

PERMIT TO CONSTRUCT

Pursuant to the *Water Resources Act*, SNL 2002 cW-4.01, specifically Section(s) 36

Date: **JULY 19, 2017**

File No: **844.066.11**
Permit No: **WS9271-2017**

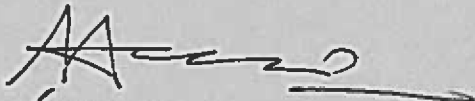
Permit Holder: **Town of Paradise
28 McNamara Drive
Paradise NL A1L 0A6**

Attention: **Ms. Vanessa Barry**

Re: **Paradise - St. Thomas Line Wastewater Treatment Plant Upgrades**

Permission is hereby given for : the upgrading of the existing wastewater treatment facility including the replacement of existing screen with two mechanically cleaned 12 mm bar screens each capable of a peak flow of 30 000 m³/day, two moving fine mesh filters capable of a peak flow of 20 000 m³/day, one UV disinfection channel capable of a peak flow of 30 000 m³/day and related appurtenances as described in a specification and drawings titled, "St. Thomas Line Wastewater Treatment Plant Upgrades" as received from CBCL Limited on June 13, 2017.

- This Permit does not release the Permit Holder from the obligation to obtain appropriate approvals from other concerned municipal, provincial and federal agencies.
- The Permit Holder must obtain the approval of the Crown Lands Administration Division if the project is being carried out on Crown Land.
- This Permit is subject to the terms and conditions indicated in Appendices A and B (attached).
- It should be noted that prior to any significant changes in the design or installation of the proposed works, or in event of changes in ownership or management of the project, an amendment to this Permit must be obtained from the Department of Municipal Affairs and Environment under Section 49 of the *Water Resources Act*.
- Failure to comply with the terms and conditions will render this Permit null and void, place the Permit Holder and their agent(s) in violation of the *Water Resources Act* and make the Permit Holder responsible for taking any remedial measures as may be prescribed by this Department.



MINISTER

APPENDIX A
Terms and Conditions for Permit

Water & Sewer General

1. Water pumped from excavations or work areas, or any runoff or effluent directed out of work sites, must have silt and turbidity removed by settling ponds, filtration, or other suitable treatment before discharging to a body of water. Effluent discharged into receiving waters must comply with the *Environmental Control Water and Sewage Regulations, 2003*.
2. All operations must be carried out in a manner that prevents damage to land, vegetation, and watercourses, and which prevents pollution of bodies of water.
3. Any areas adversely affected by this project must be restored to a state that resembles local natural conditions. Further remedial measures to mitigate environmental impacts on water resources can and will be specified, if considered necessary in the opinion of this Department.
4. All waste materials resulting from this project must be disposed of at a site approved by the Department of Service NL.
5. The works proposed must satisfy the requirements of the latest applicable codes and standards, and be consistent with or otherwise address the design criteria set out in the Department of Municipal Affairs and Environment publication *Guidelines for The Design, Construction, and Operation of Water and Sewerage Systems, 2005*, and as amended from time to time.
6. The work must be undertaken in strict compliance with the submitted documents and the latest version of the *Municipal Water, Sewer and Roads Master Construction Specifications*. A copy of all documents, including the *Municipal Water, Sewer and Roads Master Construction Specifications* must be available for viewing at the construction site office at all times.
7. Liaison is to be maintained with the Environmental Scientist representing the Drinking Water and Wastewater Section of this Department, during the construction and operation of the project. They shall be notified of the pre-construction and post-construction meetings so that they may attend, if deemed necessary. They can be reached at telephone (709)729-2558.
8. Officials of this Department may visit the project from time to time to ensure that work is carried out within the provisions of this Permit, and is not creating any environmental hazard.
9. Any changes in the approved works, or works other than those specified in the application, must be submitted, in writing, to this Department, and approved, in the form of an Amendment to this Permit, prior to any work.
10. Copies of this Permit, as well as any subsequent Amendments, must be provided to the contractor(s) who will be carrying out these works, and to the engineer's site representative.
11. The attached Completion Report (Appendix C) for Permit No. 9271 must be completed and returned to this Department upon completion of the approved works. Pictures must be submitted along with the completion report, showing the project site prior to and after development.
12. This Permit is valid for two years from the date of issue. Work must be completed by that date or the application and approval procedure must be repeated.
13. The drinking water and wastewater system shall be operated and maintained in accordance with the Permit to Operate issued by this Department.
14. Management of stormwater is the responsibility of the municipality or LSD. Stormwater management should focus on ensuring that the post-development stormwater runoff rate will be equal to or less than the pre-development runoff rate. Any stormwater runoff has the potential to contribute to flooding downstream which may have liability issues for the municipality or LSD if not managed properly.
15. The Owner must update any drawings maintained of the drinking water or wastewater system to reflect the modification or replacement of the works, where applicable.

