon request.

## **13.0 Records Retention**

- 13.1** Except as otherwise required in this licence or the drinking water works permit, any records required by or created in accordance with this licence or the drinking water works permit, other than the records specifically referenced in section 12 of O. Reg. 170/03,

shall be retained for at least 5 years and made available for inspection by a provincial officer, upon request.

## 14.0 Chemicals and Materials

- 14.1** All chemicals and materials used in the alteration or operation of the drinking water system that come into contact with water within the system shall meet all applicable standards set by both the American Water Works Association ("AWWA") and the American National Standards Institute ("ANSI") safety criteria standards NSF/60, NSF/61 and NSF/372.
- 14.1.1 In the event that the standards are updated, the owner may request authorization from the Director to use any on hand chemicals and materials that previously met the applicable standards.
- 14.1.2 The requirement for the owner to comply with NSF/372 shall come into force no later than December 19, 2017.
- 14.2** The most current chemical and material product registration documentation from a testing institution accredited by either the Standards Council of Canada or by the American National Standards Institution ("ANSI") shall be available at all times for each chemical and material used in the operation of the drinking water system that comes into contact with water within the system.
- 14.3** Conditions 14.1 and 14.2 do not apply in the case of the following:
- 14.3.1 Water pipe and pipe fittings meeting AWWA specifications made from ductile iron, cast iron, PVC, fibre and/or steel wire reinforced cement pipe or high density polyethylene (HDPE);
- 14.3.2 Articles made from stainless steel, glass, HDPE or Teflon®;
- 14.3.3 Cement mortar for watermain lining and for water contacting surfaces of concrete structures made from washed aggregates and Portland cement;
- 14.3.4 Gaskets that are made from NSF approved materials;
- 14.3.5 Food grade oils and lubricants, food grade anti-freeze, and other food grade chemicals and materials that are compatible for drinking water use; or
- 14.3.6 Any particular chemical or material where the owner has written documentation signed by the Director that indicates that the Ministry of the Environment and Climate Change is satisfied that the chemical or material is acceptable for use within the drinking water system and the chemical or material is only used as permitted by the documentation.

## 15.0 Drawings

- 15.1** All drawings and diagrams in the possession of the owner that show any treatment subsystem as constructed shall be retained by the owner unless the drawings and

diagrams are replaced by a revised or updated version showing the subsystem as constructed subsequent to the alteration.

- 15.2** Any alteration to any treatment subsystem shall be incorporated into process flow diagrams, process and instrumentation diagrams, and record drawings and diagrams within one year of the substantial completion of the alteration.
- 15.3** Process flow diagrams and process and instrumentation diagrams for any treatment subsystem shall be kept in a place, or made available in such a manner, that they may be readily viewed by all persons responsible for all or part of the operation of the drinking water system.

## **16.0 Operations and Maintenance Manual**

- 16.1** An up-to-date operations and maintenance manual or manuals shall be maintained and applicable parts of the manual or manuals shall be made available for reference by all persons responsible for all or part of the operation or maintenance of the drinking water system.
- 16.2** The operations and maintenance manual or manuals, shall include at a minimum:
- 16.2.1 The requirements of this licence and associated procedures;
  - 16.2.2 The requirements of the drinking water works permit for the drinking water system;
  - 16.2.3 A description of the processes used to achieve primary and secondary disinfection within the drinking water system, including where applicable:
    - a) A copy of the CT calculations that were used as the basis for primary disinfection under worst case operating conditions; and
    - b) The validated operating conditions for UV disinfection equipment, including a copy of the validation certificate;
  - 16.2.4 Procedures for monitoring and recording the in-process parameters necessary for the control of any treatment subsystem and for assessing the performance of the drinking water system;
  - 16.2.5 Procedures for the operation and maintenance of monitoring equipment;
  - 16.2.6 Contingency plans and procedures for the provision of adequate equipment and material to deal with emergencies, upset conditions and equipment breakdown;
  - 16.2.7 Procedures for dealing with complaints related to the drinking water system, including the recording of the nature of the complaint and any investigation and corrective action taken in respect of the complaint;

- 16.3** Procedures necessary for the operation and maintenance of any alterations to the drinking water system shall be incorporated into the operations and maintenance manual or manuals prior to those alterations coming into operation.
- 16.4** The requirement for the owner to comply with condition 16.2.3 shall come into force on May 19, 2016.



## Schedule C: System-Specific Conditions

System Owner	The Corporation of the Township of Nairn and Hyman
Licence Number	281-101
Drinking Water System Name	Nairn Centre Drinking Water System
Schedule C Issue Date	November 25th, 2015

### 1.0 System Performance

#### Rated Capacity

- 1.1 For each treatment subsystem listed in column 1 of Table 1, the maximum daily volume of treated water that flows from the treatment subsystem to the distribution system shall not exceed the value identified as the rated capacity in column 2 of the same row.

<b>Table 1: Rated Capacity</b>	
Column 1 Treatment Subsystem Name	Column 2 Rated Capacity (m <sup>3</sup> /day)
Nairn Centre Water Treatment Plant	818

#### Maximum Flow Rates

- 1.2 For each treatment subsystem listed in column 1 of Table 2, the maximum flow rate of water that flows into a treatment subsystem component listed in column 2 shall not exceed the value listed in column 3 of the same row.

<b>Table 2: Maximum Flow Rates</b>		
Column 1 Treatment Subsystem Name	Column 2 Treatment Subsystem Component	Column 3 Maximum Flow Rate (L/s)
Not Applicable	Not Applicable	Not Applicable

- 1.3 Despite conditions 1.1 and 1.2, a treatment subsystem may be operated temporarily at a maximum daily volume and/or a maximum flow rate above the values set out in column 2 of Table 1 and column 3 of Table 2 respectively for the purposes of fighting a large fire or for the maintenance of the drinking water system.
- 1.4 Condition 1.3 does not authorize the discharge into the distribution system of any water that does not meet all of the requirements of this licence and all other regulatory requirements, including compliance with the Ontario Drinking Water Quality Standards.

### Residue Management

- 1.5** In respect of an effluent discharged into the natural environment from a treatment subsystem or treatment subsystem component listed in column 1 of Table 3:
- 1.5.1 The annual average concentration of a test parameter identified in column 2 shall not exceed the value in column 3 of the same row; and
- 1.5.2 The maximum concentration of a test parameter identified in column 2 shall not exceed the value in column 4 of the same row.

