



## Small Drinking Water Systems: Who Does What in Nova Scotia?

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### **1.0 Source Water Protection**

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

*Nova Scotia Environment* is the lead agency responsible for the protection of drinking water.<sup>1,2</sup>

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

*Nova Scotia Environment* oversees liquid and solid waste.<sup>3</sup> Regulations are provided in the [Regulations Respecting Solid Waste-Resource Management](#) (February, 1996).<sup>4</sup> There are also [Municipal Solid Waste Landfill Guidelines](#).<sup>5</sup>

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

Municipalities have the primary responsibility for planning and regulating the use and development of land, buildings, and structures within their jurisdiction.<sup>6</sup> *Service Nova Scotia* includes Municipal Services and Municipal Planning, which provide guidelines, resources, and advice for planning communities. Provincial and Municipal governments work together.

#### **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?**

*Nova Scotia Environment* issues approvals for the construction and operation of water treatment and distribution facilities. One of the conditions of these approvals is that a Municipality or Water Utility must develop a Source Water Protection Plan for their drinking

<sup>1</sup> <http://www.gov.ns.ca/nse/dept/>

<sup>2</sup> <http://www.gov.ns.ca/nse/water/drinking.water.asp>

<sup>3</sup> <http://www.gov.ns.ca/nse/waste/>

<sup>4</sup> <http://www.gov.ns.ca/just/regulations/REGS/envsolid.htm>

<sup>5</sup> <http://www.gov.ns.ca/nse/dept/docs.policy/Guidelines-Municipal.Solid.Waste.Landfill.pdf>

<sup>6</sup> <http://www.gov.ns.ca/snsmr/municipal/planning/strategies.asp>

water source area. *Municipal water utilities* have responsibility for maintaining protection of water supply areas and must be contacted if any activities are planned in areas.<sup>7</sup>

### 1.5 Who delivers permits to draw water?

*Nova Scotia Environment* manages permits for water approvals (e.g., water allocation, water withdrawal).<sup>8</sup>

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

*Nova Scotia Environment* works with *municipalities* and stakeholders to protect surface waters from various watershed influences through watershed management planning and the use of best management practices.<sup>9</sup>

### 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).

*Municipalities* which rely on surface water sources for drinking water must develop Source Water Protection Plans and undergo Nova Scotia Environment approval.<sup>10</sup> *Nova Scotia Environment* (Water and Waste Management Branch) has prepared a document entitled “Developing a Municipal Source Water Protection Plan: A Guide for Water Utilities and Municipalities” (2009).<sup>11</sup>

### 1.8 Any source vulnerability assessment and ranking?

The *Government of Nova Scotia* prepared a progress report on “Water for Life” (March 2013) in which it provides an update on Nova Scotia’s water strategy and accomplishments.<sup>12</sup> Waterproof 3 (2011), prepared by Ecojustice,<sup>13</sup> rated Nova Scotia with an “A-“ and noted that the province “has strong measures in place for water treatment and testing, and is home to one of Canada’s most extensive source water protection programs.”

## **2.0 Water Treatment and Distribution**

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

*Nova Scotia Environment* has been a lead funding organization in this area. In 2009/10, Nova Scotia Environment managed the four-year Septage Treatment Assistance Program which consisted of \$2.75 million and offered assistance to septage treatment operators of up to \$100,000 for the construction of replacement facilities or the implementation of new technologies, and up to \$50,000 for improvements or upgrades to existing septage treatment facilities.<sup>14</sup>

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<sup>7</sup> <http://www.gov.ns.ca/nse/water/sourcewater.asp>

<sup>8</sup> <http://www.gov.ns.ca/nse/resources/permits.asp#water.approvals>

<sup>9</sup> <http://www.gov.ns.ca/nse/surface.water/surfacewater.protection.asp>

<sup>10</sup> <http://www.gov.ns.ca/nse/surface.water/surfacewater.protection.asp>

<sup>11</sup> <http://www.gov.ns.ca/nse/water/docs/WaterProtectionPlanSummary.pdf>

