



## Small Drinking Water Systems: Who Does What in Newfoundland?

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### 1.0 Source Water Protection

#### 1.1 Who has a stewardship role related to water source protection (lead agency)?

The *Department of Environment and Conservation* (Water Resources Management Division) is responsible for the allocation of water use, stream alterations, protection of water supply areas, drinking water safety, licensing of well drillers, and other aspects of water resource management as per provisions of the *Water Resources Act*.<sup>1</sup>

Steps in source water protection include the following:

- Municipal authority submits Application.
- Watershed boundary is delineated and mapped.
- Information is sent to the Interdepartmental Land Use Committee (ILUC) for review and comments.
- Specific concerns are considered and addressed.
- Source is protected.<sup>2</sup>

#### 1.2 Who oversees liquid and solid waste management?

At the provincial level, the *Department of Municipal Affairs* (Waste Management Division) is responsible for the implementation of the Provincial Waste Management Strategy.

The Waste Management Division works closely with the *Departments of Environment and Conservation* and *Government Services* as well as the Multi Materials Stewardship Board (MMSB) in the development of policy for the implementation of the Waste Management Strategy. These four government divisions and departments are responsible for ensuring that the strategy's objectives and timelines are met.<sup>3</sup>

The Waste Management Division is led by a director who chairs the Interdepartmental Provincial Technical Committee, which is comprised of officials from the previously noted

<sup>1</sup> <http://www.env.gov.nl.ca/env/department/branches/divisions/water.html>

<sup>2</sup> [http://www.trentu.ca/iws/documents/SWP\\_Dawe.pdf](http://www.trentu.ca/iws/documents/SWP_Dawe.pdf)

<sup>3</sup> <http://www.municipalitiesnl.com/userfiles/files/MNL%20Waste%20Management%20Report.pdf>

departments and agencies. The Provincial Technical Committee reports to the Provincial Steering Committee, which is comprised of executive members from these same four provincial government divisions and departments. The Provincial Steering Committee is chaired by the Assistant Deputy Minister of Municipal Engineering and Planning for the *Department of Municipal Affairs*. At the local level, implementation of the Provincial Waste Management Strategy is delegated to regional waste management committees/authorities of which nine currently exist in Newfoundland and Labrador.<sup>4</sup>

A *Regional Waste Management Authority* (RWMA) is responsible for designating, financing, and operating regional waste management systems across Newfoundland and Labrador.

### **1.3 Who is responsible for land use planning activities (from livestock to farming practices, including activities addressing drinking water concerns)?**

Development activity within a designated protected public water supply area is prescribed by the Policy for Land and Water Related Developments in Protected Public Water Supply Areas (PWSA). Any development requires a Permit for Development Activity issued by the *Department of Environment and Conservation*. When an application is submitted to the Department, it is assessed on an individual basis and an activity is either approved to proceed or is denied. Activities approved have conditions established as part of the permit.<sup>5</sup>

Under the *City of St. John's Act* and the *City of Corner Brook Act*, these two cities manage activities in their own water supply area. *Department of Municipal Affairs* (Land Use Division) deals with all legislation under the *Urban and Rural Planning Act, 2000*, and *Municipalities Act, 1999*, Protected Road Zoning Regulations, and all regulations under the *Act*.<sup>6</sup>

Related provincial legislation is the *Environment Act*, S.N. 1995, C. E-13, which includes: Environmental Control (Water and Sewage) Regulations, CNR 1078/96.

### **1.4 Who is responsible for ensuring that activities, such as construction of highway infrastructure, logging, or mining neither degrade source waters nor introduce contaminants into the water supply?**

Please refer to Section 1.3 above.

At the provincial level, the responsibility lies with the *Department of Environment and Conservation* (development activity within a designated protected public water supply area, prescribed by the Policy for Land and Water Related Developments in Protected Public Water Supply Areas)

As noted in 1.3 above, under the *City of St. John's Act* and the *City of Corner Brook Act*, these two cities manage activities in their own water supply area.

