



Developing a Municipal Source Water Protection Plan:
A Guide for Water Utilities and Municipalities

Designation of a Protected Water Area



Designation of a Protected Water Area

Part of Step 4 in Developing a Municipal Source Water Protection Plan

Designing Plans for Source Water Protection in Nova Scotia

A Drinking Water Strategy For Nova Scotia describes a multiple-barrier approach to clean, safe drinking water for Nova Scotians. The first line of defence in this multiple-barrier approach is to keep clean water clean. A booklet series entitled *Developing a Municipal Source Water Protection Plan: A Guide for Water Utilities and Municipalities* describes how water utilities and municipalities can do that. The booklets guide you through the process of developing a source water protection plan for your municipal water supply and are available on the website at www.gov.ns.ca/enla/water.

To keep clean water clean, we must protect the source water supply area. **Step 4** of the booklet series describes how to develop a source water protection plan, including six options for managing risks. One of these options is to request that the source water supply area be designated as a protected water area under the Environment Act. This guide describes what a water utility must do if it chooses to include this option in its source water protection plan.

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Introduction

Source water protection planning includes identifying options to manage, reduce or eliminate risks. Management strategies reinforce each other and form a cohesive plan that strives for the best possible source water quality protection.

Every community is different with respect to its water supply, water users, and the types of industries and activities which characterize the landscape. Therefore, each community needs to evaluate how it might manage potential risks to its drinking water supply and implement specific strategies to protect it.

In some situations, communities may opt to have all or a portion of its source water supply area designated under the Environment Act to manage specific activities that are known to degrade water quality. Designating a protected water area is one of the six management options that may be included in a source water protection plan. This guide explains when designation is appropriate, and the process a water utility must follow if it chooses this option.

By now, you should have completed the first three steps and begun Step 4 – developing a source water protection management plan. You have set management goals and objectives for the plan, and you must now choose the right combination of management options for your source water supply area. There are six options:

- A – Acquisition of land in the source water supply area affords one of the highest levels of protection.
- B – By-laws (municipal) allow regulation of the land uses permitted in the source water supply area.
- B – Best management practices can be used to manage activities in the source water supply area.
- C – Contingency planning ensures the continued protection of public health in the event of contamination of a source water supply area.

Review of Steps in the Source Water Protection Planning Process

Steps 1 to 3:

- an advisory committee is formed
- the source water protection area is delineated and characterized
- sources of contamination are identified and addressed
- source water issues currently being addressed have been defined
- source water issues that need to be addressed have been defined
- source water issues that will be addressed in the new management plan have been defined
- source water issues that need to be addressed in the long-term have been defined
- resources and funding have been thoroughly explored

Step 4:

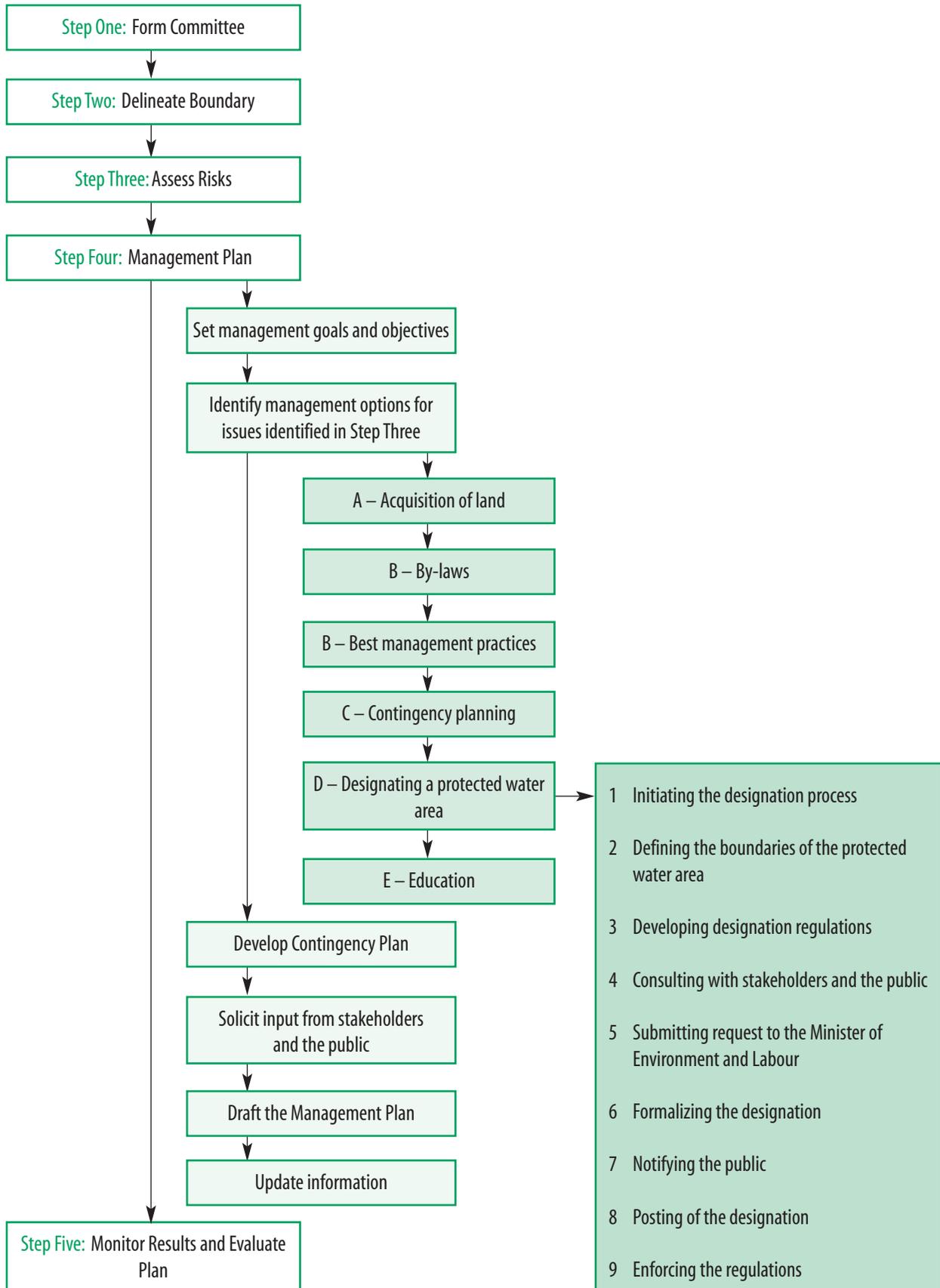
- management goals and objectives have been set

Next task: identify management options for issues identified in Step 3

- D – Designation of a protected water area with regulations under the Environment Act allows a water utility to oversee regulated activities that may impair water quality within a source water supply area.
- E – Education and awareness programs inform stakeholders about the need to protect source water supply areas, and the process for developing a source water protection plan.

This guide will help you determine if designating a protected water area is appropriate for your circumstances, and the process for achieving that designation.

Source Water Protection Planning Flow Chart



What is a Designated Protected Water Area?

Designation of a protected water area is one possible management option available to water utilities to protect or manage potential threats in the source water supply area. The Environment Act empowers the Minister of Environment and Labour to designate an area surrounding a source of drinking water as a protected water area, if requested by a water utility. Corresponding regulations are also approved by the Minister as part of the designation.

Designation differs from other approaches to managing risks to drinking water because it uses a regulatory approach to directly prohibit or restrict activities that can impair water quality. It is important to recognize that protected water area regulations can only be developed in the context of Section 106 of the Environment Act. They are meant to be applied under specific circumstances and can only apply to activities that are known to or have the potential to impair water quality.

Nova Scotia Environment and Labour works with the advisory committee to develop protected water area regulations as part of the source water protection planning process. Since these regulations must be followed by people living or working within the source water supply area, they must be developed with stakeholder input so that any issues or concerns are addressed.

Once the designation has been approved, it is the responsibility of the water utility to post signs and protect the area, including enforcing the regulations.

