



**Hamlet of ...Aklavik.....**

**Water Licence Number: ...N3L3-0570.....**

**Municipal Water Licence**

**Annual Report for the Year .....2016.....**

**Date Prepared: .....March 9, 2017.....**

## Municipal Water Licence Annual Report

Hamlet of Aklavik  
Licence # N3L3-0570  
Reporting year 2016

### 1. Water Usage

Table 1: Monthly and annual quantities of fresh water obtained from all sources

Month	Volume from Source (m <sup>3</sup> or L)	Volume from any other Source (m <sup>3</sup> or L)
January	2694836 L	
February	2417918 L	
March	2778233 L	
April	2437440 L	
May	2650122 L	
June	2693908 L	
July	2506409 L	
August	2452812 L	
September	2509183 L	
October	2773676 L	
November	2747488 L	
December	2741616 L	
<b>TOTALS</b>	31403641	
<b>ANNUAL TOTAL (m<sup>3</sup> or L)</b>		
<b>% Increase or decrease from previous year</b>	-.02 Decrease	

Reasons for increase / decrease (if applicable):

Reasons for exceeding licensed withdrawal volumes (if applicable):

General information:

## 2. Sewage Disposal

Table 2: Monthly and annual quantities of sewage discharged to the sewage disposal facilities

Month	Volume of sewage discharged (m <sup>3</sup> or L)
January	2694836 L
February	2417918 L
March	2778233 L
April	2437440 L
May	2650122 L
June	2693908 L
July	2506409 L
August	2452812 L
September	2509183 L
October	2773676 L
November	2747488 L
December	2741616 L
<b>ANNUAL TOTAL (m<sup>3</sup> or L)</b>	31403641 L
<b>% Increase or decrease from previous year</b>	-0.02

## 3. Hazardous Waste Storage and Transportation

On Table 3, list the types of hazardous waste accepted into the facility including volumes.

Table 3: Monthly and annual quantities of hazardous waste stored on site and transported off site

Month	Type of hazardous waste accepted (Volume in m <sup>3</sup> or L)	Type of hazardous waste transported off site (Volume in m <sup>3</sup> or L)
January		
February		
March		
April		
May		
June		
July		
August		
September		
October		
November		
December		
<b>ANNUAL TOTAL (m<sup>3</sup> or L)</b>	0	0
<b>% Increase or decrease from previous year</b>		

If hazardous waste has been transported off site this year, please describe how it was transported and the final destination:

Please include treatment or disposal plans for the remaining quantities:

Please describe any changes or improvements to temporary hazardous waste storage areas:

#### 4. Sewage Sludge Removal

Table 4: Monthly and annual quantities of sewage sludge removed from the sewage disposal facilities and disposal location

Month	Volume of sewage sludge removed (m <sup>3</sup> or L)	Disposal location
January		
February		
March		
April		
May		
June		
July		
August		
September		
October		
November		
December		
<b>ANNUAL TOTAL (m<sup>3</sup> or L)</b>	0	0
<b>% Increase or decrease from previous year</b>		

**5. Problems, Modifications or Repairs Completed During the Year on Water Supply and Waste Disposal Facilities**

*Include any changes to infrastructure of all facilities completed during the year, including any changes, repairs and modifications. Please note any problems that occurred during the year. If there are no changes, make note of that also.*

**6. SNP Data**

A condition of the Water Licence is the Surveillance Network Program (SNP). The SNP outlines the sampling requirements and frequency at monitoring stations. *In table 5, insert the sites sampled during the reporting year and the sampling period (sampling date). Attach the complete Taiga Laboratory results, with your “Municipal Water Licence Annual Report” to the Inuvialuit Water Board.*

Table 5: Sampling station and sampling period

Sampling station	After break-up	Prior to freeze-up

**7. Spills and Unauthorized Discharges**

*List any spills and unauthorized discharges, how and when they were reported, and clean up methods.*

**8. Spill Response Training and/or other Operator Training**

*Please provide a description of any Spill Response Training and/or other operator training carried out during the year.*

