

# 2

## Policy Development

*Creating A Local Plan*



Everyone has an interest in drinking water source protection, from wanting to ensure their source of drinking water is protected to having input into source protection policies that may affect their property. The Mississippi-Rideau Source Protection Committee was committed to creating a Source Protection Plan in an open and consultative manner that provided many opportunities for everyone to be involved. The goal was to create policies that would effectively protect source water while at the same time be implementable and reasonable for local communities.

### **What You Will Find In This Section**

This section explains the components of a source protection policy, how they pertain to the Mississippi-Rideau region and the process that was followed to create this Plan. Specifically the section describes:

- What activities are subject to policies (drinking water threats)
- Where policies apply (vulnerable areas)
- What policies are required or permissible (objectives)
- What effect policies have (policy tools, legal effect)
- How policies were created (development process, explanatory document)
- What future policies could address (future considerations)

## 2.1 Drinking Water Threats

The MOECC, in collaboration with a Technical Experts Committee, identified 21 land use activities that have the potential to contaminate or deplete sources of drinking water. These activities are designated as prescribed drinking water threats under the *Clean Water Act*. They are:

1. The establishment, operation or maintenance of a **waste disposal site** within the meaning of Part V of the *Environmental Protection Act*.
2. The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of **sewage**.
3. The application of **agricultural source material** to land.
4. The storage of agricultural source material.
5. The management of agricultural source material (aquaculture).
6. The application of **non-agricultural source material** to land.
7. The handling and storage of non-agricultural source material.
8. The application of **commercial fertilizer** to land.
9. The handling and storage of commercial fertilizer.
10. The application of **pesticide** to land.
11. The handling and storage of pesticide.
12. The application of **road salt**.
13. The handling and storage of road salt.
14. The storage of **snow**.
15. The handling and storage of **fuel**.
16. The handling and storage of a **dense non-aqueous phase liquid** (DNAPLs).
17. The handling and storage of an **organic solvent**.
18. The management of runoff that contains chemicals used in the **de-icing of aircraft**.
19. An activity that takes water from an aquifer or a surface water body without returning the water taken to the same aquifer or surface water body.
20. An activity that reduces the recharge of an aquifer.
21. The use of land as **livestock** grazing or pasturing land, an outdoor confinement area or a farm-animal yard.

### Threats Affecting Water Quality

Most of the prescribed drinking water threats listed above are land use activities that have the potential to contaminate drinking water. They are activities that through spills, leaks or mishandling would release chemicals or pathogens that could contaminate surface water or groundwater. Should this happen near a municipal well, municipal intake or in areas where groundwater is highly vulnerable to contamination, sources of drinking water could become contaminated. Identifying these activities and minimizing their risk is the purpose of source water protection and the primary focus of the policies in this Plan.

### Threat Circumstances

For each prescribed drinking water threat, the MOECC specifies under what circumstances it is considered a significant, moderate and low drinking water threat. The circumstances depend on:

- Where the activity is taking place (relative to a source of drinking water)
- What the nature of the activity is (its contamination potential)

All circumstances are catalogued in a large document produced by the MOECC called “Provincial Tables of Circumstances.” Appendix B of this Plan summarizes the significant threat circumstances for each activity, as well as moderate and low threat circumstances if a policy in this Plan addresses them. Most of the

policies in this Plan address activities when they are considered a significant drinking water threat (these policies are required under the *Clean Water Act*). A few policies also address moderate and low threats (these policies are allowed at the discretion of Source Protection Committees).

### Threats Affecting Water Quantity

Prescribed drinking water threats 19 and 20 are activities that could deplete, not contaminate, sources of drinking water. Since the Assessment Reports for the Mississippi-Rideau region concluded that there are no significant water quantity threats in this region, this Plan does not contain policies to address these activities in accordance with the *Clean Water Act*. The Assessment Reports did however recognize that there are localized water quantity concerns of a seasonal nature and significant groundwater recharge occurring throughout much of the region, which should be considered by decision-makers. This technical information is therefore being used by provincial ministries and other agencies when reviewing applications for activities that could impact water quantity. In addition, the education policies in Section 4 of this Plan promote water conservation.