<b>Table 3: Residue Management</b>			
<b>Column 1 Treatment Subsystem or Treatment Subsystem Component Name</b>	<b>Column 2 Test Parameter</b>	<b>Column 3 Annual Average Concentration (mg/L)</b>	<b>Column 4 Maximum Concentration (mg/L)</b>
Residue Management	Suspended Solids (composite)	25	

### UV Disinfection Equipment Performance

- 1.6** For each treatment subsystem or treatment subsystem component listed in column 1 of Table 4, and while directing water to the distribution system:
- 1.6.1 The UV disinfection equipment shall be operated such that a continuous pass-through UV dose is maintained throughout the life time of the UV lamp(s) that is at least the minimum continuous pass-through UV dose set out in column 2 of the same row at the maximum design flow rate for the equipment;
- 1.6.2 In addition to any other sampling, analysis and recording that may be required, the ultraviolet light disinfection equipment shall test for the test parameters set out in column 4 of the same row at a testing frequency of once every five (5) minutes or less and record the test data at a recording frequency of once every four (4) hours or less;
- 1.6.3 If there is a UV disinfection equipment alarm, the test parameters set out in column 4 of the same row shall be recorded at a recording frequency of once every five minutes or less until the alarm condition has been corrected;
- 1.6.4 A monthly summary report shall be prepared at the end of each calendar month which sets out the time, date and duration of each UV equipment alarm, the volume of water treated during each alarm period and the actions taken by the operating authority to correct the alarm situation;

<b>Table 4: UV Disinfection Equipment</b>			
<b>Column 1 Treatment Subsystem or Treatment Subsystem Component Name</b>	<b>Column 2 Minimum Continuous Pass-Through UV Dose (mJ/cm<sup>2</sup>)</b>	<b>Column 3 Control Strategy</b>	<b>Column 4 Test Parameter</b>
N/A	N/A	N/A	N/A

## 2.0 Flow Measurement and Recording Requirements

**2.1** For each treatment subsystem identified in column 1 of Table 1 and in addition to any other flow measurement and recording that may be required, continuous flow measurement and recording shall be undertaken for:

2.1.1 The flow rate and daily volume of treated water that flows from the treatment subsystem to the distribution system.

2.1.2 The flow rate and daily volume of water that flows into the treatment subsystem.

**2.2** For each treatment subsystem component identified in column 2 of Table 2 and in addition to any other flow measurement and recording that may be required, continuous flow measurement and recording shall be undertaken for the flow rate and daily volume of water that flows into the treatment subsystem component.

**2.3** Where a rated capacity from Table 1 or a maximum flow rate from Table 2 is exceeded, the following shall be recorded:

2.3.1 The difference between the measured amount and the applicable rated capacity or maximum flow rate specified in Table 1 or Table 2;

2.3.2 The time and date of the measurement;

2.3.3 The reason for the exceedance; and

2.3.4 The duration of time that lapses between the applicable rated capacity or maximum flow rate first being exceeded and the next measurement where the applicable rated capacity or maximum flow rate is no longer exceeded.

## 3.0 Calibration of Flow Measuring Devices

**3.1** All flow measuring devices that are required by regulation, by a condition in the Drinking Water Works Permit, or by a condition otherwise imposed by the Ministry of the Environment and Climate Change, shall be checked and calibrated in accordance with the manufacturer's instructions.

**3.2** If the manufacturer's instructions do not indicate how often to check and calibrate a flow measuring device, the equipment shall be checked and calibrated at least once every 12 months during which the drinking water system is in operation.

3.2.1 For greater certainty, if condition 3.2 applies, the equipment shall be checked and calibrated not more than 30 days after the first anniversary of the day the equipment was checked and calibrated in the previous 12-month period.

## 4.0 Additional Sampling, Testing and Monitoring

### Drinking Water Health and Non-Health Related Parameters

**4.1** For each treatment subsystem or treatment subsystem component identified in column 1 of Tables 5 and 6 and in addition to any other sampling, testing and monitoring that may be required, sampling, testing and monitoring shall be undertaken for a test parameter listed in column 2 at the sampling frequency listed in column 3 and at the monitoring location listed in column 4 of the same row.

<b>Table 5: Drinking Water Health Related Parameters</b>			
<b>Column 1 Treatment Subsystem or Treatment Subsystem Component Name</b>	<b>Column 2 Test Parameter</b>	<b>Column 3 Sampling Frequency</b>	<b>Column 4 Monitoring Location</b>
Not Applicable	Not Applicable	Not Applicable	Not Applicable

<b>Table 6: Drinking Water Non-Health Related Parameters</b>			
<b>Column 1 Treatment Subsystem or Treatment Subsystem Component Name</b>	<b>Column 2 Test Parameter</b>	<b>Column 3 Sampling Frequency</b>	<b>Column 4 Monitoring Location</b>
Not Applicable	Not Applicable	Not Applicable	Not Applicable

### Environmental Discharge Parameters

**4.2** For each treatment subsystem or treatment subsystem component identified in column 1 of Table 7 and in addition to any other sampling, testing and monitoring that may be required, sampling, testing and monitoring shall be undertaken for a test parameter listed in column 2 using the sample type identified in column 3 at the sampling frequency listed in column 4 and at the monitoring location listed in column 5 of the same row.

**4.3** For the purposes of Table 7:

4.3.1 Manual Composite means the mean of at least three grab samples taken during a discharge event, with one sample being taken immediately following the

commencement of the discharge event, one sample being taken approximately at the mid-point of the discharge event and one sample being taken immediately before the end of the discharge event; and

4.3.2 Automated Composite means samples must be taken during a discharge event by an automated sampler at a minimum sampling frequency of once per hour.

4.4 Any sampling, testing and monitoring for the test parameter Total Suspended Solids shall be performed in accordance with the requirements set out in the publication "Standard Methods for the Examination of Water and Wastewater", 21<sup>st</sup> Edition, 2005, or as amended from time to time by more recently published editions.

<b>Table 7: Environmental Discharge Parameters</b>				
<b>Column 1 Treatment Subsystem or Treatment Subsystem Component Name</b>	<b>Column 2 Test Parameter</b>	<b>Column 3 Sample Type</b>	<b>Column 4 Sampling Frequency</b>	<b>Column 5 Monitoring Location</b>
Residue Management	Suspended Solids (composite)	Manual Composite	Monthly	Point of Discharge

4.5 Pursuant to Condition 10 of Schedule B of this licence, the owner may undertake the following environmental discharges associated with the maintenance and/or repair of the drinking water system:

4.5.1 The discharge of potable water from a watermain to a road or storm sewer;

4.5.2 The discharge of potable water from a water storage facility or pumping station:

4.5.2.1 To a road or storm sewer; or

4.5.2.2 To a watercourse where the discharge has been dechlorinated and if necessary, sediment and erosion control measures have been implemented.

4.5.3 The discharge of dechlorinated non-potable water from a watermain, water storage facility or pumping station to a road or storm sewer;

4.5.4 The discharge of raw water from a groundwater well to the environment where if necessary, sediment and erosion control measures have been implemented; and

4.5.5 The discharge of raw water, potable water or non-potable water from a treatment subsystem to the environment where if necessary, the discharge has been dechlorinated and sediment and erosion control measures have been implemented.

## 5.0 Studies Required

5.1 Not Applicable

**6.0 Source Protection**

6.1 Not Applicable

## **Schedule D: Conditions for Relief from Regulatory Requirements**

System Owner	<b>The Corporation of the Township of Nairn and Hyman</b>
Licence Number	<b>281-101</b>
Drinking Water System Name	<b>Nairn Centre Drinking Water System</b>
Schedule D Issue Date	<b>November 25th, 2015</b>

### **1.0 Lead Regulatory Relief**

- 1.1** Any relief from regulatory requirements previously authorized by the Director in respect of the drinking water system under section 38 of the SDWA in relation to the sampling, testing or monitoring requirements contained in Schedule 15.1 of O. Reg. 170/03 shall remain in force until such time as Schedule 15.1 of O. Reg. 170/03 is amended after June 1, 2009.

