



Management of Protected Public Water Supply Areas

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Government of Newfoundland and Labrador
Department of Environment and Climate Change
Water Resources Management Division

St. John's, NL, Canada

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1. Introduction

The majority of people in the province use surface water to meet their water needs. Surface water supplies are more common in the province due to the reliability of supply and the easy access to a large number of lakes, ponds and rivers. Taking into account that the delivery of drinking water is comprised of multiple stages, the province has adopted a multi-barrier approach to ensure that its public water systems deliver clean and safe water. The main components of the multi-barrier approach are: source protection, water treatment, water system operation and maintenance, water quality monitoring and reporting, regulatory inspection and mitigation planning, and operator education and training.

The protection of public water supplies is an important stage in the multi-barrier approach. Source water protection is defined as the efforts to protect drinking water sources. The protection of drinking water at the source can be successful in providing public health protection and reducing the treatment challenge for public water suppliers.

The Department of Environment and Climate Change encourages communities to have their water supply protected, however the responsibility for applying to have a water supply protected rests with the municipal authority (town or local service district).

2. Legislation

Section 39 of the Water Resources Act SNL 2002 cW-4.01, which provides the authority for the protection of public water supplies, reads as follows:

Protection of public water supplies:

39. (1) The minister may, by regulation, designate an area surrounding a present or potential source of public water supply as a public water supply area, and shall give notice of that area by publication in the Gazette, or as otherwise required under this Act.

(2) A person operating a waterworks and using or intending to use water from that source shall protect that source of public water supply in accordance with this Act.

(3) Notwithstanding subsection (2), the minister may do those things that he or she considers to be necessary to protect a public water supply from adverse effects.

(4) In the area defined under subsection (1), a person shall not

(a) place, deposit, discharge or allow to remain in that area material of a kind that might impair the quality of the water;

(b) fish, bathe, boat, swim or wash in, or otherwise impair the quality of the water; or

(c) use or divert water that may unduly diminish the amount of water available in that area as a public water supply.

(5) Notwithstanding subsection (4), where the minister is satisfied that the nature and size of a public water supply area is sufficiently large to preclude an adverse effect by a person, the minister may define and prescribe by regulation a section of the public water supply area to be used by persons for fishing, boating, swimming, washing or another activity.

(6) The minister shall regulate resource development and other activities to be undertaken in an area established under subsection (1) that, in the minister's opinion, may impair the quality of water, and those activities shall not be undertaken without first obtaining authorization from the minister.

(7) In this section "public water supply" includes a groundwater supply.

3. Designation Process

Under the Water Resources Act, a municipal authority interested in protecting their water supply should submit an “Application for Protection of a Water Supply Area” to the Water Resources Management Division. The cost for the processing of an application is shown in the Fee Schedule and the fee must accompany the application.

This form is available on the Government of Newfoundland and Labrador’s website via: <https://www.gov.nl.ca/ecc/waterres/permits-licenses/appforms/>

The completed form should then be returned to the nearest regional office. The Environmental Scientist for the area then reviews the completed application for completeness and accuracy. The Environmental Scientist will contact a representative from the municipal authority to obtain additional information on the existing or potential development activities in the area and to arrange a site visit.

Once the application is complete, the watershed boundary for the water supply source is delineated and mapped on a 1:50 000 scale map or a large-scale map, depending on the size of the watershed. Unless the watershed area is extremely large the entire watershed or drainage basin is included.

A map, with the defined area, is then sent to the Interdepartmental Land Use Committee (ILUC) for review and comments regarding ongoing development activities and existing or potential land use conflicts with other resource and regulatory departments and agencies. The specific concerns are considered and addressed. Once the water supply area is approved by ILUC, a notice of designation is prepared and published in the Newfoundland and Labrador Gazette.

The complete designation process is shown in Figure 1.

The provisions of Section 39 shall apply to a designated area from the date of the publication of the notice in the Newfoundland and Labrador Gazette. Once notice has been given, the municipal authority is required to publish the notice in local newspapers and by posting notices in the council office, community hall and/or other public places for the information of the public. Signs should be posted at suitable locations along the boundaries of the designated area for public information.

