

**ANNUAL REPORT
FOR THE HAMLET OF PANGNIRTUNG, 2019**

YEAR BEING REPORTED: 2019

The following information is compiled pursuant to the requirements of Part A, Item 1 of Water Licence # 3AM-PAN1828 issued to the Hamlet of Pangnirtung.

- i) - iii) tabular summaries of all data generated under the “Monitoring Program”; monthly and annual quantities in cubic metres of freshwater obtained from all sources; monthly and annual quantities in cubic metres of each and all wastes discharged. Are attached quantities of water used as reported in our On Tap Water Delivery System and the estimated discharge of sewage waste based on quantities used...?

Month Reported	Quantity of Water Obtained from all sources (litres)	Quantity of Sewage Waste Discharged (Estimated)
January	System broken	Same
February	System broken	Same
March	System broken	Same
April	System broken	Same
May	System broken	Same
June	System broken	Same
July	4,272,596.60	Same
August	3,602,413.40	Same
September	3,441,985.90	Same
October	3,555,827.50	Same
November	3,986,203.80	Same
December	3,992,221.20	Same
Total for 6 months	22,851,238.40	22,851,238.40
Annual Total	45,70,476.80	45,70,476.40

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Note: The water consumption volume is considered equal to the discharge volume because there is no method to calculate the effluent volume and sludge volume.

In principle, the effluent volume should be equal to the difference between inflow volume and sludge volume.

The Hamlet water supply recording system was down from January to June and could not record any delivery volume.,

We are considering January to June for the 6 months consumption is equal to the volume from July to December for 22, 85,238.40 Liters. Therefore, the total was 45,70,476.80.

- iv. A summary of modifications and/or major maintenance work carried out on the Water Supply and Waste Disposal Facilities, including all associated structures and facilities;
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No major modification and /or maintenance works were carried during the reporting report.

- v. A list of unauthorized discharges and summary of follow-up action taken.
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The Leachate of the wastes site is uncontrolled. Especially during rainy reason, the surface runoff moves so fast from the right side of the road to the left side of the road through the culverts towards the sea.

- vi. A summary of any abandonment and restoration work completed during the year and an outline of any work anticipated for the next year.
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No abandonment and restoration work were conducted during this reporting year.

- vii. A summary of any studies requested by the Board that relate to waste disposal, water use or reclamation, and a brief description of any future studies planned.
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Under the current Type A Water Licence # 3AM-PAN1828, the following studies are recommended:

Water supply system:

1. Hydrology study by 2022: This Hydrology study shall address relevant intervener's comments and recommendations made during 2017-18 licensing

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process, including, at a minimum, details related to the discharge volume and velocity, erosion, sedimentation, water quality, and variability of discharge into the Duval River.

The Licensee shall withdraw water from the Duval River at a rate that shall not exceed ten percent (10%) of the instantaneous flow in the river and shall cease all water withdrawal when the instantaneous flow in the river is below thirty percent (30%) of the mean annual discharge.

The licensee shall limit the withdrawal of water from the Duval River to the Months of July and August, unless otherwise recommended by the hydrology study as mentioned above.

Action Taken: Hamlet is planning to conduct a desktop study of the Hydrology of the Duval River first. Hamlet is waiting for funding to conduct a field study of the Hydraulics and water quality within a few years.

Wastes Management:

- Control surface runoff from the waste's sites
- Erect a fence surrounding the metal wastes and Hazardous wastes Area
- Prepare the standalone drainage /Seepage Monitoring Plan
- Proper storage of the waste oil drums.

Action taken: Hamlet is planning to have a drainage plan soon and building a contaminated soil storage inside the metal dump site.

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- viii. Any other details on water use or waste disposal requested by the Board by November 1st of the year being reported; and

Wastes Management:

- Control surface runoff from the waste's sites
- Erect a fence surrounding the metal wastes and Hazardous wastes Area
- Prepare the standalone drainage /Seepage Monitoring Plan
- Proper storage of the waste oil drums
- Fish waste should be treated with lime and covered with soil prior to the onset of the annual spring freshet and then weekly thereafter during June, July, August and September.

Action taken; Hazardous wastes site was built inside the metal dump area and it is in containment.

- Waste oil drums are kept inside the metal dump area. Hamlet is planning to deal with other issues in the coming years.

Water body:

- No removal any material is recommended from below the ordinary high water mark.
- Can not cause erosion to the banks of the water body.
- Install a flow meter and a fish screen at the Intake pipe

- A flow meter was already installed. Hamlet is working on the suitable fish screen this summer.

ix. Updates or revisions to the approved Operation and Maintenance Plans.

Hamlet is operating all the Water Licensed facilities using the existing O&M manuals. Hamlet is planning to revise them within a few years.

x. **ADDITIONAL INFORMATION THAT THE LICENSEE DEEMS USEFUL:**

Hamlet is planning to replace the membrane in the WWTP. Hamlet is also planning to improve the drainage system of the wastes site area in this summer.

xi. **FOLLOW-UP REGARDING INSPECTION/COMPLIANCE CONCERNS:**

The Leachate analysis report is attached. Hamlet is planning to start the Hydrology study of the Duval River at any time now.

The Test Lab Results for 2019 are submitted in a separate document.

Hamlet experienced difficulty for shipping samples for Toxicity testing to ALS lab in Winnipeg due to too many transit points of the Cargo. Shipping samples was challenging to the Southern Labs within a certain time period and the samples became spoiled. Due to warning of COVID -19, the business was not as usual.



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