Miscellaneous

16. The Permit Holder must prevent erosion of drainage ditches, streams or other natural bodies of water by installing rip-rap and/or sodding.

17. All drains and vents shall be equipped with screens to prevent the entry of insects, birds and rodents.
18. The ends of drains and overflows shall be located so as to prevent erosion. Where necessary, concrete or similar splash plates shall be located below the end of the overflow, and the immediate surrounding area shall be filled to a depth of 10 cm with 19 mm minus stone to prevent ponding.

Commissioning and Monitoring

19. The wastewater treatment system shall meet the required performance objectives as established in the project specifications and the *St. Thomas Line Wastewater Treatment Plant Upgrades Basis of Design Report*.
20. This Department must be informed of the date of commission of the wastewater treatment system.
21. This Department shall require an enhanced flow and wastewater quality monitoring procedure be undertaken as part of this pilot project. Bi-monthly monitoring and reporting of wastewater influent and effluent quality shall be conducted for the following parameters: CBOD5, TSS, un-ionized ammonia, total phosphorous, Total Coliforms and *E.Coli* counts (diluted if necessary), pH, and temperature (grab sample or in-situ). Analysis shall be conducted by an accredited laboratory or in-house (as applicable). Results must be reported to the regional Environmental Scientist on a bi-monthly basis. At least one sample a year must be analysed for other parameters as referenced in Schedule A of the provincial *Environmental Control Water and Sewage Regulations, 2012*. The enhanced monitoring and reporting procedure shall be undertaken for one complete year. One year after commissioning of the water treatment facility upgrades, a technical report must be submitted to this Department outlining the results of the flow and wastewater quality monitoring.
22. Effluent quantity and quality sampling and reporting shall be undertaken in accordance with the federal *Wastewater Systems Effluent Regulations, 2012* and the requirements of this Permit.

SCADA- PtC

23. The SCADA system shall not be on the same network as other business or municipal computing systems.
24. The SCADA system shall not be located below the level of any water storage basin used in the treatment process or any large diameter pipes.
25. SCADA systems which have network connectivity must have anti-virus applications installed.
26. The computer/master terminal unit containing the SCADA system master database and interface must be kept in a separate server room that can be locked.
27. Multiple firewalls must be installed on the SCADA system if remote access/login is allowed.
28. A spare computer must be provided that contains a backup copy of the SCADA system master database and interface.

Alternative Disinfection

29. UV systems used to disinfect wastewater must be equipped with a meter to monitor transmittance. Flow gates and weirs shall be used to control the water level over the top of the UV lamps.

Wastewater Treatment

30. There shall be no connection made to the water supply line within the treatment facility prior to the reduced pressure zone backflow preventer.
31. Standby or backup power shall be provided where discharges may endanger public health or the environment, for aeration systems, activated sludge systems, and disinfection systems.
32. Flow measurement facilities shall be provided on all wastewater treatment plants for monitoring of the final discharged effluent.
33. The wastewater treatment plant shall be equipped with adequate gas detectors.
34. Adequate means or equipment for removing screenings shall be provided.
35. The Water Resources Management Division of this Department is to be informed prior to start-up or restart-up of the sewage treatment facility. Specifically, this Division must be given adequate notice of manufacturer's training sessions and demonstrations of all major components as well as full plant initiation so that a representative may be present.