### **2.0 Other Regulatory Relief**

- 2.1** Not Applicable

## Schedule E: Pathogen Log Removal/Inactivation Credits

System Owner	The Corporation of the Township of Nairn and Hyman
Licence Number	281-101
Drinking Water System Name	Nairn Centre Drinking Water System
Schedule E Issue Date	November 25th, 2015

### 1.0 Primary Disinfection Pathogen Log Removal/Inactivation Credits

#### Nairn Centre Water Treatment Plant

Spanish River [Surface Water]

Minimum Log Removal/ Inactivation Required	Cryptosporidium Oocysts	Giardia Cysts <sup>a</sup>	Viruses <sup>b</sup>
Nairn Centre Water Treatment Plant	2	3	4

<sup>a</sup> At least 0.5 log inactivation of Giardia shall be achieved by the disinfection portion of the overall water treatment process.

<sup>b</sup> At least 2 log inactivation of viruses shall be achieved by disinfection.

Log Removal/Inactivation Credits Assigned <sup>c</sup>	Cryptosporidium Oocysts	Giardia Cysts	Viruses
Conventional Filtration	2	2.5	2
Chlorination [CT:Clearwell]	NA	0.5	2+

<sup>c</sup> Log removal/inactivation credit assignment is based on each treatment process being fully operational and the applicable log removal/inactivation credit assignment criteria being met.

Treatment Component	Log Removal/Inactivation Credit Assignment Criteria
Conventional Filtration	<ol style="list-style-type: none"> <li>1. A chemical coagulant shall be used at all times when the treatment plant is in operation;</li> <li>2. Chemical dosages shall be monitored and adjusted in response to variations in raw water quality;</li> <li>3. Effective backwash procedures shall be maintained including filter-to-waste or an equivalent procedure during filter ripening to ensure that effluent turbidity requirements are met at all times;</li> <li>4. Filtrate turbidity shall be continuously monitored from each filter; and</li> <li>5. Performance criterion for filtered water turbidity of less than or equal to 0.3 NTU in 95% of the measurements each month shall be met for each filter.</li> </ol>
Chlorination	<ol style="list-style-type: none"> <li>1. Sampling and testing for free chlorine residual shall be carried out by continuous monitoring equipment in the treatment process at or near a location where the intended contact time has just been completed in accordance with the Ministry's <i>Procedure for Disinfection of Drinking Water in Ontario</i>; and</li> <li>2. At all times, CT provided shall be greater than or equal to the CT required to achieve the log removal credits assigned.</li> </ol>



## APPENDIX II

### Drinking Water Works Permit



## DRINKING WATER WORKS PERMIT

**Permit Number: 281-201**

**Issue Number: 3**

Pursuant to the *Safe Drinking Water Act, 2002*, S.O. 2002, c. 32, and the regulations made thereunder and subject to the limitations thereof, this drinking water works permit is issued under Part V of the *Safe Drinking Water Act, 2002*, S.O. 2002, c. 32 to:

### **The Corporation of the Township of Nairn and Hyman**

**64 McIntyre St.  
Nairn Centre ON  
P0M 2L0**

For the following municipal residential drinking water system:

### **Nairn Centre Drinking Water System**

This drinking water works permit includes the following:

<b>Schedule</b>	<b>Description</b>
Schedule A	Drinking Water System Description
Schedule B	General
Schedule C	All documents issued as Schedule C to this drinking water works permit which authorize alterations to the drinking water system
Schedule D	Process Flow Diagrams

DATED at TORONTO this 6th day of September, 2016

Signature

Aziz Ahmed, P.Eng.  
Director  
Part V, *Safe Drinking Water Act, 2002*

## Schedule A: Drinking Water System Description

System Owner	The Corporation of the Township of Nairn and Hyman
Permit Number	281-201
Drinking Water System Name	Nairn Centre Drinking Water System
Schedule A Issue Date	6th day of September, 2016

### 1.0 System Description

- 1.1 The following is a summary description of the works comprising the above drinking water system:

#### Overview

The **Nairn Centre Drinking Water System** consists of one conventional drinking water treatment plant and approximately 6.5 kilometers distribution watermains. The water treatment plant is a prefabricated package water treatment plant comprised of chemical addition, prechlorination, coagulation/flocculation, sedimentation, and dual media filtration.

## Nairn Centre Drinking Water System

### Treatment Plant

Name	Nairn Centre Water Treatment Plant
Street Address	Ferry Lane
UTM Coordinates	NAD 83, Zone 17m 455049m E, 5131662 m N
System Type	A prefabricated package surface water treatment plant
Notes	

## Surface Water Supply

### Intake Structure

Description	Water intake structure comprising a polyethylene "drum" (1.05 m diameter), weighed down with rock ballast, partially embedded into the river bottom
Location	
Mesh Screen	150 mm intake ports wrapped with 9.5 mm mesh screen
Intake Pipe	An intake pipe of 250mm approximately 33 m in length, connecting to the raw water well
Zebra Mussel Control	A 75 mm diameter pipe installed alongside the intake pipe, for future use in chlorination for zebra mussel control
Notes	

## Low Lift Works

### Wet Wells

Description	A raw water wet well
Dimensions	One (1) raw water pump wet well, 2.44 m diameter
Notes	

### Low Lift Pumps

Description	Two (2) low lift pumps, alternating as duty and standby
Capacity	Each pump rated at 9.5 L/s at 18.5 m TDH
Notes	Discharging raw water into the 150 mm common header, and to the treatment plant through a 150 mm diameter PVC plant supply pipe

## Mixing Zone

Description	Mixing Zone
Notes	The static in-line mixer for mixing of coagulant, soda ash and polymer added

## Flocculation

### Flocculation Tanks

Description	Flocculation Zone
Notes	Providing a retention time of 30 min

## Clarification

### Settling Compartment

Description	An upflow clarifier, complete with tube settlers
Notes	Providing a retention time of 60 min at a surface rise rate of 3.7 m/hr

## Filtration

### Dual Media Filter

Description	A two-compartment filter containing sand and anthracite
Notes	Operating at a filtration rate of 6.5 m/hr, and provided with backwash at a rate of 37 m/hr

## Waste Residual Management

### Surge Tank

Description	Surge tank receives sludge from the clarifiers and backwash waste from the dual media filters
Capacity	26 m <sup>3</sup>
Equipment	Two (2) (one duty, one standby) centrifugal submersible pumps each rated at 1.0 L/s at 5.0 m TDH
Notes	Submersible pumps transfer waste to a 65 m <sup>3</sup> settling chamber (clarifier)

### Setting Chamber (Clarifier)

Description	Setting Chamber (Clarifier) receives waste from the surge tank
Capacity	65 m <sup>3</sup>
Notes	From the settling chamber overflowing to an outfall chamber, and from there to the adjacent creek and from there to the Spanish River (downstream of the plant intake); and deposited sludge removed from the clarifier by vacuum pump truck for off-site disposal

## High Lift Works

### High Lift Pumps

Description	High lift pumping devices
Capacity	Two (2) vertical multi-stage pumps alternating as duty and standby, each pump rated at 6.6 L/s at 59.5 m TDH
	One (1) fire pump rated at 40.1 L/s at 61 m TDH
Notes	Having a system of three hydro-pneumatic (pressure) tanks, each 1.6 m <sup>3</sup> capacity

