

PERMIT TO ALTER A BODY OF WATER

Pursuant to the *Water Resources Act*, SNL 2002 cW-4.01

Date: **DECEMBER 22, 2020**

File No: **527**

Permit No: **ALT11490-2020**

Permit Holder: **Tacora Resources Inc.**
1 Mine Road
P.O. Box 3000
Wabush, NL A0R 1B0
katherinejacobs@tacoraresources.com

Attention: **Ms. Katherine Jacobs**

Re: **Town of Wabush - Hay Flora Riverine - Access Road Culvert Replacement**

Permission is hereby given for : **the removal of an existing concrete drainage pipe and the installation of one (1) - 500 mm CSP culvert with a length of eight (8) metres in the Hay Flora Riverine within the Wahnahish Lake PPWSA in the Town of Wabush in reference to the application received on September 24, 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 Environment, Climate Change and Municipalities under Section 49 of the *Water Resources Act*.



(for) MINISTER

APPENDIX A
Terms and Conditions for Permit

Culvert Design

1. An eight (8) metre long - 500mm diameter CSP culvert may be installed along the Hay Flora Riverine near the Town of Wabush.
2. The crossing structure must provide adequate capacity to safely discharge flood flows without causing backwater effects upstream or increased flow velocity downstream.
3. 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 (m³/s)	Minimum Size (mm)	Number of Pipes	Length (m)
Hay Flora Riverine	50	0.757	500	1	8

Culvert Installation

4. 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.
5. Inlet and outlet areas of culvert installations must be adequately protected from erosion by placing rip-rap, fitted stone, or concrete headwalls.
6. 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.
7. 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.
8. 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.
9. 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.
10. 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.
11. Grading and finishing of roadways or road embankments must not cause damage to culverts or allow road material to enter the watercourse.

12. Roadside embankments near the watercourse must be adequately protected from erosion by sodding, seeding or placing of rip-rap.
13. 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.
14. The inlet and outlet of culverts must be clearly marked so that operators of road grading and snow clearing equipment can avoid blocking culverts.
15. 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.
16. 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

17. Any work that must be performed below the high water mark must be carried out during a period of low water levels.
18. Any flowing or standing water must be diverted around work sites so that work is carried out in the dry.
19. 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*.
20. 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.
21. 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.
22. 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.
23. 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.
24. 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.
25. 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.
26. The owners of structures are responsible for any environmental damage resulting from dislodgement caused by wind, wave, ice action, or structural failure.
27. 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.
28. 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.

29. The attached Completion Report (Appendix C) for Permit No. 11490 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.
30. 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.
31. The location of the work is highlighted on the Location Map for this Permit attached as Appendix D.
32. All work must be carried out within the Permit Holder's legal property boundaries.

PPWSA General

33. 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.
34. An undisturbed (no cutting or ground disturbance) buffer zone of at least **150 metres** shall be maintained around Wahnahnish Lake, at least **50 metres** along both sides of all streams and main tributaries running into Wahnahnish Lake, 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.
35. 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*.
36. 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.
37. 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.
38. Officials of the Department and the appropriate Municipal Authority, Operator, or Watershed Management Committee may visit the site to ensure compliance with this Permit.
39. 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)282-5696. The Environmental Scientist must also be notified immediately at **(709)637-2542**.
40. 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.
41. Motorized vehicles, including snowmobiles and ATVs, shall not be used to cross the frozen surface of Wahnahnish Lake the intake pond within the Protected Public Water Supply Area.
42. Treated wood shall not be used in a water body or within buffer zones established in Condition 34 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.

43. 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)637-2542 and the appropriate Municipal Authority or Watershed Monitoring Committee at (709)282-5696.
44. 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.
45. 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.
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 or chemical toilet. 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.

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)637-2542 and (709)282-5696 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 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.

54. 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.
55. Wood and brush removed from the work site must not be stored within undisturbed buffer zones of any water body.

Special Conditions

56. All pumps and hoses that will be used to lower water levels must not have been in prior contact with contaminants including but not limited to chemicals and sewage, that could negatively impact water quality.
57. Disturbance to the root mat around the culvert must be kept at a minimum, only disturb enough to safely complete the work.

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: Ms. Carla Hayes, P.Tech
Environmental Scientist, Drinking Water and Wastewater Section
Water Resources Management Division
Department of Environment, Climate Change and Municipalities
P.O. Box 2006
Corner Brook, NL A2H 6J8
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- cc: Ms. Paula Dawe, P.Eng.
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Water Resources Management Division
Department of Environment, Climate Change and Municipalities
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- cc: Jeff Bannister (Western and Labrador)
Western and Labrador Regional Lands Manager
Crown Lands Administration Division
Department of Fisheries, Forestry and Agriculture
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- cc: Fisheries Protection Division
Ecosystem Management Branch
Fisheries and Oceans Canada
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cc: Amir Ali Khan, Ph.D., P.Eng.
Manager, Water Rights, Investigations and Modelling Section
Water Resources Management Division
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Appendix C - Completion Report

Pursuant to the *Water Resources Act*, SNL 2002 cW-4.01

Date: **DECEMBER 22, 2020**

File No: **527**
Permit No: **ALT11490-2020**

Permit Holder: **Tacora Resources Inc.**
1 Mine Road
P.O. Box 3000
Wabush, NL A0R 1B0
katherinejacobs@tacoraresources.com

Attention: **Ms. Katherine Jacobs**

Re: **Town of Wabush - Hay Flora Riverine - Access Road Culvert Replacement**

Permission was given for : **the removal of an existing concrete drainage pipe and the installation of one (1) - 500 mm CSP culvert with a length of eight (8) metres in the Hay Flora Riverine within the Wannahnish Lake PPWSA in the Town of Wabush in reference to the application received on September 24, 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 Environment, Climate Change and Municipalities and that the work was carried out in strict compliance with the terms and conditions of the Permit issued for this project.

Date: _____ Signature: _____

This completion report must be completed and forwarded to the following address upon completion of the approved work.

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

APPENDIX D
Location Map for Permit

