



Small Drinking Water Systems: Who Does What in Prince Edward Island?

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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 the Environment, Labour and Justice* is a lead agency involved in the Drinking Water Strategy, which is a multi-barrier approach to protecting drinking water, focusing on source protection, system design and operation, and monitoring and reporting.^{1,2} Provincial regulations require the development of well field protection plans for municipal water supplies (not privately owned central water supplies), but the responsibility for developing and enforcing such plans is with the municipality (i.e., the protection zones are not enshrined in any provincial legislation).

Public water supply systems, operated either by a municipality or a private water supply utility, service about 45% of Islanders. In addition to these central water supply systems, there are semi-public, stand-alone water systems such as those that supply schools, day-centres, etc.³

1.2 Who oversees liquid and solid waste management?

The *Department of the Environment, Labour and Justice* (Environment Division) oversees liquid and waste management.

About 55% of Islanders are serviced by central sewage collection and treatment systems operated either by a municipality or a private wastewater utility.⁴ In addition, many industrial operations have their own wastewater treatment facilities. There are a number of different types of wastewater treatment systems, and the construction, modification, and operation of wastewater collection and treatment systems requires a Certificate of Approval under Sections 13 and 16 of the *Environmental Protection Act*. Assessment of wastewater systems for approval is based on the most current version of the [Atlantic Canada Wastewater Guidelines Manual for Collection, Treatment, and Disposal](#) document.⁵

¹ <http://www.gov.pe.ca/environment/index.php3?number=1041292&lang=E>

² <http://www.gov.pe.ca/photos/original/10points2purity.pdf>

³ <http://www.gov.pe.ca/landandlocalgovernance/index.php3?number=1041591&lang=E>

⁴ The Island Waste Management Corporation (IWMC) is a provincial Crown Corporation that administers and provides solid waste management services throughout Prince Edward Island (<http://www.iwmc.pe.ca/history.php>).

⁵ <http://www.gov.ns.ca/nse/water/docs/AtlCanStdGuideSewage.pdf>

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

The *Department of Agriculture* is involved in such issues related to livestock or farming practices.

Under the *Planning Act*,⁶ Prince Edward Island municipalities have the option to assume responsibility for land use planning through the development and adoption of official plans and land use bylaws. Thirty-one municipalities have accepted the responsibility for planning (covering 10% of the land mass of PEI). A task force on land use policy has been established to lead public consultations and ensure that Islanders have the opportunity to guide future land use policy.⁷

In areas where municipalities have not assumed responsibility for planning, the Province is responsible for development control. This land (covering 90% of the land mass of PEI) is governed by a general set of subdivision and development regulations, and other provincial legislation. These regulations do not take into consideration the best use of the land, land suitability for development, future land development needs, or compatibility to neighbouring uses.⁸ *Land and Local Governance*, a section of the Provincial Planning Branch of the *Department of Finance, Energy and Municipal Affairs*, would be involved in examining these issues.

When lands on Prince Edward Island are subdivided into two or more parcels, an environmental review process is necessary to ensure consideration of drinking water and wastewater (sewage).⁹

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?

Prince Edward Island has established an environmental impact assessment process for projects that could have an impact on the environment. The *province* and the *federal government* cooperate in the implementation of the process to ensure a thorough assessment is conducted of any submitted project. The *Department of Health and Wellness* would have the opportunity to comment during the EIA process, which could result in certain conditions being attached to the approval. Once the assessment process has been completed, the *Minister of the Environment, Labour and Justice* decides whether to issue or deny approval of the undertaking.¹⁰

1.5 Who delivers permits to draw water?

The *Department of the Environment, Labour and Justice* (Environment Division) issues water permits.¹¹

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

The *Department of the Environment, Labour and Justice* (Environment Division) manages Watershed Planning and Management.¹² The department's activities and process allows

