

## PERMIT TO ALTER A BODY OF WATER

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

Date: **SEPTEMBER 21, 2020**

File No: **536-14**  
Permit No: **ALT11326-2020**

Permit Holder: **NL Hydro**  
**P.O. Box 12400**  
**500 Columbus Drive**  
**St. John's NL A1B 4K7**  
**trevorbutton@nlh.nl.ca**

Attention: **Mr. Trevor Button**

Re: **Roddickton-Bide Arm - East Brook Pond PPWSA - Dam Infilling - NL Hydro**

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Permission is hereby given for : **infilling the downstream side of the dam as a temporary measure to protect the timber crib dam (RD-1) in the East Brook Pond Protected Public Water Supply Area (used by the Town of Roddickton-Bide Arm) with reference to the application dated August 17, 2020.**

- 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**

**Dam/Reservoir Design**

1. As the dam has been conditionally reclassified from the LOW to HIGH consequence category (2007 Canadian Dam Association (CDA) guidelines) due to a reassessment during the last dam safety review, a long term plan to upgrade the dam to handle the reclassified IDF must be submitted within one year of the issuance of this permit.
2. Reservoirs must be provided with a spillway of adequate capacity to safely discharge design flows at non-erosive velocities without causing flooding of the reservoir or damage to the spillway or section downstream channel.
3. Alteration of the natural minimum streamflow is not permitted in order to preserve aquatic life.
4. The dam and appurtenant structures shall be constructed at the following coordinates:

Name	Datum	Northing (m)	Easting (m)	Zone
Roddickton Timber Crib Dam (RD-1)	NAD83	5638021.0	566910.0	21

5. The dam(s) must have the following dimensions:

Name	Height/Elev. of Dam (m)	Height of Spillway (m)	Maximum Water Elevation (m)	Minimum Water Elevation (m)
Roddickton Timber Crib Dam (RD-1)	4.0/139.85	139.15	139.85	137.45

6. To safely convey peak flows the dam(s) must be designed according to the following hydraulic criteria:

Timeframe	Name	Design Return Period (years)	Minimum Flow Capacity (m <sup>3</sup> /s)
Short Term	Roddickton Timber Crib Dam (RD-1)	1:100	23.0
Long Term (Plan within one year)	Roddickton Timber Crib Dam (RD-1)	1/3 between 1:1000 and PMF	96.7

7. The dam and associated works must be designed and constructed under the direct supervision of an engineer eligible for membership with the Professional Engineers and Geoscientists of Newfoundland and Labrador (or equivalent Canadian organization) who is able to demonstrate competence in the design, construction, and surveillance of dams.
8. The dam and associated works shall be designed according to the Canadian Dam Association Dam Safety Guidelines and associated Bulletins (most recent edition).

### **General Alterations**

9. Any work that must be performed below the high water mark must be carried out during a period of low water levels.
10. Any flowing or standing water must be diverted around work sites so that work is carried out in the dry.
11. 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*.
12. 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.
13. 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.
14. 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.
15. 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.
16. 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.
17. 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.
18. The owners of structures are responsible for any environmental damage resulting from dislodgement caused by wind, wave, ice action, or structural failure.
19. 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.
20. 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.
21. The attached Completion Report (Appendix C) for Permit No. 11326 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.

22. 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. The following terms are valid for the life cycle of the dam structures: 25.
23. The location of the work is highlighted on the Location Map for this Permit attached as Appendix D.
24. All work must be carried out within the Permit Holder's legal property boundaries.

#### **Dam Safety**

25. The dam has been conditionally classified in the HIGH Consequence category based on the 2007 Canadian Dam Association (CDA) guidelines. To meet the CDA's Dam Safety guidelines (Current Edition) for dams of this classification, the owner must:
  - Carry out an annual Dam Safety Inspection and provide the results to this Department,
  - Carry out a Dam Safety Review and submit a Dam Safety Report to this Department a maximum of every **seven years**,
  - Submit within one year of the issuance of this permit, and in consultation with this Department, an Operation, Maintenance and Surveillance (OMS) Manual,
  - Submit an Emergency Preparedness and Response Plan (EPRP) within one year of the issuance of this permit.

