

AGENDA

Mississippi-Rideau Source Protection Committee

Date: July 7, 2011
Time: 4 pm
Location: Carleton Place Arena
 75 Neelin Street, Carleton Place

Welcome and Introductions		
1.0	a. Agenda Review b. Notice of Proxies c. Adoption of the Agenda (D) d. Declarations of Interest e. Approval of Minutes – June 2, 2011 (D) ▶ draft minutes attached as a separate document f. Status of Action Items – Staff Report Attached (D) g. Correspondence – None	Pg. 1 <i>Chair Stavinga</i>
Source Protection Plan		
2.0	Source Protection Plan Development – Staff Report Attached (D) Staff will update members on policy development progress	4 <i>Sommer Casgrain-Robertson</i>
3.0	Draft Policy Ideas – Staff Reports Attached (D) Members will consider approving draft policy concepts for the following drinking water threats and directing staff to undertake early engagement: a. Sewage Works (e.g. large septic systems, sanitary sewers, sewage treatment plant, stormwater, industrial effluent)	12 <i>Sommer Casgrain-Robertson</i>
Other		
4.0	Community Outreach – Staff Report Attached (D) Members & staff report on past activities and upcoming events and opportunities	24 <i>Sommer Casgrain-Robertson</i>
5.0	Other Business	<i>Chair Stavinga</i>
6.0	Member Inquiries	<i>Chair Stavinga</i>
7.0	Next Meeting – August 4, 2011, 4pm Almonte and District Community Centre 182 Bridge Street, Almonte	<i>Chair Stavinga</i>
8.0	Adjournment	<i>Chair Stavinga</i>

(I) = Information (D) = Decision

Delegations: If you wish to speak to an item on the Agenda please contact Sommer Casgrain-Robertson before the meeting (sommer.robertson@mrsourcewater.ca or 613-692-3571 / 1-800-267-3504 x 1147)

1.0 f) STATUS OF ACTION ITEMS

Date: June 23, 2011
To: Mississippi-Rideau Source Protection Committee
From: Sommer Casgrain-Robertson, Co-Project Manager
Mississippi – Rideau Source Protection Region

Recommendation:

That the Mississippi-Rideau Source Protection Committee receive the Status of Action Items staff report for information.

Staff & Chair Action Items:

Issue		Action	Lead	Status
1	Salvage Yards	A member asked why private salvage yards are not identified as a waste disposal site in the provincial threats list	Mary Wooding	In Progress MOE will look into why salvage yards are not identified in the threats list.
2	Road Salt	A member indicated that road salt contaminated groundwater in an area with 45% impervious surface	Mary Wooding	Complete MOE is not considering changing the circumstances in the threats tables for this round of planning. For the next round of planning, the SPC can recommend that the MOE review the effectiveness of 80% impervious surface being the significant threat circumstance for road salt application.
3	Home Heating Oil	Local fuel distributor and insurance experts indicated that outdoor storage tanks are much more prone to leaks than indoor tanks.	Mary Wooding	Complete MOE is not considering changing the circumstances in the threats tables for this round of planning. For the next round of planning, the SPC can recommend that the MOE review the effectiveness of basement tanks > 250 litres and outdoor above grade tanks > 2500 litres being the significant threat circumstances for fuel oil storage.

Issue		Action	Lead	Status
4	Mine Tailings	A member indicated that mine tailings ponds were exempt from requiring a Waste Certificate of Approval	Mary Wooding	In Progress MOE will confirm whether or not mine tailing ponds require a Waste Certificate of Approval – this will affect what policy tools can be used to manage or prohibit them.
5	O. Reg 903	A member suggested O. Reg 903 be added as applicable law under Ontario's Building Code	Patricia Larkin	In Progress Staff and members are working on a draft motion to be considered by the Committee at a future meeting
	Vacant "City of Ottawa" seat on the MRSPC	Fill the vacancy on the MRSPC	City of Ottawa staff	In Progress City of Ottawa staff are in the process of filling this seat
6	Ottawa River Watershed Inter-Jurisdictional Committee	Encourage MOE to take the lead role in establishing an Ottawa River watershed inter-jurisdictional committee	Chair Stavinga & Brian Stratton	Ongoing Baird completed a proposal to revise Ottawa's IPZ-2s and delineate IPZ-1s and IPZ-2s for Gatineau's intakes. Chair Stavinga has provided this proposal to the MOE for their preliminary review and input.
7	Uranium	MVC and local Health Units work together to raise public awareness about naturally occurring uranium in drinking water	Sommer Casgrain-Robertson	In Progress Health Canada released a "Uranium and Drinking Water" fact sheet. It is available on their website at http://www.hc-sc.gc.ca/ewh-semt/pubs/water-eau/uranium-eng.php
8	Compensation Models	Staff to collect other compensation models (e.g. Ottawa wetland policy, Alternate Land Use Services).	Sommer Casgrain-Robertson	In Progress Staff will build this in to the Source Protection Plan work plan.