The department maintains digital maps of the protected public water supply areas of the province using Geographical Information Systems (GIS). These are utilized by resource agencies that require information on the location of protected public water supply areas within the province.

This mapping information is available to the general public on the Water Resources Portal via: <https://www.gov.nl.ca/ecc/waterres/portal/>

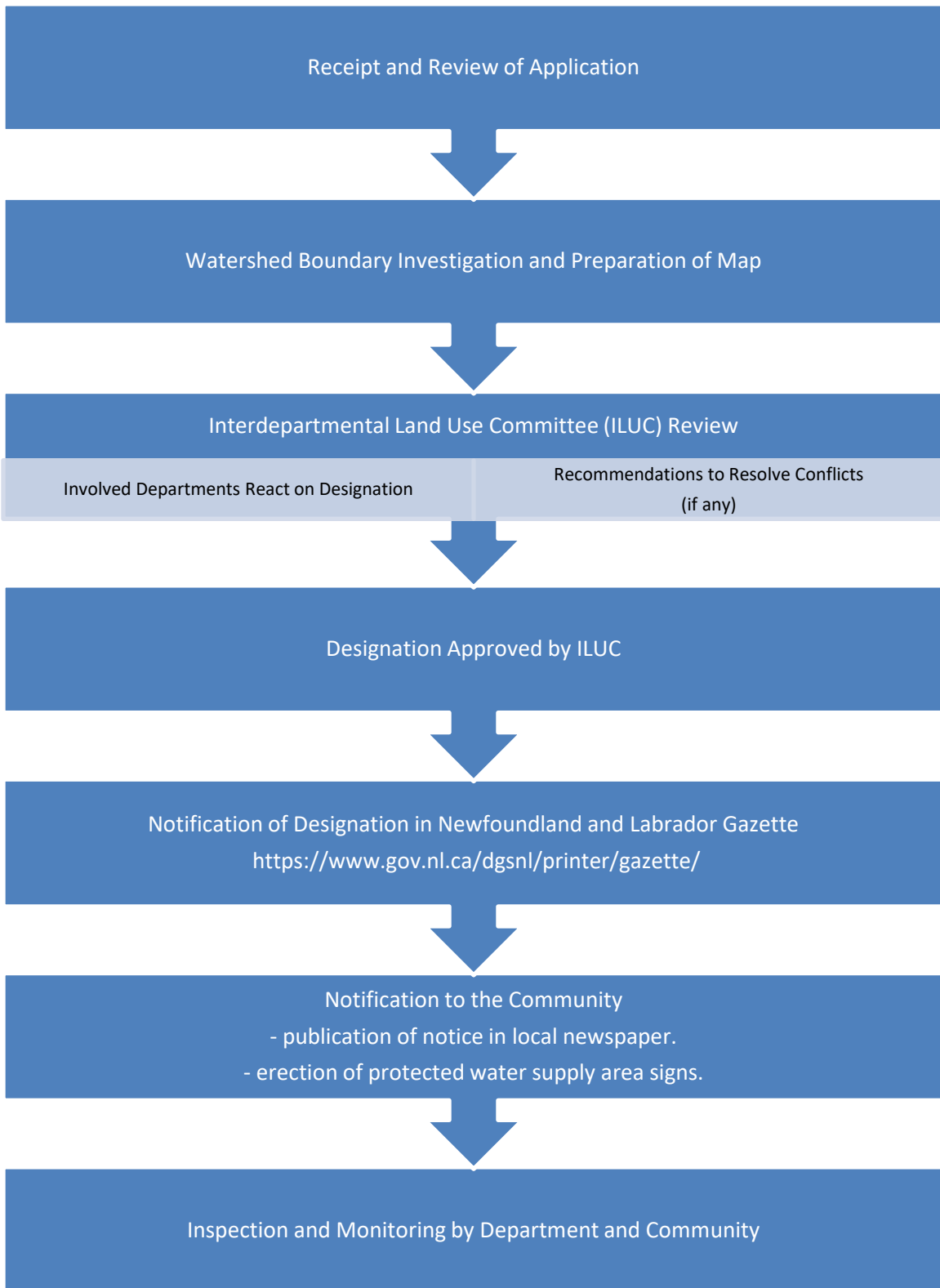


Figure 1: Process for Protection of a Public Water Supply

4. Potential Water Supply Areas

A potential public water supply area may be protected under the same process as a public water supply area.

