

Hamlet of Paulatuk

Water Licence Number: N7L3-1619

Municipal Water Licence

Annual Report for the Year 2019

Date Prepared: March 10, 2019

Municipal Water Licence Annual Report

Hamlet of Paulatuk Licence # N7L3-169 Reporting year 2019

1. Water Usage

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

Month	Volume from	Volume from any other
	Source	Source
	(m ³ or L)	(m³ or L)
January	1,024,348L	
February	726,484L	
March	856,824L	
April	912,398L	
May	925,686L	
June	928,238L	
July	892,905L	
August	907,948L	
September	925,937L	
October	932,215L	
November	847,572L	
December	889,801L	
TOTALS	10,770,356L	
ANNUAL TOTAL (m ³ or L)	10,770,356L	
% Increase or decrease from previous	1 % decrease	
year		

. Providuo	1 70 40010400
Reasons for increase / decrease (if ap	oplicable):
Reasons for exceeding licensed withd	lrawal volumes (if applicable):
General information:	

2. Sewage Disposal

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

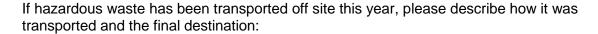
Month	Volume of sewage discharged
	(m ³ or L)
January	1,178,000 L
February	835,457L
March	985,348L
April	1,049,258L
May	1,064,539L
June	1,067,474L
July	1,026,841L
August	1,044,140L
September	1,064,828L
October	1,072,047L
November	974,708L
December	1,023,271L
ANNUAL TOTAL (m³ or L)	12,385,911L
% Increase or decrease from previous year	1% decrease

3. <u>Hazardous Waste Storage and Transportation</u>

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	Type of hazardous waste
	accepted	transported off site
	(Volume in m ³ or L)	(Volume in m ³ or L)
January	0	0
February	0	0
March	0	0
April	0	0
May	0	0
June	0	0
July	0	0
August	0	0
September	0	0
October	0	0
November	0	0
December	0	0
ANNUAL TOTAL (m ³ or L)	0	0
% Increase or decrease	No change	No change
from previous year		



No waste transported.

Please include treatment or disposal plans for the remaining quantities:

Plan to take part in MACA's project to remove hazardous waste.

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

No changes.

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 (m³ or L)	Disposal location
January	0	
February	0	
March	0	
April	0	
May	0	
June	0	
July	0	
August	0	
September	0	
October	0	
November	0	
December	0	
ANNUAL TOTAL (m ³ or L)	0	
% Increase or decrease from	No change.	
previous year		

5. <u>Problems, Modifications or Repairs Completed During the Year on Water Supply</u> 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.

New Water Treatment Plant installed and commissioned in November, 2019.

No changes to Waste Disposal Facilities.

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
1619-2	02-Jul-19	Not done-kit not received in
		time
1619-3	02-Jul-19	Not done-kit not received in
		time
1619-4	02-Jul-19	Not done-kit not received in
		time

7. Spills and Unauthorized Discharges

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

No spills or unauthorized discharges.

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.

No operator training carried out.

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.

No closure, remediation and/or reclamation activities completed.

Anticipate sorting & segregation of hazardous materials next year in keeping with MACA project.

10. <u>Studies Requested by the Board that Relate to Water Use, Waste Disposal or</u> 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.

No studies completed and none upcoming.

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

No changes to approved plans.

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 licence and any corrective actions taken, as necessary.

Attached is Inspection Report from Lloyd Gruben, Water Resources Officer, ENR carried out on July 16, 2019.

14. Correspondence between the Inspector and the Licensee

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

See above.

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.

No other details requested.



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

- FINAL REPORT -

Prepared For: Hamlet of Paulatuk

Address: P.O. Box 98

Paulatuk,NT XOE 1N0

Attn: John Holland Facsimile:

Final report has been reviewed and approved by:

Glen Hudy

Quality Assurance Officer

NOTES:

- For the 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;
 - o Environment Canada
 - o 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: Saturday, July 13, 2019

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Print Date: Sunday, July 14, 2019





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- CERTIFICATE OF ANALYSIS -

Client Sample ID: 1619-2 Taiga Sample ID: 001

Client Project:

Sample Type: Effluent Discharge

Received Date: 03-Jul-19 **Sampling Date:** 02-Jul-19

Sampling Time: Location:

Report Status: Final

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
Inorganics - Nutrients						
Biochemical Oxygen Demand	26	2	mg/L	03-Jul-19	SM5210:B	
CBOD	23	2	mg/L	03-Jul-19	SM5210:B	
<u>Inorganics - Physicals</u>						
pН	8.97		pH units	03-Jul-19	SM4500-H:B	
Solids, Total Suspended	34	3	mg/L	09-Jul-19	SM2540:D	
<u>Organics</u>						
Hexane Extractable Material	2.1	2.0	mg/L	04-Jul-19	EPA1664A	
Subcontracted Microbiology						
Coliforms, Fecal	130	10	MPN/100ml	03-Jul-19	APHA9223B	210