Designation is NOT land use zoning

Although it may seem like protected water area designation regulations are similar to land use zoning by-laws, there are important differences.

First, designation falls under the Environment Act and it does not regulate types of land use, whereas land use planning is governed by the Municipal Government Act.

More information on land use planning under the Municipal Government Act can be found in the Local Government Resource Handbook, prepared by Service Nova Scotia and Municipal Relations. View or download this handbook at www.gov.ns.ca/snsnr/muns/manuals and refer to the following sections:

- 5.2 Municipal Planning Strategy and Land Use By-Law Preparation
- 5.6 Model Land Use By-Law
- 5.7 Municipal Water Supply Watershed Planning

Second, land use or zoning by-laws mainly regulate the “development” of land, principally the location and use of buildings and structures, while designation mainly regulates “activities” on the land or water with the potential to impair water quality. However, in some cases, designation may regulate certain activities associated with development. For example, construction activities causing erosion and sedimentation can be controlled through protected water area regulations.

The third main difference is that the enforcement of protected water area regulations is the responsibility of the water utility whereas land use by-laws are enforced by the municipality in which the source water supply area is located. If drinking water supplies cross political boundaries, municipalities should work together to help manage the source water supply area.

Designation is NOT expropriation

To expropriate land means to take land without an owner’s consent and is governed by the Expropriation Act. When an area is designated as a protected water area, an individual’s property is not taken from him or her. It is a requirement of the Environment Act to engage in fair and open public consultation as part of the protected water area designation process.

Designation is NOT a source water protection plan

Historically, designation has been used by a number of communities to protect their source water supply areas by regulating as many activities as possible. Although designation has generally been used as a “stand-alone” management strategy in the past, it now forms part of a broader management approach called source water protection planning.

The source water protection planning process is more flexible and adaptable so it can address a broader range of issues than designation, with various management options based on the types of risks in the source water supply area. Through the course of developing a source water protection plan, a Watershed Advisory Committee may determine that a protected water area designation, for part or all of the source water supply area, is an appropriate option to manage specific risks.

However, before contemplating designation, Steps 1 through 3 of the source water protection planning process must be completed and Step Four must be underway.

The Designation Process

There are a number of steps in the designation process to be completed by the water utility and its advisory committee. First, the area to be designated must be defined. Second, regulations are developed to address risks previously identified during Step 3 of the source water protection planning process. Next the water utility and its advisory committee consult with stakeholders and the public. If the community supports the designation, a request is submitted to the Minister of Environment and Labour to approve, file and publish the designation and regulations. The last steps are notifying people of the designation and ongoing enforcement of the approved regulations by the water utility.

Designation Process

- Initiate the designation process
- Define the protected water area boundary
- Develop designation regulations
- Consult with stakeholders and the public
- Submit request to the Minister of Environment and Labour
- Formalize the designation
- Notify public of designation
- Post protected water area designation
- Enforce regulations

Legislation Enabling Designation

The following is Section 106 of the Environment Act, Chapter 1, S.N.S., 1994-95 which enables the Minister of Environment and Labour to designate a protected water area:

Designation of a Protected Water Area

- (1) The Minister, when requested by an operator of a water works or proposed water works, may designate an area surrounding any source or future source of water supply for a water works as a protected water area.
- (2) The operator of a water works or proposed water works named in a designation made pursuant to subsection (1) shall
 - (a) give notice of the designation of the area as a protected water area by publishing the notice in a newspaper having circulation in the county or counties in which the area is located and in the Royal Gazette;
 - (b) have the notice of designation recorded at the registry of deeds in the county or counties in which the area is located; and
 - (c) post signs in the area indicating that it has been designated a protected water area.
- (3) The operator of a water works or proposed water works is responsible for taking all measures to protect the area designated, and the enforcement of any regulations made pursuant to subsection (6).
- (4) When requested by an operator of a water works or proposed water works, the Minister may cancel a designation made pursuant to this section, in whole or in part.
- (5) Any protected water area designated pursuant to the Water Act, prior to the coming into force of this act remains so designated.

cont'd

- (6) At the request of the operator of the water works or proposed water works, the Minister may make regulations to prohibit, regulate or require the doing of any act or acts in a protected water area that may impair or prevent the impairment, as the case may be, of the quality of the water in the protected water area.
- (7) Before designating a protected water area, the Minister shall ensure that the operator of the water works or proposed water works has provided opportunities for public consultation.
- (8) No claim of injurious affection lies against any person as the result of a designation of a protected water area.
- (9) The exercise by the Minister of the authority contained in subsection (6) is regulations within the meaning of the Regulations Act.

