



THE MUNICIPALITY OF THE COUNTY OF  
LA MUNICIPALITÉ DU COMTÉ DE  
**RICHMOND**

## **Source Water Protection Advisory Committee**

September 2, 2026

6:00 p.m.

Virtual

### **Agenda**

1. Call to Order
2. Approval of Agenda
3. Review of Minutes – June 3, 2026
4. Review updates to the Source Water Protection Plan
5. Discussion on the develop of a new Source Water Protection Plan, using the existing plan and work completed to date as the starting point.
6. Next Meeting Date
7. Adjournment

## **Source Water Protection Advisory Committee**

June 3, 2026

**Location:** Virtual

**Present:** Councillor Brian Marchand, Randy Hussey, Citizen Appointee,  
Dorothy Booher, Citizen Appointee, Tristan Martel, Public  
Works Technologist

**Also Present:** Shelley David, Municipal Clerk, Mike Allen, Watershed  
Planner, Nova Scotia Environment and Climate Change

1. **Call to order**

Randy Hussey called the meeting to order at 6:03 p.m.

2. **Items Added to the Agenda (Approval of Agenda)**

Moved by Councillor Brian Marchand, seconded by Tristan Martel, that the  
agenda be approved.

Motion carried.

3. **Review of the Minutes – March 4, 2026**

Moved by Tristan Martel, seconded by Councillor Brian Marchand, that the  
meeting minutes for March 4, 2026, be adopted.

Motion carried.

4. **Review Updated Terms of Reference**

Moved by Councillor Brian Marchand, seconded by Tristan Martel, that the Source  
Water Protection Advisory Committee approve the changes to the Terms of  
Reference.

Motion carried.

5. **Review of the Source Water Protection Plan**

Moved by Councillor Brian Marchand, seconded by Tristan Martel, that the Source  
Water Protection Advisory Committee approve the amendments to the updated  
Source Water Protection Plan.

Motion carried.



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6. Guest: Mike Allen, Nova Scotia Environment and Climate Change, Watershed Planner

A discussion ensued regarding source water protection. Mr. Allen shared information on his role as Watershed Planner with Nova Scotia Environment and Climate Change and the process for updating the Source Water Protection Plan.

7. Next meeting date:

September 2, 2026, at 6:00 p.m.

8. Adjournment

There being no further business, the chair adjourned the meeting at 7:06 p.m.

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Chairperson

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Municipal Clerk



## **Municipality of the County of Richmond - Water Utility** **Source Water Protection Plan**

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### **1.0 Introduction**

The Municipality of the County of Richmond Water Utility operates two distinct water supply and distribution systems - Louisdale/Evanston/Whiteside Water System and the Arichat/Petit De Grat Water System. The Louisdale/Evanston/Whiteside system has approximately 500 connections and the Arichat/Petit De Grat system has approximately 600 connections. The Louisdale/Evanston/Whiteside Water System employs a groundwater supply in Louisdale and the Arichat/Petit De Grat Water System makes use of a surface water supply which is Babin's Lake in Arichat.

The Richmond Water Utility is required to file a Source Water Protection Plan with the Nova Scotia Department of Environment and Labour as part of Approvals to Operate these two water systems. This document describes various aspects of the proposed plan.

### **2.0 Source Water Protection Advisory Committee**

The Municipality of the County of Richmond Council has endorsed the formation of Water Supply Protection Advisory Committees for the water systems. This committee is composed of members of Municipal Council and Staff, members from the serviced communities at large and other individuals as required. The goals and objectives of the committee are the following:

1. To develop and maintain a source water protection plan and provide the Utility/Municipality and Council with advice on matters related to land-use issues, water quality, levels and flows within the source water protection area.
2. Provide advice to the Utility/Municipality:
  - a. that will attempt to satisfy the water quality and quantity concerns of all stakeholder groups.
  - b. about the sources of contamination in the source water supply area.
  - c. about management options available.
  - d. about the success of the protection plan.

This committee meets a minimum of 3 times per year or as required.