## 2.2 Drinking Water Sources and Vulnerable Areas

About three quarters of the population in the Mississippi-Rideau region live in an area that is serviced with municipal drinking water. The Assessment Reports studied the source of water supplying municipal systems and generated Wellhead Protection Areas for the groundwater systems and Intake Protection Zones for the surface water systems. These are vulnerable areas where pollutants on the surface could enter the source of municipal drinking water, potentially causing contamination.

### Wellhead Protection Areas

Wellhead Protection Areas (WHPA) illustrate where groundwater is coming from to supply a municipal well and how fast it is travelling horizontally through the aquifer toward the well. A total of four areas are identified:

- WHPA-A is a 100 metre radius around the wellhead
- WHPA-B is the area within which groundwater could reach the well within two years
- WHPA-C is the area within which groundwater could reach the well within two to five years
- WHPA-D is the area within which groundwater could reach the well within five to 25 years

The Assessment Reports then looked at the type and depth of soil found in these areas. This determines how easily contaminants on the surface could reach the aquifer supplying the well. Deeper aquifers that are covered by thicker layers of impermeable soil (e.g., clay) are the least vulnerable to contamination while shallower aquifers covered by thinner layers of permeable soil (e.g., sand) are most vulnerable. The Assessment Report used this information to assign vulnerability scores in each area. Scores are

### In This Region...

As of 2011 there were seven Wellhead Protection Areas:

- Almonte
- Carp
- Kemptville
- Munster
- Merrickville
- Richmond-King's Park
- Westport

As of 2011 there were five Intake Protection Zones:

- Carleton Place
- Perth
- Ottawa (Britannia and Lemieux Island)
- Smiths Falls

Highly Vulnerable Aquifers characterize 89 percent of this region. Significant Groundwater Recharge Areas characterize 13 percent of this region.

For more information about how vulnerable areas were delineated refer to the Assessment Reports (see page 5 for more details). **To view vulnerable areas refer to the Schedules in this Plan.**

highest closest to the well and where the vulnerability is high.

- WHPA-A always receives a vulnerability score of 10 regardless of vulnerability
- WHPA-B can receive a vulnerability score of 6, 8 or 10 depending on the area's vulnerability
- WHPA-C can receive a vulnerability score of 4, 6 or 8 depending on area's vulnerability
- WHPA-D can receive a vulnerability score of 2, 4 or 6 depending on the area's vulnerability

### **Intake Protection Zones**

Intake Protection Zones (IPZ) illustrate where surface water is coming from to supply a municipal intake at a water treatment plant and how fast it is travelling toward the intake. A total of three zones are identified:

- IPZ-1 is a 200 meter radius around or upstream of the intake (with a buffer on land)
- IPZ-2 is the area within which surface water could reach the intake within two hours (with a buffer on land)
- IPZ-3 is the remaining area within which surface water could reach the intake (with a buffer on land)

The Assessment Reports then looked at how vulnerable the intake was to contamination (in deep or shallow water, far or close to shore) and how easily surface contaminants could get into the watercourse (vegetated or hardened surfaces, sloped or flat). These factors, along with travel time from the intake, were used to assign vulnerability scores in each zone. Scores are highest closest to the intake and where the vulnerability is high.

- IPZ-1 can receive a vulnerability score of 9 or 10 depending on the vulnerability of the intake and the area
- IPZ-2 can receive a vulnerability score of 8, 8.1 or 9 depending on the vulnerability of the intake and the area
- IPZ-3 can receive vulnerability scores of 2 to 8 (scores decrease by one every four hour increment from the intake)

### **Highly Vulnerable Aquifers**

In 89 percent of the Mississippi-Rideau region the soil is very thin or completely absent and the underlying bedrock contains large cuts and gaps called fractures. These features make the underlying groundwater very vulnerable to surface contaminants so these areas are called Highly Vulnerable Aquifers. This regional groundwater is the source of drinking water for nearly one quarter of the population who are on private wells.

- Highly Vulnerable Aquifers receive a vulnerability score of 6

### **Significant Groundwater Recharge Areas**

In 13 percent of the Mississippi-Rideau region there are gravel deposits or soil features that allow a significant amount of rain and snowmelt to infiltrate down into groundwater. These areas are

### **What the Scores Mean...**

#### **Areas Scored 8 to 10**

Activities can only be considered a "significant" drinking water threat in areas scored 8 to 10 (except for DNAPLs which are a significant threat anywhere in WHPA-A, B or C). Under the *Clean Water Act*, Source Protection Plans must include policies to address significant threats and only significant threats can be prohibited or made to require a Risk Management Plan. Since areas scored 8 to 10 cover less than 1.5 percent of the Mississippi-Rideau region, most properties will not be affected by the majority of policies in this Plan.