#### **Dam Construction**

26. Fill material must be obtained from an approved quarry site. It must not be taken from beaches or streams, and must not be dredged from a body of water.
27. Reservoir shorelines with moderately steep slopes or vulnerability to wave induced erosion, must be adequately protected with armour stone, rip-rap, or by other suitable measures.
28. The downstream side of the overflow dam structure must be constructed with a 1.5 metre facing of armour stone or rip-rap with a D50 of 500mm and a slope of 5 horizontal to 1 vertical to prevent erosion of the structure when overtopping occurs.
29. The transportation of labour and materials to the site must be along existing access roads.
30. Work must be conducted in dry conditions.

#### **PPWSA General**

31. 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.
32. An undisturbed (no cutting or ground disturbance) buffer zone of at least **150 metres** shall be maintained around East Brook Pond , at least **50 metres** along both sides of all streams and main tributaries running into East Brook Pond , and at least **30 metres** around all ponds and along both sides of all other water bodies. Activity or development within these buffer zones is prohibited. All buffer zones must be marked with signs or flagging tape to avoid encroachment into the buffer zones.
33. 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*.

34. 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.
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. Officials of the Department and the appropriate Municipal Authority, Operator, or Watershed Management Committee may visit the site to ensure compliance with this Permit.
37. Liaison is to be maintained with the appropriate Municipal Authority and Environmental Scientist. If there are any specific problems (ie sedimentation, fuel spill, other potential water quality impairment), the appropriate Town Manager/Clerk, Mayor, Chair of the Local Service District Committee, or Chair of the Water Supply Committee must be notified immediately at (709)457-2413. The Environmental Scientist must also be notified immediately at **(709)637-2542**.
38. 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.
39. 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.
40. Treated wood shall not be used in a water body or within buffer zones established in Condition 36 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.
41. 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.
42. All vehicles and equipment must be in good working order with no leaking fuel, oil, or other harmful substances that could impair water quality.
43. 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.
44. Any streams not visible on a 1:50,000 scale map (including field identified streams) shall require a minimum buffer of 30 m.

45. 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.
46. 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.
47. 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.

### **Fuel Storage**

48. 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.
49. A complete oil spill clean-up kit must be on site at all times when gasoline or fuel powered equipment is being used or refueled. The kit must contain the following:
- Fire pump and 100 metres of hose
  - Two hand operated fuel pumps
  - Six recovery containers such as empty 205 litre drums
  - Four shovels
  - Two pick axes
  - Ten metres of containment boom
  - Twenty-five absorbent pads
  - One hundred litres of loose absorbent material
50. 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.
51. 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)729-7634 and (709)457-2413 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.
52. Refueling sites shall be located at least 150 metres from any water body or wetland.

### **Protected Miscellaneous**

53. 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)729-7634 and the appropriate Municipal Authority or Watershed Monitoring Committee at (709)457-2413.

54. The Permit Holder is required to provide this Department with all documentation, information and data which may be requested or required in order to carry out the inspection or investigation.
55. Sawdust, bark, and logs must not be stored within undisturbed buffer zones of any body of water, and must be removed at regular intervals to prevent excessive accumulation at the site.
56. Wood and brush removed from the work site must not be stored within undisturbed buffer zones of any water body.

**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: Ms. Carla Hayes, P.Tech  
Environmental Scientist, Drinking Water and Wastewater Section  
Water Resources Management Division  
Department of Environment, Climate Change and Municipalities  
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Water Resources Management Division  
Environment, Climate Change and Municipalities  
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- cc: Ms. Susan Hoddinott (Western/Labrador)  
Regional Director  
Service NL  
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- cc: Town of Roddickton-Bide Arm  
Ms. Paula Snook-Randell  
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roddickton@nf.aibn.com
- cc: Janice McCarthy  
Senior Engineer  
Water Resources Management Division  
Dept of Municipal Affairs and Environment  
JaniceMcCarthy@gov.nl.ca



**Appendix C - Completion Report**

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

Date: **SEPTEMBER 21, 2020**

File No: **536-14**  
Permit No: **ALT11326-2020**

Permit Holder: **NL Hydro**  
**P.O. Box 12400**  
**500 Columbus Drive**  
**St. John's NL A1B 4K7**  
**trevorbutton@nlh.nl.ca**