## **9. Closure and Reclamation**

*Include a description of any closure, remediation and/or reclamation activities completed during the year and an outline of any work anticipated for next year.*

## **10. Studies Requested by the Board that Relate to Water Use, Waste Disposal or Closure and Reclamation**

*If the Board has requested that specific studies be completed or have asked for specific information be included in the annual report, include these details in this section. Include a summary report of the study completed and the results. Include as attachments with the submission of the Annual Report. Include details of any upcoming studies that will be completed by the Hamlet.*

## **11. Updates or Revisions to Approved Plans**

*Include details on any changes to approved plans such as the Solid and Sewage Waste Disposal Facilities Operating and Maintenance Plan (O&M Plan) or any other plans specific to your Water Licence.*

- *Spill Contingency Plan*
- *Solid Waste Disposal Facilities Operation and Maintenance Plan*
- *Sewage Disposal Facilities Operation and Maintenance Plan*
- *Hazardous Waste Management Plan*
- *Closure and Reclamation Plan*

## **12. Inspection of Dams, Berms, Dykes and Control Structures**

*Include results of any inspections of all dams, berms, dykes and control structures related to the water intake facilities, solid waste disposal facilities, sewage disposal facilities and/or any other specific to your water licence.*

## **13. Inspections on all Water and Waste Disposal Facilities**

*Include results of regular staff inspections on all water and waste disposal facilities authorized under this license and any corrective actions taken, as necessary.*

## **14. Correspondence between the Inspector and the Licensee**

*Include all correspondence between the Inspector and the Licensee with your annual report.*

## **15. Other Information**

*Include any other details on waste disposal requested by the Board by November 1, of the year being reported. In this section you may include non-compliance items identified in the inspection reports and how the Hamlet is addressing them. If there are any contaminated soil piles currently in use, please list the details of containment, remediation, and progress in this section. Ongoing issues with compliance can be identified here. If the IWB is aware of ongoing problems with the licence, discussions can occur to find a resolution.*



**Taiga Environmental Laboratory**  
4601-52nd Ave., Box 1320, Yellowknife, NT. X1A 2L9  
Tel: (867)-767-9235 Fax: (867)-920-8740

**Taiga Batch No.:**  
**161134**

**- FINAL REPORT -**

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**Prepared For:** Hamlet of Aklavik

**Address:** P.O. Box 87  
Aklavik, NT  
X0E 0A0

**Attn:** Fred Behrens

**Facsimile:** (867) 978-2502

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**Final report has been reviewed and approved by:**

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**Glen Hudy**  
Quality Assurance Officer

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**NOTES:**

- Test methods and data are validated by the laboratory's Quality Assurance Program. Taiga Environmental Laboratory is accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) to ISO/IEC 17025 as a testing laboratory for specific tests registered with CALA.
- Routine methods are based on recognized procedures from sources such as
  - Standard Methods for the Examination of Water and Wastewater APHA AWWA WEF;
  - Environment Canada
  - USEPA
- Samples shall be kept for thirty (30) days after the final report is issued. All microbiological samples shall be disposed of immediately upon completion of analysis to minimize biohazardous risks to laboratory personnel. Please contact the laboratory if you have any special requirements.
- Final results are based on the specific tests at the time of analysis and do not represent the conditions during sampling.

**ReportDate:** Wednesday, December 28, 2016

**Print Date:** *Wednesday, December 28, 2016*

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## Taiga Environmental Laboratory

4601-52nd Ave., Box 1320, Yellowknife, NT. X1A 2L9

Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:  
**161134**

### - CERTIFICATE OF ANALYSIS -

Client Sample ID:

Taiga Sample ID: **001**

Client Project: Annual Drinking Water

Sample Type: Potable

Received Date: 12-Dec-16

Sampling Date: 06-Dec-16

Sampling Time: 8:00

Location: Water Plant

Report Status: **Final**

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<b><u>Inorganics - Nutrients</u></b>						
Organic Carbon, Dissolved	2.7	0.5	mg/L	13-Dec-16	SM5310:B	
Organic Carbon, Total	2.6	0.5	mg/L	14-Dec-16	SM5310:B	
<b><u>Inorganics - Physicals</u></b>						
Alkalinity, Total (as CaCO <sub>3</sub> )	148	0.4	mg/L	12-Dec-16	SM2320:B	
Colour, Apparent	< 5	5	CU	12-Dec-16	SM2120:B	
pH	7.99		pH units	12-Dec-16	SM4500-H:B	
Solids, Total Dissolved	307	10	mg/L	12-Dec-16	SM2540:C	
Solids, Total Suspended	< 3	3	mg/L	12-Dec-16	SM2540:D	
Turbidity	0.20	0.05	NTU	13-Dec-16	SM2130:B	
<b><u>Major Ions</u></b>						
Chloride	7.4	0.7	mg/L	13-Dec-16	SM4110:B	
Fluoride	< 0.1	0.1	mg/L	13-Dec-16	SM4110:B	
Hardness	227	0.7	mg/L	13-Dec-16	SM4110:B	
Nitrate as Nitrogen	0.41	0.01	mg/L	13-Dec-16	SM4110:B	

ReportDate: Wednesday, December 28, 2016

Print Date: **Wednesday, December 28, 2016**

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**161134**

**- CERTIFICATE OF ANALYSIS -**

**Client Sample ID:**

**Taiga Sample ID: 001**

Sodium	14.9	0.1	mg/L	13-Dec-16	SM4110:B
Sulphate	102	1	mg/L	13-Dec-16	SM4110:B

**Organics**

Bromodichloromethane	< 0.005	0.005	mg/L	20-Dec-16	EPA8260B
Bromoform	< 0.005	0.005	mg/L	20-Dec-16	EPA8260B
Chloroform	0.036	0.005	mg/L	20-Dec-16	EPA8260B
Dibromochloromethane	< 0.005	0.005	mg/L	20-Dec-16	EPA8260B
Trihalomethanes, Total	0.039	0.005	mg/L	20-Dec-16	EPA8260B

**Subcontracted Organics**

Cyanide, Weak Acid Dissociable	< 0.0010	0.001	mg/L	20-Dec-16	APHA4500-CN
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**Trace Metals, Total**

Aluminum	185	0.6	µg/L	13-Dec-16	EPA200.8
Arsenic	< 0.2	0.2	µg/L	13-Dec-16	EPA200.8
Barium	68.4	0.1	µg/L	13-Dec-16	EPA200.8
Cadmium	< 0.05	0.05	µg/L	13-Dec-16	EPA200.8
Chromium	0.1	0.1	µg/L	13-Dec-16	EPA200.8
Copper	0.4	0.2	µg/L	13-Dec-16	EPA200.8
Iron	5	5	µg/L	13-Dec-16	EPA200.8
Lead	< 0.1	0.1	µg/L	13-Dec-16	EPA200.8
Manganese	14.6	0.1	µg/L	13-Dec-16	EPA200.8
Mercury	0.71	0.01	µg/L	13-Dec-16	EPA200.8
Selenium	0.8	0.3	µg/L	13-Dec-16	EPA200.8
Uranium	1.1	0.1	µg/L	13-Dec-16	EPA200.8
Zinc	< 0.4	0.4	µg/L	13-Dec-16	EPA200.8

**ReportDate:** Wednesday, December 28, 2016

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Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:

**161134**

### - CERTIFICATE OF ANALYSIS -

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Client Sample ID:

Taiga Sample ID: **001**

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**\* Taiga analytical methods are based on the following standard analytical methods**