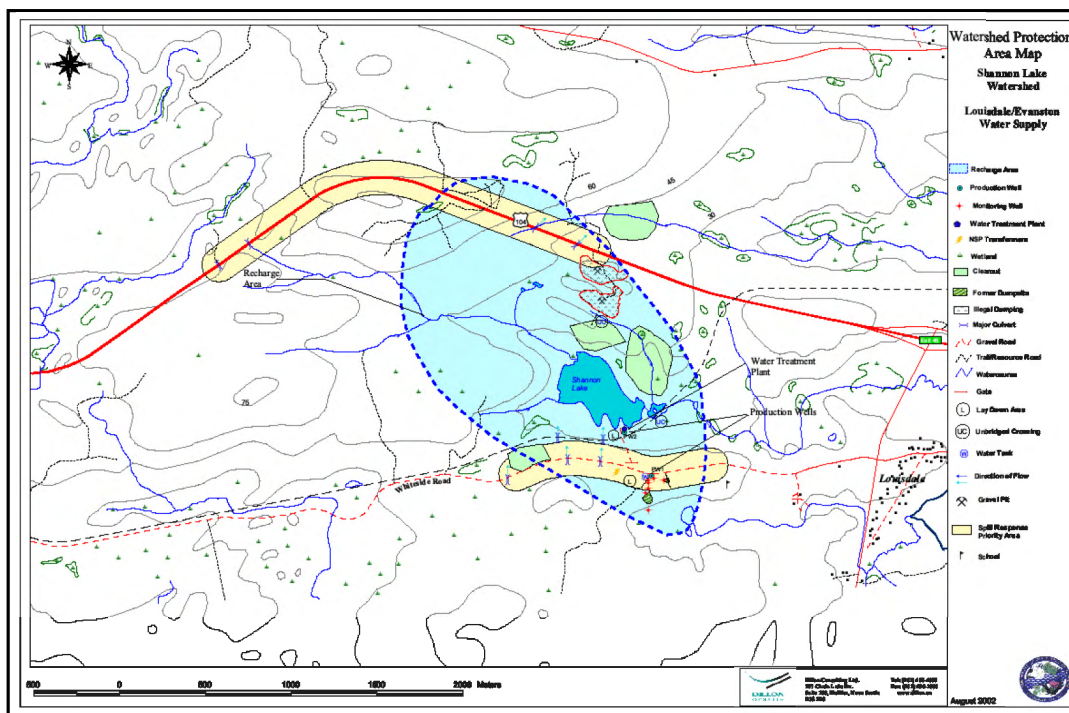
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### **3.0 Delineation of Boundaries of the Supply Area**

The extent of the boundaries for each of the two water systems have been delineated. These limits are shown on the attached Figures 1 and 2 for Louisdale and Arichat, respectively. More detailed maps can be found in Appendix A.