## On-Site Storage

### Clearwells

Description	Two (2) equal-capacity clearwells, interconnected via an overflow wall
Capacity	Each clearwell has a maximum volume of 345 m <sup>3</sup> , for a total treated water storage volume of 690 m <sup>3</sup>
Notes	Each clearwell equipped with a 200 mm diameter high lift pump intake

## Emergency Power

### Backup Power Supply

Description	A 160 kW (200 kVA) diesel generator set
Notes	Provide emergency "back-up" power for the water treatment plant

## Chemical Addition

### Chlorine

Description	Pre-chlorination and post-chlorination system
Feed Point	Injection point to the upstream of the static mixer into raw water for pre-chlorination
	Injection point to the filter effluent line for post-chlorination
Equipment	Three (3) metering pumps, one for pre-chlorination, Two (2) for post chlorination, one duty, one standby each pump capable of 6.3 L/hr, complete with a solution tank
Notes	

**Coagulant**

Description	Coagulant injection system
Feed Point	Injection into the raw water supply pipe upstream of the static mixer
Equipment	Two (2) metering pumps (one duty and one standby), each capable of 19 L/hr
	One (1) 11.4 m <sup>3</sup> polyethylene tank with a concrete containment
Notes	

**Soda Ash System**

Description	Soda ash solution injection system
Feed Point	Injection to the raw water upstream of the static mixer
	Injection also to the treated water upstream of the clearwell/reservoir
Equipment	Two (2) metering pumps (one pre and one post) each capable of 17 L/hr Both pumps can be valved to run as back up for each other.
	One (1) 1,400 L steel tank
Notes	

**Polymer Solution**

Description	Polymer solution injection system
Feed Point	Injection to downstream of the static mixer
Equipment	Two (2) (one duty and one standby) metering pumps, each capable of 19 L/hr,
	One (1) 200 L polyethylene solution tank
Notes	

**Instrumentation and Control****Regulatory Monitoring**

Description	Process control and monitoring equipment for the Nairn Centre Drinking Water System
Notes	System control with data acquisition including various in-line analyzers and monitors

## Watermains

1.2 Watermains within the distribution system comprise:

1.2.1 Watermains that have been set out in each document or file identified in column 1 of Table 1.

<b>Table 1: Watermains</b>	
<b>Column 1 Document or File Name</b>	<b>Column 2 Date</b>
Township of Nairn, Water Distribution System Commissioned	December 30, 2014

1.2.2 Watermains that have been added, modified, replaced or extended further to the provisions of Schedule C of this drinking water works permit on or after the date identified in column 2 of Table 1 for each document or file identified in column 1.

1.2.3 Watermains that have been added, modified, replaced or extended further to an authorization by the Director on or after the date identified in column 2 of Table 1 for each document or file identified in column 1.



## Schedule B: General

System Owner	The Corporation of the Township of Nairn and Hyman
Permit Number	281-201
Drinking Water System Name	Nairn Centre Drinking Water System
Schedule B Issue Date	6th day of September, 2016

### 1.0 Applicability

- 1.1 In addition to any other requirements, the drinking water system identified above shall be altered and operated in accordance with the conditions of this drinking water works permit and the licence.
- 1.2 The definitions and conditions of the licence shall also apply to this drinking water works permit.

### 2.0 Alterations to the Drinking Water System

- 2.1 Any document issued by the Director as a Schedule C to this drinking water works permit shall provide authority to alter the drinking water system in accordance, where applicable, with the conditions of this drinking water works permit and the licence.
- 2.2 All Schedule C documents issued by the Director for the drinking water system shall form part of this drinking water works permit.
- 2.3 All parts of the drinking water system in contact with drinking water which are:
- 2.3.1 Added, modified, replaced, extended; or
- 2.3.2 Taken out of service for inspection, repair or other activities that may lead to contamination,
- shall be disinfected before being put into service in accordance with a procedure approved by the Director or in accordance with the applicable provisions of the following documents:
- a) The ministry's Watermain Disinfection Procedure, effective no later than March 1, 2017;
  - b) AWWA C652 – Standard for Disinfection of Water-Storage Facilities;
  - c) AWWA C653 – Standard for Disinfection of Water Treatment Plants; and
  - d) AWWA C654 – Standard for Disinfection of Wells.
- 2.4 The owner shall notify the Director within thirty (30) days of the placing into service or the completion of any addition, modification, replacement or extension of the drinking water system which had been authorized through:
- 2.4.1 Schedule B to this drinking water works permit which would require an alteration of the description of a drinking water system component described in Schedule A of this drinking water works permit;

- 2.4.2 Any Schedule C to this drinking water works permit respecting works other than watermains; or
- 2.4.3 Any approval issued prior to the issue date of the first drinking water works permit respecting works other than watermains which were not in service at the time of the issuance of the first drinking water works permit.
- 2.5** For greater certainty, the notification requirements set out in condition 2.4 do not apply to any addition, modification, replacement or extension in respect of the drinking water system which:
- 2.5.1 Is exempt from subsection 31(1) of the SDWA by subsection 9.(2) of O. Reg. 170/03;
- 2.5.2 Constitutes maintenance or repair of the drinking water system; or
- 2.5.3 Is a watermain authorized by condition 3.1 of Schedule B of this drinking water works permit.
- 2.6** The owner shall notify the legal owner of any part of the drinking water system that is prescribed as a municipal drinking water system by section 2 of O. Reg. 172/03 of the requirements of the licence and this drinking water works permit as applicable to the prescribed system.
- 2.7** For greater certainty, any alteration to the drinking water system made in accordance with this drinking water works permit may only be carried out after other legal obligations have been complied with including those arising from the *Environmental Assessment Act*, *Niagara Escarpment Planning and Development Act*, *Oak Ridges Moraine Conservation Act, 2001* and *Greenbelt Act, 2005*.

### **3.0 Watermain Additions, Modifications, Replacements and Extensions**

- 3.1** The drinking water system may be altered by adding, modifying, replacing or extending a watermain within the distribution system subject to the following conditions:
- 3.1.1 The design of the watermain addition, modification, replacement or extension:
- a) Has been prepared by a Professional Engineer;
  - b) Has been designed only to transmit water and has not been designed to treat water;
  - c) Satisfies the design criteria set out in the Ministry of the Environment and Climate Change publication "Watermain Design Criteria for Future Alterations Authorized under a Drinking Water Works Permit – June 2012", as amended from time to time; and
  - d) Is consistent with or otherwise addresses the design objectives contained within the Ministry of the Environment and Climate Change publication "Design Guidelines for Drinking Water Systems, 2008", as amended from time to time.