ReportDate: Saturday, July 13, 2019 Print Date: Sunday, July 14, 2019





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- CERTIFICATE OF ANALYSIS -

Client Sample ID: 1619-3 Taiga Sample ID: 002

Client Project:

Sample Type: Effluent Discharge

Received Date: 03-Jul-19 **Sampling Date:** 02-Jul-19

Sampling Time:

Location:

Report Status: Final

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Inorganics - Nutrients</u>						
Biochemical Oxygen Demand	4	2	mg/L	03-Jul-19	SM5210:B	
CBOD	4	2	mg/L	03-Jul-19	SM5210:B	
<u>Inorganics - Physicals</u>						
pH	8.01		pH units	03-Jul-19	SM4500-H:B	
Solids, Total Suspended	226	3	mg/L	09-Jul-19	SM2540:D	
<u>Organics</u>						
Hexane Extractable Material	< 2.0	2.0	mg/L	04-Jul-19	EPA1664A	
Subcontracted Microbiology						
Coliforms, Fecal	< 1	1	MPN/100ml	03-Jul-19	APHA9223B	

ReportDate: Saturday, July 13, 2019 Print Date: Sunday, July 14, 2019





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- CERTIFICATE OF ANALYSIS -

Client Sample ID: 1619-4 Taiga Sample ID: 003

Client Project:

Sample Type: Effluent Discharge

Received Date: 03-Jul-19 **Sampling Date:** 02-Jul-19

Sampling Time:

Location:

Report Status: Final

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
Inorganics - Nutrients						
Biochemical Oxygen Demand	4	2	mg/L	03-Jul-19	SM5210:B	
CBOD	4	2	mg/L	03-Jul-19	SM5210:B	
Inorganics - Physicals						
pH	8.04		pH units	03-Jul-19	SM4500-H:B	
Solids, Total Suspended	160	3	mg/L	09-Jul-19	SM2540:D	
Organics						
Hexane Extractable Material	< 2.0	2.0	mg/L	04-Jul-19	EPA1664A	
Subcontracted Microbiology						
Coliforms, Fecal	< 1	1	MPN/100ml	03-Jul-19	APHA9223B	

ReportDate: Saturday, July 13, 2019 Print Date: Sunday, July 14, 2019



Taiga Batch No.: 190441

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

- CERTIFICATE OF ANALYSIS -

Client Sample ID: 1619-4 Taiga Sample ID: 003

- DATA QUALIFERS -

Data Qualifier Descriptions:

210 Detection limit adjusted for required dilution.

* 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

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Hamlet of Paulatuk 1 Main Road Paulatuk, NT X0E 1N0 November 4, 2019

Attention:

Ray Ruben Sr., Mayor of Paulatuk

File Number

N7L3-1691

Type of Operation

Type B - MUNICIPAL Water License

Location

Paulatuk

On July 16, 2019, I completed an inspection at the Hamlet of Paulatuk's landfill, sewage lagoon, garage and water treatment plant. I attached a copy of the Municipal Water License Inspection Report for your review.

During my inspection, I noted the following non – compliance issues:

- Section 1 of Part B of the Water License requires the Hamlet of Paulatuk to submit their annual report no later than April 30 of each year
- Leaving Water Treatment Plant unlocked when no water treatment operators available with toxic chemicals not under lock and key
- No segregation at landfill
- No signage at landfill
- No signage for sewage lagoon
- Water Treatment Plant sign weathered so bad, you can't make out what the sign state

I would like to commend the Hamlet of Paulatuk for the following:

SNP samples taken and analyzed before my inspection

Please contact me at the number below if you have any questions or concerns or if you require additional information.

Sincerely

Lloyd Gruben

Water Resource Officer

Environment and Natural Resources

P.O. Box 2749

Inuvik, NT X0E 0T0

Ph: 867 - 678 - 6676



Cc:

Lila Voudrach:

Manager, Wildlife and Environment

Mardy Semmler:

Executive Director, Inuvialuit Water Board

Bijaya Adhikara:

Science and Regulatory Co - ordinator

Leigh Anne Williams – Jones:

Regulatory Officer

John Holland:

Senior Administrative Officer, Hamlet of Paulatuk

Date: August 7, 2019 Licence #: N7L3 - 1619 Page No: 2



LICENCE #:	N7L3 - 1619	EXPIRY DATE:	Nov 20, 2020
LICENCEE:	Hamlet of Paulatuk	PREVIOUS INSPECTION:	August 11, 2015
COMPANY REP:	Mayor Ray Ruben Sr	INSPECTION DATE:	July 16, 2019