MRSPC Member Action Items:

Issue		Action	Lead	Status
1	Members were concerned that attendance might be low at public open houses and groups who should be involved in the process are not	Members were asked to provide Sommer with contact information for groups they feel should be involved in the process – they will be added to our mailing list.	All Members	Ongoing

2	OFEC Conference Calls & Training Sessions	Richard Fraser will provide the MRSPC with updates on OFEC conference calls & training sessions	Richard Fraser	Ongoing
3	Community Outreach opportunities	Members to notify Sommer of potential events and opportunities to engage the public about source protection	All members	Ongoing

2.0 Source Protection Plan Progress

Date: June 23, 2011
To: Mississippi-Rideau Source Protection Committee
From: Sommer Casgrain-Robertson, Co-Project Manager
Mississippi – Rideau Source Protection Region

Recommendation:

That the Mississippi-Rideau Source Protection Committee receive the Community Outreach staff report for information.

Background

Across Ontario, Source Protection Committees (SPC) are working with municipalities, farmers, property owners, businesses, industries, First Nations, environmental groups, Provincial Ministries and the general public. Together they are developing policies to prevent the contamination and overuse of lakes, rivers and aquifers that supply drinking water.

2006 to 2010

Source Protection Committees completed **Assessment Reports** that:

- Mapped local sources of drinking water (primarily municipal drinking water);
- Determined how vulnerable these sources could be to contamination; and
- Identified types of land use activities that could pose a contamination risk

2011 to 2012

Source Protection Committees must now develop **Source Protection Plans**:

- Plans must contain policies that protect local sources of drinking water (primarily municipal drinking water)
- Policies will be implemented in areas where drinking water sources are vulnerable
- Policies will address those land use activities that pose a contamination risk

Where Will Policies Apply?

Land use activities can only be considered drinking water threats if they are taking place in a vulnerable area. There are four types of vulnerable areas:

- Wellhead Protection Areas
 - vulnerable area around a municipal well
- Intake Protection Zones
 - vulnerable area upstream of a municipal surface water intake
- Highly Vulnerable Aquifers
 - Areas where groundwater is vulnerable to surface contaminants
- Significant Groundwater Recharge Areas
 - Areas where high amounts of groundwater infiltration takes place

Land use activities can only be considered a significant drinking water threat if they are taking place in the most vulnerable parts of a:

- **Wellhead Protection Areas**; or
- **Intake Protection Zones.**

These are typically areas closest to the municipal well or intake.

Only 3% of the Mississippi Rideau region is considered vulnerable enough to produce significant threats. Maps of these areas are in the Assessment Reports which are available from staff or on our website at www.mrsourcewater.ca (Assessment Report page).

Source Protection Plans:

- Must contain policies to address significant drinking water threats; and
- May contain policies to address moderate and low drinking water threats.

What is Considered a Threat?