Initiating the process

Early consultation with Nova Scotia Environment and Labour representatives will help the water utility navigate through the designation process. It is important for the utility to understand its roles and responsibilities, as well as the Minister's authority under the Environment Act.

Defining the boundaries of the protected water area

A designated protected water area must have a distinct boundary that can be marked on a map. A topographic map at a scale of 1:10,000 is a common base for plotting the boundary. The boundary may or may not be the same as the boundary defined in Step 2 of the source water protection planning process because of enforcement or other administrative reasons. In the past, surveyors generated a legal boundary description of straight lines having distances and bearings. However, protected water area boundaries may also be described using topographic, political, or property boundaries. Today's GPS units are able to assist in generating maps by computer.

Whatever approach is used to define the boundary, it is important to consider that the public and those who will enforce the protected water area regulations must be able to determine where the boundary is on the ground. Therefore, public highways and other land marks should be incorporated wherever practical.

Some protected water area boundaries have deviated from the source water protection plan area boundary because the designation applied only to the area of greatest risk rather than the natural watershed or groundwater recharge area. Future designations could also deviate from the source water protection plan area boundary, such as where the activities to be regulated only apply to specific portions of the source water supply area.

A very simple example of this situation would be the need to regulate motorized vessels or vehicles on a water supply lake, either on open water or when ice covered. The protected water area designation in this case would apply only to the lake and the lake shore. Other options, such as acquisition of land, best management practices, contingencies, and education would be used to protect areas outside the designation.

Step 2: Delineate a Source Water Protection Area Boundary

Surface Water Supplies:

The boundary delineation of a surface water supply can be generated in several ways. Topographic maps can be used to manually connect the high elevation points around the surface water body to delineate the watershed boundary. The boundary can be generated by computer from a series of GPS points which are gathered in the field and plotted on a map. The boundary can also be generated on a computer through a process called digital elevation modelling.

Groundwater Supplies:

The boundary of a groundwater supply is commonly determined through computer-based groundwater modelling. The recharge areas to be managed around groundwater sources are called wellhead protection zones. These zones are based on the time it takes for different types of contaminants to reach the well. Usually three zones are established that denote specific time of travel distances. For example, Zone 1 might represent the time it takes contaminants to reach the well within two years. Zone 2 would be the travel time from two to five years, and Zone 3 would be the five to 25-year travel time.

For more information see “Step 2 Developing a Municipal Source Water Protection Plan - Delineate a Source Water Protection Area Boundary” published by Nova Scotia Environment and Labour, and available at www.gov.ns.ca/enla/water.

Developing designation regulations

After the protected water area boundary has been defined, regulations must be developed that reflect an appropriate response to the potential risks identified in Step 3 of the source water protection planning process. Nova Scotia Environment and Labour should be consulted to assist with the development of regulations. Regulations should be reviewed on a regular basis in case updating or amending is required.

Regulations are appropriate in situations where certain activities cannot be managed through other strategies to reduce the potential degradation of the source water. For example, the use of herbicides to control weeds may require a specific regulation which dictates a standard for herbicide storage, timely application, and setbacks from watercourses within the source water supply area.

As mentioned above, regulations can also be applied to just a portion of the source water supply area, such as a particular water body. In these circumstances, regulations can be used to prohibit motor boats, swimming, or the release of substances into the water.

Although regulations made under Section 106 (6) of the Environment Act can't directly control types of land uses, they can be used to control impacts associated with development. For example, they may require erosion and sediment control plans during building or road construction that may occur within the source water supply area.