### **1.5 Who delivers permits to draw water?**

*Department of Environment and Conservation*

According to Section 4 of the *Department of Environment Notice, NR 60/96*, the Minister has responsibilities relating to the conservation, development, control, improvement and proper utilization of the water resources of the Province and protection and enhancement of water

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<sup>4</sup> <http://www.municipalitiesnl.com/userfiles/files/MNL%20Waste%20Management%20Report.pdf>

<sup>5</sup> [http://www.trentu.ca/iws/documents/SWP\\_Dawe.pdf](http://www.trentu.ca/iws/documents/SWP_Dawe.pdf)

<sup>6</sup> [http://www.ma.gov.nl.ca/ma/faq/faq\\_landuseplanning.html](http://www.ma.gov.nl.ca/ma/faq/faq_landuseplanning.html)

quality. Section 5 of the *Act* authorizes the Minister to have control of the use of all surface, ground, and shore waters and the allocation of the use of waters. Any person who intends to use or divert water for any beneficial purpose from a body of water, as defined in the *Act*, for which rights have not been granted under any other provincial statute or instrument shall apply to the *Department of Environment* for grant of the water rights before using or diverting water. This policy will provide for the licencing/authorizing of the use or diversion of all surface, ground, and shore waters in this Province.”<sup>7</sup>

A water use licence under the *Water Resources Act* is not required, but is recommended if there are any potential water use conflicts. Under the *Water Resources Act*, the *Department of Environment and Conservation* has the authority to issue various permits relating to different aspects of drinking water protection under the MBSAP. These include:

- permits to construct water and sewage works under Section 36 and 37 of the *Act*;
- permits to operate water and sewage works under Section 38 of the *Act*;
- permits for development activity in a protected water supply area under Section 39 of the *Act*;
- non-domestic well permits under Section 53 of the *Act*.

The design and construction of all water and sewage infrastructure in the province requires approval from the *Minister of Environment and Conservation*.

#### **1.6 Who has control over the watershed and delineates the watershed/aquifer area?**

The *Department of Environment and Conservation* (Water Resources Management Division) plays a central role in managing the watershed and aquifer area, along with communities.

Jurisdiction of the protection and use of a watershed is divided among a number of parties. The following table lists the agencies responsible for management of Protected Public Watershed Supply Areas (PPWSA) and activities in PPWSAs. The specific responsibilities, relevant legislation, and the type of development regulated by that agency are outlined in the table below:

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<sup>7</sup> [http://www.env.gov.nl.ca/env/waterres/regulations/policies/water\\_use.html](http://www.env.gov.nl.ca/env/waterres/regulations/policies/water_use.html)

Table 1. Legislation and regulatory agencies and their responsibilities for Protected Public Water Supply Areas:<sup>8</sup>

Agency Responsible	Legislation, Regulations/Policies	Responsibilities	Development Regulated
Department of Environment and Conservation – Water Resources Division	<ul style="list-style-type: none"> <li>• Environmental Protection Act, 2002</li> <li>• <i>Water Resources Act, 2002</i> <ul style="list-style-type: none"> <li>○ Policy for Treated Poles in Water Supply Areas</li> <li>○ Policy for Land- and Water-Related Developments in Protected Public Water Supply Areas</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Provides a framework for protection and preservation of water quality</li> <li>• Designations of and enforcements within Protected Public Water Supply Areas</li> </ul>	<ul style="list-style-type: none"> <li>• All Developments                             <ul style="list-style-type: none"> <li>○ Legal Cabins</li> </ul> </li> <li>• All Developments                             <ul style="list-style-type: none"> <li>○ Transmission Lines</li> <li>○ All Developments</li> </ul> </li> </ul>
Department of Environment and Conservation – Crown Lands Administration Division	<ul style="list-style-type: none"> <li>• <i>Lands Act, 1991</i></li> <li>• License to Occupy</li> </ul>	<ul style="list-style-type: none"> <li>• Grants permits for occupancy of Crown Land</li> </ul>	<ul style="list-style-type: none"> <li>• Legal cabins</li> </ul>
Department of Environment and Conservation – Environmental Assessment Division	<ul style="list-style-type: none"> <li>• <i>Environmental Protection Act, 2002</i></li> <li>• Environmental Assessment Regulations</li> </ul>	<ul style="list-style-type: none"> <li>• Requires review of development proposals, policies and plans under the <i>Act</i></li> </ul>	<ul style="list-style-type: none"> <li>• All Developments</li> </ul>

<sup>8</sup> <http://www.env.gov.nl.ca/env/waterres/cycle/surfacewater/manual.pdf> (p. 32-33)