The province has determined that under certain circumstances the following land use activities can be considered drinking water threats if occurring in certain vulnerable areas:

- **Waste** disposal sites (including the application of untreated septage to land)
- **Sewage** storage, treatment, transmission or disposal
- **Agricultural source material** (e.g. manure) storage, management or application
- **Non-agricultural source material** (e.g. biosolids) storage, handling or application
- **Farm animal** pasturing, grazing, outdoor confinement areas or farm yards
- **Fertilizer** storage, handling or application
- **Pesticide** storage, handling or application
- **Fuel** storage or handling
- **Dense Non-aqueous Phase Liquids** (DNAPLSs) storage or handling
- **Organic solvents** storage or handling
- **Road salt** storage, handling or application
- **Snow storage**
- **Airplane de-icing**

To be a threat most of these activities must involve a minimum amount of material, be occurring on a minimum size area and/or involve a certain type of chemical. These threat criteria or “circumstances” are listed in provincial tables accessible on the “Assessment Report” page of our website (www.mrsourcewater.ca)

What are the Policy Tools?

While most source protection policies will manage land use activities that have the potential to contaminate drinking water, prohibition can be used as a tool of last resort to address significant drinking water threats. All policies will undergo thorough public consultation at various draft stages.

Policies to address drinking water threats can use one or more of the following tools. Some tools can only be used to address significant drinking water threats.

Policy Tools	Address Significant Threats	Address Moderate & Low Threats
Education & Outreach	√	√
Incentives	√	√
Other*	√	√
Land Use Planning	√ Must conform	√ Have regard for
Prescribed Instruments	√ Must conform	√ Have regard for
Risk Management Plans	√	X
Prohibition (under <i>Clean Water Act</i>)	√	X

* “Other” policy tools include:

- Specify Actions (that would help implement the Plan or achieve it’s objectives)
- Stewardship Programs, Best Management Practices, Pilot Programs, Research

How Will Policies Be Developed?

In the Mississippi-Rideau region, source protection plans will be developed in five stages (a policy development flowchart is attached):

1. Draft Policy Ideas:
 - o Municipal staff, SPC members, sector experts and staff will develop policy ideas
 - o These ideas will be considered by the SPC when developing Draft Policy Concepts
2. Draft Policy Concepts
 - o Staff will seek input from people/bodies who would be affected by the policy concepts and who have been tasked with implementing the policy concepts
 - o This input will be considered by the SPC when developing Draft Policies
3. Draft Policies
 - o Staff will seek formal comments from people/bodies who have been tasked with implementing the policies
 - o These comments will be considered by the SPC when finalizing Draft Policies
4. Draft Source Protection Plans
 - o Draft Policies will be compiled into Draft Source Protection Plans
 - o Plans will be posted for a 35 day public comment period
 - o At least two public meetings will be held to solicit comments
 - o All comments will be considered by the SPC when developing Proposed Policies
5. Proposed Source Protection Plans
 - o Proposed Policies will be compiled into Proposed Source Protection Plans
 - o Plans will be posted for a 30 day comment period
 - o All comments will be submitted to the MOE for their consideration when reviewing Proposed Source Protection Plans for possible approval

Proposed Source Protection Plans must be submitted to the Minister of the Environment by August, 2012. The following is a general policy development schedule.

		2011												2012							
	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A
Policy Ideas																					
Policy Concepts																					
Draft Policies																					
Draft Plans																					
Proposed Plans																					

Policy Development Progress

As policy concepts are developed for each drinking water threat, the attached tables will be used to track:

- Policy Development Progress
- Potential Policy Effect (encourage, manage or prohibit activities)