SM - Standard Methods for the Examination of Water and Wastewater

EPA - United States Environmental Protection Agency

ReportDate: Wednesday, December 28, 2016

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Client Name	Taiga Sample ID	Sample Type	Sampling Location	Sample Collect Date	Sample Received Date	Test Group Name	Lab Section	Parameter Name
Hamlet of Aklavik	161134-001	Potable	Water Plant	06-Dec-16	12-Dec-16	DOC	Inorganics - Nutrients	Organic Carbon, Dissolved
Hamlet of Aklavik	161134-001	Potable	Water Plant	06-Dec-16	12-Dec-16	TOC	Inorganics - Nutrients	Organic Carbon, Total
Hamlet of Aklavik	161134-001	Potable	Water Plant	06-Dec-16	12-Dec-16	Alkal	Inorganics - Physicals	Alkalinity, Total (as CaCO3)
Hamlet of Aklavik	161134-001	Potable	Water Plant	06-Dec-16	12-Dec-16	Colour, Apparent	Inorganics - Physicals	Colour, Apparent
Hamlet of Aklavik	161134-001	Potable	Water Plant	06-Dec-16	12-Dec-16	TDS	Inorganics - Physicals	Solids, Total Dissolved
Hamlet of Aklavik	161134-001	Potable	Water Plant	06-Dec-16	12-Dec-16	TSS	Inorganics - Physicals	Solids, Total Suspended
Hamlet of Aklavik	161134-001	Potable	Water Plant	06-Dec-16	12-Dec-16	Turb	Inorganics - Physicals	Turbidity
Hamlet of Aklavik	161134-001	Potable	Water Plant	06-Dec-16	12-Dec-16	pH	Inorganics - Physicals	pH
Hamlet of Aklavik	161134-001	Potable	Water Plant	06-Dec-16	12-Dec-16	IC Anion	Major Ions	Chloride
Hamlet of Aklavik	161134-001	Potable	Water Plant	06-Dec-16	12-Dec-16	IC Anion	Major Ions	Fluoride
Hamlet of Aklavik	161134-001	Potable	Water Plant	06-Dec-16	12-Dec-16	IC Cation	Major Ions	Hardness
Hamlet of Aklavik	161134-001	Potable	Water Plant	06-Dec-16	12-Dec-16	IC Anion	Major Ions	Nitrate as Nitrogen
Hamlet of Aklavik	161134-001	Potable	Water Plant	06-Dec-16	12-Dec-16	IC Cation	Major Ions	Sodium
Hamlet of Aklavik	161134-001	Potable	Water Plant	06-Dec-16	12-Dec-16	IC Anion	Major Ions	Sulphate
Hamlet of Aklavik	161134-001	Potable	Water Plant	06-Dec-16	12-Dec-16	THMs	Organics	Bromodichloromethane
Hamlet of Aklavik	161134-001	Potable	Water Plant	06-Dec-16	12-Dec-16	THMs	Organics	Bromoform
Hamlet of Aklavik	161134-001	Potable	Water Plant	06-Dec-16	12-Dec-16	THMs	Organics	Chloroform
Hamlet of Aklavik	161134-001	Potable	Water Plant	06-Dec-16	12-Dec-16	THMs	Organics	Dibromochloromethane
Hamlet of Aklavik	161134-001	Potable	Water Plant	06-Dec-16	12-Dec-16	THMs	Organics	Trihalomethanes, Total
Hamlet of Aklavik	161134-001	Potable	Water Plant	06-Dec-16	12-Dec-16	WAD - ALS	Subcontracted Organics	Dissociable
Hamlet of Aklavik	161134-001	Potable	Water Plant	06-Dec-16	12-Dec-16	ICPMS3	Trace Metals, Total	Aluminum
Hamlet of Aklavik	161134-001	Potable	Water Plant	06-Dec-16	12-Dec-16	ICPMS3	Trace Metals, Total	Arsenic
Hamlet of Aklavik	161134-001	Potable	Water Plant	06-Dec-16	12-Dec-16	ICPMS3	Trace Metals, Total	Barium
Hamlet of Aklavik	161134-001	Potable	Water Plant	06-Dec-16	12-Dec-16	ICPMS3	Trace Metals, Total	Cadmium
Hamlet of Aklavik	161134-001	Potable	Water Plant	06-Dec-16	12-Dec-16	ICPMS3	Trace Metals, Total	Chromium
Hamlet of Aklavik	161134-001	Potable	Water Plant	06-Dec-16	12-Dec-16	ICPMS3	Trace Metals, Total	Copper
Hamlet of Aklavik	161134-001	Potable	Water Plant	06-Dec-16	12-Dec-16	ICPMS3	Trace Metals, Total	Iron
Hamlet of Aklavik	161134-001	Potable	Water Plant	06-Dec-16	12-Dec-16	ICPMS3	Trace Metals, Total	Lead
Hamlet of Aklavik	161134-001	Potable	Water Plant	06-Dec-16	12-Dec-16	ICPMS3	Trace Metals, Total	Manganese
Hamlet of Aklavik	161134-001	Potable	Water Plant	06-Dec-16	12-Dec-16	ICPMS3	Trace Metals, Total	Mercury
Hamlet of Aklavik	161134-001	Potable	Water Plant	06-Dec-16	12-Dec-16	ICPMS3	Trace Metals, Total	Selenium
Hamlet of Aklavik	161134-001	Potable	Water Plant	06-Dec-16	12-Dec-16	ICPMS3	Trace Metals, Total	Uranium
Hamlet of Aklavik	161134-001	Potable	Water Plant	06-Dec-16	12-Dec-16	ICPMS3	Trace Metals, Total	Zinc

