

## PERMIT TO CONSTRUCT

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

Date: **DECEMBER 18, 2023**

File No: **844.220.003**  
Permit No: **WS13411-2023**

Permit Holder: **Town of Burin**  
**491 Main Street**  
**P.O. Box 370**  
**Burin, NL A0E 1E0**  
**lhartson@townofburin.com**

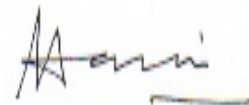
Attention: **Leo Hartson**

Re: **Burin - Port Au Bras Water System Upgrades**

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Permission is hereby given for : **the installation of a new wedgewire intake screen, upgrades to the existing chlorination building to include new gas chlorination system, flowmeter, booster pumps, SCADA system, upgrades to existing booster station with new pumps and all related works and appurtenances as described in the drawings titled, "Town of Burin Port Au Bras - Water System Upgrades" as received from Edwards and Associates Ltd. on November 29, 2023; 17-GI-22-00018.**

- 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

**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*. 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. 13411 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 door of the chlorination room must open outward, and must be equipped with approved panic hardware. This door shall have mounted on its exterior, a sign **warning** of the presence of chlorine gas.
19. The chlorination room/building/storage area must be equipped with a chlorine leak detection device. The device shall control an audible alarm, and an alarm light located above the entrance door to the chlorine room.
20. The exhaust fan in the chlorine room must be capable of providing one complete air exchange per minute, and the air intake duct shall extend to within 150 mm of the floor. A manual control switch for the fan shall be provided at the entrance and in an adjoining room.
21. The chlorination room and the adjoining room(s) shall be separated by an air tight wall in order to protect personnel and equipment in the adjoining room in the event of a chlorine gas leak. A clear air tight viewing window shall be installed in this wall to allow for visual inspection of the chlorine room and chlorine storage room.
22. The breathing apparatus must be wall mounted in a convenient location in the pump/screen room. The Town of Burin shall ensure that the air cylinder is purged and refilled on a regular basis to ensure its safe operation, and shall ensure that the operator(s) is trained in the use of the breathing apparatus.
23. A Chlorine Institute 'Kit A' should be provided in order that emergency leak repairs may be made to the chlorine cylinders when necessary. The Kit should be stored near the emergency breathing apparatus, and not in the same room as the chlorine cylinders.
24. The vacuum regulator vents must be vented to a safe location where personnel will not be endangered from the escaping gas. They shall not under any circumstance be vented in the vicinity of an exit door or through an unheated space (ie. attic).
25. The chlorination facility shall be located in a fenced enclosure to minimize vandalism and endangerment to the general public in case of a chlorine leak.
26. 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.

27. 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.
28. 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.
29. Floor drains in the chlorine equipment room or the chlorine gas cylinder storage room must discharge to a separate sump outside the building and shall not be connected to other internal or external drainage systems.
30. The emergency eye wash stations shall be located within 4.5 m of both the chlorine equipment room or chlorine storage room exit doors. An emergency eye wash shall also be installed in the polymer room. All eye wash stations not connected to the potable water system must be capable of providing a continuous 15 minute flush as a minimum, using potable water or equivalent.
31. Self-contained breathing apparatus or respiratory air-pac protection equipment shall be provided. The equipment shall be stored in convenient locations, but not inside any room where chlorine is used or stored. The unit shall use compressed air, have at least 30 minute capacity, and be compatible with the units used by the regional fire department.
32. A wind sock or flag shall be mounted on the roof of the building to indicate wind direction in case of a major gas leak and a scrubber failure resulting in the chlorine having to be vented to the outside.
33. 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.
34. The chlorinator and chlorine vacuum lines shall not be located on an outside wall to prevent exposure to low temperatures.

#### **SCADA- PtC**

35. The SCADA system shall not be on the same network as other business or municipal computing systems.
36. 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.
37. SCADA systems which have network connectivity must have anti-virus applications installed.
38. 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.
39. Multiple firewalls must be installed on the SCADA system if remote access/login is allowed.
40. A spare computer must be provided that contains a backup copy of the SCADA system master database and interface.

#### **Intake**

41. A water supply intake may be placed in Gripe Cove Pond as part of the water supply system for the Town of Burin .
42. The intake screen shall consist of 450 mm diameter wedgewire drum intake structure.
43. 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.

44. 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.
45. 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.
46. 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.
47. The intake must be fitted with a removable mesh screen or a trash rack.
48. 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.
49. Adequate protection must be provided against clogging by sediment, debris, ice, frazil ice, wind, floatation and wave pressure.

