

PERMIT TO CONSTRUCT

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

Date: **OCTOBER 03, 2016**

File No: **841.013.1**

Permit No: **WS8877-2016**

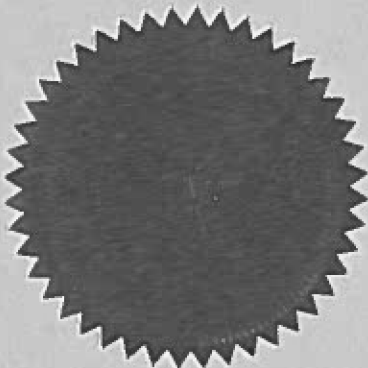
Permit Holder: **Town of Hopedale
PO Box 190
Hopedale NL A0P 1G0**

Attention: **Ms. Marjorie Flowers**

Re: **Hopedale - Water System Upgrades**

Permission is hereby given for : the removal of existing intake structures at Supplementary Pond and American Pond, the installation of new stainless steel structures for both Supplementary Pond and American Pond, new basket strainers, air valves and vacuum pumps and related works and appurtenances as described in a specification entitled "Upgrades to Community Water System, Inuit Community Government of Hopedale" as well as a set of ten drawings as received from Amec Foster Wheeler on September 13, 2016.

- 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*.
- Failure to comply with the terms and conditions will render this Permit null and void, place the Permit Holder and their agent(s) in violation of the *Water Resources Act* and make the Permit Holder responsible for taking any remedial measures as may be prescribed by this Department.



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 Environment and Climate Change 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 Design Approval Specialist representing the Drinking Water and Wastewater Section of this Department, during the construction and operation of the project. The Specialist shall be notified of the pre-construction and post-construction meetings so that he may attend, if deemed necessary. He can be reached at telephone (709)637-2034.
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. 8877 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. 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. All new waterlines and appurtenances shall be hydrostatically tested in accordance with the *Municipal Water, Sewer and Roads Specifications*.
16. 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.

17. Backflow prevention devices should/must be installed on service connections where there is a high risk of contamination of the potable water supply.
18. Drains in valve chambers shall be equipped with a backwater valve and screening to prevent the entry of insects, birds, and rodents.
19. When crossing watercourses which are greater than 4.5 m in width, valves should be provided at both ends of water crossings so that the section can be isolated for testing or repair and the valves shall be easily accessible and not subject to flooding.
20. 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.
21. 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 the Regional Department of Environment and Climate Change Office (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, the Department of Environment and Climate Change should be contacted to determine provisions for the disposal of heavily chlorinated water. **Bacteriological results along with completion reports for projects (Appendix C of the Permit to Construct) must be forwarded to the Regional Department of Environment and Climate Change Office.**
22. 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.
23. 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.
24. The existing watermain that is being taken out of service must be permanently disconnected so as not to create a cross-connection with the town's water distribution system.

Water Intake

25. The constructed works must be inspected regularly so that action can be taken to undertake repairs as required.
26. Water supply intakes may be placed in Supplementary Pond and American Pond as part of the water supply system for the Town of Hopedale.
27. 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.
28. 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.
29. 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.
30. The installation of the water supply pipe must comply with the manufacturers specifications, particularly with regard to pipe zone bedding material, degree of compaction, and maximum - minimum pipe cover for design loadings.
31. The intake(s) must be fitted with a removable mesh screen or a trash rack.
32. 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(s) must not draw air.
33. Adequate protection must be provided against clogging by sediment, debris, ice, frazil ice, wind, floatation and wave pressure.

General Alterations

34. Any work that must be performed below the high water mark must be carried out during a period of low water levels.
35. Any flowing or standing water must be diverted around work sites so that work is carried out in the dry.
36. 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.
37. 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.
38. 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.
39. 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.
40. 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.
41. 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.
42. The owners of structures are responsible for any environmental damage resulting from dislodgement caused by wind, wave, ice action, or structural failure.
43. 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.
44. 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.
45. All work must be carried out within the Permit Holder's legal property boundaries.

PPWSA General

46. 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.
47. An undisturbed (no cutting or ground disturbance) buffer zone of at least 150 metres shall be maintained around , at least 50 metres along both sides of all streams and main tributaries running into , 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.
48. 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.
49. 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.*
50. 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.
51. Officials of the Department and the appropriate Municipal Authority, Operator, or Watershed Management Committee may visit the site to ensure compliance with this Permit.
52. 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, must be notified immediately at (709)933-3864. The Environmental Scientist must also be notified immediately at (709)637-2542.
53. 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.