Result Flag	Reported Result	Units	CALC_MDL	Result	Result	Analysis Date	Method	Test Method	PORT STAT	DL
	2.7	mg/L	0.5			13-Dec-16		SM5310:B	Final	0.5
	2.6	mg/L	0.5			14-Dec-16		SM5310:B	Final	0.5
	148	mg/L	0.4			12-Dec-16		SM2320:B	Final	0.4
<	5	CU	5			12-Dec-16		SM2120:B	Final	5
	307	mg/L	10			12-Dec-16		SM2540:C	Final	10
<	3	mg/L	3			12-Dec-16		SM2540:D	Final	3
	0.20	NTU	0.05			13-Dec-16		SM2130:B	Final	0.05
	7.99	pH units				12-Dec-16		SM4500-H:B	Final	
	7.4	mg/L	0.7			13-Dec-16		SM4110:B	Final	0.7
<	0.1	mg/L	0.1			13-Dec-16		SM4110:B	Final	0.1
	227	mg/L	0.7			13-Dec-16		SM4110:B	Final	0.7
	0.41	mg/L	0.01			13-Dec-16		SM4110:B	Final	0.01
	14.9	mg/L	0.1			13-Dec-16		SM4110:B	Final	0.1
	102	mg/L	1			13-Dec-16		SM4110:B	Final	1
<	0.005	mg/L	0.005			20-Dec-16		EPA8260B	Final	0.005
<	0.005	mg/L	0.005			20-Dec-16		EPA8260B	Final	0.005
	0.036	mg/L	0.005			20-Dec-16		EPA8260B	Final	0.005
<	0.005	mg/L	0.005			20-Dec-16		EPA8260B	Final	0.005
	0.039	mg/L	0.005			20-Dec-16		EPA8260B	Final	0.005
<	0.0010	mg/L	0.001			20-Dec-16		APHA4500-CN	Final	0.001
	185	µg/L	0.6			13-Dec-16		EPA200.8	Final	0.6
<	0.2	µg/L	0.2			13-Dec-16		EPA200.8	Final	0.2
	68.4	µg/L	0.1			13-Dec-16		EPA200.8	Final	0.1
<	0.05	µg/L	0.05			13-Dec-16		EPA200.8	Final	0.05
	0.1	µg/L	0.1			13-Dec-16		EPA200.8	Final	0.1
	0.4	µg/L	0.2			13-Dec-16		EPA200.8	Final	0.2
	5	µg/L	5			13-Dec-16		EPA200.8	Final	5
<	0.1	µg/L	0.1			13-Dec-16		EPA200.8	Final	0.1
	14.6	µg/L	0.1			13-Dec-16		EPA200.8	Final	0.1
	0.71	µg/L	0.01			13-Dec-16		EPA200.8	Final	0.01
	0.8	µg/L	0.3			13-Dec-16		EPA200.8	Final	0.3
	1.1	µg/L	0.1			13-Dec-16		EPA200.8	Final	0.1
<	0.4	µg/L	0.4			13-Dec-16		EPA200.8	Final	0.4