Agency Responsible	Legislation, Regulations/Policies	Responsibilities	Development Regulated
Department of Environment and Conservation – Pesticides Control Section	<ul style="list-style-type: none"> <li>• <i>Environmental Protection Act, 2002</i></li> <li>• Pesticides Control Regulations</li> </ul>	<ul style="list-style-type: none"> <li>• Controls pesticide usage through licensing applicators, training and emergency response</li> </ul>	<ul style="list-style-type: none"> <li>• All Developments</li> </ul>
Municipality	<ul style="list-style-type: none"> <li>• <i>Municipalities Act, 1999</i></li> <li>• <i>City of St. John's Act</i> and <i>City of Corner Brook Act.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Makes regulations to prevent the pollution of, and prohibit and control the use of a municipality's water supply.</li> </ul>	<ul style="list-style-type: none"> <li>• All Developments</li> </ul>
Fisheries and Oceans Canada	<ul style="list-style-type: none"> <li>• <i>The Fisheries Act, 1985</i></li> <li>• Fishery (General) Regulations</li> <li>• Atlantic Fishery Regulations</li> <li>• Policy for the Management of Fish Habitat</li> </ul>	<ul style="list-style-type: none"> <li>• Reviews any development which would have an impact on fish habitat.</li> <li>• Describes process to apply for letter of advice or authorization to alter fish habitat.</li> <li>• Regulates recreational fishery.</li> <li>• Guides the application of habitat provisions.</li> </ul>	<ul style="list-style-type: none"> <li>• All Developments</li> </ul>
Department of Health and Community Services	<ul style="list-style-type: none"> <li>• <i>Public Health Act, 1996</i></li> <li>• Sanitation Regulations</li> </ul>	<ul style="list-style-type: none"> <li>• Regulates standards for onsite disposal of sewage</li> </ul>	<ul style="list-style-type: none"> <li>• Legal Cabins</li> </ul>

Agency Responsible	Legislation, Regulations/Policies <sup>9</sup>	Responsibilities	Development Regulated
Department of Natural Resources – Forest Resources Division	<ul style="list-style-type: none"> <li>• <i>Forestry Act</i>, 1990</li> <li>• Guidelines for Forestry Operations Within Protected Water Supply Area (PWSA)</li> <li>• Guidelines on use of Water Bombers in PWSA</li> </ul>	<ul style="list-style-type: none"> <li>• Controls commercial and domestic cutting, and access road construction; prepares timber management plans</li> </ul>	<ul style="list-style-type: none"> <li>• Domestic and Commercial Forest Harvesting</li> </ul>
Department of Natural Resources – Mines and Energy Division	<ul style="list-style-type: none"> <li>• <i>Minerals Act</i>, 1990</li> <li>• <i>Mining Act</i>, 1999</li> <li>• <i>Quarry Materials Act</i>, 1998</li> <li>• Environmental Guidelines for Construction and Mineral Exploration Companies</li> </ul>	<ul style="list-style-type: none"> <li>• Governs the acquisition of rights to minerals</li> <li>• Regulates the operation of mines</li> <li>• Grants exploration licenses and quarry permits</li> </ul>	<ul style="list-style-type: none"> <li>• Mineral Exploration</li> <li>• Mining</li> <li>• Quarrying</li> </ul>

NOTE: Watershed Monitoring Committee – There is no requirement for a watershed monitoring committee under the *Water Resources Act*. If a town wants to establish a committee, they write to the Minister of Environment and ask that one be established. Minister asks stakeholders for representatives and Terms of Reference are agreed upon between Committee and Department.

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<sup>9</sup> Additional Acts:

- *Expropriation Act*
- *Hydro Corporation Act* (2007)
- *Arbitration Act*

**1.7 Who is responsible for the watershed/aquifer management plan? (The plan establishes measures to reduce risks. The watershed management plan may also include an incident and emergency response plan, plan for water conservation, and contingency plans for dealing with water scarcity emergencies).**

A *watershed committee* always establishes and oversees the plan.

The *Department of Environment and Conservation* (Water Resources Management Division) regulates development activities within protected public water supply areas. The division uses a number of tools to monitor such activities, including:

- referrals from the Interdepartmental Land Use Committee, Crown Lands, Natural Resources, Municipal Affairs and other agencies (Environmental Assessment);
- permits for development;
- watershed management plans;
- watershed management committees (responsible for watershed management plans).

