

**PERMIT TO CONSTRUCT**

---

Pursuant to the *Water Resources Act*, SNL 2002 cW-4.01, specifically Section(s) 37, 39, 48

Date: **AUGUST 09, 2019**

File No: **844.241.005**  
Permit No: **WS10444-2019**

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

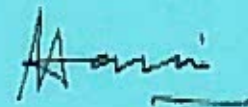
Attention: **Mariette Holly**

Re: **Colliers - New Water Supply Intake Bedlam Pond**

---

Permission is hereby given for : the installation of 38 m of 200 mm diameter screened stainless steel intake pipe, 75 mm PE backwash line, 10 m of 150 mm PE watermain, a 900mm diameter culvert across an unnamed stream, and related appurtenances as described in a specification and drawings titled, "Town of Colliers Bedlam Pond Water Supply (Phase 1)" as received from Harris & Associates on April 18, 2019; 17-SCF-19-00097.

- 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*.



(for) 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. 10444 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. 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.
14. 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**

15. Under no circumstances shall sewage be permitted to enter the waterline trench during or after construction.
16. All new waterlines and appurtenances shall be hydrostatically tested in accordance with the *Municipal Water, Sewer and Roads Specifications*.
17. 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.
18. 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.
19. 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.

#### **Miscellaneous**

20. The Permit Holder must prevent erosion of drainage ditches, streams or other natural bodies of water by installing rip-rap and/or sodding.
21. Council is advised to apply to the Water Resource Management Division of this Department, for protection of the watershed area.
22. The project must be wholly located within the municipal boundary over which the Owner has jurisdiction.

#### **Intake**

23. A water supply intake may be placed in Bedlam Pond as part of the water supply system for the Town of Colliers .
24. The intake shall consist of 38 m of 200 mm diameter stainless steel pipe and a screened intake structure.
25. Pipe zone cutoff walls or other means must be installed to prevent lowering of the water table due to groundwater flow through the porous pipe zone material.
26. Where pumping is used to bypass flow, cofferdams must be installed both above and below areas of construction. The Permit Holder must provide pumps with sufficient capacity to prevent washout of cofferdams.

27. Cofferdams must be properly designed and constructed of suitable materials to prevent leakage and to resist loss of any material as a result of erosion. Cofferdams must be removed upon completion of their intended function. All material must be removed carefully to prevent disturbance of the water body and to prevent water quality degradation.
28. Close cut clearing and disposal must be undertaken around the perimeter of the water supply reservoir to an elevation not less than 200 mm above the proposed high water mark. Special care should be exercised to minimize siltation and erosion problems at the new shore wash area.
29. The intake must be fitted with a removable mesh screen or a trash rack.
30. Intake ports must be located above the bottom of the stream, lake or impoundment, but at sufficient depth to be kept submerged at low water levels and below ice level. The intake structure must not draw air.
31. Adequate protection must be provided against clogging by sediment, debris, ice, frazil ice, wind, floatation and wave pressure.

#### **PPWSA General**

32. All persons working on this project must be informed that they are within a Protected Public Water Supply Area, and must be made aware of all conditions of this Permit. A copy of this Permit must be on site during operations.
33. 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.
34. 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.*
35. 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.
36. 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.
37. Treated wood shall not be used in a water body or within 50 metres of the high water mark of any water body. The use of creosote treated wood anywhere within the Protected Public Water Supply Area is strictly prohibited.
38. 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.
39. All vehicles and equipment must be in good working order with no leaking fuel, oil, or other harmful substances that could impair water quality.
40. 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.
41. Drainage from roads and other disturbed areas, and all water, runoff or effluent from the site, that is pumped or flows by gravity, shall have silt, sludge, sediment, cuttings, and visible turbidity removed by means of sediment boxes, settling tanks, settling ponds, sumps dug into the ground, filtration or other suitable treatment, to less than or equal to 30 milligrams per litre of Total Suspended Solids (TSS), before being discharged to the environment. More specifically, at the last point of control, the final discharge of all water, runoff or effluent must conform to the limits specified in Schedule A of the Environmental Control Water and Sewer Regulations, 2003, <https://www.assembly.nl.ca/Legislation/sr/Regulations/rc030065.htm>. It is the responsibility of the Permit Holder to demonstrate, that the final discharge meets the requirement of these Regulations.

42. The Permit Holder is required to ensure that adequate sanitary (bathroom) facilities are available or provided on site. This may be in the form of a portable toilet, chemical toilet, pit privy (outhouse), sub-surface disposal system, or municipal sewer system. If a portable toilet or chemical toilet is used, the waste water must be disposed of in a septic disposal system approved by Service NL, or 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. If a pit privy (outhouse) or sub-surface disposal system is used, it must be located outside the required buffers, and be subject to Service NL standards, requirements and approval.
43. 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.

**Fuel Storage**

44. 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.
45. Any spills of gasoline, fuel or oil, regardless of volume, shall be reported immediately to the Environmental Scientist and the appropriate Municipal Authority or Watershed Management Committee by calling (709) 729-4817 and (709) 229-4333 respectively. Furthermore, all spills in excess of 70 litres shall be reported immediately to the 24 hour spill report line at 1-800-563-9089.
46. 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
47. Refueling sites shall be located at least 150 metres from any water body or wetland.

