

## PERMIT TO CONSTRUCT

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Pursuant to the *Water Resources Act*, SNL 2002 cW-4.01, specifically Section(s) 37, 39

Date: **MARCH 02, 2021**

File No: **844.241.005**  
Permit No: **WS11640-2021**

Permit Holder: **Town of Colliers  
PO Box 84  
Colliers NL A0A 1Y0  
townofcolliers@eastlink.ca**

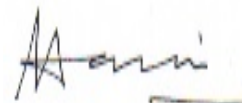
Attention: **Mariette Holly**

Re: **Colliers - Bedlam Water Supply Phase II**

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Permission is hereby given for : **the installation of 680 m of 150 mm HDPE watermain, a new chlorination building including all architectural, mechanical, electrical and site work to house new variable speed pump system, hypo chlorination system and all related appurtenances to connect Well #1 Mahoney's Well system to the Bedlam Pond water supply as described in the specification and drawings titled, "Town of Colliers Bedlam Pond Water Supply Phase II" as received from Harris & Associates Limited on January 26, 2021; 17-GI-21-00005.**

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



(for) MINISTER

**APPENDIX A**  
**Terms and Conditions for Permit**

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**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* and the *NL Master Specification Guide for Public Funded Buildings*. 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, [729-2558](mailto: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. 11640 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.

### **Water Systems**

16. Wherever possible, water distribution system layouts should be designed to eliminate dead-end sections. Where dead-end mains cannot be avoided, they should be provided with a fire hydrant, blow off, or other acceptable measures taken to prevent problems associated with stagnation.
17. Under no circumstances shall sewage be permitted to enter the waterline trench during or after construction.
18. All new waterlines and appurtenances shall be hydrostatically tested in accordance with the *Municipal Water, Sewer and Roads Specifications*.
19. 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.
20. Backflow prevention devices should/must be installed on service connections where there is a high risk of contamination of the potable water supply.
21. Buildings or homes to be connected to this system must have their private supplies permanently disconnected so as not to create a cross-connection with the town's water distribution system.
22. All new lines and appurtenances must be disinfected by an approved method described in the latest edition of the AWWA C651 Standard for Disinfecting Watermains and using only chlorine products that meet the NSF 60 standard.
23. After final flushing and before the new water main is commissioned into service, bacteriological sampling must be conducted as per the latest edition of the AWWA C651 Standard for Disinfecting Watermains. Two acceptable options are available: (1) two consecutive sets of bacteriological samples, taken at least 16 hours apart, must be collected and tested for bacteriological quality, or (2) following a 16 hour rest period two consecutive sets of samples, taken 15 minutes apart, must be collected and tested for bacteriological quality. Sets of samples shall be collected for every 366 m of new water main including the end of the main line and the end of each branch line. These sampling locations shall be determined by the engineer. **A copy of test results must be submitted to this Department (Water Resources Management Division) before the new watermain is placed into service.** In the event of any bacteria detected in the sample results, flushing and re-sampling may be attempted or the disinfection process will need to be repeated until results for two consecutive sets of samples are bacteria free. Where necessary, this Department should be contacted to determine provisions for the disposal of heavily chlorinated water.
24. For the purpose of disinfecting new or upgraded watermains, connection may only be made to the existing watermain provided a valve is installed that maintains a water tight seal. This valve may be operated to flush the new water extension before disinfection and post disinfection provided adequate measures and procedures are followed to avoid a backflow and contamination of the existing system.

25. Drain lines from air release/vacuum valves shall not discharge at the bottom of the chamber next to the floor drain unless there is an air gap on the line to prevent any possibility of backsiphonage of chamber water back into the potable water system. The air gap shall be located at a location on the line just above the crown of the watermain. If an air gap is not possible in this area, the drain line shall be shortened so it discharges higher than the crown of the watermain.

### **Chlorination**



26. 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.
27. 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.
28. 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.
29. 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.
30. 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.
31. An emergency shower and eye wash station that is in compliance with ANSI Z358.1-2014 and meets the requirements of the appropriate Safety Data Sheet (SDS) shall be installed in a convenient location(s) within each facility. The emergency shower and eye wash station must be in compliance with the *Emergency Eye Wash Facility Policy*.
32. 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.
33. Personal protective equipment such as goggles and rubber gloves suitable for handling sodium hypochlorite must be provided.
34. The chlorination room and chlorine ton container storage room shall be gas tight to protect equipment in the adjoining room(s) in the event of a leak.
35. 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**

36. The Permit Holder must prevent erosion of drainage ditches, streams or other natural bodies of water by installing rip-rap and/or sodding.
37. All drains and vents shall be equipped with screens to prevent the entry of insects, birds and rodents.

38. 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.