Protected water area regulations may complement the overall source water protection plan and address the specific risks that are not addressed through other management options. They may be restrictive and prohibitive in nature, or they may be more flexible requiring an approval or notification from the water utility to undertake regulated activities. Sample regulations and the associated activities are listed in Appendix A.

Approvals and Notifications

Approvals

Some activities regulated by the designation process may be subject to approval by the water utility. The granting of an approval is based on a set of criteria that are specific to the activity being regulated and apply to how or when the activity is conducted.

In most instances approvals require that further mitigative measures be taken. For example, sediment and erosion control plans may be required for approval to be granted for road construction within a designated protected water area.

Where a regulation makes reference to an approval from the department, it refers to an existing approval under the Environment Act and enforced by Nova Scotia Environment and Labour.

Notifications

There are some regulations that require notification be given to the water utility for certain activities. Notification of an activity subject to regulation is made to the water utility in writing, prior to commencement of the activity. As a result, the water utility has a greater awareness of when and where activities within the watershed are taking place.

Consulting with stakeholders and the public

Section 106 (7) of the Environment Act requires public consultation before a protected water area can be designated by the Minister. The consultation plan should involve landowners and other stakeholders, including the municipality in which the proposed designated area is located.

Public consultation is a mandatory element of the designation process because it ensures that people affected by the process are given an opportunity to express any concerns they might have. A fair, open and transparent consultation usually includes public meetings or public information sessions to explain to stakeholders how the utility and advisory committee prepared the proposal for the designation.

Stakeholders who are not active members of the advisory committee can request that the committee provide additional supporting information and copies of minutes taken during the meetings. Water utilities may also choose to provide information about the designation process on their municipal websites.

Submitting request to the Minister of Environment and Labour

After the protected water area boundaries and regulations have been developed and public consultation has occurred, appropriate legal documents must be finalized and submitted to the Minister of Environment and Labour for final approval. This set of documents includes:

- a legal description and map of the area as required in Section 106 (1) of the Environment Act;
- a set of regulations properly formatted as required in Section 106 (6) of the Environment Act; and
- documentation on the completed public consultation as required in Section 106 (7) of the Environment Act.

The department's solicitor will review the documents. The purpose of the solicitor's review is to ensure proper form and authority, not to change the intent of the regulations.

Formalizing the designation

Following the Minister's approval, Nova Scotia Environment and Labour will file the protected water area designation and regulations with the Department of Justice's Registry of Regulations. Certification of filing and subsequent publishing in the Royal Gazette brings the regulations into force in accordance with the Regulations Act.

Notifying the public

The water utility is required to record the designation at the Registry of Deeds in the county or counties in which the protected water area is located. The water utility is also required by the Environment Act to give public notice of the designation in a newspaper with circulation in the county or counties in which the area is located. It is not necessary to publish the entire designation in the newspaper, but the notice should provide a sufficient amount of detail and how to get more information. Ideally, all those who own land within the protected water area should receive a letter from the water utility with information about the designation and the source water protection plan.

Posting of the designation

The water utility must post and maintain signs along all public roads which access the protected water area and in other appropriate places visible to the public. Signs must clearly indicate that the area is a protected water area and that regulations apply. The sign may also indicate the type of prohibited or restricted activities. The name and phone number of the water utility should be visible to inform people how to get further information. These actions are necessary to ensure members of the public take appropriate action to help keep the area clean.

Enforcing the regulations

The water utility has the responsibility of enforcing the protected water area regulations per Section 106 (3) of the Environment Act. To do this, the water utility can appoint one of its employees to become a peace officer or special constable through provisions in the Police Act. When the employee is established as a special constable, he or she is able to issue Summary Offence Tickets for infractions within the protected water area. Failure to comply with protected water area regulations under section 106 of the Environment Act can result in a fine of \$675 (2005).

Monitoring and Evaluation

As part of the source water protection plan, the water utility should undertake a water quality monitoring program. It should include regular evaluation of the source water protection plan, including the effectiveness of the designation. Changes should be made as necessary to ensure the plan and the designation are effectively managing risks.