54. Motorized vehicles, including snowmobiles and ATVs, shall not be used to cross the frozen surface of the intake pond within the Protected Public Water Supply Area.
55. The use of creosote treated wood anywhere within the Protected Public Water Supply Area is strictly prohibited.
56. The location of the work is highlighted on the Location Map for this Permit attached as Appendix D.
57. 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.
58. All vehicles and equipment must be in good working order with no leaking fuel or oil.
59. All stationary motorized equipment and fuel tanks shall have metal trays, absorbent pads or impervious liners under them to catch any leaking fuel or oil.
60. 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.
61. Any streams not visible on a 1:50,000 scale map (including field identified streams) shall require a minimum buffer of 30 m.
62. 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.

Fuel Storage

63. 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.
64. 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
65. 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 *Waste Material Disposal Act, RSN 1990 c.W-4*.
66. 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 637-2034 and (709) 933-3864 respectively. Furthermore, all spills in excess of 70 litres shall be reported immediately to the 24 hour spill report line at (709) 722-2083 (call collect) or 1-800-563-9089.
67. Refueling sites shall be located at least 150 metres from any water body or wetland.

Protected Miscellaneous

68. The Permit Holder must inspect the site DAILY, and any water quality impairment related problems are to be reported immediately to the Environmental Scientist and the appropriate Municipal Authority or Watershed Monitoring Committee.
69. 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.
70. Dead trees may be removed for fuel wood, or along with brush, be burned on site. Areas for burning shall be located outside any buffer zones. Living trees shall remain uncut.

71. Permits for burning operations must be obtained from the Department of Natural Resources.

Special Conditions

72. If the heat trace system is re-charged in the future, the chemical(s) used in the heat trace system shall meet the applicable NSF requirements or any other standard applicable to potable water.

73. The town must ensure that daily monitoring and recording of pressure is done at critical points in the distribution system/heat trace system and report any leak/spill incidents to this Department immediately.

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 and/or Ministerial orders and guidelines, as determined by this Department, the Minister may, after providing ten (10) day notice to the Permit Holder, 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. Chris Blanchard, B.Tech.(Env), AScT
Environmental Scientist
Water Resources Management Division
Department of Environment and Climate Change
P.O. Box 2006
Corner Brook, NL A2H 6J8
cblancha@gov.nl.ca
- cc: Ms. Carla Hayes, P.Tech
Environmental Scientist , Drinking Water and Wastewater Section
Water Resources Management Division
Department of Environment and Climate Change
P.O. Box 2006
Corner Brook, NL A2H 6J8
CarlaHayes@gov.nl.ca
- cc: Ms. Deneen Spracklin, P.Eng.
Environmental Engineer, Drinking Water and Wastewater Section
Water Resources Management Division
Department of Environment and Climate Change
P.O. Box 8700
4th Floor, West Block, Confederation Building
St. John's, NL A1B 4J6
dspracklin@gov.nl.ca
- cc: Ms. Susan George
Water Resources Technician, Water Rights and Investigations Section
Water Resources Management Division
Department of Environment and Climate Change
P.O. Box 8700
4th Floor, West Block, Confederation Building
St. John's, NL A1B 4J6
susangeorge@gov.nl.ca
- cc: Mr. Michael Kearney
Engineering Technician, Engineering & Planning
Labrador Regional Office, Department of Municipal Affairs
Goudie Building
P.O. Box 3014, Stn B
Happy Valley-Goose Bay, NL A0P 1E0
mkearney@gov.nl.ca
- cc: Mr. Tyler White, P. Eng.
AMEC Foster Wheeler Americas Limited
Suite 201, 130 Eileen Stubbs Ave.
Dartmouth NS B3B 2C4
tyler.white@amecfv.com
- cc: Mr. Dan Hynes, P.Eng
Regional Director: Western/Labrador
Department of Municipal Affairs
P.O. Box 2006
Corner Brook, NL A2H 6J8
dhynes@gov.nl.ca
- cc: Mr. Ken Russell (Labrador)
Manager of Operations, GSC - Happy Valley-Goose Bay, Service NL
Government Service Centre
2 Tenth Street, P.O. Box 3014, Stn. B
Happy Valley-Goose Bay, NL A0P 1E0
krussell@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: **OCTOBER 03, 2016**

File No: **841.013.1**
Permit No: **WS8877-2016**

Permit Holder: **Town of Hopedale
PO Box 190
Hopedale NL A0P 1G0**

Attention: **Ms. Marjorie Flowers**

Re: **Hopedale - Water System Upgrades**

Permission was given for : the removal of existing intake structures at Supplementary Pond and American Pond, the installation of new stainless steel structures for both Supplementary Pond and American Pond, new basket strainers, air valves and vacuum pumps and related works and appurtenances as described in a specification entitled "Upgrades to Community Water System, Inuit Community Government of Hopedale" as well as a set of ten drawings as received from Amec Foster Wheeler on September 13, 2016.

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