A potential public water supply area may be protected if one of the following conditions apply:

- It is demonstrated that the yield of the present source is inadequate to meet the present and future water demands of its users.
- The quality of the present source is not in compliance with existing drinking water quality guidelines and may pose a risk to the health of consumers.
- Due to other factors as determined by the department.

Once protected, the provisions of Section 39 shall apply to the potential public water supply area from the date of the publication of the notice of the designation in the Newfoundland and Labrador Gazette. In the same manner as with protected public water supply areas, signs should be posted at suitable locations along the boundaries of the designated area for public information.

5. Repeal of Designated Areas

Under some circumstances, a municipal authority may request that the designation of a protected public water supply area or a protected potential public water supply area be repealed. A protected public water supply area or a protected potential public water supply area may be repealed if:

- a) the quality of the source water is not in compliance with the existing drinking water quality guidelines and may pose a risk to the health of consumers, therefore an alternate source is being utilized to provide drinking water;
- b) the yield of the present source is inadequate to meet the present and future water demands of its users, therefore an alternate source is being utilized to provide drinking water; or
- c) any other reason as considered appropriate by the Minister.

The applicant shall file with the Minister an explanation for the repeal request. The change in the designated area status, the protected public water supply area boundary or the protected potential water supply area boundary shall be published in the *Newfoundland and Labrador Gazette* for the information of the public.

6. Amendment of Designated Areas

Under some circumstances, a municipal authority may request an amendment to the protected public water supply area or a protected potential public water supply area. This would occur if the designated area of a watershed were to be increased or decreased in area, therefore changing the present boundary of the protected area. The applicant shall file with the Minister an explanation for the amendment request.

If the protected area is to be increased in size, the Minister will then refer the application to the Interdepartmental Land Use Committee (ILUC) for review and comments. The Minister, after considering the report and input from ILUC, may grant approval for the amendment of the protected public water supply area or the protected potential water supply area under Section 39 of the Act.

The change in the protected public water supply area boundary or the protected potential water supply area boundary shall be published in the *Newfoundland and Labrador Gazette* for the information of the public.

7. Regulatory Permits

Any development activity proposed in a designated area will require a Permit from the Department of Environment and Climate Change.

A development activity is defined as the carrying out of any activity or operations on, over or under land or water for social or economic benefits, or any change in the use or the intensity of use, of any land, water, building or premises.

The proponent will have to apply for a development permit using the application form for a Permit for a Development Activity in a Public Water Supply Area. Also, there is a short application form that can be used for development activities that have been previously permitted. This short form may only be used if the location, area, type, use or intensity of the development activity previously permitted remains unchanged. The costs associated for the processing of these applications are shown in the Fee Schedule. The fee must accompany each separate development activity application.

This form is available on the Government of Newfoundland and Labrador's website via: <https://www.gov.nl.ca/ecc/waterres/permits-licenses/appforms/>

The completed form should be returned to the nearest regional office of the Department of Environment and Climate Change for consideration. The owner/operator responsible for the designated area in question will be consulted for their input during the permit process.

7.1 Amendment of a Section 39 Permit

During the course of the development activity, the need or desire may arise to make minor changes to the location, area, type, use or intensity of the development activity. It is possible to do this through an amendment to the original regulatory permit. To do this, the proponent would contact the nearest Department of Environment and Climate Change office and provide details to the Environmental Scientist regarding the changes. If the changes are minor enough and allowed under the present permit for a development activity, an amendment to the permit for a development activity can be issued.

When a development permit application is received, the municipal authority responsible for the protected water supply area is contacted. This provides an opportunity for the municipal authority to bring forward any objections regarding the development activity. It also provides an opportunity for the municipal authority to suggest conditions under which the proposed development may be able to proceed under. These conditions can be incorporated into the permit and the development activity may be able to proceed if the set conditions of the development permit are met and followed.

8. Land Use Policy

Section 39 of the Water Resource Act details activities that are prohibited from protected public water supply areas. Any violation of this constitutes an offence under Section 90 of the Water Resource Act.

