

**ANNUAL REPORT
FOR THE HAMLET OF PANGNIRTUNG, 2021**

YEAR BEING REPORTED: 2021

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. Attached are 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	4,646,909.20	Same
February	3,694,203.50	Same
March	5,274,541.00	Same
April	4,258,352.70	Same
May	4,333,863.40	Same
June	4,208,188.30	Same
July	4,213,433.40	Same
August	4,318,184.00	Same
September	4,160,806.00	Same
October	4,258,543.80	Same
November	4,413,393.30	Same
December	4,267,575.60	Same
ANNUAL TOTAL	52,047,994.20	52,047,994.20

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

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The effluent volume is practically the difference between the inflow volume and the sludge volume.

- 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.

No major modification and /or maintenance works were carried out during the reporting report. The Wastewater Treatment Plant needs regular maintenance to keep it running. The new water plant also requires very minor maintenance works every now and then to keep it running.

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- v. A list of unauthorized discharges and summary of follow-up action taken.

The Leachate of the waste's site is uncontrolled. Especially during the 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. The runoff coming from the Hill was diverted through the drainage channel and prevented from entering into the metal dump.

No spill was recorded during this reporting period.

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- vi. A summary of any abandonment and restoration work completed during the year and an outline of any work anticipated for the next year.

No abandonment and restoration work were conducted during this reporting year. However, the existing Truck fill station and the old sewage lagoon are in the list to be abandoned and decommissioned as soon as the capital plan supports these projects.

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- 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.

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 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.

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Action taken: Hamlet is still looking for funding to conduct research on Duval River Hydrology. This project was delayed due to COVID 19 Pandemic. This study requires 3 to 4 yrs. for Field data collection like velocity, discharge, rainfall intensity, snowfall intensity, ground temperature etc.

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: Normally Hamlet withdraws water from the Duval River in the month of September of each year.

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 has initiated to resolve all the above issues and expected to complete within a year or two.

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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:

- a. Control surface runoff from the waste's sites
- b. Erect a fence surrounding the metal wastes and Hazardous wastes Area
- c. Prepare the standalone drainage /Seepage Monitoring Plan
- d. Proper storage of the waste oil drums
- e. Fish wastes 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: Hamlet has initiated correcting some of the issues like a, b, d and is working for the rest. It is expected to resolve all the above issues in the next 1 to two years.

Water body:

- f. No removal of any material is recommended from below the ordinary high

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water mark.

- g. Can not cause erosion to the banks of the water body.

Action taken: Hamlet will follow the above directions as best as possible.

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

Hamlet has been operating all the Water Licensed facilities using the existing O&M manuals. Hamlet is in the process of updating these O&Ms within a year or two.

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







Hamlet is planning to replace the membrane in the WWTP in 2022. Hamlet is also planning to improve the drainage system of the waste's site area in 2022 summer.

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

Hamlet is working closely with CGS's Municipal Engineer and CIRNAC's inspector to keep their Water Licence into compliance. They submit annual report on time. Due to COVID -19 Pandemic, Field sampling and shipping were disturbed throughout the year.

The Test Lab Results for 2021 are submitted in a separate document.

Hamlet had trouble 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 and most of the time the samples became spoiled. Due to the warning of COVID -19, the business was not as usual.

     
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