Attention: **Mr. Trevor Button**

Re: **Roddickton-Bide Arm - East Brook Pond PPWSA - Dam Infilling - NL Hydro**

Permission was given for : **infilling the downstream side of the dam as a temporary measure to protect the timber crib dam (RD-1) in the East Brook Pond Protected Public Water Supply Area (used by the Town of Roddickton-Bide Arm) with reference to the application dated August 17, 2020.**

*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.*

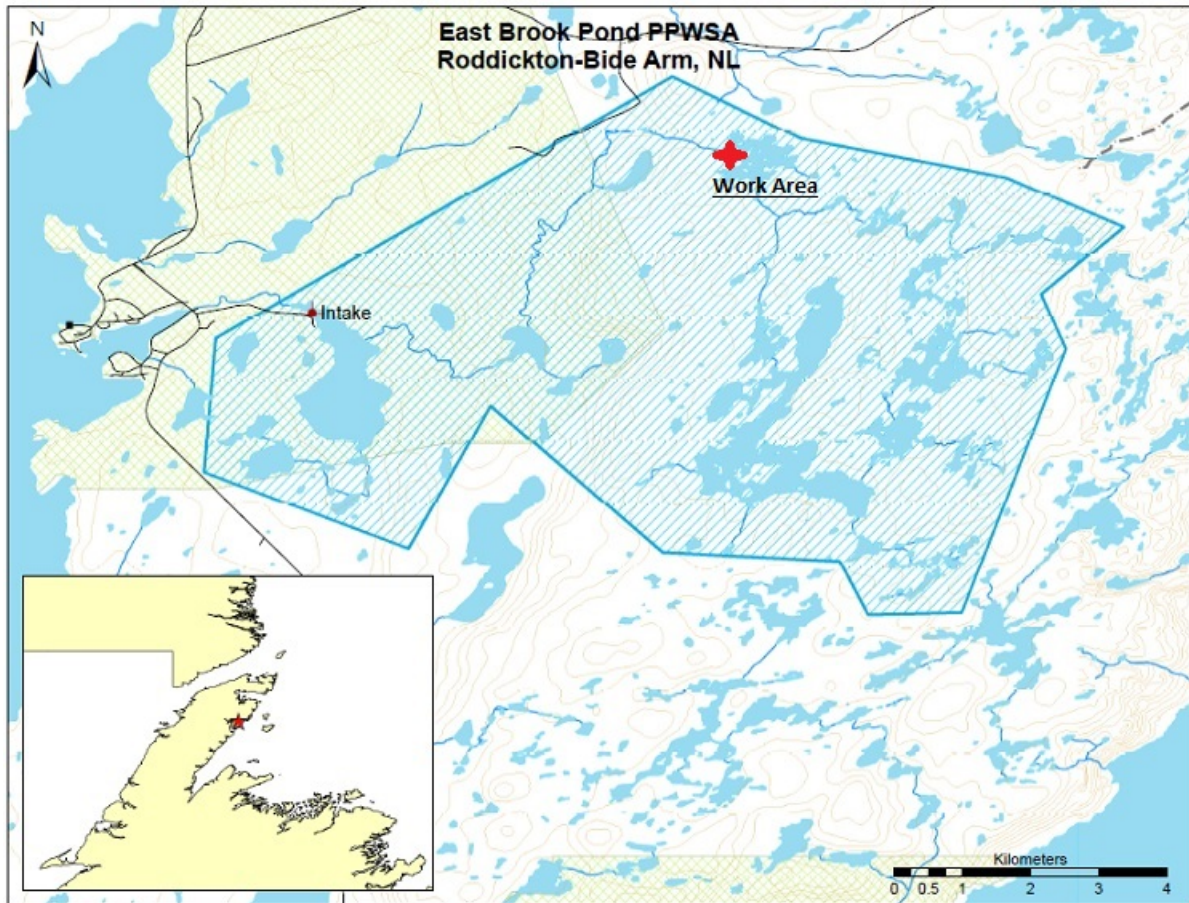
Date: \_\_\_\_\_ Signature: \_\_\_\_\_

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**

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**Second Attached Image File**