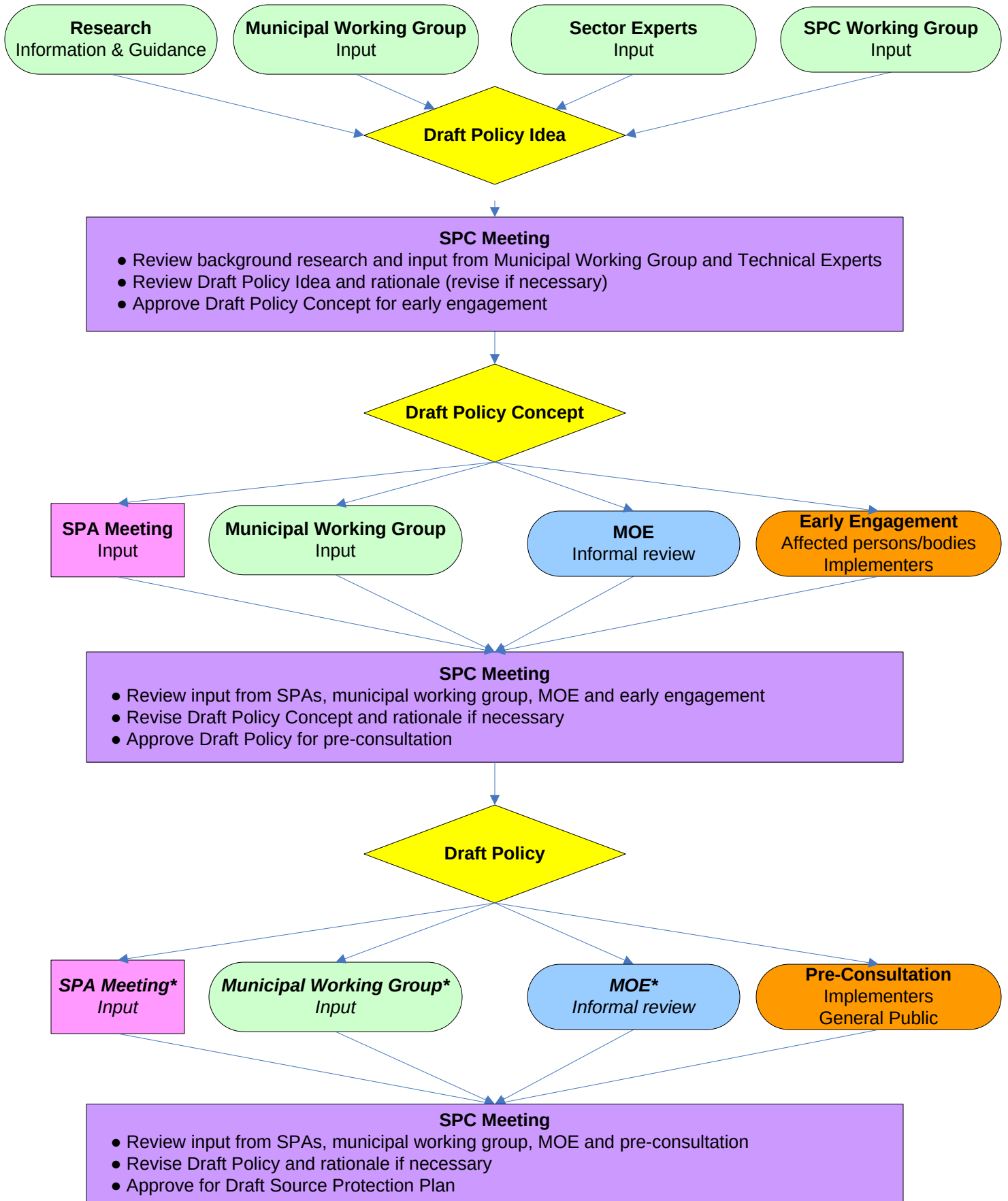
In the coming months, additional tables will be added to track:

- Potential Policy Tools (e.g. education, land use planning, risk management plan)
- Potential Policy Implementers (e.g. provincial ministries, health units, municipalities)
- Potential Municipal Responsibilities (for each individual municipality)

Attachments:

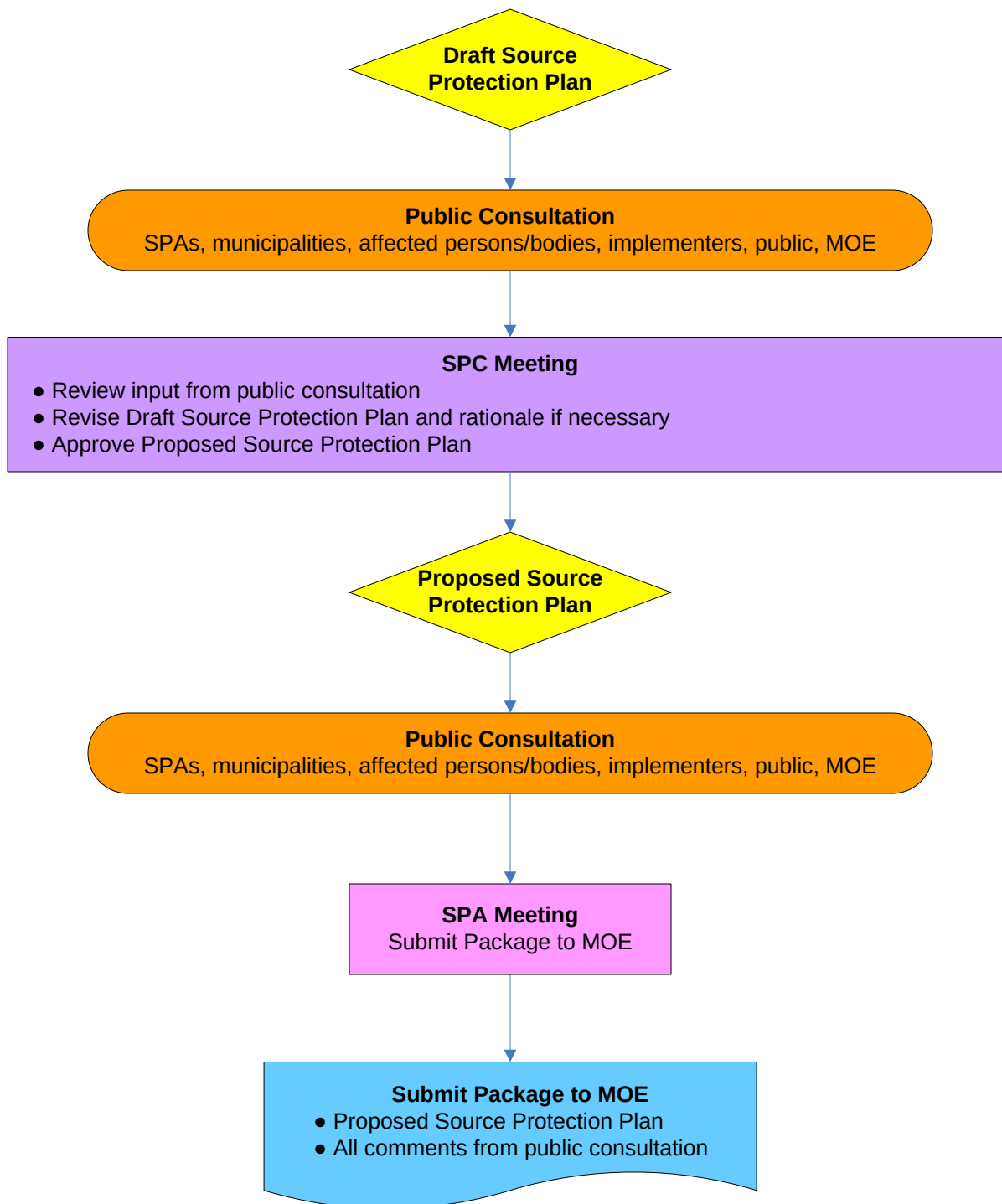
- Policy Development Process
- Draft Policy Concepts: Policy Development Progress
- Draft Policy Concepts: Potential Policy Effect

Source Protection Plan Policy Development Process



* Only if different from Draft Policy Concept

Continued on next page...