#### **Areas Scored Less Than 8**

No activities (except DNAPLs) can be considered a significant drinking water threat in areas scored less than 8. This means more restrictive policies like prohibition and Risk Management Plans cannot be used in these areas. The only policies in this Plan that apply in these types of areas are:

- Managing waste disposal sites in Highly Vulnerable Aquifers
- Encouraging the wise use of road salt
- Promoting best management practices through education

called Significant Groundwater Recharge Areas and they contribute to the quantity of groundwater available within the Mississippi-Rideau region. Groundwater can also be vulnerable to contamination in these areas depending on the depth and type of soil.

- Significant Groundwater Recharge Areas receive a vulnerability score of 2 to 6 depending on the area's vulnerability

## 2.3 Plan Objectives

Under the *Clean Water Act* the objectives of a Source Protection Plan are:

1. *Protect existing and future drinking water sources in the Source Protection Region.*
2. *Ensure that, for every area identified in the Assessment Report as an area where an activity is or would be a significant drinking water threat:*
  - i. *the activity never becomes a significant drinking water threat, or*
  - ii. *if the activity is occurring when the source protection plan takes effect, the activity ceases to be a significant drinking water threat.*

Section 22(1) of Ontario Regulation 287/07

### Required Policies

The *Clean Water Act* therefore requires Source Protection Plans to include:

- Policies to address all significant drinking water threats

### Other Permissible Policies

The *Clean Water Act* also allows Plans to include:

- Policies to address moderate or low drinking water threats
- General policies like education and incentive programs
- Policies to address transport pathways
- Policies to address Emergency Response Plans

### In This Plan ...

#### Education Everywhere

This Plan uses education to raise awareness about all vulnerable areas and drinking water threats. The policies in Section 4 promote awareness about vulnerable area locations, what people can do to help protect their community's source of drinking water, and what funding is available to help them do it.

#### Significant Threats

In general, the policies in this Plan that address significant drinking water threats:

- Prohibit future activities that pose too high a risk (e.g., DNAPLs) or are unnecessary to locate in a vulnerable area (e.g., gas station)
- Manage all other future activities and all existing activities (no existing activities are prohibited).

#### Moderate and Low Threats

Policies in this Plan address moderate and low threats pertaining to:

- Waste disposal sites because their magnitude warrants careful review in a region where groundwater is highly vulnerable to contamination
- Road salt application because this is an emerging issue that could affect regional groundwater
- Aquaculture because this cannot be considered a significant threat but warrants a policy in case a facility was proposed near a municipal intake

#### Other Permissible Policies

Policies also address:

- Transport pathways (wells, pits and quarries, and earth energy systems)
- Transportation corridors (roadways and recreational waterways)

## 2.4 Policy Tools

The *Clean Water Act* identifies a number of policy tools that can be used to protect source water in vulnerable areas. They range from education and incentives to requiring risk management measures to prohibition. Many of these are existing tools that are already used to regulate development and land uses. Other tools were created by the *Clean Water Act* to help fill regulatory gaps. The Act places limitations on the most restrictive tools (Risk Management Plans and prohibition) to ensure that they are only used to address significant drinking water threats. Below is a description of the policy tools used in this Plan to protect sources of drinking water.

### Education and Outreach

Programs can educate property owners and businesses about how to address drinking water threats on their property. Such programs can be used to address one threat, a group of threats or all threats. Education policies can also be used to complement other policy tools.

### Incentives

Financial incentives or recognition can be offered to those who address drinking water threats on their property. Such programs can also be used to address one threat, a group of threats or all threats and can complement other policy tools.

### Existing Programs or Requirements

Policies can recognize and support existing regulatory programs that already effectively manage drinking water threats (e.g., Ontario's pesticide safety courses and septic maintenance inspection program). Policies can also request that changes be made to strengthen existing programs so that they could be used to address threats in the future (e.g., fuel tank inspections).