**Figure 1 - Louisdale/Evanston/Whiteside Water Supply Area:**

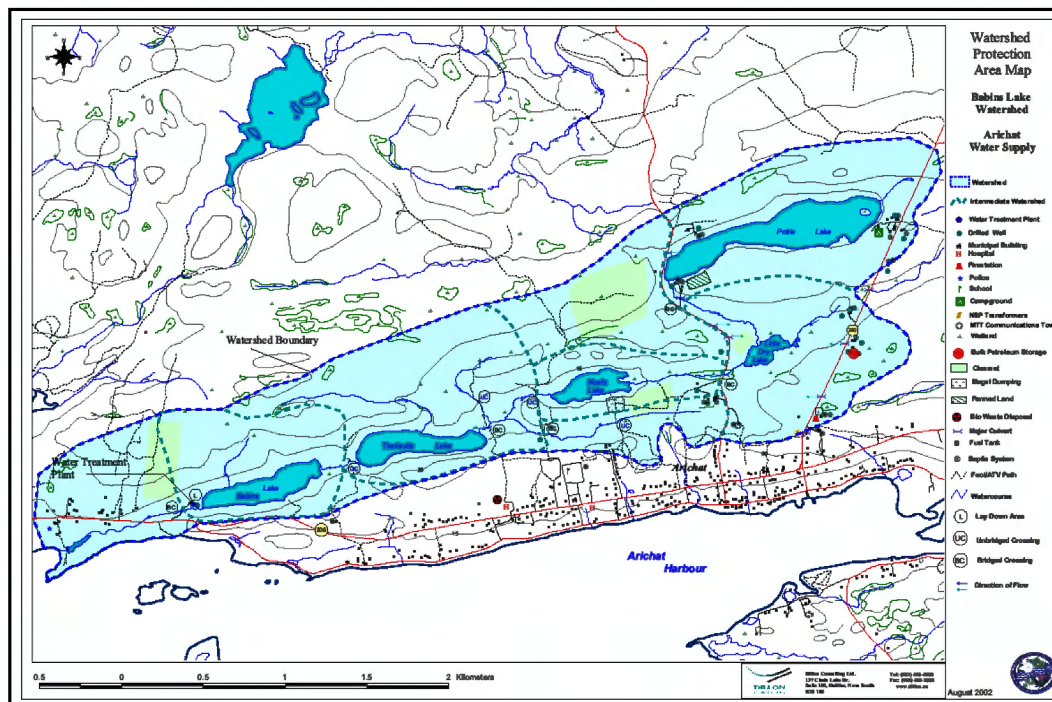




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**Figure 2 - Arichat/Petit de Grat Water Supply Area:**







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#### **4.0 Identification of Potential Threats to Water Supplies**

##### **4.1 Louisdale/Evanston/Whiteside Water Supply Land Use Activity**

Existing land uses within the Louisdale/Evanston/Whiteside Water Supply Area include:

- *clear cutting*
- *passive recreation*
- *gravel mining*
- *all-terrain vehicle recreation*
- *transportation*
- *water treatment*

There are currently no year round residences located within the Watershed Protection Zone. A high school and skating arena are located directly east of the Watershed Protection Zone boundary on Whiteside Road. A large fuel storage tank is located above ground at the rear of the school.

Transportation corridors within the Watershed Protection Area include a portion of the 104 Highway between exits 45 and 46, and Whiteside Road. Nova Scotia Power Inc. cables also run along Whiteside Road. The Department of Transportation currently places no limits on the shipment of materials through the watershed area, along the 104 Highway and/or Whiteside Road. They do not carry out the spraying of pesticides along the transportation corridors within the Watershed Protection Zone. Salting of Whiteside Road extends only as far as the new high school, after which sanding is used to the limit of pavement in Whiteside.

According to the Department of Natural Resources (DNR), they currently do not spray pesticides within the Watershed Protection Zone. However, private industries/owners may do so without the consent of DNR. The most common type of forest spray used is the herbicide known as Vision.

##### **4.2 Arichat/Petit de Grat Water Supply Land Use Activity**

Current land uses within or near the Babin's Lake Watershed Area include:

- *clear cutting*
  - *bulk fuel storage*
  - *Metal fabrication*
  - *water treatment*
  - *all-terrain vehicle recreation*
-



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- *single unit dwellings*
- *residential homes and property*
- *campground*
- *farming*
- *passive recreation*
- *transportation*

Transportation corridors within the watershed area include a portion of Highway 320 between Arichat and D'Escousse, and a portion of Highway 206 between Arichat and West Arichat. The Department of Transportation and Public Works (NSTPW) currently places no limits on the shipment of materials through the watershed area, along the 320 or 206 Highways. They do not carry out the spraying of pesticides along the transportation corridors within the watershed area.

The Nova Scotia Department of Natural Resources (DNR) currently does not spray pesticides within the watershed area, however, private industries/owners may do so without the consent of DNR. The most common type of forest spray currently used is the herbicide known as Vision.