Existing resource development activities, such as domestic or commercial forest harvesting, agriculture, recreation, transportation, mineral exploration, and aggregate extraction may be permitted to continue in the designated area, if these activities do not impair water quality.

Any activities or developments that are causing impairment will have to be discontinued if the problem cannot be mitigated.

The Policy for Land and Water Related Developments in Protected Public Water Supply Areas is available via:

<https://www.gov.nl.ca/ecc/waterres/regulations/policies/water-related/>

9. Water Information Management System

The Water Resources Management Division of the Department of Environment and Climate Change maintains a computerized Geographic Information System (GIS) layer depicting the geographic boundaries of the public water supplies in the province.

This GIS layer displays information on protected, unprotected and potential water supplies. It also displays information on water supplies that have been submitted to ILUC and are currently in the designation for protection application process. The water supply information in the GIS layer can be linked to both source and tap drinking water quality data, displaying the most recent data available.

The application has the ability to analyze, query and group data by community, serviced areas and by sample attributes.

The system also has the ability to have GIS information updated from other natural resource agencies. This enables the Department to display our water supply areas in conjunction with other land use activities. By doing this, the combined information can be used as a powerful tool for integrated resource management, allowing areas with resource conflicts to be easily identified.

10. Monitoring and Inspection

The owner/operator of a designated area is responsible for protecting the area by posting protected water supply area signs and maintaining them, conducting routine surveillance of the area and monitoring approved development activities. Under Section 68 of the *Water Resources Act*, where 2 or more persons believe another person is contravening or has contravened the Act, they may jointly request that the department investigate the alleged contravention. This request should be accompanied by an affidavit, made under the oath of affirmation, by the person making the request. The affidavit should state the name and address of the persons making the request, state the nature of the alleged contravention and the name of each person alleged to be involved in its commission and contain a concise statement of the evidence supporting the allegation. Upon receipt of the request the department shall investigate the matter to determine the facts of the alleged contravention. Not more than 90 days after receiving the complaint, the department shall report to the persons who made the request of the progress of the investigation and action proposed to be taken in respect of the alleged contravention.

The Environmental Scientist will conduct periodic inspections of designated areas to assist the towns and communities in monitoring development activities in designated areas. Inspections are conducted to ensure existing development activities are being conducted in an environmentally acceptable manner and to ensure that there are no development activities being undertaken without prior approval of the department. Also, the Environmental Scientist will assist in land use conflicts in designated areas.

In areas of significant land use conflicts, a watershed monitoring committee should be established to oversee the development activity in the designated area. The watershed monitoring committee should consist of representatives from the concerned government departments and agencies, the municipal authority (town council/Local Service District/owner/operator) and the Department of Environment and Climate Change. The committee is responsible for ensuring compliance with the terms and conditions of the approved work, implementation of environmental protection guidelines, monitoring effects on water quality and making recommendations to the Department of Environment and Climate Change.

The department conducts routine inorganic source and tap water quality monitoring for all public water supplies in the province. For additional information refer to the following page: <https://www.gov.nl.ca/ecc/waterres/drinkingwater/>

11. Environmental Protection Guidelines

Development activities, such as urban and suburban development, forestry, agriculture, mineral exploration, aggregate extraction, recreation, etc., when uncontrolled, may cause serious water quality problems, such as high bacterial count, nutrient enrichment, high colour and turbidity, high suspended solids and unacceptable levels of toxic and other chemicals.

The resource departments and agencies, in consultation with the Department of Environment and Climate Change, prepared environmental protection guidelines for the utilization of various resources in designated areas. These guidelines outline the methods, practices and control measures designed to minimize adverse effects on the environment and water resources. The developers will be required to strictly adhere to these guidelines.

12. Watershed Management Plan

The Department of Environment and Climate Change promotes the development of long-term watershed management plans for designated areas so that resource utilization can be optimized on a planned and orderly basis without impairing water quality. Management plans should outline the details of the proposed activities and the environmental protection measures designed to minimize adverse impacts on water quality. The plans will also contain water quality monitoring programs to assess the effects of the development activity.