- 3.1.2 The maximum demand for water exerted by consumers who are serviced by the addition, modification, replacement or extension of the watermain will not result in an exceedance of the rated capacity of a treatment subsystem or the maximum flow rate for a treatment subsystem component as specified in the licence, or the creation of adverse conditions within the drinking water system.
  - 3.1.3 The watermain addition, modification, replacement or extension will not adversely affect the distribution system's ability to maintain a minimum pressure of 140 kPa at ground level at all points in the distribution system under maximum day demand plus fire flow conditions.
  - 3.1.4 Secondary disinfection will be provided to water within the added, modified, replaced or extended watermain to meet the requirements of O. Reg. 170/03.
  - 3.1.5 The watermain addition, modification, replacement or extension is wholly located within the municipal boundary over which the owner has jurisdiction.
  - 3.1.6 The owner of the drinking water system consents in writing to the watermain addition, modification, replacement or extension.
  - 3.1.7 A Professional Engineer has verified in writing that the watermain addition, modification, replacement or extension meets the requirements of condition 3.1.1.
  - 3.1.8 The owner of the drinking water system has verified in writing that the watermain addition, modification, replacement or extension meets the requirements of conditions 3.1.2 to 3.1.6.
- 3.2** The authorization for the addition, modification, replacement or extension of a watermain provided for in condition 3.1 does not include the addition, modification, replacement or extension of a watermain that:
- 3.2.1 Passes under or through a body of surface water, unless trenchless construction methods are used;
  - 3.2.2 Has a nominal diameter greater than 750 mm;
  - 3.2.3 Results in the fragmentation of the drinking water system; or
  - 3.2.4 Connects to another drinking water system, unless:
    - a) Prior to construction, the owner of the drinking water system seeking the connection obtains written consent from the owner or owner's delegate of the drinking water system being connected to; and
    - b) The owner of the drinking water system seeking the connection retains a copy of the written consent from the owner or owner's delegate of the drinking water system being connected to as part of the record that is recorded and retained under condition 3.3.

- 3.3** The verifications required in conditions 3.1.7 and 3.1.8 shall be:
- 3.3.1 Recorded on “Form 1 – Record of Watermains Authorized as a Future Alteration”, as published by the Ministry of the Environment and Climate Change, prior to the watermain addition, modification, replacement or extension being placed into service; and
  - 3.3.2 Retained for a period of ten (10) years by the owner.
- 3.4** For greater certainty, the verification requirements set out in condition 3.3 do not apply to any addition, modification, replacement or extension in respect of the drinking water system which:
- 3.4.1 Is exempt from subsection 31(1) of the SDWA by subsection 9.(2) of O. Reg. 170/03; or
  - 3.4.2 Constitutes maintenance or repair of the drinking water system.
- 3.5** The document or file referenced in Column 1 of Table 1 of Schedule A of this drinking water works permit that sets out watermains shall be retained by the owner and shall be updated to include watermain additions, modifications, replacements and extensions within 12 months of the addition, modification, replacement or extension.
- 3.6** The updates required by condition 3.5 shall include watermain location relative to named streets or easements and watermain diameter.

#### **4.0 Minor Modifications to the Drinking Water System**

- 4.1** The drinking water system may be altered by adding, modifying or replacing the following components in the drinking water system:
- 4.1.1 Raw water pumps and treatment process pumps in the treatment system;
  - 4.1.2 Coagulant feed systems in the treatment system, including the location and number of dosing points;
  - 4.1.3 Valves;
  - 4.1.4 Instrumentation and controls, including SCADA systems, and software associated with these devices;
  - 4.1.5 Filter media, backwashing equipment and under-drains in the treatment system; or,
  - 4.1.6 Spill containment works.
- 4.2** The drinking water system may be altered by adding, modifying, replacing or removing the following components in the drinking water system:
- 4.2.1 Treated water pumps and associated equipment;
  - 4.2.2 Re-circulation devices within distribution system storage facilities;

- 4.2.3 In-line mixing equipment;
  - 4.2.4 Chemical metering pumps and chemical handling pumps;
  - 4.2.5 Chemical storage tanks (excluding fuel storage tanks) and associated equipment; or,
  - 4.2.6 Measuring and monitoring devices that are not required by regulation, by a condition in the Drinking Water Works Permit, or by a condition otherwise imposed by the Ministry of the Environment and Climate Change.
- 4.3** The drinking water system may be altered by replacing the following:
- 4.3.1 Raw water piping, treatment process piping or treated water piping within the treatment subsystem;
  - 4.3.2 Fuel storage tanks and spill containment works, and associated equipment; or
  - 4.3.3 Coagulants and pH adjustment chemicals, where the replacement chemicals perform the same function;
    - a) Prior to making any alteration to the drinking water system under condition 4.3.3, the owner shall undertake a review of the impacts that the alteration might have on corrosion control or other treatment processes; and
    - b) The owner shall notify the Director in writing within thirty (30) days of any alteration made under condition 4.3.3 and shall provide the Director with a copy of the review.
- 4.4** Any alteration of the drinking water system made under conditions 4.1, 4.2 or 4.3 shall not result in:
- 4.4.1 An exceedance of a treatment subsystem rated capacity or a treatment subsystem component maximum flow rate as specified in the licence;
  - 4.4.2 The bypassing of any unit process within a treatment subsystem;
  - 4.4.3 A deterioration in the quality of drinking water provided to consumers;
  - 4.4.4 A reduction in the reliability or redundancy of any component of the drinking water system;
  - 4.4.5 A negative impact on the ability to undertake compliance and other monitoring necessary for the operation of the drinking water system; or
  - 4.4.6 An adverse effect on the environment.
- 4.5** The owner shall verify in writing that any addition, modification, replacement or removal of drinking water system components in accordance with conditions 4.1, 4.2 or 4.3 has met the requirements of the conditions listed in condition 4.4.

- 4.6** The verifications and documentation required in condition 4.5 shall be:
- 4.6.1 Recorded on “Form 2 – Record of Minor Modifications or Replacements to the Drinking Water System”, as published by the Ministry of the Environment and Climate Change, prior to the modified or replaced components being placed into service; and
  - 4.6.2 Retained for a period of ten (10) years by the owner.
- 4.7** For greater certainty, the verification requirements set out in conditions 4.5 and 4.6 do not apply to any addition, modification, replacement or removal in respect of the drinking water system which:
- 4.7.1 Is exempt from subsection 31(1) of the SDWA by subsection 9.(2) of O. Reg. 170/03; or
  - 4.7.2 Constitutes maintenance or repair of the drinking water system.
- 4.8** The owner shall update any drawings maintained for the drinking water system to reflect the modification or replacement of the works, where applicable.

## **5.0 Equipment with Emissions to the Air**

- 5.1** The drinking water system may be altered by adding, modifying or replacing any of the following drinking water system components that may discharge or alter the rate or manner of a discharge of a compound of concern to the atmosphere:
- 5.1.1 Any equipment, apparatus, mechanism or thing that is used for the transfer of outdoor air into a building or structure that is not a cooling tower;
  - 5.1.2 Any equipment, apparatus, mechanism or thing that is used for the transfer of indoor air out of a space used for the production, processing, repair, maintenance or storage of goods or materials, including chemical storage;
  - 5.1.3 Laboratory fume hoods used for drinking water testing, quality control and quality assurance purposes;
  - 5.1.4 Low temperature handling of compounds with a vapor pressure of less than 1 kilopascal;
  - 5.1.5 Maintenance welding stations;
  - 5.1.6 Minor painting operations used for maintenance purposes;
  - 5.1.7 Parts washers for maintenance shops;
  - 5.1.8 Emergency chlorine and ammonia gas scrubbers and absorbers;
  - 5.1.9 Venting for activated carbon units for drinking water taste and odour control;
  - 5.1.10 Venting for a stripping unit for methane removal from a groundwater supply;
  - 5.1.11 Venting for an ozone treatment unit;

- 
- 5.1.12 Natural gas or propane fired boilers, water heaters, space heaters and make-up air units with a total facility-wide heat input rating of less than 20 million kilojoules per hour, and with an individual fuel energy input of less than or equal to 10.5 gigajoules per hour; or
- 5.1.13 Emergency generators that fire No. 2 fuel oil (diesel fuel) with a sulphur content of 0.5 per cent or less measured by weight, natural gas, propane, gasoline or biofuel, and that are used for emergency duty only with periodic testing.
- 5.2** The owner shall not add, modify or replace a drinking water system component set out in condition 5.1 for an activity that is not directly related to the treatment and/or distribution of drinking water.
- 5.3** The emergency generators identified in condition 5.1.13 shall not be used for non-emergency purposes including the generation of electricity for sale or for peak shaving purposes.
- 5.4** The owner shall prepare an emission summary table for nitrogen oxide emissions only, for each addition, modification or replacement of emergency generators identified in condition 5.1.13.