⁶ <http://www.gov.pe.ca/law/statutes/pdf/p-08.pdf>

⁷ <http://www.gov.pe.ca/landandlocalgovernance/index.php3?number=1041569&lang=E>

⁸ <http://www.gov.pe.ca/landandlocalgovernance/index.php3?number=1041591&lang=E>

⁹ <http://www.gov.pe.ca/environment/index.php3?number=1041415&lang=E>

¹⁰ <http://www.gov.pe.ca/environment/eia>

¹¹ <http://www.gov.pe.ca/environment/index.php3?number=78023&lang=E>

¹² <http://www.gov.pe.ca/environment/index.php3?number=1006719&lang=E>

residents, landowners, and others having an interest in the future of a watershed to make decisions on managing the watershed.¹³

1.7 Who is responsible for 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).

The *Department of the Environment, Labour and Justice* (Watershed Planning and Management) provides technical advice and financial support through the Watershed Management Fund.¹⁴ The community, general public, and stakeholders are involved with watershed planning.

1.8 Any source vulnerability assessment and ranking?

The report, *Waterproof 3*, awarded a “B-” grade to Prince Edward Island with respect to source water protection. The rating was reported as follows: “Prince Edward Island has 92% of water systems protected by legally-binding plans.”¹⁵ All municipal systems treat (chlorinate) their water and approvals for private water systems (except for the very smallest) usually require disinfection capability to be installed.

2.0 Water Treatment and Distribution

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

Federal, provincial, and municipal sources typically fund major projects equally.

2.2 Any construction permits?

The construction, modification, and operation of all except semi-public water supply systems require a Certificate of Approval under Sections 13 and 16 of the *Environmental Protection Act*. Assessment of water systems for approval is based on the most current version of the [Atlantic Canada Guidelines for the Supply, Treatment, Storage, Distribution, and Operation of Drinking Water Supply Systems](#) document.¹⁶ In addition, wells constructed to supply these systems require a Groundwater Exploration Permit and a Groundwater Extraction Permit.¹⁷

2.3 Any fee collected for water distribution?

All municipal and the vast majority of privately owned water systems have fees for water use. In the majority of cases for residential use, this is a flat fee, with a per volume fee normally applied to larger customers. Progressive moves toward more metering are being made.

Permits are required under the *Environmental Protection Act* for withdrawing surface water and groundwater and are based on volume, quality, and use. Prince Edward Island does not require conservation as part of its permitting process or water right permit; however, water conservation is a condition of the most recent allocations to the city of Charlottetown.

¹³ <http://www.gov.pe.ca/environment/index.php3?number=1008636&lang=E>

¹⁴ <http://www.gov.pe.ca/environment/index.php3?number=1015820&lang=E>

¹⁵ <http://www.ecojustice.ca/publications/files/canadas-drinking-water-report-card-infographic-1>

¹⁶ http://www.gov.pe.ca/photos/original/eef_water_sup.pdf

¹⁷ <http://www.gov.pe.ca/environment/index.php3?number=1015759&lang=E>

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

The Drinking Water and Wastewater Facility Operating Regulations, which came into effect January 1, 2005, require that all facilities have *certified operators* in charge of the operation of water and wastewater systems. As of April 1, 2005, all municipal systems are required to have certified operators, and as of January 1, 2006, all systems serving the public are required to be registered. Also, as of January 1, 2006, systems serving five or more households are required to have certified operators in charge of their systems. The level of certification is based upon the facility classification of the system(s). For an operator to become certified, they must meet certain education and experience requirements and successfully complete an examination (greater than 70%) administered by the *Department of the Environment, Labour and Justice*.¹⁸

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

The operation of public water supply systems is governed by the [Drinking Water and Wastewater Facility Operating Regulations](#). Under these regulations, municipal water systems must be registered with the Province and have a valid Facilities Classification Certificate.¹⁹ In addition, they are required to retain certified operators and maintain water quality monitoring programs.

Wastewater quality results are assessed on the basis of the recommendations in the ([CCME Water Quality Guidelines](#)) or as directed in the facility's Certificate of Approval.