<sup>12</sup> <http://www.gov.ns.ca/nse/water/docs/Water.For.Life.Progress.Report.2013.pdf>

<sup>13</sup> [http://www.ecojustice.ca/publications/files/images/updated-maps/image\\_view\\_fullscreen](http://www.ecojustice.ca/publications/files/images/updated-maps/image_view_fullscreen)

<sup>14</sup> <http://www.gov.ns.ca/nse/wastewater/septageassistanceprogram.asp>

The province provided in-kind and financial support to the Community University Research Alliance H2O (CURA H2O) at Saint Mary's University. CURA H2O is a five-year project focused on increasing community capacity for integrated water monitoring and management. In Nova Scotia, WET-PRO © field kits and training were provided to 16 community groups.<sup>15</sup>

## 2.2 Any construction permits?

*Municipal planning departments* manage most construction permits. Water approvals go through Public Works. Municipalities work with Provincial government, generally through *Nova Scotia Environment*.

## 2.3 Any fee collected for water distribution?

The *Nova Scotia Utility and Review Board* supervises water utilities operating as public utilities within the Province. This authority includes setting of rates, tolls and charges, and regulations. There are approximately 60 regulated water utilities, all of which are either owned and operated by a municipality or a separate Commission. Each Utility has schedules of rates and regulations approved by the Board.<sup>16</sup>

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

Certification of persons operating classified water and wastewater facilities in Nova Scotia is mandatory under the [Water and Wastewater Facilities and Public Drinking Water Supplies Regulations](#).<sup>17,18</sup> *Operators* must renew permits and are required to obtain ongoing education.<sup>19</sup> *Nova Scotia Environment* provides information about certification and training.

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

*Nova Scotia Environment* is responsible for issuing approvals for the construction and operation of water treatment and distribution facilities. Nova Scotia treatment standards for municipal drinking water systems have been established.<sup>20</sup>

Public drinking water supply *owners* are required to use an approved *laboratory* for water quality testing.<sup>21</sup> Water wells and water facilities require licensing through *Nova Scotia Environment*.<sup>22</sup>

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

Public drinking water supply *owners* are required to test their water supplies on a regular basis, to inform their *customers* and *Nova Scotia Environment* if there are problems, and to take corrective action to address any problems which may be identified.<sup>23</sup>

## 2.7 Any requirements for the water supply system?

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<sup>15</sup> <http://www.gov.ns.ca/nse/water/docs/Water.For.Life.Progress.Report.2013.pdf>

<sup>16</sup> <http://nsuarb.novascotia.ca/content/water>

<sup>17</sup> <https://www.gov.ns.ca/nse/water/operator.certification/>

<sup>18</sup> <https://www.gov.ns.ca/nse/water.operator.certification/operator.certification.program.asp>

<sup>19</sup> <https://www.gov.ns.ca/nse/water.operator.certification/ceu.training.providers.asp>

<sup>20</sup> <http://0-fs01.cito.gov.ns.ca/legcat.gov.ns.ca/deposit/b10648860.pdf>

<sup>21</sup> <http://www.gov.ns.ca/nse/water/publicwater.asp>

<sup>22</sup> <http://www.gov.ns.ca/nse/resources/permits.asp - water.wells>

<sup>23</sup> <http://www.gov.ns.ca/nse/water/publicwateroverview.asp>

All water supplied must meet health-based Guidelines for Canadian Drink Water Quality published by Health Canada.

### **3.0 Drinking Water Quality and Monitoring**

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

*Nova Scotia Environment* has been designated as the lead agency to take such measures as are reasonable to provide access to safe, adequate, and reliable public water supplies.

#### **3.2 Who defines water quality standards?**

Nova Scotia has adopted the Guidelines for Canadian Drinking Water Quality as legally binding standards for regulated public drinking water supplies and recommended for private well owners.<sup>24</sup>

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

*Nova Scotia Environment* administers drinking water regulations.

