

PERMIT TO ALTER A BODY OF WATER

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

Date: **FEBRUARY 22, 2019**

File No: **525**
Permit No: **ALT10028-2019**

Permit Holder: **Town of Springdale
PO Box 57
Springdale NL A0J 1T0**

Attention: **Matthew Bowers**

Re: **Springdale- Sullivan's Pond Dam Upgrade**

Permission is hereby given for : **upgrading of the Sullivan's Pond Dam to allow for stoplogs across the dam spillway in order to raise water levels in the water supply reservoir used by the Town of Springdale, and associated activities located within the Sullivan's Pond protected public water supply area as detailed in the application received from the Town of Springdale on November 1, 2018 and additional information received February 1, 2019.**

- 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*.



MINISTER

APPENDIX A
Terms and Conditions for Permit

Dam/Reservoir Design

1. 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 downstream channel.
2. The dam and appurtenant structures shall be constructed at the following coordinates:

Name	Datum	Northing (m)	Easting (m)	Zone
Sullivan's Pond Dam	NAD83	5485475.4	569091.98	21

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

Name	Height/Elev of Dam (m)	Elev of Spillway (m)	Maximum Water Elevation (m)	Minimum Water Elevation (m)	Minimum Freeboard (m)
Sullivan's Pond Dam	9.5/99	98	99	97.5	0.5

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

Name	Spillway Capacity (m ³ /s)
Sullivan's Pond Dam	7.26

General Alterations

5. Any work that must be performed below the high water mark must be carried out during a period of low water levels.
6. Any flowing or standing water must be diverted around work sites so that work is carried out in the dry.
7. 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*.
8. 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.

9. 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.
10. 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.
11. 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.
12. 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.
13. 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.
14. All waste materials resulting from this project must be disposed of at a site approved by the Department of Service NL.
15. Care must be taken to prevent spillage of pollutants into the water.
16. The owners of structures are responsible for any environmental damage resulting from dislodgement caused by wind, wave, ice action, or structural failure.
17. 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.
18. 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.
19. The attached Completion Report (Appendix C) for Permit No. 10028 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.
20. 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 structure: 22, 25, 27.
21. The location of the work is highlighted on the Location Map for this Permit attached as Appendix D.

Dam Safety

22. The dam has been conditionally classified in the SIGNIFICANT 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 a Dam Safety Review and submit a Dam Safety Report to this Department within two years of the date of issue of this permit and a maximum of every **ten years** after that,
 - Carry out an annual Dam Safety Inspection and provide the results to this Department,
 - Carry out dam operation, maintenance and surveillance operations in accordance with the OMS Manual and any recommendations of the most recent Dam Safety Review so that an acceptable level of the dam safety is ensured.

Special Conditions

23. The dam and associated works shall be designed according to the Canadian Dam Association Dam Safety Guidelines and associated Bulletins (most recent edition).
24. 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.
25. The Town of Springdale must submit to this Department a dam safety review report of the drinking water supply dam within 2 years of the date of issue of this permit. Dam breach analysis and flood inundation mapping must be undertaken as part of this review to confirm the dam classification. Hydrotechnical analysis must be undertaken as part of this review to determine the adequacy of the dam design including assessment of the inflow design flood, spillway capacity, freeboard capacity and other relevant design factors.

26. Vegetation around the increased wetted perimeter of the pond shall be removed if the elevation of water in Sullivan's Pond is increased to a point where additional vegetation will be inundated.
27. The dam OMS Manual shall include a written procedure for the insertion and removal of the stoplogs. Stoplogs shall be removed from the dam spillway prior to any high rainfall/runoff events so as not to reduce the capacity of the spillway when spilling water from the reservoir is required for safe operation of the dam and reservoir.

Dam Construction

28. The face of the existing concrete dam and spillway shall be thoroughly cleaned prior to addition of any stoplog mechanism.
29. 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.
30. Anchor holes drilled into the concrete spillway for connection of the stoplog mechanism shall be thoroughly cleaned prior to assembly.
31. Any surfaces or components of the concrete dam or spillway damaged by installation of the stoplog mechanism shall be touched up and repaired.
32. Work shall be carried out while water levels in Sullivan's Pond are below the spillway elevation of 98 m.
33. The transportation of labour and materials to the site must be along existing access roads.
34. Stoplogs shall be of untreated wood. Stoplogs should be soaked in water prior to placement in the stoplog gains to allow for expansion and swelling once waterlogged. Stoplogs should be trimmed of any excess material once saturated so that they fit the slot size of the gains.

PPWSA General

35. 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.
36. Apart from the approved works, an undisturbed (no cutting or ground disturbance) buffer zone of at least **150 metres** shall be maintained around Sullivan's Pond. Activity or development within this buffer zone is prohibited. All buffer zones must be marked with signs or flagging tape to avoid encroachment into the buffer zones.
37. 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.
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. Treated wood shall not be used for the stop logs, or in a water body or within 150 meters of Sullivan's Pond. The use of creosote and pentachlorophenol (PCP) treated wood anywhere within the Protected Public Water Supply Area is strictly prohibited.
40. 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.

Fuel Storage

41. There shall be no fuel storage associated with this project within the protected water supply area. Equipment shall be refuelled at least 150 metres from any water body or wetland.
42. 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.*
43. Any spills of gasoline, fuel or oil, regardless of volume, shall be reported immediately to the Environmental Scientist by calling (709) 292-4280. Furthermore, all spills in excess of 70 litres shall be reported immediately to the 24 hour spill report line at 1-800-563-9089.
44. A complete oil spill clean-up kit must be on site at all times when gasoline or fuel powered equipment is being used or refuelled. The kit must contain the following:

- One hand operated fuel pump
- One recovery container such an empty 205 litre drum
- One shovel
- One pick axe
- Five metres of containment boom
- Five absorbent pads
- Twenty-five litres of loose absorbent material

Special Conditions

45. 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.

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.
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- cc: File Copy for Binder
- cc: Mr. Robert Wight (C)
Environmental Scientist
Water Resources Management Division
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Provincial Building, 3 Cromer Avenue
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- cc: Ms. Paula Dawe, P.Eng.
Manager, Drinking Water and Wastewater Section
Water Resources Management Division
Department of Municipal Affairs and Environment
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- cc: Fisheries Protection Division
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Government of Newfoundland and Labrador
Department of Municipal Affairs and Environment
Water Resources Management Division

Appendix C - Completion Report

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

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Attention: **Matthew Bowers**

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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