Many of the provisions of the Drinking Water and Wastewater Facility Operating Regulations apply to other public water systems. Non-municipal central water supply systems must be registered, have a facilities classification certificate, retain certified operators, and maintain water quality monitoring programs in the same manner as municipal water supplies. However, they are **not** required to develop well field protection plans. Semi-public supplies only need to be registered with the Province and maintain water quality monitoring programs.²⁰

Nearly half of Prince Edward Island homes have on-site wastewater treatment and disposal systems (i.e., septic systems). Household wastewater from the kitchen, bathrooms, and laundry is treated by the septic system before being returned to the environment. Systems typically consist of a septic tank and a disposal (or tile) field.²¹

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

Every owner of a facility for which a facility classification certificate has been issued, or is deemed to have been issued, shall place the responsibility for the operation, repair, and maintenance of the facility under the direct responsible charge of an operator who holds, or is deemed to hold, a valid operator's certificate of a classification that is equivalent to or greater than the classification assigned to the facility (*Environmental Protection Act, Drinking Water and Wastewater Facility Operating Regulations, Part II. Operator Certification*).²²

Department of Environment, Labour and Justice can provide advice to operators on proper water system maintenance.²³

¹⁸ <http://www.water.ca/wkd-guide-drink-water-1.asp>

¹⁹ <http://www.gov.pe.ca/environment/index.php3?number=1042281&lang=E>

²⁰ <http://www.gov.pe.ca/environment/index.php3?number=1015759&lang=E>

²¹ <http://www.gov.pe.ca/environment/septic>

²² <http://www.gov.pe.ca/law/regulations/pdf/E&09-04.pdf>

²³ <http://www.gov.pe.ca/environment/index.php3?number=1015759&lang=E>

2.7 Any requirements for the water supply system?

All *municipal water supply utilities* and *privately owned or operated central water supply systems* are required to sample their water on a regular basis according to the requirements prescribed in the Drinking Water and Wastewater System Operating Regulations. These regulations specify both the minimum scope and frequency of water testing for water supply facilities based on the system size and characteristics, and also require system operators to report general water quality statistics to customers on an annual basis.^{24,25}

The regulations also require that municipal water supply utilities develop well field protection plans to protect groundwater quality in areas used as their principle source of supply.²⁶

3.0 Drinking Water Quality and Monitoring

3.1 Who is the lead agency for drinking water quality?

Department of Environment, Labour and Justice (Environment Division) is responsible for the sustainable management, protection, and enhancement of the Province's drinking water, groundwater, inland surface water, and coastal estuaries. The division regulates water and sewer infrastructure and assists in the administration of funding that supports this infrastructure. The division provides water-testing services (microbiological and chemical) and engineering advisory services to the general public, other provincial departments and agencies, industry, and municipalities.²⁷

3.2 Who defines water quality standards?

Water quality results are assessed on the basis of the recommendations in the Guidelines for Canadian Drinking Water Quality.²⁸

Within the *Environmental Protection Act*, Drinking Water and Wastewater Facility Operating Regulations, Part II. Operator Certification, the following is stated: "The assessment of water quality monitoring results under this Part shall be based on the recommendations in the most recent version of the Guidelines for Canadian Drinking Water Quality or, where no such guidelines exist, on the advice of the chief health officer. (EC710/04)."²⁹

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

Note: There are no discrete "Drinking Water Regulations." The appropriate regulations are those cited above in the Drinking Water and Wastewater Facility Operating Regulations. The *Department of the Environment, Labour and Justice* and the *chief health officer* have a role in administering these regulations.

3.4 Who enforces regulations, if any?

The *Department of the Environment, Labour and Justice* enforces the *Environmental Protection Act*, which includes Drinking Water and Wastewater Facility Operating Regulations.

²⁴ <http://www.water.ca/wkd-guide-drink-water-1.asp>

²⁵ <http://www.gov.pe.ca/law/regulations/pdf/E&09-04.pdf>

²⁶ <http://www.gov.pe.ca/environment/index.php3?number=1015759&lang=E>

²⁷ <http://www.water.ca/wkd-guide-drink-water-1.asp>

²⁸ http://www.hc-sc.gc.ca/ewh-semt/pubs/water-eau/2010-sum_guide-res_recom/index-eng.php

²⁹ <http://www.gov.pe.ca/law/regulations/pdf/E&09-04.pdf>

The *Department of Health and Wellness*, Office of Environmental Health (in coordination with the Chief Public Health Office), provides the delivery of various programs and services under the PEI *Public Health Act* and Regulations and is responsible for enforcement of these regulations.³⁰

3.5 Who ensures the accountability of government and water suppliers?

The *Minister of the Crown* is accountable for departmental performance and results to the rest of government and to the citizens of the province.³¹

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.³²)

The *municipalities* are responsible for public supply systems. Over half of Islanders (57%, the highest proportion in Canada) depend on private wells for their water supply. Forty per cent have onsite sewage disposal systems for wastewater treatment for which they are responsible.