Policy Development Progress
Dated: June 23, 2011

Drinking Water Threats		Municipal Working Group (generate policy ideas)	Sector Experts (generate policy ideas)	SPP Working Group (generate policy ideas)	Draft Policy Concept	SPA Meeting (review draft policy concepts)	MOE (review draft policy concepts)	Municipal Working Group (review draft policy concepts)	Policy Implementers (review draft policy concepts)	Affected People (review draft policy concepts)	Draft Policy	Pre-Consultation (policy implementers & public)	Draft SPP Policy	Draft SPP (post for public consultation)
Waste	Application of untreated seepage to land	✓	✓	✓	✓	✓	✓	✓						
	Storage, Treatment and Discharge of Tailings from Mines	✓	✓	✓	✓	✓	✓	✓						
	Landfarming of Petroleum Refining Waste	✓	✓	✓	✓	✓	✓	✓						
	Liquid Industrial Waste Injection into a Well	✓	✓	✓	✓	✓	✓	✓						
	PCB Waste Storage	✓	✓											
	Landfilling (Hazardous Waste)	✓	✓	✓	✓	✓	✓	✓						
	Landfilling (Municipal Waste)	✓	✓	✓	✓	✓	✓	✓						
	Landfilling (Solid Non Hazardous Industrial or Commercial)	✓	✓	✓	✓	✓	✓	✓						
	Storage of Hazardous Waste at Disposal Sites	✓	✓	✓	✓	✓	✓	✓						
	Storage of Wastes described in clauses...of the definition of hazardous waste	✓	✓	✓	✓	✓	✓	✓						
Sewage	Discharge of Untreated Stormwater from a Stormwater Retention Pond	✓	✓	✓										
	Sanitary Sewers and Related Pipes	✓	✓	✓										
	Sewage Treatment Plant Effluent Discharges Including Lagoons	✓	✓	✓										
	Storage of Sewage (e.g. Treatment Plant Tanks)	✓	✓	✓										
	Combined Sewer Discharge from a Stormwater Outlet to Surface Water	✓	✓	✓										
	Sewage Treatment Plant Bypass Discharge to Surface Water	✓	✓	✓										
	Industrial Effluent Discharge	✓	✓	✓										
	Septic System / Holding Tank - large	✓	✓	✓										
	Septic System / Holding Tank - small	✓	✓	n/a	✓	✓		✓	✓					
ASM	Application	✓	✓											
	Storage	✓	✓											
NASM	Application	✓	✓											
	Handling and Storage	✓	✓											
Fertilizer	Application	✓	✓											
	Storage	✓	✓											
Pesticide	Application	✓	✓											
	Handling and Storage	✓	✓											
Road Salt	Application	✓	✓	✓	✓		✓	✓						
	Handling and Storage	✓	✓	✓	✓		✓	✓						
Snow	Storage	✓	✓	✓	✓		✓	✓						
Fuel	Handling and Storage - fuel oil	✓	✓	✓	✓	✓	✓	✓						
	Handling and Storage - liquid fuel	✓	✓	✓	✓		✓	✓						
DNAPLs	Handling	✓												
	Storage	✓												
Organic Solvent	Handling	✓												
	Storage	✓												
De-Icing		✓	n/a	✓	✓		✓	✓						
Livestock	Management or Handling of ASM Generation (grazing and pasturing)	✓	✓											
	Management or Handling of ASM Generation (farm-yards or outdoor confinement areas)	✓	✓											

March, 2012

✓	Task completed
✓	Task completed since last Source Protection Authority meeting

Draft Policy Concepts: Potential Policy Effect

Drinking Water Threats		Significant Threats	Encourage	Manage	Prohibit	Moderate / Low Threats	Encourage (across entire HVA)	Encourage (within portions of WHPA / IPZ)
Waste	Application of untreated septage to land	✓		F		F		
	Storage, Treatment and Discharge of Tailings from Mines	✓						
	Landfarming of Petroleum Refining Waste	✓		F		F		
	Liquid Industrial Waste Injection into a Well	✓		F		F		
	PCB Waste Storage	✓						
	Landfilling (Hazardous Waste)	✓		F		F		
	Landfilling (Municipal Waste)	✓		F		F		
	Landfilling (Solid Non Hazardous Industrial or Commercial)	✓		F		F		
	Storage of Hazardous Waste at Disposal Sites	✓		F		F		
	Storage of Wastes described in clauses...of the definition of hazardous waste	✓		F		F		
Sewage	Discharge of Untreated Stormwater from a Stormwater Retention Pond	✓						
	Sanitary Sewers and Related Pipes	✓						
	Sewage Treatment Plant Effluent Discharges Including Lagoons	✓						
	Storage of Sewage (e.g. Treatment Plant Tanks)	✓						
	Combined Sewer Discharge from a Stormwater Outlet to Surface Water	✓						
	Sewage Treatment Plant Bypass Discharge to Surface Water	✓						
	Industrial Effluent Discharge	✓						
	Septic System / Holding Tank - large	✓						
ASM	Septic System / Holding Tank - small	✓	E,F	E,F				
	Application	✓						
NASM	Storage	✓						
	Application	✓						
Fertilizer	Handling and Storage	✓						
	Application	✓						
Pesticide	Storage	✓						
	Application	✓						
Road Salt	Handling and Storage	✓	E,F	F		E, F		
	Application	✓						
Snow	Storage	✓	E,F	F		E,F		
	Handling and Storage - fuel oil	✓	E,F				E,F	
Fuel	Handling and Storage - liquid fuel	✓	E,F	F			E,F	
	Handling	✓						
DNAPLs	Storage	✓						
	Handling	✓						
Organic Solvent	Storage	✓						
	Handling	✓						
De-Icing	Storage	✓		F				
Livestock	Management or Handling of ASM Generation (grazing and pasturing)	✓						
	Management or Handling of ASM Generation (farm-yards or outdoor confinement areas)	✓						