For more information see "Step 5: Developing a Municipal Source Water Protection Plan - Develop a Monitoring Program to Evaluate the Effectiveness of a Source Water Plan" published by Nova Scotia Environment and Labour and available at www.gov.ns.ca/enla/water.



Amending or Cancelling a Designation

Amending a designation

The water utility may request the Minister of Environment and Labour to amend either the boundaries or the regulations for a protected water area.

For example, a boundary line could be moved in response to a request from a landowner whose property is partly within the designated area. Over time, the property owner may feel that the designation encumbers the way he or she manages the entire property. If the property is located at the extremity of the designated area, far from the water supply intake, the water utility may grant the request to exclude the entire property from the protected water area.

Boundaries have also been amended in the past to coincide with municipal land use zoning boundaries, to avoid public confusion arising from two sets of boundary lines. They might also need adjustment to enable more efficient forest management planning.

Reasons for amending regulations may vary from simply updating the text or definitions to provide clarity or consistency, to adding a new regulation to address a new threat to water quality. A regulation may also be deleted if it is no longer relevant.

Prior to requesting an amendment, the water utility and its advisory committee would take the same steps as required for initial designation, including defining new boundaries and/or regulations, public consultation, and preparation of legal documents, including a new map if boundaries are changing. Once approved, the water utility must file the new designation and regulations pursuant to the Regulations Act, and meet the other public notification requirements. Posted signs would be relocated if the protected water area boundaries were amended.

Cancelling a designation

The water utility may request that the Minister of Environment and Labour cancel a designation, in whole or in part. There are various reasons why a cancellation may be sought. For example, the area may be well managed by other components of the source water protection plan, or updated technical information may indicate that the area is not contributing to the source of the water supply.

Regardless of the reason, the water utility should conduct the same kind of consultation as required for initial designation and submit the request for cancellation to the Minister of Environment and Labour. Once the designation is cancelled, a notice is published in the Royal Gazette. The water utility must notify the public in the same way as is required for the initial designation. Any posted signs must be taken down or modified to indicate the current protected water area designation.

For More Information

Nova Scotia Environment and Labour can provide input into the development of management practices and will review the final source water protection plan.

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PO Box 697
Halifax, Nova Scotia
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Phone: (902) 424-5300
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APPENDIX A – A Reference For Preparing Regulations for Protected Water Areas

This appendix includes some samples to assist water utilities in preparing draft regulations. These samples illustrate activities that are typically regulated in protected water areas and are meant to serve only as examples. The use of these samples does not guarantee approval by the Minister.

The regulations that a water utility chooses will depend on the conditions in the source water supply area, and whether the source of water is groundwater or surface water (a river or a lake). For example, it may not be necessary to have regulations on forestry activities if there is currently no forestry activity in the source water supply area, and there is not expected to be any in the future. Water utilities should obtain professional assistance before selecting a regulation (e.g. ask a professional forester if the forestry regulation is appropriate for their area).

Examples that are marked with an asterisk * indicate that the value (such as swimming within 200 metres of the water intake) is provided as an example only. Water utilities should determine appropriate values based on public consultation and science.

Sample Regulations:

Note that not all of the following activity regulations may be applicable to every protected water area. Regulations may need to be tailored to fit the level of protection required in each circumstance.

Activity: Home heating oil tanks and fuel storage tanks

Issue: Small amounts of contaminants such as oil, can render large quantities of drinking water non-potable. It can be very expensive, if not impossible, to remove these contaminants from groundwater and/or surface water.

Sample Regulation:

No person is permitted to install a new home heating oil tank, a gasoline fuel storage tank, or a diesel fuel storage tank within the protected water area unless the tank is supported by concrete footings, has a leak detection device and is:

- (a) made of stainless;
- (b) made of fibreglass;
- (c) constructed with double walls; or
- (d) approved prior to installation in writing by the water works operator.