### In This Plan...

The policies maximize the use of existing programs and tools to avoid regulatory duplication:

- **Existing Programs:** Where a drinking water threat was already well regulated in a manner that adequately protects source water, no requirements were added. Where there were opportunities to strengthen other regulatory programs so they could be used to adequately protect source water in the future, the Committee recommended such modifications. This could make some source protection policies unnecessary in the future.
- **Prescribed Instruments:** For those drinking water threats the Committee wanted to manage or prohibit, they did so through Prescribed Instruments wherever possible.
- **Section 57 and 58:** For those drinking water threats that could not be managed or prohibited through Prescribed Instruments, the Committee required Risk Management Plans through Section 58 or prohibited through Section 57 of the *Clean Water Act*.

To ensure applicants are aware of applicable source protection policies early in the planning and development processes two approaches are used:

- **Land Use Planning:** Where Prescribed Instrument policies prohibit future drinking water threats (waste disposal sites and some sewage works), a complementary policy requires municipal Official Plans and zoning by-laws to also prohibit the land use.
- **Restricted Land Use:** Where Section 57 or 58 policies prohibit or manage a drinking water threat, a complementary restricted land use policy applies.

## Prescribed Instruments

A “prescribed instrument” is a permit or other legal document issued by the provincial government allowing an activity to take place. Examples include Nutrient Management Plans under the *Nutrient Management Act* and Environmental Compliance Approvals for sewage works under the Ontario *Water Resources Act*. These instruments usually contain provisions to protect human health and the environment. Source protection policies can require that an instrument be examined and amended, if necessary, to better manage a drinking water threat or policies can be prescriptive and specify content to be included in the instrument. Policies can also prohibit new instruments from being issued to prevent the creation of new significant threats.

## Land Use Planning

Municipalities use *Planning Act* tools like Official Plans and zoning by-laws to direct new development to appropriate areas. Municipal planning documents can therefore be amended to prohibit or restrict certain types of new development in vulnerable areas that would create a new drinking water threat. For example, source protection policies could require a municipality to prohibit new waste disposal sites in certain vulnerable areas.

## Risk Management Plans (Part IV, Section 58 of the *Clean Water Act*)

Requiring a Risk Management Plan is a new tool created by Section 58 of the *Clean Water Act*. A Risk Management Plan outlines how a person must manage significant drinking water threats on their property. Policies can specify the content of a Risk Management Plan or the content can be developed jointly by a Risk Management Official and the property owner. One plan can be used to address multiple threats on a single property but plans are only valid for the current property owner. Risk Management Plans recognize current practices that have already been implemented to decrease risk, such as agricultural best management practices. In the event that a property owner and Risk Management Official are unable to negotiate a Risk Management Plan, the Risk Management Official can impose one.

## Prohibition (including Part IV, Section 57 of the *Clean Water Act*)

Policies can prohibit activities in vulnerable areas to eliminate or prevent significant drinking water threats. Prescribed Instruments, land use planning or Section 57 of the *Clean Water Act* can be used to prohibit an activity. Only significant drinking water threats can be prohibited and in the Mississippi-Rideau region, no existing activities (e.g., established businesses) are prohibited.

## Restricted Land Uses (Part IV, Section 59 of the *Clean Water Act*)

This is a new administrative tool that was created by Section 59 of the *Clean Water Act*. It is used to flag applications made under the *Planning Act* or the Ontario Building Code that may be prohibited under Section 57 or require a Risk Management Plan under Section 58 of the *Clean Water Act*. These flagged applications are forwarded to the Risk Management Official to determine if the proposed activity is prohibited or requires a Risk Management Plan. If it is prohibited the application does not proceed, if it requires a Risk Management Plan, the proponent and the official need to establish a plan before the application can proceed.



### KEY CONCEPT ...

**Part IV Powers** refer to new powers under Part IV of the *Clean Water Act* that allow municipalities to require a Risk Management Plan or prohibit activities that are drinking water threats. The municipality may enforce Part IV or they may delegate the enforcement responsibility to another body such as a Health Unit or Conservation Authority. The duties and powers are carried out by a Risk Management Official (similar to a Building Official.)

## 2.5 Legal Effect

The *Clean Water Act* specifies what legal effect each type of policy can have. Under the Act, some policies can be legally binding on implementing bodies while others cannot. The Source Protection Committee highly recommends that non-legally binding policies be given due consideration and be implemented as resources permit in the interest of source water protection. Appendix A contains a list that identifies the legal effect of each policy in the Plan.