#### **3.4 Who enforces regulations, if any?**

*Nova Scotia Environment* enforces drinking water regulations. Nova Scotia Environment has approximately 60 inspectors who have a right and a duty to promote and enforce compliance with the *Environment Act* and regulations.<sup>25</sup>

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

Although the Public Health Association of Nova Scotia has called for an accountability framework where there are annual reports, for example, as reporting tools, and goals and indicators for areas, there does not appear to be an accountability framework of that nature in place. General accountability lies with the *Deputy Minister*. *Water suppliers* are accountable to municipalities and, in turn, *Nova Scotia Environment*.

#### **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.)**

Public drinking water supply *owners* are required to test their water supplies on a regular basis, to inform their *customers* and *Nova Scotia Environment* if there are problems, and to take corrective action to address any problems which may be identified.

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

*Nova Scotia Environment* manages licensing for water wells and water facilities.

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

*Water suppliers* must meet water quality standards and take prescribed action if problems arise.

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<sup>24</sup> <http://www.gov.ns.ca/nse/water/waterquality.asp>

<sup>25</sup> <http://www.gov.ns.ca/nse/resources/environment.act.compliance.asp>

Routine monitoring by *water supply owner* is a proactive approach to detecting and resolving any problems; *Nova Scotia Environment* audits and enforces this process. The Environmental Monitoring and Compliance Division of Nova Scotia Environment is responsible for the majority of field operations relating to environmental protection.<sup>26</sup>

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

*Water suppliers* must report potentially unsafe water situations to *Nova Scotia Environment*, local *medical officer of health*, and *water supply owner*.

## **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?**

*Nova Scotia Health and Wellness* has nine district *health authorities* who have responsibility for public health programs, and respond to health complaints. An inspector with *Nova Scotia Environment* may receive a complaint and investigate. Nova Scotia Health and Wellness may work in collaboration with Environment where public safety is in question.

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

*Nova Scotia Health and Wellness* manages outbreak surveillance and provides leadership as it relates to health and the prevention and control of communicable diseases. There are Nova Scotia Surveillance Guidelines for Notifiable Diseases and Conditions to provide guidance to public health staff in Nova Scotia on the reporting of notifiable diseases and conditions for surveillance purposes. Notifiable disease surveillance reports are produced.<sup>27</sup>

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

*Nova Scotia Health and Wellness* has responsibility through Environmental Monitoring and Compliance and Communicable Disease Prevention and Control work to link outbreaks to source/system characteristics.

#### **5.4 Who is responsible for managing outbreaks?**

*Nova Scotia Health and Wellness* has responsibility for managing outbreaks. It is working to enhance and expand its role and its participation in many aspects of environmental health. Its role includes:

- investigating health hazards identified in the [Health Protection Act](#) and its [regulations](#);
- providing information on a wide range of possible health hazards;
- working with other government departments, agencies and groups to protect public health and prevent illness and disease from environmental hazards including:
  - [Food Safety & Enforcement Division, Nova Scotia Department of Agriculture](#),
  - [Environmental Monitoring & Compliance Division, Nova Scotia Environment](#),
  - [District Health Authorities](#).

<sup>26</sup> <http://www.gov.ns.ca/nse/dept/division.emc.asp>

<sup>27</sup> <http://novascotia.ca/hpp/populationhealth/>

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

Approximately 60% of Nova Scotians receive treated drinking water from central groundwater or surface water supplies operated by *municipal water utilities*. Municipal water utilities are responsible for the delivery of water in accordance with provincial standards. *Regional health authorities*, *municipal health departments*, and *Nova Scotia Environment* have roles in provision of safe drinking water. For water regulations and guidelines, there is documentation online for municipalities, communities, water suppliers, and individuals. Nova Scotia Environment posts and regularly updates boil water advisories online.

### **References/Notes**

*Environment Act*, SNS 1994-95, c 1

- Water and Wastewater Facility Regulations, NS Reg 60/95
- A public drinking water supply is a waterworks system for the provision of piped water for human consumption where the system has at least 15 service connections or serves 25 or more individuals per day at least 60 days of the year. This includes municipal, commercial, institutional, industrial, and privately owner water supplies (e.g., schools, restaurants, nursing homes, campgrounds, and parks that are on their own water supply).

*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 the information provided.*

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