Activity: Storage of contaminants

Issue: Small amounts of contaminants such as dry cleaning fluids, can render large quantities of drinking water non-potable. It can be very expensive, if not impossible, to remove these contaminants from groundwater and/or surface water.

Sample Regulation:

Any potential contaminant stored within the protected water area must be contained within a storage tank that is supported by concrete footings and has a leak detection device and is:

- (a) made of stainless steel double wall construction;
- (b) made of fibreglass; or
- (c) approved prior to installation in writing by the water works operator.

Activity: On-site sewage disposal systems

Issue: Improperly designed and/or maintained sewage disposal systems can leak nitrates, phosphates, bacteria, viruses, and other contaminants to groundwater and surface water. The greater the distance between a disposal system and groundwater and/or surface water, the more likely the contaminant will be broken down into a less harmful substance.

Sample Regulation:

No person is permitted to construct, install or cause the construction or installation of an on-site sewage disposal system contrary to the On-site Sewage Disposal Systems Regulations and the terms and conditions of an approval issued by Nova Scotia Environment and Labour.

Activity: Forestry operations

Issue: Healthy forests can help maintain groundwater and surface water quality. They play an important part in filtering contaminants and preventing erosion and sedimentation. Properly designed forestry management plans can reduce the risk of altering the health of a forest.

Sample Regulation:

No person is permitted to undertake a forestry operation on land greater than 10* hectares within the protected water area unless the operation is conducted pursuant to a forestry management plan prepared by a professional forester in accordance with the objectives and policies approved by the water works operator.

Note: The forestry management plan may address topics such as setback distances for roads, machinery and tree harvesting from watercourses and wells; maximum percent of forest to be harvested per year; and harvesting methods. It should be designed to minimize risks of contamination from spill of petroleum products, and sedimentation and erosion.

Activity: Road construction and watercourse alteration

Issue: Unpaved roads and road construction activities can release sediment into watercourses. Properly designed and constructed roads can minimize the risk of erosion and sedimentation. The erosion and sediment control requirements for public highways are sufficient to reduce the risk of contamination to water sources. In addition, roads can also create areas where vehicles could inadvertently enter watercourses and cause fuel to contaminate the water supply.

Sample Regulation:

(1) No person is permitted to undertake any road construction work in the protected water area unless the work is conducted between June 1* and September 30*, inclusive, in any year (in order to minimize impacts to aquatic organisms).

(2) No person is permitted to expose at any time more than 1,900* square metres of roadway subbase in the protected water area.

(3) All roads that are located within 15* m of a watercourse must have concrete barriers to prevent vehicles from inadvertently entering the watercourse.

Activity: Disposal of wastes or garbage (i.e., landfill, waste disposal site)

Issue: The disposal of wastes can cause harmful chemicals to leach from the site into groundwater. Small amounts of chemicals can make large amounts of drinking water non-potable. It can be very expensive, if not impossible, to remove these contaminants from groundwater and/or surface water.

Sample Regulation:

No person is permitted to establish a dump, landfill, or waste disposal site within 500* metres of a watercourse or well in the protected water area.

Activity: Mining, pit and quarry operations and other excavations

Issue: These activities can affect drinking water quality through erosion, the release of metals or the release of acid runoff into water draining from the mine site. Properly designed mining, quarrying or processing operations can take place under controlled conditions, resulting in minimal impacts on water supply sources. However, all mine and quarry operations must be approved by Nova Scotia Environment and Labour.

Sample Regulation:

No person is permitted to authorize or commence an operation to extract peat, gravel, rock or minerals in the protected water area without first obtaining written approval of the water works operator.

Activity: Agriculture

Issue: A well designed environmental farm plan, combined with a nutrient management plan, can reduce the risk of contamination. Contaminants such as oil and nitrates can make drinking water non-potable. It can be very expensive, if not impossible, to remove these contaminants from groundwater and/or surface water.

Note: The Department of Agriculture should be contacted for more information on environmental farm plans and nutrient management plans.

Sample Regulation:

An agricultural operation undertaken within the protected water area must be conducted according to a nutrient management plan and environmental farm plan prepared by a qualified person in consultation with the water works operator.