### Performance Limits

- 5.5** The owner shall ensure that a drinking water system component identified in conditions 5.1.1 to 5.1.13 is operated at all times to comply with the following limits:
- 5.5.1 For equipment other than emergency generators, the maximum concentration of any compound of concern at a point of impingement shall not exceed the corresponding point of impingement limit;
- 5.5.2 For emergency generators, the maximum concentration of nitrogen oxides at sensitive populations shall not exceed the applicable point of impingement limit, and at non-sensitive populations shall not exceed the Ministry of the Environment and Climate Change half-hourly screening level of 1880 ug/m<sup>3</sup> as amended; and
- 5.5.3 The noise emissions comply at all times with the limits set out in publication NPC-300, as applicable.
- 5.6** The owner shall verify in writing that any addition, modification or replacement of works in accordance with condition 5.1 has met the requirements of the conditions listed in condition 5.5.
- 5.7** The owner shall document how compliance with the performance limits outlined in condition 5.5.3 is being achieved, through noise abatement equipment and/or operational procedures.
- 5.8** The verifications and documentation required in conditions 5.6 and 5.7 shall be:
- 5.8.1 Recorded on "Form 3 – Record of Addition, Modification or Replacement of Equipment Discharging a Contaminant of Concern to the Atmosphere", as published by the Ministry of the Environment and Climate Change, prior to the additional, modified or replacement equipment being placed into service; and

5.8.2 Retained for a period of ten (10) years by the owner.

**5.9** For greater certainty, the verification and documentation requirements set out in conditions 5.6 and 5.8 do not apply to any addition, modification or replacement in respect of the drinking water system which:

5.9.1 Is exempt from subsection 31(1) of the SDWA by subsection 9.(2) of O. Reg. 170/03; or

5.9.2 Constitutes maintenance or repair of the drinking water system.

**5.10** The owner shall update any drawings maintained for the works to reflect the addition, modification or replacement of the works, where applicable.

## **6.0 Previously Approved Works**

**6.1** The owner may add, modify, replace or extend, and operate part of a municipal drinking water system if:

6.1.1 An approval was issued after January 1, 2004 under section 36 of the SDWA in respect of the addition, modification, replacement or extension and operation of that part of the municipal drinking water system;

6.1.2 The approval expired by virtue of subsection 36(4) of the SDWA; and

6.1.3 The addition, modification, replacement or extension commenced within five years of the date that activity was approved by the expired approval.

## **7.0 System-Specific Conditions**

**7.1** Not Applicable

## **8.0 Source Protection**

**8.1** Not Applicable



## Schedule D: Process Flow Diagrams

System Owner	The Corporation of the Township of Nairn and Hyman
Permit Number	281-201
Drinking Water System Name	Nairn Centre Drinking Water System
Schedule D Issue Date	6th day of September, 2016

### 1.0 Process Flow Diagrams

Township of Nairn and Hyman, Process flow charts of the Nairn Centre Water Treatment Plant

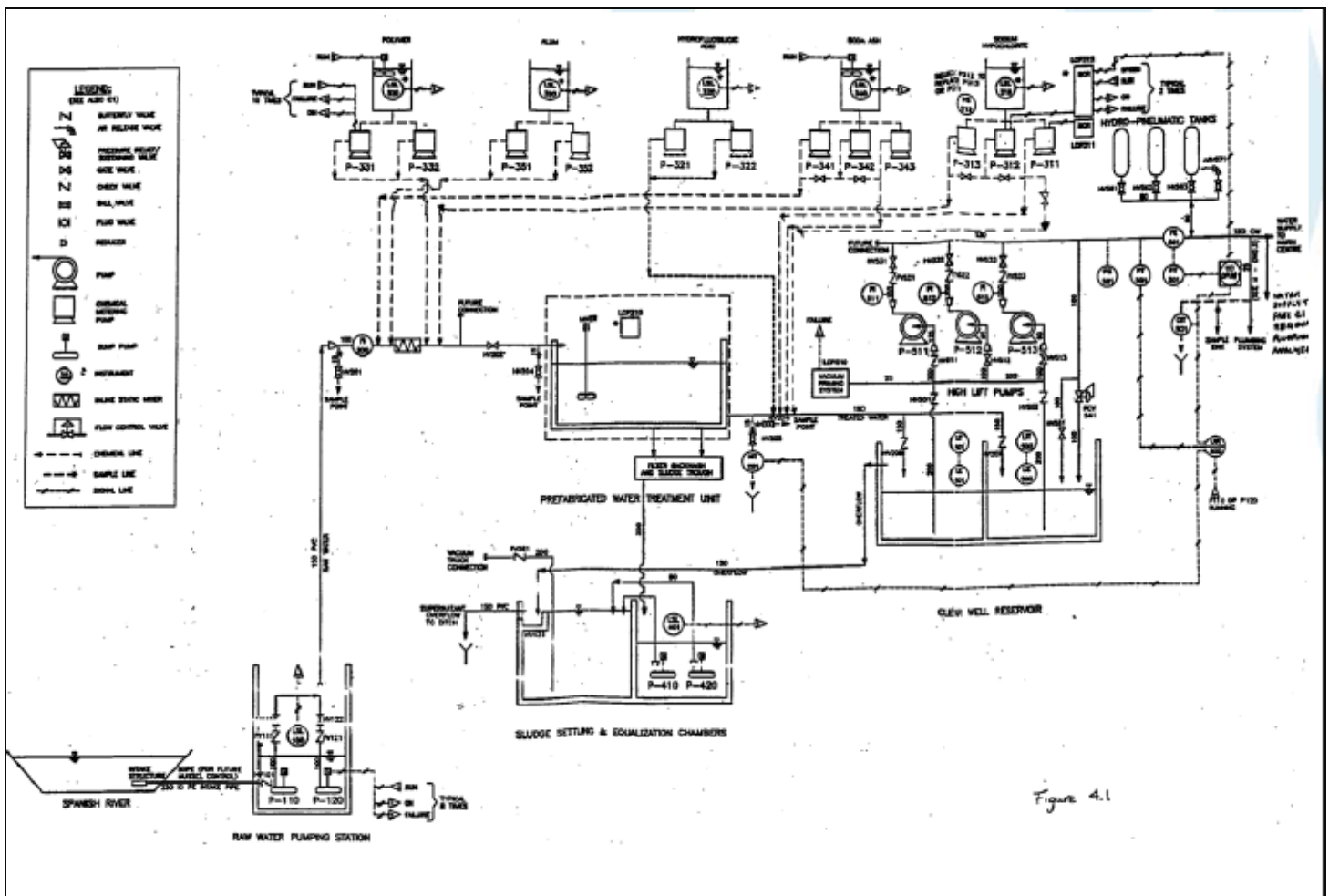


Figure 4.1

[Source: Operational Plan Element #6, Revision #5, December 30, 2014]