### Legally Binding Policies

- Decisions made under the *Planning Act* “must conform with” significant threat policies and “have regard to” moderate and low threat policies.
- Decisions regarding Prescribed Instruments “must conform with” significant threat policies and “have regard to” moderate and low threat policies.
- All other significant threat policies that impose obligations on municipalities, Source Protection Authorities or local boards are legally binding.
- Most monitoring policies that are directed at municipalities, Source Protection Authorities or local boards are legally binding.
- Policies that use Part IV of the *Clean Water Act* to prohibit or manage significant threats are legally binding. Under these policies activities are designated prohibited under Section 57, designated as requiring a Risk Management Plan under Section 58 or designated as subject to Restricted Land Use under Section 59.

### Non-Legally Binding Policies

- Policies that set out recommended actions that public bodies should take in order to meet the Plan’s objectives are not legally binding.
- Significant threat policies directed at bodies other than Provincial Ministries (through Prescribed Instruments), municipalities, Source Protection Authorities or local boards cannot be legally binding.

### In This Plan...

Policy codes were assigned to every policy and the last part of the code indicates the policy’s legal effect:

- The third part of the policy code indicates if the policy is legally binding (**LB**) or non-legally binding (**NLB**) on the implementing body
- If the policy code has a fourth part it indicates if the implementing body must conform with (**MC**) or have regard to (**HR**) the policy.
- If the policy code has a fifth part it indicates what Part IV tool under the *Clean Water Act* is being used. An activity may be prohibited under Section 57 (**S57**), require a Risk Management Plan under Section 58 (**S58**), be subject to restricted land use under Section 59 (**S59**)

## 2.6 Policy Development Process

The Mississippi-Rideau Source Protection Committee was committed to developing policies in an open, transparent and consultative manner. The goal was to develop policies that were not only effective at protecting drinking water sources but were practical and cost-effective to implement and had broad municipal and public support.

The Committee took the following steps to create the policies in this Plan. Additional details are provided in the Summary of Consultation Activities in Appendix E.



## **Step 1: Developing Draft Policies**

The Source Protection Committee worked with municipal staff, sector experts and adjacent Source Protection Committees to generate initial policy ideas.

### Municipal Staff Working Group

- All municipal staff in the Mississippi-Rideau region were invited to participate in a series of “Municipal Working Group” meetings. Five day-long meetings were held in December 2010 and January, February, March and June 2011.
- At these meetings municipal staff reviewed and discussed policy options and indicated their preferred approach for all required policies and some permissible policies.

### Sector Experts

- Many of the policy ideas generated by the municipal working group were vetted through sector experts who are knowledgeable about the land use activity that would be affected (e.g., fuel suppliers, farmers, septic inspectors, municipal public works employees).
- These sector experts provided additional information about how the land use activity may already be regulated and how reasonable, effective and implementable the policy idea would be.

### Adjacent Source Protection Committees

- Policy ideas were also shared with the three neighbouring source protection areas and regions (Cataraqui, Quinte and Raisin-South Nation). Staff from the four areas/regions met regularly to share background information and compare policy ideas.
- The intention was to provide a consistent level of information and where possible, a consistent policy approach for the benefit of those municipalities and other organizations that are shared between more than one source protection area.

The Source Protection Committee reviewed the policy ideas generated by municipal staff and considered the information provided by sector experts. They chose to share these initial draft policies with those who would be affected by them to determine what impact the policies would have and if the policies were reasonable.

## **Step 2: Feedback on Draft Policies**

Draft policies were shared with Source Protection Authorities, municipalities, other agencies identified as possible policy implementers, industry associations and property owners who may be affected by policies and the general public. The goal was to solicit input early in the process so it could reshape, where necessary, the policies that would be included in the draft Source Protection Plan.

### Source Protection Authorities

- Draft policies were presented to the Source Protection Authorities in batches as they were being developed. The policies were endorsed by the Authorities before being circulated to others for comment.

### Municipalities

- In October 2011, all municipalities received a complete set of draft policies for review and comment. Background information and mapping explained how the policies could affect their specific municipality and its residents.
- Municipalities were encouraged to thoroughly review the policies and indicate support or recommend changes for each policy. Municipalities were also asked to indicate if they were willing to undertake the roles and responsibilities that would be assigned to them by the policies.
- Two day-long meetings were held to assist municipalities with their review. One was for members of council and one was for municipal staff. These meetings gave council members and staff an overview of the policies and an opportunity to ask questions and provide feedback.