For private wells, most problems relate to total coliform problems that can be traced to lack of routine well maintenance or older well construction. A relatively small portion (in the range of 2%) relate to detection of *E. coli* and issues with septic systems.

3.7 Any approval process for newly built water treatment systems?

The *Department of the Environment, Labour and Justice* requires water and wastewater facility registration by application.

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

Prince Edward Island Analytical Laboratories conducts on-going testing of drinking water from private wells, as well as from municipal systems. However, they are not responsible for monitoring; they just provide analytic services. Private well owners are responsible for monitoring their own supplies, and central supply utilities are responsible for monitoring their supplies.

The *Department of the Environment, Labour and Justice* monitors pesticides in drinking water as part of the [Pesticide Monitoring Program](#). Over 100 sites are monitored annually, including private homes, schools, municipal drinking water supplies, and seniors' housing facilities. The same sites are sampled each year to create a long-term background history of pesticide detections in drinking water.³³

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

The *provincial lab* provides virtually all analytic services for routine drinking water quality analyses, so generally, it is the government that informs the water supplier (private homeowner or utility) of adverse results.

³⁰ <http://www.gov.pe.ca/health/environmentalhealth>

³¹ <http://www.gov.pe.ca/health/index.php3?number=1037417&lang=E>

³² With the exception of one small community, there is no water treatment; there is disinfection. Standards are covered by Council on Accreditation standards (COAs).

³³ <http://www.gov.pe.ca/environment/drinking-water-quality>

According to regulations, “Where a water quality sample is analyzed by a laboratory other than the PEI Analytical Laboratories and where the results of the analysis indicate the presence of E.coli, the owner shall notify the Department immediately by telephone or facsimile of the results of the analysis. (EC710/04)” (Environmental Protection Act, Drinking Water and Wastewater Facility Operating Regulations, Part II. Operator Certification),³⁴ but in practice it usually happens where the government informs the water supplier as noted above.

Where a boil water advisory is issued by the *Department of Health and Wellness*, the task is completed by an *environmental health officer* for private systems and by the *chief public health officer* for municipal systems.

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?

Department of Health and Wellness (Environmental Health) offers 24-hour service for complaints.³⁵

5.2 Any outbreak surveillance system in place?

The *Communicable Disease Program, within the Chief Public Health Office, Department of Health and Wellness* is responsible for monitoring over 50 reportable communicable diseases under the *PEI Public Health Act* and Regulation. The program provides direction for contact tracing, investigation, control measures, and surveillance of these diseases and includes the *provincial epidemiologist*.³⁶

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

Within the Communicable Disease Program of the Chief Public Health Office, Department of Health and Wellness, outbreaks are investigated in an attempt to identify source and there is a notification system in place as set out in the *Environmental Protection Act*.

5.4 Who is responsible for managing outbreaks?

The *Department of Health and Wellness* manages outbreaks. Boil water advisories are issued by *Environmental Health* for public and semi-public supplies (CPHO for municipal systems) when results indicate water is not suitable for human consumption. There is no requirement to publish boil water advisories.³⁷

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

Ultimately, every Islander has a personal responsibility for protection of our groundwater, since over half the population (57%, the highest proportion in Canada) depend on private wells.

³⁴ <http://www.gov.pe.ca/law/regulations/pdf/E&09-04.pdf>

³⁵ <http://www.gov.pe.ca/health/environmentalhealth>

³⁶ http://www.gov.pe.ca/photos/original/hw_cphoar2012.pdf

³⁷ <http://www.gov.pe.ca/health/index.php3?number=1020723>

"Water quality on Prince Edward Island is the responsibility of each and every Islander. But people must have the information and tools to understand how they can protect and manage water resources."³⁸

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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³⁸ *Report of the Commission on Nitrates in Groundwater, June 2008*
(<http://www.gov.pe.ca/photos/original/cofNitrates.pdf>)