With respect to ambient water quality, the *Water Resources Management Division* operates a Real Time Water Quality Network<sup>10</sup> that consists of eight non-industrial stations throughout the province (only one of these is on a public drinking water supply). The Real Time Water Quality Network stations sample water quality on an hourly basis and transmits the data every three hours. The water quality data is presented on the Water Resources Management Division website in a 30-day rolling graph and is updated four times daily.<sup>11</sup>

With respect to steps in the development of a Watershed Management Plan the *municipal authority* must first by request to the *Minister of Environment* establish a *Watershed Management Committee* that will: develop a plan to protect the source of their drinking water; advise Council on how to proceed with this plan; and then monitor the implementation of the plan. The request to the Minister should include a generic list of groups, agencies, departments and individuals that the municipality would like to see on their Committee.<sup>12</sup>

**1.8 Any source vulnerability assessment and ranking?**

As part of the management plan, assessment and ranking is done. Also the sensitivity of the protected water supply area is evaluated during the assessment of development activity applications. The authority governing watersheds and/or aquifers has the responsibility of deciding on which Environmental Quality Objectives (EQOs) are to be met for drinking water sources.<sup>13</sup>

The province of Newfoundland and Labrador has adopted the Guidelines for Canadian Drinking Water Quality.

**2.0 Water Treatment and Distribution**

**2.1 Any lead funding organization for water system planning and infrastructure improvements?**

*Department of Municipal Affairs* is the lead funding agency for water infrastructure. Publicly funded projects are reviewed by both the Department of Municipal Affairs and the *Department of Environment and Conservation* (Water Resources Management Division).

<sup>10</sup> <http://www.env.gov.nl.ca/env/waterres/rti/rtwq/desc.html>

<sup>11</sup> <http://www.env.gov.nl.ca/env/waterres/quality/background/rtwqi.html>

<sup>12</sup> <http://www.env.gov.nl.ca/env/waterres/cycle/surfacewater/manual.pdf>

<sup>13</sup> [http://www.ccme.ca/assets/pdf/mba\\_guidance\\_doc\\_e.pdf](http://www.ccme.ca/assets/pdf/mba_guidance_doc_e.pdf)

The Department of Municipal Affairs, in consultation with Department of Environment and Conservation, has developed guidelines for municipalities to follow regarding the selection process for a water treatment system. Under this process, a steering committee is established to oversee the technical aspects of the selection process. Committees consist of representatives from the town council, Department of Environment and Conservation and Department of Municipal Affairs, the prime consultant and others as deemed necessary. The selection, supply, and installation of the most appropriate treatment process are via a Request for Proposals.

Permits to Operate for Water Distribution Systems, Water Treatment Plants, Sewage Collection Systems and Sewage Treatment Plants are required under Section 38 of the *Water Resources Act*. These permits are an integral part of the Department's regulatory program directed at ensuring public health and environmental protection. These permits focus on proactive operation and maintenance techniques that employ best practices of the industry.<sup>14</sup>

## 2.2 Any construction permits?

Any new or upgraded drinking water infrastructure on a public drinking water system requires a permit to construct from the *Department of Environment and Conservation*.

The *Department of Government Services (Service NL)* requires a development permit to build on and develop land, whether Crown or privately owned, within the building control lines of a Protected Road (defined as a road designated under Section 61 of the *Urban and Rural Planning Act*<sup>15</sup> for the purpose of controlling development) or within the boundaries of a Protected Area.<sup>16</sup>

## 2.3 Any fee collected for water distribution?

Communities collect water and sewer fees ranging from \$100–\$600 depending on the community.

## 2.4 Any operator permit? Any training? How are new policies disseminated?

The *Department of Environment and Conservation* issues Permits to Operate for Drinking Water Systems – Water Distribution and Water Treatment. Operators responsible for systems servicing over 1000 people are required to be certified to the level of their system. All operators responsible for water treatment facilities are required to be certified to the level of the system.

The *Department of Environment and Conservation* has developed a long-term strategic plan for educating and training the province's water system operators. It provides operators with education, hands-on training opportunities, and certification.

The Operator Education, Training, and Certification (OETC) program was developed specifically for small rural communities.<sup>17</sup> It is offered to all municipalities in the province, regardless of their size or fiscal capability.