#### **4.3 Potential sources of contamination**

There are a number of activities in these water supply areas that have the potential to generate contaminants. These include, but are not limited to:

- *abandoned wells*
- *forest fire fighting chemicals*
- *dump sites*
- *transportation of bulk fuels*
- *sedimentation*
- *production / other wells*
- *water supply and treatment plants / incorrect chemical dosing*
- *construction activities*
- *vandalism*
- *above ground or underground storage tanks*
- *Metal fabrication activities*
- *fertilizer / pesticide / manure storage / handling / application*
- *major highways and/or railroads*
- *road salt use*
- *septic systems*





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#### **4.4 Potential Emergency Events in the Water Supply Areas**

##### ***4.4.1 Hazardous Material Spill***

Spills of fuel oils or chemicals represent a serious threat to the water supplies. Spills can occur from the following sources:

- Spills from heavy equipment or bulk transport equipment passing through the water supply areas;
- Spills along the recreational pathways within the watershed area, especially in the vicinity of stream crossings;
- Chemical and/or fuel spills at the water treatment plant site;
- Furnace oil spills from private residences within the watershed area;
- Runoff from septic systems within the watershed area; and
- Runoff and/or spills from pesticide and fertilizer use within the watershed area.

The fate of spill material is directly related to the presence/absence of viable pathways to transport contaminants. Factors such as topography, soil and vegetative cover, proximity of streams and watercourses, and the presence of other conduits such as ditches, culverts and wells may not only affect the extent of impact but may cause acceleration of the process.

Where hazardous materials are involved, fires and/or explosions may also cause contaminants to become airborne and be deposited within the water supply area.

##### ***4.4.2 Illegal Dumping***

There are several areas within these water supply areas that are currently used as sites for illicit dumping of waste. This practice could lead to contamination of the ground and surface water supply within the watershed and should be discouraged by the municipality. See Appendix A for historic illegal dumping locations.

##### ***4.4.3 Natural Disasters***

There are a number of natural disasters which could threaten the watershed areas, as well as the water storage and distribution system. These include:



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- **Hurricanes:** High winds and flooding can damage equipment and infrastructure, including power supply, communications and transportation systems. Washed out roads and/or downed power lines can prevent staff and resources from accessing parts of the water system, while flooding can cause sediment laden surface water to contaminate the water supply, especially where wellheads become submerged. The Lennox Passage Bridge is a key element of the local transportation system which may limit access to/from Isle Madame. Any damage to the bridge during a storm would be critical in an emergency response situation.
- **Lightning:** Lightning can damage power supply, communication and control systems.
- **Forest Fires:** Forest fires can damage water system infrastructure, and can also create a large demand on the supply system for firefighting purposes.
- **Flooding:** Flooding at the production wells can create problems where sediment laden water contaminates the water supply. Flooding may also cause well casings and water system piping to bend and become damaged and may result in cross contamination.
- **Extreme Weather:** Extreme heat and cold, along with ice storms, can cause structural damage to storage and distribution elements of the water system, and may also interfere with communications and power supply.

### **5.0 Recommended Methods to Protect the Water Supplies**

#### **5.1 Acquisition of Lands in the Waters Supply Areas**

##### ***5.1.1 Lands in the Source Water Protection 1 Zone***

The Municipal Planning Strategy (MPS) for the Source Water Protection 1 Zone indicates that the Municipality should endeavor to purchase lands within certain zones around the two existing production wells. Specifically, the MPS states the following:

“Policy 4-84: Council shall continue to explore the purchase and acquisition of land within the Shannon Lake Watershed to protect this resource for the long-term future of the municipality.”

It is expected the Municipality will pursue purchase of these lands.



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### ***5.1.2 Lands in the Water Supply (O-3) Zone***

It is not expected that the Municipality will pursue purchase of lands within the entire Arichat/Petit de Grat Water Supply Area. This area is so large and there are so many properties in this area that purchase of these lands is simply not feasible.

### **5.2 Land Use By-Laws in the Water Supply Areas**

Both municipal water supplies have Municipal Planning Strategy and associated Land-Use By-Laws in effect. The following gives some general requirements for each water supply.