### **PPWSA General**

39. All persons working on this project must be informed that they are within a Protected Public Water Supply Area when applicable, and must be made aware of all conditions of this Permit. A copy of this Permit must be on site during operations.
40. For any clearing or construction within 150m of Bedlam Pond, all best practices must be employed to avoid any unnecessary ground disturbance including disturbance to the root mat, grubbing, or removal of soil. The Permit Holder is to ensure that the appropriate best practices are employed to prevent any detrimental effects that could impact water quality.
41. All waste material is to be collected in refuse containers, and disposed of at an approved waste disposal site outside the Protected Public Water Supply Area in accordance with the *Environmental Protection Act, SNL 2002 cE-14.2*.
42. Equipment storage, maintenance facilities associated with this project, and all maintenance other than emergency repairs must not be located/carried out within the Protected Public Water Supply Area.
43. The Department reserves the right to require that the Permit Holder follow, and cover all costs incurred by the Permit Holder or this department, associated with any water quality monitoring program that may be ordered by the Minister for the purpose of ensuring that the water quality is maintained within acceptable guidelines.
44. Officials of the Department may visit the site to ensure compliance with this Permit.
45. Liaison is to be maintained with the appropriate Environmental Scientist. If there are any specific problems (ie sedimentation, fuel spill, other potential water quality impairment), the Environmental Scientist must be notified immediately at (709)729-4817 .
46. The felling or disposing of trees, parts of trees, sawdust, bark, logging debris or slash into a water body or upon the frozen surface of a water body is strictly prohibited.
47. Motorized vehicles, including snowmobiles and ATVs, shall not be used to cross the frozen surface of Bedlam Pond within the Protected Public Water Supply Area.
48. Treated wood shall not be used in a water body or within 150 m of Bedlam Pond measured from the high water mark. The use of creosote treated wood anywhere within the Protected Public Water Supply Area is strictly prohibited.
49. The Permit Holder must inspect the site daily during work inside the PPWSA, and any water quality impairment related problems are to be reported immediately to the Environmental Scientist at (709) 729-4817 .
50. Any changes in water quality resulting directly from this project, rendering the water unsuitable as a public water supply, are the responsibility of the Permit Holder. The Minister may order the Permit Holder to provide an alternate source of potable water to the affected community until water quality returns to an accepted level.
51. All vehicles and equipment must be in good working order with no leaking fuel, oil, or other harmful substances that could impair water quality.
52. All stationary motorized equipment and associated fuel tanks shall have metal trays, absorbent pads or impervious liners under them to catch and contain in excess of 110 % of the aggregate volume of any fuel, lubricant and oil.

53. Drainage from roads and other disturbed areas into any body of water must first be discharged into a settling pond, a vegetated area or pass through a sedimentation fence where all suspended material can settle out before draining into any body of water.
54. Where permits, licences, approvals or authorizations are issued by multiple governments departments or agencies, in the case of similar conditions, the more stringent of the those shall prevail; in the case of conflicting conditions, the Permit Holder shall seek clarification and direction in writing from each of the respective departments or agencies.
55. The issuance of this permit does not guarantee, nor set precedent, that additional or similar permits or amendments will be issued in this or any other Protected Public Water Supply Area for additional or similar activity or development.

### **Fuel Storage**

56. There shall be no bulk fuel storage associated with this project within the protected water supply area. Fuel shall be brought to the operating area in no more than two (2), 205 litre barrels or one (1) 500 litre slip tank. Refueling sites shall be located at least 150 metres from any water body or wetland. The Permit Holder is hereby informed that fuel storage and handling requires a separate approval under the *Storage and Handling of Gasoline and Associated Products Regulations*, CNR 775/96.
57. Any spills of gasoline, fuel or oil, regardless of volume, shall be reported immediately to the Environmental Scientist (709) 729-4817. Furthermore, all spills in excess of 70 litres shall be reported immediately to the 24 hour spill report line at 1-800-563-9089.
58. Contaminated snow and soil must be removed from the site and disposed of at an approved location outside the protected public water supply area, in accordance with the *Environmental Protection Act, SNL 2002 cE-14.2*.
59. A complete oil spill clean-up kit must be on site at all times when gasoline or fuel powered equipment is being used or refuelled. The kit must contain the following:
  - One hand operated fuel pump
  - One recovery container such an empty 205 litre drum
  - One shovel
  - One pick axe
  - Five metres of containment boom
  - Five absorbent pads
  - Twenty-five litres of loose absorbent material
60. Refueling sites shall be located at least 150 metres from any water body or wetland.

**APPENDIX B**

**Special Terms and Conditions for Permit**

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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, PO 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



### Appendix C - Completion Report

Pursuant to the *Water Resources Act*, SNL 2002 cW-4.01, specifically Section(s) 37, 39

Date: **MARCH 02, 2021**

File No: **844.241.005**  
Permit No: **WS11640-2021**

Permit Holder: **Town of Colliers**  
**PO Box 84**  
**Colliers NL A0A 1Y0**  
**townofcolliers@eastlink.ca**

Attention: **Mariette Holly**

Re: **Colliers - Bedlam Water Supply Phase II**

Permission was given for : **the installation of 680 m of 150 mm HDPE watermain, a new chlorination building including all architectural, mechanical, electrical and site work to house new variable speed pump system, hypo chlorination system and all related appurtenances to connect Well #1 Mahoney's Well system to the Bedlam Pond water supply as described in the specification and drawings titled, "Town of Colliers Bedlam Pond Water Supply Phase II" as received from Harris & Associates Limited on January 26, 2021; 17-GI-21-00005.**

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