- Presentations were also made to municipal councils and meetings held with municipal staff as requested. Municipalities were also encouraged to attend the open houses that were held for the general public.

#### Policy Implementers

- In October 2011, all other agencies identified as potential policy implementers (e.g., provincial ministries, federal departments, Health Units, Conservation Authorities) received a copy of the policies that they would be responsible for implementing. Background information and mapping explained how the policies could affect them.
- Implementing bodies were encouraged to review the policies thoroughly and indicate their support or recommend changes. They were also asked to indicate their willingness to implement the policies.
- A day-long meeting was also co-hosted with neighbouring Source Protection Committees, to assist these implementing bodies with their review. The meeting gave implementing bodies an overview of the policies and an opportunity to ask questions and provide feedback. Source protection staff was also available to meet with implementing bodies one-on-one.

#### Industry Associations

- In August 2011, Conservation Ontario mailed letters to a number of provincial and national industry associations who represent sectors that could be affected by source protection policies. These associations were encouraged to contact local Source Protection Committees if they wanted to receive draft policies for review.
- In November 2011, the Mississippi-Rideau Source Protection Committee sent draft policies to all associations who requested them.

#### Potentially Affected Property Owners

- In November 2011, a letter was sent to all property owners where there was the potential for a land use activity that could be considered a significant drinking water threat. The letter explained why and how policies were being developed, what activities could be affected by the policies and what affect the policies could have (e.g., new requirements or restrictions).
- Property owners were encouraged to indicate if activities on their property would be subject to the policies, how the policies would affect them, if they supported the policies or recommended changes, and how their activities may already be governed by other regulations or requirements.
- They were also strongly encouraged to take advantage of stewardship funding that was available to address many of the activities that would be subject to source protection policies.
- Property owners were also invited to contact staff to discuss the policies and/or attend the open houses for the general public.

#### General Public

- In November 2011, four public open houses were held to solicit input from all other interested groups and individuals, including the general public. An overview of the policies was provided and staff and Committee members were available to answer questions and record comments.

All comments received on the draft policies were reviewed and considered by the Source Protection Committee. A number of revisions were made to the policies to address concerns and integrate recommendations. A complete summary of comments received and how they were addressed can be found in Appendix A of the Explanatory Document.

### **Step 3: Draft Source Protection Plan**

Revised policies were compiled into a draft Source Protection Plan. On March 29, 2012, it was posted for a 37 day public comment period.

- Municipalities, other implementing bodies and potentially affected property owners received a letter notifying them about the posting and how to review and comment on the Plan.
- Source protection staff were available to meet with municipalities, other implementers and property owners upon request.
- Four public open houses were held to solicit input and comments from the public and property owners.

All comments received on the draft Plan were considered by the Source Protection Committee who revised the Plan where possible to address concerns and integrate suggestions. A summary of all comments received and how they were addressed is included in Appendix B of the Explanatory Document.

#### **Step 4: Proposed Source Protection Plan**

A proposed version of this Source Protection Plan was posted on June 22, 2012 for a final 32 day public comment period.

- Municipalities, other implementing bodies and people who had submitted comments on the draft Source Protection Plan received a letter notifying them about the posting and how to review and comment on the Plan.

All comments received on the proposed Source Protection Plan were forwarded to the MOECC for their consideration when reviewing the Plan for approval. These comments are included in Appendix C of the Explanatory Document. Recommended revisions provided by the MOECC during their review of the proposed Source Protection Plan and final minor edits and improvements appear in Appendix D of the Explanatory Document.

## **2.7 Explanatory Document**

The goal of the Mississippi-Rideau Source Protection Committee was to work with the local community to create policies that were:

- **Effective** at protecting source water;
- **Practical** to implement;
- **Cost-effective** to implement; and
- **Accepted** broadly.

In deciding whether or not a policy met these guiding principles, the Committee considered a lot of background information and took many factors into consideration. An Explanatory Document, which accompanies this Plan, captures what information and factors influenced policy decisions and the reasons behind each policy.