## 2.5 Any assessment of treatment system? Any licence of treatment system? By whom?

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<sup>14</sup> <http://www.env.gov.nl.ca/env/waterres/waste/permit.html>

<sup>15</sup> <http://www.assembly.nl.ca/legislation/sr/statutes/u08.htm>

<sup>16</sup> [http://www.servicentl.gov.nl.ca/licenses/land\\_dev/prot\\_area/index.html](http://www.servicentl.gov.nl.ca/licenses/land_dev/prot_area/index.html)

<sup>17</sup> <http://www.env.gov.nl.ca/env/waterres/training/index.html>



All water treatment and distribution systems are classified according to the *Association of Boards of Certification*.

Also, please see Section 2.4 above. *Department of Environment and Conservation* issues permits to Operate for Drinking Water Systems – Water Treatment. The province collects drinking water quality samples from all public drinking water systems.

## 2.6 Who is responsible for the maintenance and upgrade of the water treatment?

A *community* has the responsibility for the operation and maintenance of the drinking water infrastructure (which includes intakes, distribution pipes, water storage tanks, pumps, and water treatment plants) after the province has helped pay for the capital costs.

*Municipal water suppliers* are required to obtain a Certificate of Approval for their treatment plant and distribution systems, which is related to the water source and the market served. This certificate sets out testing and maintenance requirements. These facilities are further required to undergo routine testing and maintenance and to keep detailed records.<sup>18</sup>

## 2.7 Any requirements for the water supply system?

Design of public drinking water systems must meet the Guidelines for the Design, Construction and Operation of Water and Sewerage Systems.<sup>19</sup>

## 3.0 Drinking Water Quality and Monitoring

### 3.1 Who is the lead agency for drinking water quality?

The *Department of Environment and Conservation* monitors chemical and physical water quality of public drinking water systems. The *Department of Government Services (Service NL)* monitors bacteriological quality of public drinking water systems.

Newfoundland and Labrador have a Multi-Barrier Strategic Action Plan (MBSAP).<sup>20</sup> The implementation of the MBSAP involves the collaborative efforts of *Environment and Conservation* (acting as the lead agency); *Health and Community Services, Municipal Affairs and Service NL* – and *communities (cities, municipalities, and local service districts)* – are expected to play a role.

The Water Resources Portal provides drinking water quality data and treatment profiles; protection areas for ground and surface water supplies; boil water advisories; ambient water quality data, station profiles and watersheds; real time water quality data; hydrometric station data and station profiles; climate station profiles; dam locations; and sewage outfall locations.<sup>21</sup>

### 3.2 Who defines water quality standards?

Standards are defined by: Policy for Drinking Water Monitoring and Reporting<sup>22</sup>, and the standard for Bacteriological Quality of Drinking Water.<sup>23</sup>

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<sup>18</sup> [http://www.cwwa.ca/faqmunicipal\\_e.asp](http://www.cwwa.ca/faqmunicipal_e.asp)

<sup>19</sup> <http://www.env.gov.nl.ca/env/waterres/waste/groundwater/report.html>

<sup>20</sup> [http://www.env.gov.nl.ca/env/waterres/reports/drinking\\_water/annual\\_report\\_2009-10.pdf](http://www.env.gov.nl.ca/env/waterres/reports/drinking_water/annual_report_2009-10.pdf)

<sup>21</sup> <http://maps.gov.nl.ca/water/>

<sup>22</sup> [http://www.env.gov.nl.ca/env/waterres/regulations/policies/water\\_quality.html](http://www.env.gov.nl.ca/env/waterres/regulations/policies/water_quality.html)

The legislation that governs drinking water quality in the province of Newfoundland and Labrador includes the Water Resources Act, the Municipal Affairs Act, and the Municipalities Act. All of the legislation, policy directives, standards, and regulations are posted on the Province's website.<sup>24</sup> These three Acts contain broadly stated initiatives:

- The *Water Resources Act* regulates the administration of water rights, the protection of public water supply areas, and a range of construction and development permits pertaining to drinking water infrastructure and development that may impact public water supplies.
- The *Municipal Affairs Act* administers the management of waterworks
- The *Municipalities Act* grants powers to municipalities for the construction, operation, and maintenance of water systems and for the allocation of funds for this work

The *Water Resources Act*<sup>25</sup> (Section 39) protects public drinking water sources. These areas are classified as protected public water supply area(s) for surface water supplies, and wellhead protected water supply area(s) for groundwater supplies. Establishing protection is a cooperative process that is initiated by individual communities.