#### ***5.2.1 Plan Richmond Land-Use By-Law***

The Shannon Lake Wellhead Protection Areas Land-Use By-Law includes wellhead protection zones and watershed protection zones based on the contents of Dillon's Groundwater Protection Study (September, 2001).

### **Source Water Protection 1 (WP1) Zone**

Permitted Uses - The following uses shall be permitted in Source Water Protection 1 (WP1) Zone subject to the requirements of this By-law:

- a) Government Uses
- b) Parks and Playgrounds
- c) Public Recreation
- d) Trails and Conservation
- e) Water Access

Permitted Uses by Development Agreement - The following uses shall be considered in the Source Water Protection 1 (WP1) Zone by Development Agreement, subject to the applicable policies in the Municipal Planning Strategy:

- a) Energy Generation Systems – MPS Policy 5-56

### **Source Water Protection 2 (WP2) Zone**

Permitted Uses - The following uses shall be permitted in Source Water Protection 2 (WP2) Zone subject to the requirements of this By-law:

- a) Forestry uses – excluding buildings or structures
  - b) Dwelling – up to 1 dwelling unit per lot
  - c) Government Uses
  - d) Parks and Playgrounds
  - e) Public Recreation – excluding buildings or structures
-



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- f) Trails and Conservation
- g) Water Access

Permitted Uses by Development Agreement - The following uses shall be considered in the Source Water Protection 2 (WP2) Zone by Development Agreement, subject to the applicable policies in the Municipal Planning Strategy:

- a) Energy Generation Systems – MPS Policy 5-56

### **5.2.2 Isle Madame Land-Use By-Law**

**The following is outlined in the Water Supply (O-3) Zone:**

#### **Uses Permitted Conditionally**

1. The following uses will be permitted subject to a development agreement being negotiated between the municipality and the developer:
  - Campgrounds
  - Multiple unit dwellings and grouped dwellings

#### **Permitted Uses**

2. The following uses shall be permitted in a Water Supply (O-3) zone:
  - Agriculture uses
  - All uses permitted in the Conservation Open Space (O-2) zone
  - Dwellings, single detached
  - Dwellings, single detached with an apartment unit
  - Existing campground identified on the land use map
  - Existing residential dwellings
  - Logging and silviculture uses
  - Mobile homes
  - Recreational trails
  - Water supply treatment and distribution uses

#### **General Requirements**

3. The requirements in the following table shall apply to all uses permitted in a Water Supply (O3) zone:

Minimum Lot Requirements

|               | Lot Area    | Lot Frontage | Front Yard | Rear Yard | Side Yard |
|---------------|-------------|--------------|------------|-----------|-----------|
| Water & Sewer | 10,000sq.ft | 20 ft.       | 20 ft.     | 20 ft.    | 10 ft.    |



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|                |              |        |        |        |        |
|----------------|--------------|--------|--------|--------|--------|
| Water & Septic | 100,000sq.ft | 20 ft. | 20 ft. | 20 ft. | 10 ft. |
| Well & Septic  | 100,000sq.ft | 20 ft. | 20 ft. | 20 ft. | 10 ft. |

- Minimum lot sizes and some elements relating to configuration are also dependent upon approval by the Provincial Department of Environment and in some instances, by the Provincial Department of Transportation and Public Works. In cases of discrepancy, the more stringent requirements shall apply.

### **Special Requirements: Separation Distances**

4. No development permit shall be issued for any structure within 50 feet of the edge of a lake or watercourse within the Water Supply (O-3) zone, with the exception of water treatment and distribution uses.

### **Special Requirements: Treed Buffer**

5. A treed buffer of 25 feet (7.6 metres) shall be maintained around the edge of the lakes and watercourses which form the watershed of Babins Lake, as identified by the Water Supply (O-3) zone. Paths, walking trails and recreational trails may be cleared within the treed buffer.