- E Indicates potential policy effect for "existing" significant drinking water threats
- F Indicates potential policy effect for "future" significant drinking water threats
- ✓ Indicates public education will be used to encourage best management practices for all threat subcategories

3.0a Draft Policy Ideas: Sewage Works

Date:

To: Mississippi-Rideau Source Protection Committee
From: Sommer Casgrain-Robertson, Co-Project Manager
Mississippi – Rideau Source Protection Region

Recommendation 1:

That the Mississippi-Rideau Source Protection Committee approve the Draft Policy Ideas for Sewage Works and direct staff to undertake early engagement with potentially affected persons and bodies.

Background

Drinking Water Threats

Certain land use activities involving chemicals or pathogens (e.g. bacteria) are considered a significant drinking water threat if they take place close to a municipal well or upstream of a municipal water treatment plant intake. This is because a leak, spill or runoff could soak into the ground and contaminate groundwater or runoff property and contaminate a lake or river. If this happened near a municipal well or intake, municipal drinking water could become contaminated. Source Protection Committees must write policies to address these activities.

The province has determined that under certain circumstances the following land use activities are considered drinking water threats. To be a threat most of the activities below must involve a minimum amount of material, be occurring on a minimum size area and/or involve a certain type of chemical. All these threat “circumstances” are listed in a provincial table accessible from the “Assessment Report” page of our website (www.mrsourcewater.ca).

The provincial drinking water threat categories are:

- o Waste disposal sites
- o **Sewage collection, storage, transmission, treatment or disposal**
- o Agricultural source material (e.g. manure) storage, management or application
- o Non-agricultural source material (e.g. biosolids) storage, handling or application
- o Farm animal pasturing, grazing, outdoor confinement areas or farm yards
- o Fertilizer storage, handling or application
- o Pesticide storage, handling or application
- o Fuel storage or handling
- o Dense Non-aqueous Phase Liquids (DNAPLs) storage or handling
- o Organic solvents storage or handling
- o Road salt storage, handling or application
- o Snow storage
- o Airplane de-icing

Sewage Works

This staff report discusses the establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage. It provides:

- o Background information about this significant drinking water threat; and
- o Draft policy ideas for how it could be addressed in a Source Protection Plan.

The Threat

As noted above (in bold), one of the provincial threat categories is sewage, specifically:

- The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage (hereafter referred to as “sewage works”)

This staff report proposes draft policy ideas for the eight sewage threat subcategories.

They are:

1. Untreated stormwater from a stormwater retention pond
2. Sanitary sewers and related pipes
3. Sewage treatment plant effluent discharges (including lagoons)
4. Storage of sewage (such as in sewage treatment plant tanks)
5. Combined sewer discharge from a stormwater outlet to surface water
6. Sewage treatment plant bypass discharge to surface water
7. Industrial effluent discharges
8. Septic systems and holding tanks (large systems that are regulated under the *Ontario Water Resources Act*)

A previous staff report (March 3, 2011 agenda) proposed draft policy ideas for small, residential septic systems regulated under the *Building Code Act*.