### 3.3 Who is responsible for administering drinking water regulations, if any?

The *Department of Environment and Conservation* administers Acts, Regulations, and Policy Directives and Water Quality Standards.<sup>26,27</sup>

### 3.4 Who enforces regulations, if any?

The *Department of Environment and Conservation* (Water Resources Management Division) staff conduct regular inspections of water-supply systems to ensure that they comply with the terms and conditions of their permits. When proponents do not comply with the conditions of their permits, the Department acts to enforce the regulations of the *Water Resources Act*, 2002, as needed.

The Water Resources Act, 2002, regulates:

- changes to public water-supply and sewer systems;
- development activities within watersheds;
- the licensing of water-well drillers.

### 3.5 Who ensures the accountability of government and water suppliers?

The *Public Auditor General* reports ensure accountability, as well as communities, the public and media.

### 3.6 Who is responsible for the assessment of public water supply systems? (Identify critical points within the treatment process for effective monitoring, control and management including determining treatment efficiency in the removal or inactivation of harmful agents found in the source water.)

*Environmental health officers* (EHOs) and/or *environmental technicians* with the Government Service Centre, *Department of Government Services*, are responsible for:

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<sup>23</sup> [http://www.env.gov.nl.ca/env/waterres/regulations/policies/standards\\_microbiological.html](http://www.env.gov.nl.ca/env/waterres/regulations/policies/standards_microbiological.html)

<sup>24</sup> <http://www.env.gov.nl.ca/env/waterres/regulations/policies/index.html>

<sup>25</sup> <http://www.assembly.nl.ca/legislation/sr/statutes/w04-01.htm>

<sup>26</sup> <http://www.env.gov.nl.ca/env/waterres/regulations/index.html>

<sup>27</sup> [http://www.env.gov.nl.ca/env/waterres/regulations/policies/standards\\_microbiological.html](http://www.env.gov.nl.ca/env/waterres/regulations/policies/standards_microbiological.html)

- collection of water samples, for bacteriological testing, from public water supply distribution systems;
- testing of chlorine residuals in public water supply distribution systems (e.g., at entry to distribution system and throughout distribution system);
- coordination of testing with regional testing sites and/or the *public health laboratory*.

*Environmental health officers* are responsible for interpretation of test results and appropriate follow-up action, including advice and consultation. The *regional management of the Government Service Centre* are responsible for ensuring that EHOs/Technicians carry out sampling in accordance with this protocol and the Standards for Bacteriological Quality of Drinking Water (Part 1 of the Drinking Water Manual).<sup>28</sup>

The *Department of Environment and Conservation* maintains the Water Resources Portal, which supplies community water resources reports, current boil water advisories, and public water supplies list.<sup>29</sup>

### 3.7 Any approval process for newly built water treatment systems?

The *Department of Environment and Conservation* (Community Water and Wastewater Section) provides<sup>30</sup>:

- review of the design of municipal water supply, treatment, and distribution systems and wastewater collection, treatment, and disposal systems;
- issuance of Permits to Construct for municipal water supply and wastewater projects; and
- issuance of Permits to Operate municipal infrastructure facilities and systems.

### 3.8 Who is responsible for monitoring the water system? Any source water monitoring?

Communities are required to do daily disinfectant residual testing. The *Department of Environment and Conservation* does chemical and physical water quality monitoring.

The *Department of Government Services (Service NL)* and the *Department of Health and Community Services* are jointly responsible for monitoring the bacteriological quality of public water supplies in the province. This sampling activity is carried out on a regular basis by *environmental health officers* located throughout the province.<sup>31</sup>

Under the direction of *Service NL*, *environmental health officers* collect tap samples from public drinking water supplies for analysis of bacteriological parameters.

In addition to its province-wide monitoring activities, the *Department of Environment and Conservation's* Water Resources Management Division also designs special monitoring programs to address site-specific characteristics or emerging water quality issues. Communities are encouraged to monitor specific water quality parameters themselves for operational purposes in water treatment plants, or if a specific parameter is of local concern.

