



Government of Newfoundland and Labrador  
Department of Municipal Affairs and Environment  
Water Resources Management Division

## PERMIT TO CONSTRUCT A NON-DOMESTIC WELL

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Pursuant to the *Water Resources Act*, SNL 2002 cW-4.01, specifically Section(s) 58

Date: **AUGUST 29, 2017**

File No: **NDOM17-029**  
Permit No: **GW9346-2017**

Permit Holder: **Town of North West River  
1 Mission Rd  
North West River, NL  
A0P 1M0**

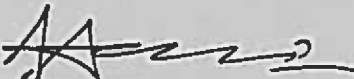
Attention: **Lowell Barkman**

Re: **Town of North West River - Pump tests on the three existing municipal wells**

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Permission is hereby given for : **Step tests and 72 hour pump tests on the three existing municipal wells.**

- 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*.
- 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

GOVERNMENT OF NEWFOUNDLAND AND LABRADOR  
Department of Municipal Affairs and Environment

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APPENDIX A  
Terms and Conditions for Permit

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**Special Conditions**

1. This permit allows for completion of step tests and 72 hour pump tests on the three existing municipal wells of North West River.

**Non-Domestic (Pumping Test)**

2. A 72 hour aquifer pumping test is required for the well in accordance with the Water Resources Management Division document Guidelines for Aquifer Pumping Tests. A final report, written by a hydrogeologist or qualified person and providing the information as stated in the guidelines, including chemical analyses of the water, must be forwarded to this department. This report must be submitted with the completion report.
3. Prior to commencing a long-term aquifer test, a step drawdown test must be conducted to estimate the rate that can be maintained by the well for extended periods of time. The step drawdown test should consist of at least 4 steps and each step should be of at least 30 minutes duration. The pumping rates that are used for this test are determined from the driller's estimate of the well yield. If four steps are used, the first should be conducted at a rate of about one-quarter of the well yield estimate provided by the driller. This rate is maintained for 30 to 60 minutes and then the next step is begun without stopping for recovery. Each successive step should be run at a rate that is approximately double the rate of the step prior. The step drawdown test must be evaluated by a qualified professional prior to the constant rate pumping test to evaluate a sustainable pumping rate.

**Non-Domestic (Water Quality)**

4. A minimum of two water samples must be collected from the well at the wellhead during the aquifer pumping test utilizing proper sampling protocol. The first water sample must be collected not less than 30 minutes or more than two hours into the pumping period, and the second or last water sample must be collected during the last hour of the pumping period. Water samples must be submitted to an accredited water analysis laboratory for testing as per the attached parameter list. As a part of the completion report, a copy of the analytical results must be sent to this department.
5. After the well has been completed as a source water supply, a bacteriological water sample must be collected from the well before chlorination and/or treatment is applied, utilizing proper sampling protocol, and submitted to the Service NL for analysis between 10-15 days after well disinfection. As a part of the completion report, a copy of the bacteriological results must be submitted to this department.

**Non-Domestic (Completion)**

6. The signed completion report must include: aquifer pumping test results (including calculations); water quality results; and any other reports related to the construction or abandonment of water wells or boreholes.
7. All non-domestic wells and boreholes are subject to inspections to ensure compliance with the terms and conditions of this permit. Upon completion of the inspection, a wellhead inspection report will be sent to the well owner.

GOVERNMENT OF NEWFOUNDLAND AND LABRADOR  
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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 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.

File No: **NDOM17-029**  
Permit No: **GW9346-2017**

cc: Groundwater Section File Copy



Government of Newfoundland and Labrador  
Department of Municipal Affairs and Environment  
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### Appendix C - Completion Report

Pursuant to the *Water Resources Act*, SNL 2002 cW-4.01, specifically Section(s) 58

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Permit Holder: **Town of North West River  
1 Mission Rd  
North West River, NL  
A0P 1M0**

Attention: **Lowell Barkman**

Re: **Town of North West River - Pump tests on the three existing municipal wells**

Permission was given for : **Step tests and 72 hour pump tests on the three existing municipal wells.**

*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

# General Water Quality Parameter List for Groundwater

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Alkalinity  
Aluminum  
Ammonia  
Antimony  
Arsenic  
Barium  
Boron  
Bromide  
Cadmium  
Calcium  
Chloride  
Chromium  
Colour (true)  
Conductivity  
Copper  
Dissolved Organic Carbon  
Fluoride  
Hardness  
Iron  
Kjeldahl Nitrogen  
Lead  
Magnesium  
Manganese  
Mercury  
Nickel  
Nitrate/Nitrite  
pH  
Potassium  
Selenium  
Sodium  
Sulphate  
Total Dissolved Solids  
Total Phosphorus  
Turbidity  
Uranium  
Zinc