### **PPWSA General**

50. 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.
51. An undisturbed (no cutting or ground disturbance) buffer zone of at least **150 metres** shall be maintained around Gripe Cove Pond, at least **50 metres** around major lakes and ponds and along both sides of all streams and main tributaries running into Gripe Cove Pond, and at least **30 metres** around all ponds, along both sides of all other water bodies including wetlands and field identified streams. Activity or development within these buffer zones is prohibited, with the exception of the Gripe Cove Pond water system upgrades. All buffer zones must be marked with signs or flagging tape to avoid encroachment into the buffer zones.
52. 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*.
53. 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.
54. 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.
55. Officials of the Department and the appropriate Municipal Authority, Operator, or Watershed Management Committee may visit the site to ensure compliance with this Permit.
56. 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 appropriate Environmental Scientist must be notified immediately at (709) 729-4817.
57. 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.
58. Treated wood shall not be used in a water body or within buffer zones established in Condition #54 of any water body measured from the high water mark. The use of creosote treated wood anywhere within the Protected Public Water Supply Area is strictly prohibited.

59. The Permit Holder must inspect the site daily, and any water quality impairment related problems are to be reported immediately to the Environmental Scientist at (709) 729-4817.
60. 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.
61. All vehicles and equipment must be in good working order with no leaking fuel, oil, or other harmful substances that could impair water quality.
62. 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.
63. 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.
64. For any clearing inside buffer zones: no ground disturbance (no disturbance to the root mat, no grubbing, or removal of soil) shall take place in the buffer zones. The Permit Holder is to ensure that the appropriate best practices are employed to prevent any detrimental effects that could impact water quality. Where possible, work in buffer zones shall be completed when the ground is frozen.
65. Where permits, licences, approvals or authorizations are issued by multiple governments departments or agencies, in the case of similar conditions, the more stringent of 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.
66. 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**

67. 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. 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.
68. 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*.
69. Any spills of gasoline, fuel or oil, regardless of volume, shall be reported immediately to the Environmental Scientist at (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.
70. 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 as 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
71. Refueling sites shall be located at least 150 metres from any water body or wetland.

### **Dredging/Debris Removal**

72. Alteration of the natural minimum streamflow is not permitted in order to preserve aquatic life.
73. The natural course of any stream must not be altered.
74. Dredging activity must only be carried out during periods when wind, wave and tide conditions minimize the dispersion of silt and sediment from the work site.
75. A water quality monitoring program is not required at this time. However, the Department reserves the right to require that the Permit Holder sample, analyse, and submit results of water quality tests, for the purpose of ensuring that the water quality is maintained within acceptable guidelines. All analyses must be undertaken by a CALA accredited laboratory.
76. The area to be dredged must be enclosed and isolated from the rest of the body of water through the use of a filter fabric curtain or similar method.
77. Dredged material must be disposed of in accordance with the regional Service NL Centre of the Department of Digital Government and Service NL. The Department of Digital Government and Service NL may require samples to be submitted for testing and analysis. Only suitable, rocky material dredged may be used for breakwater construction as it will not be susceptible to erosion.

### **General Alterations**

78. Any work that must be performed below the high water mark must be carried out during a period of low water levels.
79. Any flowing or standing water must be diverted around work sites so that work is carried out in the dry.
80. 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.
81. All vehicles and equipment must be clean and in good repair, free of mud and oil, or other harmful substances that could impair water quality.
82. 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.
83. Wood preservatives such as penta, CCA or other such chemicals must not be applied to timber near a body of water. All treated wood or timber must be thoroughly dry before being brought to any work site and installed.
84. 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.
85. 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.
86. The owners of structures are responsible for any environmental damage resulting from dislodgement caused by wind, wave, ice action, or structural failure.
87. 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.
88. 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.
89. The location of the work is highlighted on the Location Map for this Permit attached as Appendix D.

**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: Mr. Ian Edwards, P.Eng.  
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iedwards@enwardsandassociates.ca
- cc: Ms. Deneen Spracklin, P.Eng.  
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Water Resources Management Division  
Department of Environment and Climate Change  
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- cc: Sarah Smith  
Environmental Scientist  
Water Resources Management Division  
Environment and Climate Change  
sarahsmith@gov.nl.ca
- cc: Mr. Inayat Rehman, P.Eng.  
Regional Engineer  
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- cc: Mr. Michael Duke (Clarenville - Eastern)  
Manager  
Digital Government and Service NL  
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michaelduke@gov.nl.ca

### Appendix C - Completion Report

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

Date: **DECEMBER 18, 2023**

File No: **844.220.003**

Permit No: **WS13411-2023**

Permit Holder: **Town of Burin  
491 Main Street  
P.O. Box 370  
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Attention: **Leo Hartson**

Re: **Burin - Port Au Bras Water System Upgrades**

Permission was given for : **the installation of a new wedgewire intake screen, upgrades to the existing chlorination building to include new gas chlorination system, flowmeter, booster pumps, SCADA system, upgrades to existing booster station with new pumps and all related works and appurtenances as described in the drawings titled, "Town of Burin Port Au Bras - Water System Upgrades" as received from Edwards and Associates Ltd. on November 29, 2023; 17-GI-22-00018.**

*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

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

Town of Burin - Port Au Bras Water System Improvements