### **Special Requirements: Keeping of Farm Animals**

6. Where farm animals are kept in a Water Supply (O-3) zone, the following restrictions shall apply:
  - Such animals shall be kept in an enclosed area, which is surrounded by wire or fencing;
  - no part of such an enclosed area or building used for housing farm animals shall be located within 50 feet (12.2 metres) of a neighbouring residence; and
  - the animals present in an agricultural operation shall total no more than one and one-half animal units (as defined in Part 5, Section 16) for each acre of land or part thereof enclosed for such purposes).

### **Special Requirements: Storage of Manure and Pesticides**

7. Where manure or pesticides are stored within the Water Supply (O-3) zone, the following restrictions shall apply:
  - Manure storage facilities shall be constructed in compliance with the Department of Agriculture and Marketing "Guidelines for the Management and Use of Animal Manure in Nova Scotia" or other guidelines or regulations which may replace them. Confirmation of this compliance will be required from the Department of Agriculture and Marketing; and
  - pesticide storage facilities shall be constructed in compliance with whatever provincial guidelines may exist at the time. Confirmation of this compliance will



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be required from the provincial department or agency which is responsible for administering these guidelines.

### **Special Requirements: Multiple Units and/or Grouped Dwellings**

8. Where multiple unit dwellings and/or grouped dwellings are permitted within the Water Supply (O-3) zone, the following restrictions shall apply:
  - The development is serviced by central municipal water and sewer services;
  - The installation of underground or above ground heating oil storage tanks shall be prohibited; and
  - Oil storage tanks larger than 25 litres shall not be permitted.

### **5.3 Emergency Response Planning**

The Municipality has drafted detailed Emergency Response Plans to enable the Municipal Staff to prepare for and react to foreseeable emergency incidents that might threaten the water supply areas. These Plans are available for viewing and are updated on an annual basis. An Executive Summary for these plans is provided at the end of this document.

### **5.4 Provincial Water Supply Designation**

#### ***5.4.1 Source Water Protection 1 Zone & Source Water Protection 2 Zone***

The Municipal Planning Strategy for the Plan Richmond indicates that the Municipality should work towards the designation of WP-1 & WP-2 as a Public Water Supply Area under the Environment Act. The following related policies were adopted:

*Policy 4-83: Council shall collaborate with the Province of Nova Scotia to designate the lands around the wellhead for the municipal water supply for the communities of Louisdale, Evanston, and Whiteside as a "Protected Water Supply Area." Specifically, this area should encompass the groundwater draw down area for the Production Well #1 and Production Well #2 as delineated by Dillon Consultants (Groundwater Protection Study Louisdale Wellfield – Louisdale, Nova Scotia, 2001) and the watershed for Shannon Lake.*





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### ***5.4.2 Arichat/Petit de Grat Water Supply Area Designation***

There are currently no plans to work towards a Public Water Supply designation under the Environment Act for the Arichat/Petit de Grat Water Supply. However, the Water Supply Protection Advisory Committee will likely examine this option.

## **5.5 Education**

The Municipality recognizes that education is a key component of any Source Water Protection Plan. There are three key areas that education is currently carried out:

- a) water supply boundary signs*
- b) letters to property owners in the water supply areas*
- c) water supply and watershed protection information displayed on the municipal website*

Municipal Staff has posted signs at the boundaries of the two water supply areas where these boundaries intersect with transportation corridors. These signs indicate the boundary of a water supply area and provide emergency contact information should a person witness an incident that may threaten the water supply. The layout of these signs is depicted in Figure 3 below.



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**Figure 3 - Water Supply Sign:**



In addition to posted signs, Municipal Staff has sent letters to owners of properties located within the water supply areas. These letters serve to remind property owners that they are within the water supply area and advise these owners to take precautions to protect the supply. *Figure 4* shows a typical letter.

Municipal staff has included water supply and watershed protection information on the Municipal website [www.richmondcounty.ca](http://www.richmondcounty.ca). The website provides people with detailed information on the two municipally operated water systems including such topics as supply, treatment methods, monitoring criteria, emergency contact information, and mapping. To



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find the said information on the website click on the ***Public Works*** tab, then ***Municipal Water*** sub tab, and lastly the ***Information on Water Supply Areas*** tab.