The explanatory document was prepared by the Source Protection Committee in accordance with Ontario Regulation 287/07. As required, the document describes:

- The process used to develop policies
- Consideration of climate change
- Consideration of financial implications
- Consideration of comments received
- Reasons for each policy

#### **View the Explanatory Document**

It can be viewed online at:

- [www.mrsourcewater.ca](http://www.mrsourcewater.ca)

Electronic copies can also be obtained by contacting:

- Mississippi Valley Conservation Authority at 613-259-2421
- Rideau Valley Conservation Authority at 613-692-3571 or 1-800-267-3504

## 2.8 Future Considerations

When this Plan is reviewed and updated in the future the following items could be considered.

### Ottawa River Watershed

While protecting the whole Ottawa River watershed is beyond the scope of this Plan, many initiatives have been undertaken to establish better information sharing and collaborative decision making among Ottawa River watershed agencies and stakeholders. The goal is to help protect the broader water quality, quantity, and the ecological integrity of the Ottawa River.

Since the formation of the Mississippi-Rideau Source Protection Committee:

- Municipal staff along both sides of the Ottawa River have met to discuss protecting their shared source of municipal drinking water. Information and data have been shared among these municipalities to build a better understanding of vulnerable drinking water areas and potential threats in those areas.
- The Ministries of the Environment for both provinces have also discussed source protection. The ministries have facilitated meetings between ministry and municipal staff from both provinces as well as shared information about the legislative processes established in both provinces to protect drinking water sources. In December 2011, the Province of Quebec introduced a draft regulation that will strengthen source protection for surface water.

This Source Protection Plan will be shared with municipalities, agencies and ministries in Quebec and upstream in Ontario. These bodies will be encouraged to incorporate the information into their spill prevention and contingency plans, and to ensure that procedures are in place to notify the City of Ottawa of any water or land-based spills that could impact that City's drinking water.

### Other Drinking Water Systems

There is a clause in the *Clean Water Act* that allows municipal councils or the Minister of the Environment to include two other types of drinking water systems in the source protection planning process:

- Clusters of six or more private wells or intakes
- Systems that supply public and private facilities (schools, community centres, trailer parks)

Should the Minister of the Environment or local municipalities choose, future versions of the Assessment Report and Source Protection Plan could address these other types of drinking water systems.

### In This Region...

- The Mississippi-Rideau region makes up six percent of the Ottawa River watershed.
- Approved Intake Protection Zones for Ottawa's water treatment plants at Britannia and Lemieux Island end at the provincial boundary between Ontario and Quebec. This is because the *Clean Water Act* has no jurisdiction outside of Ontario. Modelled Intake Protection Zones for these systems extend into Quebec, a preliminary delineation of these areas is shown in the Assessment Reports.

### In This Region...

- There are countless potential clusters of six or more private wells or intakes.
- There are over 600 drinking water systems that supply public and private facilities.

## Climate Change

Under the *Clean Water Act* the Committee could take one of three approaches to address climate change in this Plan:

1. Not addressed — Committees could state in their Explanatory Document that climate change was not considered.
2. Precautionary approach — Committees could err on the side of caution when making decisions about policies given the potential impacts of climate change.
3. Proactive approach — Committees could describe how the policies try to address the added stress climate change could create and state that the policy, as written, helps to proactively address projected climate change impacts on drinking water sources.

The Mississippi-Rideau Source Protection Committee chose the precautionary approach which means the policies in this Plan were developed with climate change considerations in mind (e.g., changing weather trends were discussed when developing the policy for road salt application). In addition, some non-required policies were also included in the Plan to help protect source water in a changing climate (e.g., certain moderate and low threat policies, transport pathways policies).

The Committee also had the ability to include policies governing climate change data collection. No policies were included in this Plan as the Conservation Authorities and a number of other agencies already collect climate related data on an ongoing basis (e.g., stream flow, snow depth and water content, rainfall, air and water temperature).

## In This Region...

Climate change projections show this region will likely experience the following:

- A rise in temperatures in both warm and cold seasons
- Minimum temperatures increasing at a faster rate than maximum temperatures
- Changes in monthly precipitation patterns and amounts
- Increase in evapotranspiration rates
- Increase in weather variability with higher frequency of weather extremes and events

These changes could result in:

- Changes in the delineation of the Intake Protection Zones and Wellhead Protection Areas
- Increased importance of transport pathways
- Water quantity and water quality stresses on some subwatersheds