36. Drainage from mechanical sludge dewatering units shall be returned to the wastewater treatment plant.

APPENDIX B
Special Terms and Conditions for Permit

1. The Permit Holder and its agent(s), subcontractor(s), and consultant(s) shall keep all systems and works in good condition and repair and in accordance with all laws, by-laws, directions, rules and regulations of any governmental authority. The Permit Holder or its agent(s), subcontractor(s), or consultant(s) shall immediately notify the Minister if any problem arises which may threaten the structural stability of the systems and works, endanger public safety and/or the environment or adversely affect others and/or any body of water either in or outside the said Project areas. The Permit Holder and its agent(s), subcontractor(s), and consultant(s) shall be responsible for all damages suffered by the Minister and Government resulting from any defect in the systems and works, operational deficiencies/inadequacies, or structural failure.
2. The Permit Holder and its agent(s), subcontractor(s), and consultant(s) shall operate the said Project and its systems and works in a manner which does not cause any water related and/or environmental problems, including but not limited to problems of erosion, deposition, flooding, and deterioration of water quality and groundwater depletion, in or outside the said Project areas. The Permit Holder and its agent(s), subcontractor(s), and consultant(s) shall be responsible for any and all damages associated with these problems caused as a result of changes, deficiencies, and inadequacies in the operational procedures by the Permit Holder or its agent(s), subcontractor(s), or consultant(s).
3. If the Permit Holder or its agent(s), subcontractor(s), or consultant(s) fails to perform, fulfil, or observe any of the terms and conditions, or provisions of this Permit and/or Ministerial orders and guidelines, as determined by this Department, the Minister may, after providing ten (10) day notice to the Permit Holder, amend, modify, suspend or cancel this Permit in accordance with the *Water Resources Act*.
4. The Permit Holder and its agent(s), subcontractor(s), and consultant(s) indemnify and hold the Minister and Government harmless against any and all liabilities, losses, claims, demands, damages or expenses including legal expenses of any nature whatsoever whether arising in tort, contract, statute, trust or otherwise resulting directly or indirectly from granting this Permit, systems and works in or outside the said Project areas, or any act or omission of the Permit Holder or its agent(s), subcontractor(s), or consultant(s) in or outside the said Project areas, or arising out of a breach or non-performance of any of the terms and conditions, or provisions of this Permit by the Permit Holder or its agent(s), subcontractor(s), or consultant(s).
5. This Permit is subject to all provisions of the *Water Resources Act* and any regulations in effect either at the date of this Permit or hereafter made pursuant thereto or any other relevant legislation enacted by the Province of Newfoundland and Labrador in the future.
6. This Permit shall be construed and interpreted in accordance with the laws of the Province of Newfoundland and Labrador.

- cc: Ms. Deneen Spracklin, P.Eng.
Environmental Engineer, Drinking Water and Wastewater Section
Water Resources Management Division
Department of Municipal Affairs and Environment
P.O. Box 8700
4th Floor, West Block, Confederation Building
St. John's, NL A1B 4J6
dspracklin@gov.nl.ca
- cc: Mr. Inayat Rehman, P.Eng.
District Engineer
Department of Municipal Affairs and Environment
Main Floor, West Block, Confederation Bldg.
P.O. Box 8700
St. John's, NL A1B 4J6
inayatrehman@gov.nl.ca
- cc: Mr. Robert Locke
Manager of Operations and Environmental Protection, GSC - Mount Pearl, Service NL
P.O. Box 8700
St. John's, NL A1B 4J6
rlocke@gov.nl.ca
- cc: Ms. Sharon Williams, Regional Manager
Environmental Health, GSC - Mount Pearl, Service NL
P.O. Box 8700
St. John's, NL A1B 4J6
williams@gov.nl.ca
-
- cc: Mr. Greg Sheppard, P. Eng.
CBCL Limited
187 Kenmount Road
St. John's, NL A1B 3P9
jackc@cbcl.ca

Appendix C - Completion Report

Pursuant to the *Water Resources Act*, SNL 2002 cW-4.01, specifically Section(s) 36

Date: JULY 19, 2017

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I (the Permit Holder named above or agent authorized to represent the Permit Holder) do hereby certify that the project described above was completed in accordance with the plans and specifications submitted to the Department of Municipal Affairs and Environment and that the work was carried out in strict compliance with the terms and conditions of the Permit issued for this project.

Date: _____ Signature: _____

This completion report must be completed and forwarded to the following address upon completion of the approved work.

Department of Municipal Affairs and Environment
Water Resources Management Division
PO Box 8700
St. John's NL A1B 4J6

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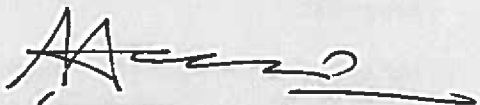
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