Government of Newfoundland and Labrador
Department of Environment and Climate Change
Water Resources Management Division

PERMIT TO CONSTRUCT

Pursuant to the *Water Resources Act*, SNL 2002 cW-4.01, specifically Section(s) 37

Date: **JUNE 07, 2021**

File No: **844.075.001**
Permit No: **WS11700-2021**

Permit Holder: **Town of Point Lance**
PO Box 15
Point Lance NL A0B 1E0
pointlance@bellaliant.net

Attention: **Ms. Jane Powers, Town Clerk**

Re: **Point Lance - Town Wells Project**

Permission is hereby given for : **the construction of a new well house including all architectural, mechanical and electrical components, the installation of a new deep well pump, booster pump, flow meter, hypo chlorination system, an iron/manganese removal system, a 2000 gallon storage tank and all related appurtenances as described in a specification and drawings titled, "Town of Point Lance Town Wells Project" as received from Harris & Associates Limited on February 11, 2021; 17-MCW-21-00003.**

- 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 Environment and Climate Change under Section 49 of the *Water Resources Act*.

(for) MINISTER

File No: **844.075.001**
Permit No: **WS11700-2021**

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 Digital Government and 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 this Department's 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. 11700 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.

Chlorination

16. A backflow prevention device, in this case a hose connection vacuum breaker, non removable, meeting or exceeding CSA 64.2, shall be attached to any hose bibb connection, to prevent the possibility of contaminants entering the potable water distribution system due to back-siphonage.

17. The upgrading of the existing chlorination facility must be carried out in such a way as there will be minimal interruption of the water supply and chlorination system. In this regard, water consumers and the Regional Office of the Department of Digital Government and Service NL shall be kept informed and appropriate action taken to address any potential or encountered problems.

18. The injector for the chlorination system shall be located as close as possible to the diffuser (preferably attached) in order to minimize the pressurized chlorine solution line. The chlorine injection lance shall be installed in the pipe so that the chlorine solution is being injected within the flow of water to ensure appropriate mixing.

19. The hypochlorination system shall be set-up such that chlorine is injected in the line from the source prior to any other connection to that line with the exception of the raw water sampling tap. Also, in this regard the chlorinated water shall enter one end of the chlorine contact tank and exit out of the opposite end to allow for maximum contact time and mixing and to avoid potential short circuiting.

20. Storage tank and pressure tank drain lines and overflows shall not be directly connected to the building floor drain, but shall be separated from the floor drain by an appropriately sized air gap. Drain lines from the storage tank and pressure tanks shall be protected from back-siphonage or back-pressure by an appropriate backflow prevention device.

21. A sample tap shall be provided so that water samples can be obtained from the raw water source and from an appropriate location after chlorination. Taps used shall be of the smooth-nosed type without interior or exterior threads and shall not have a screen, aerator or other such appurtenance.

22. An emergency shower and eye wash station that is in compliance with ANSI Z358.1-2014, the *Emergency Eye Wash Facility Policy* and meets the requirements of the appropriate Safety Data Sheet (SDS) shall be installed in a convenient location(s) within each facility.

23. The sodium hypochlorite shall be stored in a dark cool area to minimize loss of strength of the solution. In this regard a storage cabinet should be provided and shall be located away from any direct heat and light sources.

24. Personal protective equipment such as goggles and rubber gloves suitable for handling sodium hypochlorite must be provided.

25. Portable equipment must be provided for measuring chlorine residuals. The equipment shall have digital display readout, enable measurement of chlorine residuals to the nearest 0.02 mg/L, and shall be of a type approved by this Department.

Miscellaneous

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

27. All drains and vents shall be equipped with screens to prevent the entry of insects, birds and rodents.

28. 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.

29. Council is advised to apply to the Water Resource Management Division of this Department, for protection of the well head area.

Water Treatment

30. There shall be adequate storage handling facilities for 30 days of dry chemical supply.

31. Chemical mixing tanks shall be located as near as possible to the point of application to minimize the length of feed lines.

32. All components, lubricants and chemicals provided shall be compatible for use with drinking water and shall meet the requirements of ANSI/NSF 60 Drinking Water Treatment Chemical Standard and ANSI/NSF 61 Drinking Water and System Component Standard and any other standard applicable to potable water.