### **6.0 Monitoring and Evaluation of the Plan**

This Source Water Protection Plan is to be updated on an annual basis. It is proposed that the plan will be reviewed each year by Municipal Staff and the members of the Water Supply Protection Committee. The review process should include the following items:

- significant negative changes in raw water sampling data
- review of land use activities
- changes to water supply infrastructure
- introduction of new legislation

In addition to monitoring the water supply area through water quality sampling, the Municipality should undertake visual monitoring of the water supply areas. For example, periodic inspection of the areas (by drive-by or walkthrough) can identify potential water quality problems or other potentially harmful activity. This may help identify activities that are in violation of bylaws and regulations put in place to protect water quality.



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### ***Figure 4 - Typical Letter to Homeowner in Water Supply Area:***

November 4, 2003

Dear Sir or Madam:

Richmond County Public Works would like to remind you that your property is located in the Arichat / Petit de Grat Watershed Recharge Area. We have erected signs on the approximate boundaries of the watershed depicting emergency phone numbers and the watershed boundary map for that area.

We note that you are responsible to control and pay for cleanup of any spills and releases from your property in accordance with the Nova Scotia Environment Act. We request that you make sure your heating fuel storage tank is in good condition, so that any leaks or spills that may potentially contaminate the water supply can be prevented. If you have an on-site sewage disposal system, we ask that you ensure that it is properly operated and maintained. We also request that you take extra care if you possess any other means of fuel or chemical storage on your property.

Richmond County Public Works Department is dedicated to the preservation and protection of the Arichat / Petit de Grat Watershed, and we would appreciate your cooperation in helping us provide safe drinking water to the residents of Arichat and Petit de Grat. If you have any question please call the Municipal Office in Arichat at 226-2400.

**IF YOU ENCOUNTER A CHEMICAL OR FUEL SPILL, PLEASE CALL ONE OF THE FOLLOWING PHONE NUMBERS:**

**1-800-565-1633 OR 226-2400**

Sincerely,

Jason Mac Millan CET  
Engineering Technologist



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### **Water Supply Emergency Response Plan**

#### **Executive Summary**

This Emergency Response Plan will serve as a tool and a resource in the event of an incident which threatens the water supply system and its recharge area. The intention of the plan is to make provision for a rapid, systematic and effective response to any emergency which threatens the recharge area. This emergency response plan contains information on available emergency response resources, both personnel and equipment, and also outlines a response procedure and responsibilities, including key emergency response personnel and associated contact information.

**Organizations** involved in an emergency response in the Louisdale/Evanston Watershed Protection Area may include the following, depending on the severity of the situation:

- The Municipality of the County of Richmond;
- The Louisdale/Arichat Volunteer Fire Department;
- The Nova Scotia Department of Environment and Labour;
- The Nova Scotia Department of Transportation and Public Works;
- The Nova Scotia Department of Natural Resources;
- The Cape Breton HazMat Team;
- Point Tupper Marine Services;
- The Canadian Coast Guard;
- Local Emergency Measures Organization (EMO);
- Local Contractors;
- Local Equipment and Service Providers; and/or
- RCMP/Ambulance.

The response effort will be lead by the **Municipality's Response Team** which will be comprised of:

#### **1. Response Team Leader**

The responsibilities of the **Response Team Leader** will include but are not limited to:

- Notification
- Evaluation and Response Coordination
- Documentation
- Post Emergency Monitoring
- Updating



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### **2. The Site Health and Safety Officer**

The responsibilities of the **Site Health and Safety Officer** will include but are not limited to:

- selecting and maintaining protective clothing and equipment;
- monitoring on-site hazards and conditions; and
- knowing emergency procedures, evacuation routes, and telephone numbers of the ambulance, local hospital, poison control centre, fire department and police department.

### **3. The Public Relations Contact**

The **Public Relations Contact** will be the only communication link between the Municipality and the public/media. Any public statements or announcements regarding the emergency response will be made by the **Public Relations Contact**, upon direction of the **Response Team Leader**.



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# Appendix A