13. Watershed Management Committees

The Department of Environment and Climate Change promotes the establishment of Watershed Management Committees to bring together stakeholders to oversee developments within protected public water supply. It is essential that these Watershed Management Committees be consulted so they may provide their input and raise any concerns before any development activities are approved in the respective designated areas through the permit process.

14. Stakeholder Participation

It is essential to maintain appropriate levels of partnership and communication among stakeholders. In view of the ever-increasing interest in resource development in designated areas, it has become imperative for the department to develop policies and programs, which are designed to minimize any adverse effects on water quality. Since only a small number of communities in the province have water treatment facilities, it is essential that development activities in designated areas are strictly controlled and monitored so that water quality is protected.

The success of these programs and policies very much depends on the involvement and cooperation of stakeholders, including town councils and everyone living in the area and using the water supply. The stakeholders must realize the fact that once water quality is impaired, it is very difficult and expensive to restore it to its original condition, if it is possible to restore it at all. By being proactive, this can be prevented from happening. Therefore, the stakeholders must get involved in monitoring and protecting their water supply area in accordance with the *Water Resources Act* and in cooperation with the staff of this department. Together, we can ensure the security of healthy water supplies for today and for years to come.

15. Summary of Responsibilities

15.1 Department of Environment and Climate Change

- 1) Maintain the overall responsibility to protect water quality.
- 2) Process watershed designation applications.
- 3) Process permits for developments in designated areas.
- 4) Assess existing land uses and its impact on water quality.
- 5) Resolve conflicts dealing with land use and resource developments in designated areas.
- 6) Take appropriate measures to prohibit or regulate those activities which might impair water quality.
- 7) Inspect sites to investigate any reported unauthorized activity or development.
- 8) Monitor water quality on a routine basis.
- 9) Lead and promote the development of environmental protection guidelines for resource development and land use activities in designated watersheds
- 10) Assist in and promote the development of watershed management plans.
- 11) Enforce the *Water Resources Act*.

15.2 Municipal Authority

- 1) Submit an application to the Department of Environment and Climate Change to have a water supply area protected.
- 2) Provide baseline information on existing land uses, resource development and water quality for the area to be designated.
- 3) Assist the Environmental Scientist in collecting information on an ongoing basis.
- 4) Inform the community about the designation notice by publishing it in a local newspaper and posting it on community notice board.
- 5) Placement of protected public water supply area signs along the boundaries of the designated area.
- 6) Inspect the watershed on a regular basis and report any unauthorized activity to the Environmental Scientist in their region.
- 7) Conduct surveillance of the designated area to ensure that the existing activities are not causing any water quality problems and that newly approved developments are being conducted according to the terms and conditions of the permit and in compliance with the environmental protection guidelines for the resource development activity.

16. WRMD Contact Information

16.1 Web Page

- Water Resources Management Division (WRMD) web page:
<https://www.gov.nl.ca/ecc/waterres/>
- WRMD Drinking Water Section web page:
<https://www.gov.nl.ca/ecc/waterres/drinkingwater/>

16.2 Mailing Address

St. John's – Headquarters

WATER RESOURCES MANAGEMENT DIVISION
Department of Environment and Climate Change
P.O. Box 8700
4th Floor, West Block
Confederation Building
St. John's, NL
A1B 4J6
Tel: (709) 729-2563
Fax: (709) 729-0320
Email: water@gov.nl.ca

Grand Falls-Windsor – Regional Office

WATER RESOURCES MANAGEMENT DIVISION
Department of Environment and Climate Change
Provincial Building
3 Cromer Avenue
Grand Falls-Windsor, NL
A2A 1W9
Tel: (709) 292-4997
Fax: (709) 292-4365

Corner Brook – Regional Office

WATER RESOURCES MANAGEMENT DIVISION
Department of Environment and Climate Change
9th Floor, Sir Richard Squires Building
84 Mount Bernard Avenue
P.O. Box 2006
Corner Brook, NL
A2H 5G2
Tel: (709) 637- 2035
Fax: (709) 637-2541