33. The owner shall ensure that all chemicals used in the treatment process and all materials contacting the water are of Food Grade quality and meet both the American Water Works Association (AWWA) quality criteria as set out in AWWA standards and the American National Standards Institute (ANSI) and the National Sanitation Foundation (NSF) safety criteria as set out in ANSI/NSF 60 or ANSI/NSF 61 standards and any other applicable standards.

34. The water treatment plant including all interior and exterior water piping systems, all storage tanks including the finished water clear wells, filter media and other receptacles and appurtenances must be disinfected by approved methods such as described in the American Water Works Association Standards, Disinfection of Watermains, C651-99, Disinfection of Water Storage Facilities, C652-92 and Disinfection of Water Treatment Plants C653-87. It should be noted that the filter chambers must be disinfected prior to the placement of filter media and subsequently, the media disinfected as per the above quoted Standards. After final flushing, samples shall be collected and tested for bacteriological quality. The sampling locations shall be determined by the engineer. A copy of the test results shall be submitted to this Department (Water Resources Management Division) before the treatment plant is placed in service.

35. Residuals discharged from the water treatment facility must meet the requirements of the *Environmental Control Water and Sewage Regulations, 2003*.

36. Appropriate backflow prevention devices meeting or exceeding the CSA 64 Standard shall be installed on all potable water lines where a cross connection may exist or be created, to prevent the possibility of contaminants entering the potable water distribution system due to back-siphonage or back-pressure.

Commissioning and Monitoring

37. This Department must be informed of the date of commission of the drinking water treatment system.

38. The water treatment facility must produce water that is compliant with the applicable maximum acceptable concentration (MAC) and aesthetic objective (AO) for iron and manganese as outlined in the *Guidelines for Drinking Water Quality in Newfoundland and Labrador*.

Water Storage Tanks

39. The water storage tank must be disinfected by an approved method as described in the latest edition of the **AWWA C652 Standard For Disinfection of Water Storage Facilities Standard.** The solution used for disinfecting the water storage reservoir may not be discharged to a water course. After final flushing, samples shall be collected and tested for bacteriological quality. A copy of the test results shall be submitted to this Department (Water Resources Management Division) before the storage reservoir is **placed in service.**

40. The water storage tank, all appurtenances and coatings must meet the latest ANSI/NSF 61 Drinking Water and System Component Standard, the latest AWWA Standards, and any other standards and codes that may be applicable.

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, as determined by this Department, the Minister may, without notice, 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: David Peddle, C.Tech.
Harris & Associates Limited
48 Crowdy Street, P.O. Box 699
Carbonear, NL A1Y 1C2
david.peddle@nf.aibn.com

cc: Angela Buchanan
Groundwater
Water Resources Management
Municipal Affairs and Environment
P.O. Box 8700
St. John's, NL
A1B 4J6
angelabuchanan@gov.nl.ca

cc: Mr. Richard Harvey
Environmental Engineer
Water Resources Management Division
Dept. Environment, Climate Change & Municipalities
RHarvey@gov.nl.ca

cc: Ms. Deneen Spracklin, P.Eng.
Environmental Engineer, Drinking Water and Wastewater Section
Water Resources Management Division
Department of Environment, Climate Change and Municipalities
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.
Regional Engineer
Department of Transportation and Infrastructure
P.O. Box 8700
St. John's, NL A1B 4J6
inayatrehman@gov.nl.ca

cc: Mr. Dean Shute (Harbour Grace - Eastern)
Manager of Operations, GSC-Harbour Grace
Digital Government and Service NL
7-9 Roddick Crescent
PO Box 512
Harbour Grace NL A0A 2M0
deanshute@gov.nl.ca

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Department of Environment and Climate Change
Water Resources Management Division

Appendix C - Completion Report

Pursuant to the *Water Resources Act*, SNL 2002 cW-4.01, specifically Section(s) 37

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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 Environment and Climate Change 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 Environment and Climate Change
Water Resources Management Division
PO Box 8700
St. John's NL A1B 4J6