**Culvert Design**

48. A 10 metres long 900 mm diameter CSP culvert may be installed across an Unnamed Stream in the Town of Colliers .
49. The crossing structure must provide adequate capacity to safely discharge flood flows without causing backwater effects upstream or increased flow velocity downstream.
50. To safely convey peak flows the culvert installations must be designed according to the following hydraulic criteria:

Crossing Name / No.	Design Return Period (years)	Design Flow (m <sup>3</sup> /s)	Minimum Size (mm)	Number of Pipes	Length (m)
Culvert on a Unnamed Brook	25	1.47	900	1	10

**Culvert Installation**

51. Drainage ditches must collect and transport surface runoff in a manner that does not cause flooding, erosion or sedimentation of adjacent land or receiving waters.
52. Inlet and outlet areas of culvert installations must be adequately protected from erosion by placing rip-rap, fitted stone, or concrete headwalls.
53. Culvert installations must follow the stream channel gradient to the maximum extent possible and placed in line with the direction of the main flow to minimize disturbance to the channel. Culverts must not disrupt the flow of water or cause ponding at the upstream side of the installation.
54. In multiple culvert installations, one culvert must be set a minimum of 150 mm lower than the others to provide adequate water depth and velocity for fish passage during low flow conditions. In addition, multiple culverts must be installed within 0.6 to 0.9 metres apart for maximum stability.
55. All work involving minor alteration to the stream channel to permit culvert placement must be carried out at a time of low flow, and in a manner that prevents downstream siltation and unnecessary alteration of the channel.
56. Grading and finishing of roadways or road embankments must not cause damage to culverts or allow road material to enter the watercourse.
57. Roadside embankments near the watercourse must be adequately protected from erosion by sodding, seeding or placing of rip-rap.
58. Culverts must be inspected regularly so that immediate action can be taken to clear blockages caused by ice or debris or to undertake repairs as required.
59. The inlet and outlet of culverts must be clearly marked so that operators of road grading and snow clearing equipment can avoid blocking culverts.
60. Any damage to culverts during installation or due to inadequate capacity and/or improper construction must be reported to this Department. Damaged culverts must be replaced immediately to prevent overtopping, erosion, or flooding.
61. If a culvert is installed in natural fish habitat it must be embedded a minimum of 150 mm below the natural streambed (up to a maximum of 1/3 of the culvert diameter).

#### **General Alterations**

62. Any work that must be performed below the high water mark must be carried out during a period of low water levels.
63. Any flowing or standing water must be diverted around work sites so that work is carried out in the dry.
64. The use of heavy equipment in streams or bodies of water is not permitted. The operation of heavy equipment must be confined to dry stable areas.
65. During the construction of concrete components, formwork must be properly constructed to prevent any fresh concrete from entering a body of water. Dumping of concrete or washing of tools and equipment in any body of water is prohibited.
66. The bed, banks and floodplains of watercourses, or other vulnerable areas affected by this project, must be adequately protected from erosion by seeding, sodding or placing of rip-rap.
67. Periodic maintenance such as painting, resurfacing, clearing of debris, or minor repairs, must be carried out without causing any physical disruption of any watercourse. Care must be taken to prevent spillage of pollutants into the water.

68. The owners of structures are responsible for any environmental damage resulting from dislodgement caused by wind, wave, ice action, or structural failure.
69. Sediment and erosion control measures must be installed before starting work. All control measures must be inspected regularly and any necessary repairs made if damage is discovered.
70. Fill material must be of good quality, free of fines or other substances including metals, organics, or chemicals that may be harmful to the receiving waters.
71. The location of the work is highlighted on the Location Map for this Permit attached as Appendix D.
72. All work must be carried out within the Permit Holder's legal property boundaries.

**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  
PO Box 699, Crowdy Street  
Carbonear, NL, A1Y 1C2  
david.peddle@nf.aibn.com
- cc: Amir Ali Khan, Ph.D., P.Eng.  
Manager, Water Rights, Investigations and Modelling 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  
akhan@gov.nl.ca
- cc: Janice McCarthy  
Senior Engineer  
Water Resources Management Division  
Dept of Municipal Affairs and Environment  
JaniceMcCarthy@gov.nl.ca
- 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: Frank Norman (Eastern)  
Land Management Specialist  
Crown Lands Administration  
Howley Building  
St. John's  
franknorman@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. Dean Shute  
Manager of Operations  
Service NL  
7-9 Roddick Cres., PO Box 512  
Harbour Grace NL A0A 2M0  
deanshute@gov.nl.ca
- cc: Fisheries Protection Division  
Ecosystem Management Branch

Fisheries and Oceans Canada  
P.O. Box 5667  
St. John's, NL A1C 5X1  
FPP-NL@dfo-mpo.gc.ca

**Appendix C - Completion Report**

---

Pursuant to the *Water Resources Act*, SNL 2002 cW-4.01, specifically Section(s) 37, 39, 48

Date: **AUGUST 09, 2019**

File No: **844.241.005**  
Permit No: **WS10444-2019**

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

Attention: **Mariette Holly**

Re: **Colliers - New Water Supply Intake Bedlam Pond**

---

Permission was given for : the installation of 38 m of 200 mm diameter screened stainless steel intake pipe, 75 mm PE backwash line, 10 m of 150 mm PE watermain, a 900mm diameter culvert across an unnamed stream, and related appurtenances as described in a specification and drawings titled, "Town of Colliers Bedlam Pond Water Supply (Phase 1)" as received from Harris & Associates on April 18, 2019; 17-SCF-19-00097.

*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

**APPENDIX D**  
**Location Map for Permit**