With respect to applications of the Canadian Water Quality Index (CWQI) in Newfoundland and Labrador, the CWQI is used for drinking water quality reporting on a quarterly basis. A

<sup>28</sup> [http://www.health.gov.nl.ca/health/publichealth/envhealth/drinking\\_water\\_manual\\_1-8.pdf](http://www.health.gov.nl.ca/health/publichealth/envhealth/drinking_water_manual_1-8.pdf)

<sup>29</sup> <http://maps.gov.nl.ca/water/>

<sup>30</sup> <http://www.env.gov.nl.ca/env/waterres/waste/community.html>

<sup>31</sup> <http://www.env.gov.nl.ca/env/waterres/quality/drinkingwater/advisories.html>

CWQI report is sent to all communities with public drinking water supplies in Newfoundland and Labrador.<sup>32</sup>

### **3.9 In case of adverse quality standards, who notifies whom (government, public, water supplier)?**

The *Department of Environment and Conservation* will notify the community and other government departments if there is any contaminant exceedance from chemical and physical water quality monitoring.

The owner/operator of the drinking water system, and other municipal officials, take the necessary steps to alert all water consumers when a boil water advisory has been implemented.

The *Government Service Centre* on behalf of the *medical officer of health* monitors how effective the community council/local service district/water committee is in implementing the Boil Water Advisory and notifying water consumers. All departments involved in drinking water are notified: e.g., *Environment and Conservation, Health and Community Services, Municipal Affairs, and Service NL.*

## **4.0 Waste Management (part of source water protection as well)**

### **5.0 Surveillance**

#### **5.1 Any process in place to respond to health complaints?**

The *Department of Environment and Conservation* has a process in place for Water Investigations and Complaints as part of its mandate. The Investigations Section regulates alterations to bodies of water in compliance with **Section 48** of the *Water Resources Act*, SNL 2002 c W-4.01.<sup>33</sup>

The *Provincial Public Health Laboratory* (PHL), integral to the health sector, would be involved in responding and investigating health-related complaints, in coordination with the *regional medical officer of health*, the *Department of Health and Community Services*, and the *Department of Government Services*.

#### **5.2 Any outbreak surveillance system in place?**

The *Provincial Public Health Laboratory* (PHL) is part of Newfoundland and Labrador's public health system and is linked to all sectors of the public health infrastructure (e.g., disease control and prevention, environmental health, epidemiology, emergency preparedness and response). The PHL provides early detection of health risks associated with infectious agents, compiles data in support of outbreak investigations, and identifies causes of disease to aid in treatment and prevention.

#### **Public Health Laboratory Core Functions<sup>34</sup>**

1. Communicable Disease Surveillance, Prevention and Control
2. Integrated Communicable Disease Data Management

<sup>32</sup> <http://www.env.gov.nl.ca/env/waterres/quality/background/cwqi.html#3>

<sup>33</sup> <http://www.env.gov.nl.ca/env/waterres/regulations/investigation/>

<sup>34</sup> <http://publichealthlab.ca/about-us/>

3. Reference Testing, Specialized Screening and Diagnostic Testing
4. Environmental Health and Food Safety
5. Laboratory Improvement and Regulation
6. Public Health Policy Development and Evaluation
7. Biosafety, Containment, and Biohazard Spill Response Program
8. Outbreak and Emergency Response to Communicable Diseases
9. Public Health Related Research and Development
10. Training and Education of Health Care and Public Health Workers

Disease surveillance is also carried out through activities of *regional health authorities* and the *Department of Health and Community Services*.

### 5.3 Any system in place to link outbreaks to source or system characteristics?

In certain cases, the *Provincial Public Health Laboratory* can link outbreaks through surveillance and disease data management activities.

When waterborne enteric illness is identified (e.g., through laboratory testing or clinical history) in an individual or a cluster of individuals, a comprehensive investigation is carried out to identify links and protect public health.