## APPENDIX III

### Permit to Take Water

**Ministry of the Environment**

Northern Region  
Technical Support Section  
Water Resources  
331-435 James St S  
Thunder Bay ON P7E 6S7  
Fax: (807)475-1754  
Tel: (807)475-1734

**Ministère de l'Environnement**

Direction régionale du Nord  
Section du Soutien Technique  
Ressource en eau  
331-435 rue James S  
Thunder Bay ON P7E 6S7  
Télécopieur: (807)475-1754  
Tél: (807)475-1734



June 26, 2009

The Corporation of the Township of Nairn and Hyman  
64 McIntyre St  
Nairn and Hyman, Ontario, P0M 2L0

Dear Sir/Madam,

**RE:** Permit to Take Water 2003-7TDPEP  
Reference Number 4381-7QMHY8

Please find attached Permit to Take Water (PTTW) 2003-7TDPEP, which replaces PTTW 5675-5VVRWE and grants the taking of water from the Spanish River, in the Township of Nairn and Hyman, District of Sudbury, for the purpose of municipal supply. The rate of taking shall not exceed a maximum of 570 litres per minute and 820,800 litres per day. The Permit is valid until June 26, 2019.

The Terms and Conditions are shown on pages 2-5 of the Permit.

This Permit does not relieve you, or The Corporation of the Township of Nairn and Hyman as the proponent, from compliance with provisions of any of the applicable Federal or Provincial statutes, regulations or other legal requirements.

The Water Taking Regulation, O.Reg. 387/04, requires that permit holders track the volume of water they take daily and report these volumes to the Ministry of the Environment (MOE) the following year. Please ensure that you have familiarized yourself with the monitoring and reporting requirements related to your permit. You can find additional information on the MOE web site at [www.ene.gov.on.ca](http://www.ene.gov.on.ca) or by calling the nearest MOE office.

Should you have any questions or concerns, please contact this office as soon as possible.

Yours truly,

---

Jacynth Gilliam-Price  
PTTW Evaluator  
Northern Region

File Storage Number: TS 31-02 PTTW 94-P-5012 NAIRN AND HYMAN, THE  
CORPORATION OF THE TOWNSHIP OF (SPANISH RIVER)

c: Angela Dubois, Ontario Clean Water Agency

bc: Brian McMahon, MOE Sudbury Safe Drinking Water Branch

**PERMIT TO TAKE WATER**  
Surface Water  
NUMBER 2003-7TDPEP

*Pursuant to Section 34 of the Ontario Water Resources Act, R.S.O. 1990 this Permit To Take Water is hereby issued to:*

The Corporation of the Township of Nairn and Hyman  
64 McIntyre St  
Nairn and Hyman, Ontario, P0M 2L0  
Canada

*For the water taking from:* Spanish River  
*Located at:* Ferry Lane, Nairn Ctr  
Nairn and Hyman, District of Sudbury

*For the purposes of this Permit, and the terms and conditions specified below, the following definitions apply:*

**DEFINITIONS**

- (a) "Director" means any person appointed in writing as a Director pursuant to section 5 of the OWRA for the purposes of section 34, OWRA.
- (b) "Provincial Officer" means any person designated in writing by the Minister as a Provincial Officer pursuant to section 5 of the OWRA.
- (c) "Ministry" means Ontario Ministry of the Environment.
- (d) "District Office" means the Sudbury District Office.
- (e) "Permit" means this Permit to Take Water No. 2003-7TDPEP including its Schedules, if any, issued in accordance with Section 34 of the OWRA.
- (f) "Permit Holder" means The Corporation of the Township of Nairn and Hyman.
- (g) "OWRA " means the *Ontario Water Resources Act*, R.S.O. 1990, c. O. 40, as amended.

*You are hereby notified that this Permit is issued subject to the terms and conditions outlined below:*

## **TERMS AND CONDITIONS**

### **1. Compliance with Permit**

- 1.1 Except where modified by this Permit, the water taking shall be in accordance with the application for this Permit To Take Water, dated March 25, 2009 and signed by Angela Dubois, and all Schedules included in this Permit.
- 1.2 The Permit Holder shall ensure that any person authorized by the Permit Holder to take water under this Permit is provided with a copy of this Permit and shall take all reasonable measures to ensure that any such person complies with the conditions of this Permit.
- 1.3 Any person authorized by the Permit Holder to take water under this Permit shall comply with the conditions of this Permit.
- 1.4 This Permit is not transferable to another person.
- 1.5 This Permit provides the Permit Holder with permission to take water in accordance with the conditions of this Permit, up to the date of the expiry of this Permit. This Permit does not constitute a legal right, vested or otherwise, to a water allocation, and the issuance of this Permit does not guarantee that, upon its expiry, it will be renewed.
- 1.6 The Permit Holder shall keep this Permit available at all times at or near the site of the taking, and shall produce this Permit immediately for inspection by a Provincial Officer upon his or her request.
- 1.7 The Permit Holder shall report any changes of address to the Director within thirty days of any such change. The Permit Holder shall report any change of ownership of the property for which this Permit is issued within thirty days of any such change. A change in ownership in the property shall cause this Permit to be cancelled.

### **2. General Conditions and Interpretation**

#### **2.1 Inspections**

The Permit Holder must forthwith, upon presentation of credentials, permit a Provincial Officer to carry out any and all inspections authorized by the OWRA, the *Environmental Protection Act*, R.S.O. 1990, the *Pesticides Act*, R.S.O. 1990, or the *Safe Drinking Water Act*, S. O. 2002.

#### **2.2 Other Approvals**

The issuance of, and compliance with this Permit, does not:

(a) relieve the Permit Holder or any other person from any obligation to comply with any other applicable legal requirements, including the provisions of the *Ontario Water Resources Act*, and the *Environmental Protection Act*, and any regulations made thereunder; or

(b) limit in any way any authority of the Ministry, a Director, or a Provincial Officer, including

the authority to require certain steps be taken or to require the Permit Holder to furnish any further information related to this Permit.

2.2.1 Prior to the taking of any water under the authorization of this Permit, the Permit Holder shall ensure full compliance with the *Safe Drinking Water Act*, R.S.O. 2002 and its regulations. At no time does this permit authorize the taking of water when out of compliance with the *Safe Drinking Water Act*, R.S.O. 2002 and its regulations.

### 2.3 Information

The receipt of any information by the Ministry, the failure of the Ministry to take any action or require any person to take any action in relation to the information, or the failure of a Provincial Officer to prosecute any person in relation to the information, shall not be construed as:

(a) an approval, waiver or justification by the Ministry of any act or omission of any person that contravenes this Permit or other legal requirement; or

(b) acceptance by the Ministry of the information's completeness or accuracy.