WATER SUPPLY

Source:	New Water Lake	Quantity Used:	Approx12,500m cubed
Owner/Operator:	Hamlet of Paulatuk	Meter Reading:	N/I

Indicate: A - Acceptable U - Unacceptable N/A - Not Applicable N/I - Not Inspected

Intake Facilities	А	Storage Structures	U	Treatment Systems	A	Recycling	N/I
Flow Meas. Device	А	Conveyance Lines	А	Pumping Stations	А	Chem. Storage	U
						Modifications	N/A

Water Supply Comments:

- Water Lake was clean looking with no floating debris and no obvious signs of human activity surrounding the lake other than the occasional ATV and snowmobile. Hamlet staff stated they are still educating the public, the Water Supply Facilities (WSF) are off limits
- Sign at the gate weathered so bad, that the sign cannot be read
- Water Treatment Plant and Water Supply Facilities are gated and locked during non-working hours
- WTP was generally clean and tidy at the time of inspection
- The Water Operator is maintaining daily logs and is meeting all record keeping requirements. Water analysis and routine checks are being conducted
- Two trained Water Treatment Operators which is good if one operator is not around
- No erosion by water truck refill station
- Fuel tank on good base, no stress on pipe entering building
- No Spill Kit at WTP
- Backup generator is rarely used. Recommended use periodically to ensure that it is functional
- Check generator and backup generator checked daily for leaks
- Water delivery truck seems to be new

WASTE DISPOSAL - WELL WASTE

Disposal Method		N/A							
Off-Site Removal	N	Drilling Sump	N	Downhole Injection	N	Treat and Landspread	N	Other	N

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Indicate:

A - Acceptable

U - Unacceptable

N/A - Not Applicable N/I - Not Inspected

Sump Liners	N/A	Sump Treatment	N/A	Freeboard	N/A
Erosion	N/A	Construction	N/A		
SNP Samples Collected	N/A	•		•	

Well Waste Comments:

WASTE DISPOSAL - SEWAGE

Disposal Met	hod	Primary Treat	ment				
Mechanical	N	Camp Sump	N	Natural Water Body	N	Wetland Treatment	N
Continuous Discharge	N	Intermittent Discharge	N	Seasonal Discharge	N	Land Spread	N
Accelerated Biological	N	Other			ie.		

Indicate:

A - Acceptable

U - Unacceptable

N/A - Not Applicable N/I - Not Inspected

Discharge	Α	Decant Process &	Α	Discharge	Α
Quality		Structures		Measurement Device	
Freeboard	Α	Sludge Disposal Method	N/A		
Periods Of	Appea	rs to discharge continuously, v	SNP Samples Collected	No	
Discharge	levels	remain high			
Effluent	Natura	al outflow into the wetland			
Discharge					
Rates					

Sewage Comments:

- SNP samples were collected prior to my inspection
- Regular SNP samples being conducted by Hamlet staff
- Dumping chute needs work, pallets holding chute up, Chute ready to drop if accidently hit by sewage truck backing up
- No smell from lagoon
- No signage. I did not know I was standing by the sewage truck chute as there was no signage
- Public waste in lagoon
- Good freeboard
- Access road in good shape
- Sewage truck pad in such poor condition, unsafe for workers

WASTE DISPOSAL - TAILINGS

r			
- 1	Disposal		
- 1	Disposar	a s	1
- 1	Method		
- 1	IVICTIOU		

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Indicate:

A - Acceptable

U - Unacceptable

N/A - Not Applicable N/I - Not Inspected

Conveyance Lines	Runoff Diversion	Dams, Dykes	
Freeboard	Seepages	Dyke Inspection	
Erosion	Pond Treatment	Construction	
Periods Of Discharge		SNP Samples Collected	

Tailings Comments:

WASTE DISPOSAL - MINING - OTHER

Indicate:

A - Acceptable

U - Unacceptable

N/A - Not Applicable N/I - Not Inspected

Ore & Waste Rock Stockpiles	Chemical Storage
Ground Water Discharge	Mine Water Discharge

Mining-Other Comments:

WASTE DISPOSAL - SOLID WASTE

Disposal M	lethod	Landfill					
Open Dump	N	Landfill	N	Burn & Landfill	N	Underground	N
Offsite Removal	N	Other					
Owner / Operator	Hamlet of Paulatuk						

Indicate:

A - Acceptable

U - Unacceptable

N/A - Not Applicable N/I - Not Inspected

Runoff A Diversion	SNP Samples Collected	А
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Solid Waste Comments:

- Hamlet staff collected SNP samples prior to my inspection
- No Segregation of debris. Where do they drop off appliances, dead batteries, old tires, regular household garbage, empty propane bottles
- No signage of where to dump tires, appliances, batteries, paint, steel
- Foreman stated tried to do segregation but public still dumping all over

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- Empty propane bottles dumped with regular waste
- All waste and used oil brought to garage and poured into tote
- Lot of windblown material
- Contractors dumping all over, no control of what is brought out
- Liquids from vehicles, atv's and snowmobiles not drained

FUEL STORAGE

Indicate: A - Acceptable U - Unacceptable N/A - Not Applicable N/I - Not Inspected Hamlet of Condition of Hamlet of Owner: Operator: Α Paulatuk Paulatuk tanks: Berms & Water within Evidence of N N Α Liners Berm: Leaks: **Pump Station** Drainage **Runoff Diversion** Α and Catchment **Pipes** Berm Pipeline Α Condition

Fuel Storage Comments:

- Tanks in good order, no leaks
- No stress on pipes
- Fuel tanks bermed and lined
- Fuel tanks on good, stable pad to prevent shifting

DAM - STRUCTURAL CONDITION OF DAM

Dam						
Indicate:	A - Acceptable	U - Unacce _l	otable N/A - No	ot Applicable N/I - I	Not Inspected	
Required Freeboard		1.00.000	or the state of th			
Crest	Cracking	Subsidence	Heaving	Wave Erosion	Brushing Required	
Upstream Face	Cracking	Surface Erosion	Gullying	Wave Erosion	Brushing Required	
Downstrea m Face	Cracking	Surface Erosion	Gullying	Wave Erosion	Brushing Required	

Structural Condition of Dam Comments:

DAM - SPILLWAYS and DISCHARGE STRUCTURES

Indicate: A - Acceptable U - Unacceptable N/A - Not Applicable N/I - Not Inspected

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Intake Structures	Discharge Structures	
Seepage	Erosion	
Downstream Discharge	Stage Discharge Curves	
Forebay Level	Tail Race Level	
Flow rate (Power House)		
Flow rate (Spillway)		
Power Production		
Forebay Max Level		
Forebay Min Level		

Spillways and Discharge Structures Comments:

SURVEILLANCE NETWORK PROGRAM

Samples Collected Licensee	Yes
Samples Collected ENR	No

Signs Posted:	SNP	Yes	Warning	No
0.8		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		

Surveillance Network Program Comments:

- Spring melt SNP samples taken by Hamlet of Paulatuk prior to me arriving for inspection

GENERAL CONDITIONS/REPORTS/PLANS

Indicate:

A - Acceptable

U - Unacceptable

N/A - Not Applicable N/I - Not Inspected

C &R Plan	Records & Reporting	Final Report	
Geotechnical Inspection	Posting, Signage	Contingency Plan	
Restorations Activities	Spills	O&M Plan	
Maintenance	Modifications	Annual Report	

General Condition Comments:

Weather: +20, clear, sunny, light winds

ADDITIONAL COMMENTS/REMARKS

MATTERS FOR FOLLOW UP

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- Place spill kit at WTP
- Sewage dumping station and chutes require lot of work to prevent chute from being knocked off pallet padding, foundation
- WTP to be locked at all times when no one around as chemicals located in WTP building
- Landfill requires lot of cleanup, segregation and signage

NON-COMPLIANCE/VIOLATIONS OF ACT OR LICENCE

- Part B, Section 1, of General Conditions states "The Licensee shall file an Annual Report with the Inuvialuit Water Board not later than April 30 of each year
- The 2018 Annual Report was submitted to the IWB on May 23, 2019. On May 22, 2019, the IWB sent a letter as an annual report reminder
- On the dates July 3 and 4, 2019, the IWB sent a letter for additional information request regarding the 2018 Annual Report
- In the future, would like to see the annual report submitted to the IWB prior to the April 30 deadline

Inspector's Signature:

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1-510010000000						



INSPECTION IMAGES



Figure 1 No Segregation

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Figure 2 No Segregation



Figure 3 Batteries disposed on ground, not on pallets. Battery acid leaked onto the ground

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Figure 4 No Segregation, appliances dumped with other trash



Figure 5 Unsafe Sewage Truck Chute, Poor Foundation

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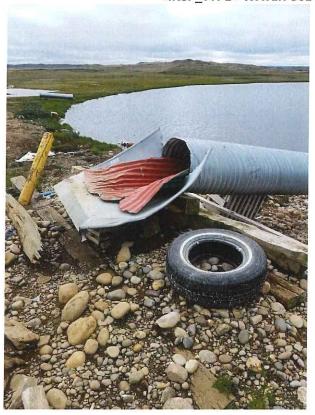


Figure 6 Unsafe sewage dump chute

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