### 5.4 Who is responsible for managing outbreaks?

Outbreak investigations are carried out by field investigators who work under the direction of the *regional medical officer of health*. In Newfoundland and Labrador the routine investigations of food and waterborne illness are completed by *environmental health officers* who work for the Government Service Centre, the *Department of Government Services*. In some situations, the *public health nurse* or *infection control practitioner* may be asked to participate in field investigations, such as when an outbreak occurs in a healthcare facility. The purpose of this local investigation is to identify the factors that contributed to a person contracting the illness. This investigation will provide the information needed by public health officials to implement appropriate public health measures to prevent further illness.<sup>35</sup>

## **6.0 What is the Role of the Community in the Provision of Safe Drinking Water?**

The community has the primary responsibility for the operation and maintenance of drinking water infrastructure (which includes intakes, distribution pipes, water storage tanks, pumps, and water treatment plants) and monitoring of the protected public water supply area. This is for compliance with terms/conditions in permits to operate and construct.

### **References/Notes**

Ministries

**Newfoundland and Labrador – Department of Environment and Conservation**

<http://www.env.gov.nl.ca/env/index.html>

**Legislation, Guidelines, Standards, Policies**

Environment Canada – Water Governance and Legislation

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<sup>35</sup> <http://www.health.gov.nl.ca/health/publications/diseasecontrol/dcenterics.pdf>

<https://www.ec.gc.ca/eau-water/default.asp?lang=En&n=24C5BD18-1>

Acts, Regulations, Policy Directives and Water Quality Standards [list]

<http://www.env.gov.nl.ca/env/department/legislation.html#general>

Environment and Conservation Acts and Regulations (*Environmental Protection Act* and *Water Resources Act*)

<http://www.assembly.nl.ca/legislation/sr/statutes/e14-2.htm>

*Newfoundland and Labrador Water Resources Act* SNL 2002 cW-4.01

<http://www.assembly.nl.ca/Legislation/sr/statutes/w04-01.htm>

Guidelines for Canadian Drinking Water Quality: Summary Table

[http://www.hc-sc.gc.ca/ewh-semt/pubs/water-eau/2010-sum\\_guide-res\\_recom/index-eng.php](http://www.hc-sc.gc.ca/ewh-semt/pubs/water-eau/2010-sum_guide-res_recom/index-eng.php)

Standards for Bacteriological Quality of Drinking Water

[http://www.env.gov.nl.ca/env/waterres/regulations/policies/standards\\_microbiological.html](http://www.env.gov.nl.ca/env/waterres/regulations/policies/standards_microbiological.html)

Standards for Chemical and Physical Monitoring of Drinking Water

[http://www.env.gov.nl.ca/env/waterres/regulations/policies/physical\\_monitoring.html](http://www.env.gov.nl.ca/env/waterres/regulations/policies/physical_monitoring.html)

Policy for Drinking Water Quality Monitoring and Reporting for Public Water Supplies

[http://www.env.gov.nl.ca/env/waterres/regulations/policies/water\\_quality.html](http://www.env.gov.nl.ca/env/waterres/regulations/policies/water_quality.html)

Department of Environment and Conservation Drinking Water Quality Data

<http://www.env.gov.nl.ca/env/waterres/quality/drinkingwater/chemical.html>

Acts, Regulations, Policy Directives, and Water Quality Standards

<http://www.env.gov.nl.ca/env/waterres/regulations/policies/index.html>

Guidelines for the Design, Construction, and Operation of Water and Sewerage Systems

<http://www.env.gov.nl.ca/env/waterres/waste/groundwater/report.html>

Best Management Practices for the Control of Disinfection By-products in Drinking Water Systems in Newfoundland and Labrador

<http://www.env.gov.nl.ca/env/waterres/reports/cwws/index.html>

Operator Education, Training, and Certification

<http://www.env.gov.nl.ca/env/waterres/training/index.html>

Protected Water Supply Area List and GIS Layers

<http://www.env.gov.nl.ca/env/waterres/gis/index.html>

## **General Resources**

Water Resources Management Division Reports and Publications

<http://www.env.gov.nl.ca/env/waterres/reports/index.html>

“What’s New” The latest information posted by Water Resources Management Division

<http://www.env.gov.nl.ca/env/waterres/whatsnew/index.html>

Related Reports and Tools

- [Source to Tap – Water Supplies in Newfoundland and Labrador](#)
- [Policy for Allocation of Water Use](#)
- [Policy for Development in Shore Water Zones](#)
- [Policy for Development in Wetlands](#)

*Note that while the National Collaborating Centre for Environmental Health has used its best efforts to ensure the accuracy and reliability of this information, it is provided as a general reference only. Please contact federal, provincial, municipal, and other agencies noted to verify information provided.*

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