### 2.4 Rights of Action

The issuance of, and compliance with this Permit shall not be construed as precluding or limiting any legal claims or rights of action that any person, including the Crown in right of Ontario or any agency thereof, has or may have against the Permit Holder, its officers, employees, agents, and contractors.

### 2.5 Severability

The requirements of this Permit are severable. If any requirements of this Permit, or the application of any requirements of this Permit to any circumstance, is held invalid or unenforceable, the application of such requirements to other circumstances and the remainder of this Permit shall not be affected thereby.

### 2.6 Conflicts

Where there is a conflict between a provision of any submitted document referred to in this Permit, including its Schedules, and the conditions of this Permit, the conditions in this Permit shall take precedence.

## 3. Water Takings Authorized by This Permit

### 3.1 Expiry

This Permit expires on **June 26, 2019**. No water shall be taken under authority of this Permit after the expiry date.

### 3.2 Amounts of Taking Permitted

The Permit Holder shall only take water from the source, during the periods and at the rates and amounts of taking specified in Table A. Water takings are authorized only for the purposes specified in Table A.

**Table A**

	Source Name / Description:	Source: Type:	Taking Specific Purpose:	Taking Major Category:	Max. Taken per Minute (litres):	Max. Num. of Hrs Taken per Day:	Max. Taken per Day (litres):	Max. Num. of Days Taken per Year:	Zone/ Easting/ Northing:
1	Spanish River	River	Municipal	Water Supply	570	24	820,800	365	17 455049 5131662
						<b>Total Taking:</b>	820,800		

**4. Monitoring**

4.1 The Permit Holder shall maintain a record of all water takings. This record shall include the dates and times of water takings, and the total measured amounts of water pumped per day for each day that water is taken under the authorization of this Permit. The Permit Holder shall keep all required records up to date and available at or near the site of the taking and shall produce the records immediately for inspection by a Provincial Officer upon his or her request.

**5. Impacts of the Water Taking**

5.1 Notification

The Permit Holder shall immediately notify the local District Office of any complaint arising from the taking of water authorized under this Permit and shall report any action which has been taken or is proposed with regard to such complaint. The Permit Holder shall immediately notify the local District Office if the taking of water is observed to have any significant impact on the surrounding waters. After hours, calls shall be directed to the Ministry's Spills Action Centre at 1-800-268-6060.

5.2 For Surface-Water Takings

The taking of water (including the taking of water into storage and the subsequent or simultaneous withdrawal from storage) shall be carried out in such a manner that streamflow is not stopped and is not reduced to a rate that will cause interference with downstream uses of water or with the natural functions of the stream.

**6. Director May Amend Permit**

The Director may amend this Permit by letter requiring the Permit Holder to suspend or reduce the taking to an amount or threshold specified by the Director in the letter. The suspension or reduction in taking shall be effective immediately and may be revoked at any time upon notification by the Director. This condition does not affect your right to appeal the suspension or reduction in taking to the Environmental Review Tribunal under the *Ontario Water Resources Act*, Section 100 (4).



*The reasons for the imposition of these terms and conditions are as follows:*

1. Condition 1 is included to ensure that the conditions in this Permit are complied with and can be enforced.
2. Condition 2 is included to clarify the legal interpretation of aspects of this Permit.
3. Conditions 3 through 6 are included to protect the quality of the natural environment so as to safeguard the ecosystem and human health and foster efficient use and conservation of waters. These conditions allow for the beneficial use of waters while ensuring the fair sharing, conservation and sustainable use of the waters of Ontario. The conditions also specify the water takings that are authorized by this Permit and the scope of this Permit.

*In accordance with Section 100 of the Ontario Water Resources Act, R.S.O. 1990, you may by written Notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 101 of the Ontario Water Resources Act, R.S.O. 1990, as amended, provides that the Notice requiring the hearing shall state:*

1. The portions of the Permit or each term or condition in the Permit in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

*In addition to these legal requirements, the Notice should also include:*

3. The name of the appellant;
4. The address of the appellant;
5. The Permit to Take Water number;
6. The date of the Permit to Take Water;
7. The name of the Director;
8. The municipality within which the works are located;

*This notice must be served upon:*

*The Secretary  
Environmental Review Tribunal  
655 Bay Street, 15th Floor  
Toronto ON  
M5G 1E5*

AND

*The Director, Section 34  
Ministry of the Environment  
331-435 James St S  
Thunder Bay ON P7E 6S7  
Fax: (807)475-1754*

***Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal:***

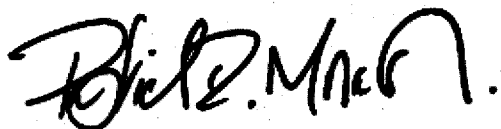
***by telephone at (416) 314-4600***

***by fax at (416) 314-4506***

***by e-mail at [www.ert.gov.on.ca](http://www.ert.gov.on.ca)***

This Permit cancels and replaces Permit Number 5675-5VVRWE, issued on 2004/02/10.

Dated at Thunder Bay this 26th day of June, 2009.



Patrick Morash  
Director, Section 34  
*Ontario Water Resources Act*, R.S.O. 1990

**Schedule A**

This Schedule "A" forms part of Permit To Take Water 2003-7TDPEP, dated June 26, 2009.

## APPENDIX IV

### Inspection Rating Record

**Ministry of the Environment - Inspection Summary Rating Record (Reporting Year - 2018-2019)**

<b>DWS Name:</b>	NAIRN CENTRE DRINKING WATER SYSTEM
<b>DWS Number:</b>	210002138
<b>DWS Owner:</b>	Nairn And Hyman, The Corporation Of The Township
<b>Municipal Location:</b>	Nairn And Hyman

**Regulation:** O.REG 170/03  
**Category:** Large Municipal Residential System  
**Type Of Inspection:** Focused  
**Inspection Date:** November 6, 2018  
**Ministry Office:** Sudbury District

**Maximum Question Rating:** 493

Inspection Module	Non-Compliance Rating
Capacity Assessment	0 / 30
Treatment Processes	0 / 56
Operations Manuals	0 / 28
Logbooks	0 / 14
Certification and Training	0 / 42
Water Quality Monitoring	0 / 124
Reporting & Corrective Actions	0 / 66
Treatment Process Monitoring	0 / 133
<b>TOTAL</b>	<b>0 / 493</b>

<b>Inspection Risk Rating</b>	<b>0.00%</b>
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<b>FINAL INSPECTION RATING:</b>	<b>100.00%</b>
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Ministry of the Environment - Detailed Inspection Rating Record (Reporting Year - 2018-2019)

**DWS Name:** NAIRN CENTRE DRINKING WATER SYSTEM  
**DWS Number:** 210002138  
**DWS Owner:** Nairn And Hyman, The Corporation Of The Township  
**Municipal Location:** Nairn And Hyman

**Regulation:** O.REG 170/03  
**Category:** Large Municipal Residential System  
**Type Of Inspection:** Focused  
**Inspection Date:** November 6, 2018  
**Ministry Office:** Sudbury District

**Maximum Question Rating:** 493

**Inspection Risk Rating** | 0.00%

**FINAL INSPECTION RATING:** | 100.00%