Happy Valley-Goose Bay – Regional Office

WATER RESOURCES MANAGEMENT DIVISION
Department of Environment and Climate Change
163 Hamilton River Road
Bursey Building
Happy Valley – Goose Bay, NL
A0P 1E0
Tel: (709) 896-7981

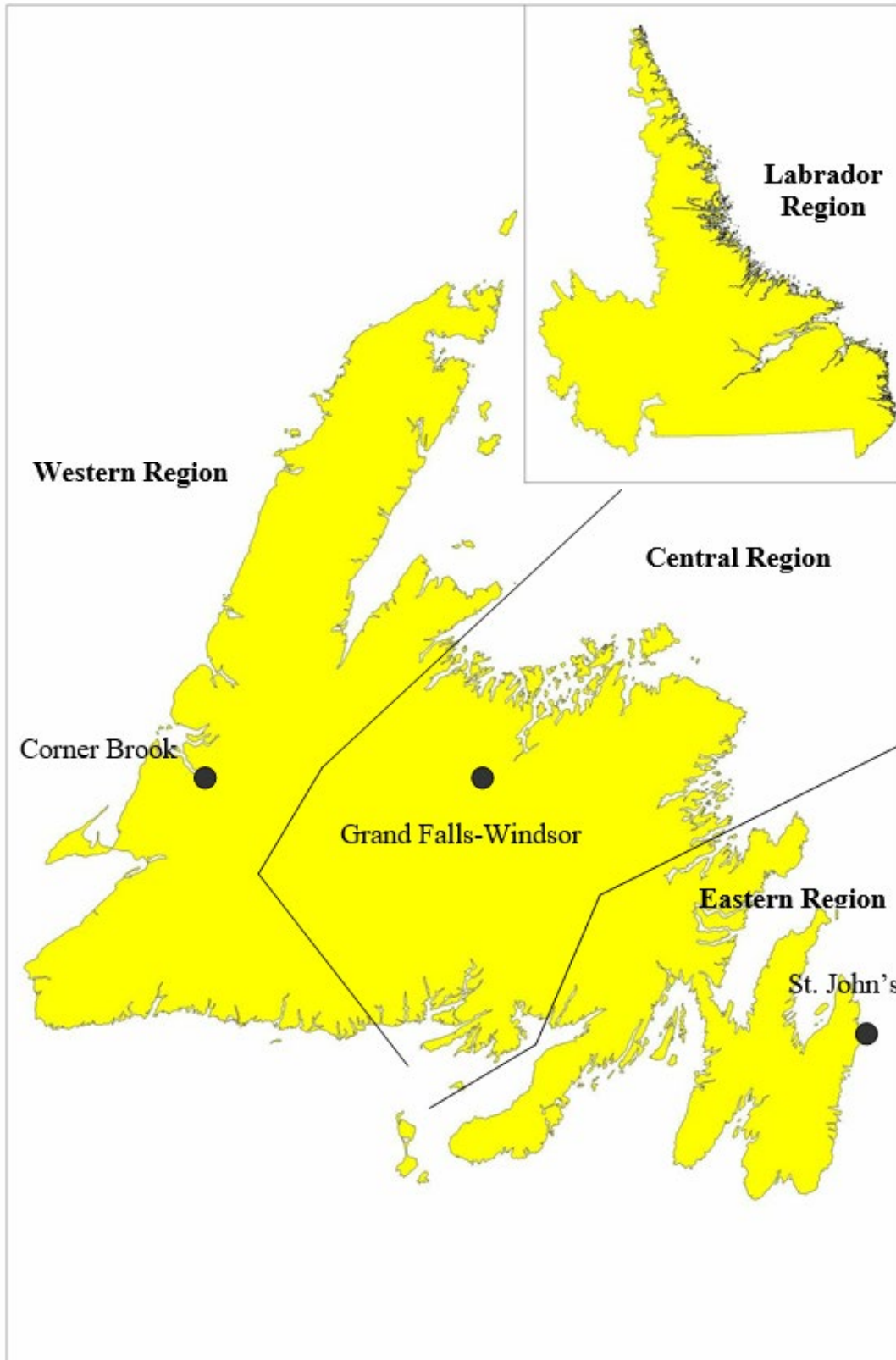


Figure 2: Water Resources Management Division – Regions