Activity: Access (boating, swimming, fishing, car washing, etc.)

Issue: Large numbers of people swimming, bathing or fishing in the source water area can contaminate the water with excrement, phosphates and litter. Large numbers of people washing vehicles in a source water area can contaminate water with phosphates and petroleum products. Motorized vehicles, such as motor boats and all-terrain vehicles (ATVs), can leak petroleum products into the water. Small amounts of contaminants such as oil and gas can make large amounts of drinking water non-potable. It can be very expensive, if not impossible, to remove these contaminants from groundwater. ATVs can also cause erosion and sedimentation of the watercourses. The greater the distance between the intake and swimmers, bathers, fishers or people operating/washing a vehicle, the less risk of contaminated drinking water.

Sample Regulation:

(1) No person is permitted to swim, bathe, wash, or cut ice at any time in [insert name of water body] or any other watercourse within the protected water area.

(2) No person is permitted to fish from the shoreline of or in [insert name of water body] or any watercourse within the protected water area.

(3) No person is permitted to wash a vehicle in any watercourse or within 60* m of the shoreline or bank of any watercourse within the protected water area.

(4) No person is permitted to, at any time, operate a vessel of any kind, on, through or over [insert name of water body] or any watercourse in the protected water area, unless authorized by the water works operator for the protection of the protected water area.

(5) No person is permitted to fill a gasoline tank or transfer any liquid fuel from tank to tank on or within 100* m of the shoreline or bank of [insert name of water body] or any watercourse within the protected water area, except for the purpose of operating a water treatment plant or a purpose reasonably incidental to the maintenance of private property.

Activity: Burning

Issue: Healthy forests can help maintain water quality. They play an important part in filtering contaminants and preventing erosion and sedimentation. Large uncontrolled forest fires can reduce the ability of the forest to perform these functions in the years immediately following the fire. The highest risk of forest fire is from late spring to early fall, so the greatest precautions should be taken when lighting fires during this period.

Sample Regulation:

No person is permitted to light or be responsible for an open fire in the protected water area from April 1* to October 31*, inclusive, in any year.

Activity: Biocides and pest control products

Issue: Small amounts of chemicals such as biocides can make large amounts of drinking water non-potable. It can be very expensive, if not impossible, to remove these contaminants from water.

Sample Regulation:

(1) Prior written permission from the water works operator is required to use a biocide or pest control product within the protected water area.

(2) A biocide or pest control product used in an agricultural operation within the protected water area must be applied only by a certified applicator and only if recommended for use by a pest management specialist and approved under subsection (1).

Activity: Corridor easements

Issue: This type of construction can cause sediment to erode into watercourses. Properly designed construction plans can minimize the risk of erosion and sedimentation.

Sample Regulation:

No person is permitted to construct a pipeline, railway, telephone line, power line or other similar development or grant an easement on, over or across the protected water area without first obtaining the written approval of the water works operator.

Activity: Urban development (ground disturbance)

Issue: Ground disturbance can cause large amounts of sediment to erode into watercourses. Healthy vegetation plays an important part in filtering contaminants and preventing erosion and sedimentation.

Sample Regulation:

No person is permitted to undertake an activity that causes or might cause soil erosion resulting in sedimentation of a watercourse located within the protected water area. If sedimentation occurs in a watercourse within the protected water area, an operator or person responsible for the sedimentation must undertake immediate action to install erosion and sediment control measures and notify the water works operator.

Activity: Vegetation removal (non-forestry related)

Issue: Healthy vegetation can help maintain groundwater and surface water quality. It plays an important part in filtering contaminants and preventing erosion and sedimentation.

Sample Regulation:

(1) No person is permitted to alter or remove vegetation within 100* m of [insert name of water body] or within 30* m of any watercourse or wetland within the protected water area unless such alteration or removal is:

- (a) approved in advance by the water works operator; or
- (b) related to the operation of the water treatment plant/system and following consultation with the advisory committee.



Environment and Labour
Environmental and Natural Areas Management