Definitions

1. Untreated stormwater from a stormwater retention pond: Stormwater means rainwater runoff, water runoff from roofs, snowmelt and surface runoff. A stormwater pond provides quantity and quality control by capturing excess runoff and allowing time for settling of suspended pollutants. Despite the name of the subcategory, the Ministry of the Environment has confirmed that this threat does also include stormwater discharge through the stormwater system without a pond.
2. Sanitary sewers and related pipes: These are pipes and related infrastructure (such as pumps) that collect sanitary waste from serviced buildings in an area.
3. Sewage treatment plant effluent discharges (including lagoons): All sewage treatment plants release treated wastewater that is called effluent. This effluent can be directly released to a watercourse or waterbody. Effluent from a lagoon is usually scheduled for release during high flows.
4. Storage of sewage: Many sewage treatment plants have sewage storage tanks as part of the treatment process.
5. Combined sewer discharge from a stormwater outlet to surface water: In older parts of urban areas there are sometimes pipes that convey both stormwater and sanitary waste. Under normal conditions these two waste streams remain separate (i.e. the stormwater flows to watercourses or water bodies and the sanitary waste enters a sewage treatment plant). However, during an extreme wet weather event, the portion of the pipe with stormwater can become full, spilling into the sanitary waste stream and resulting in untreated sewage entering surface water. Combined sewers are no longer permitted to be installed.
6. Sewage treatment plant by-pass discharge to surface water: Sometimes the capacity at a sewage treatment plant is overwhelmed and partially treated or untreated sanitary waste is released into the receiving water body. This is generally as a result of an extreme wet weather event where the sanitary sewer network is not completely isolated from stormwater. Combined sewers or sewer networks with inflow or infiltration issues are the root causes of bypasses.

7. Industrial effluent discharges: Industrial processes often produce industrial sewage requiring industrial sewage works to collect, transmit, treat or dispose of it. The resulting effluent when discharged to surface water can be a significant drinking water threat.
8. Septic system: A system that stores and/or treats human waste on-site (not including a sewage treatment plant).

Where is it a Significant Threat?

Sewage works are a significant drinking water threat:

- In the following locations
 - o Wellhead Protection Areas (WHPA)
 - o Intake Protection Zones (IPZ)
- Under the following circumstances

Threat Subcategory	Locations	Circumstances
1. Untreated stormwater from a stormwater retention pond	WHPA vulnerability score of 10	Depends on the size of the drainage area and the type of land use (e.g. rural, residential, industrial/commercial) in the drainage area.
	IPZ vulnerability score of 8 to 10	
2. Sanitary sewers and related pipes	WHPA vulnerability score of 10	Any size system that is part of a wastewater collection facility that collects or transmits sewage containing human waste.
	IPZ vulnerability score of 10	
3. Sewage treatment plant effluent discharges	WHPA vulnerability score of 10	• Discharging to water: any size system • Discharging to land: depends on the size of the system (average daily rate in cubic metres that the system is designed to discharge)
	IPZ vulnerability score of 8 to 10	
4. Storage of sewage	WHPA vulnerability score of 8 to 10	• Any size system except in WHPA 8 where the system must be designed for >50,000 m³ average daily rate • Below grade storage is not a significant threat in IPZ 9
	IPZ vulnerability score of 9 to 10	
5. Combined sewer discharge from a stormwater outlet to surface water	IPZ vulnerability score of 8 to 10	Any size system that may discharge sanitary sewage containing human waste to surface water other than by way of a designed bypass.

Threat Subcategory	Locations	Circumstances
6. Sewage treatment plant bypass discharge to surface water	IPZ vulnerability score of 8 to 10	Any size system discharging via a designed bypass.
7. Industrial effluent discharges	IPZ vulnerability score of 8 to 10	• System discharges to surface water. • System has as its primary function the collection, transmission or treatment of industrial sewage.
8. Septic systems and holding tanks (large systems designed to service institutions or public buildings)	WHPA vulnerability score of 10	Regulated under the <i>Ontario Water Resources Act</i> *
	IPZ vulnerability score of 10	

*Septic systems and holding tanks regulated under the Building Code (small systems designed to service a single residence) were addressed in a staff report in our March 3, 2011 agenda.

Maps showing the location of WHPAs and IPZs and their vulnerability scores are available from staff and on the “Assessment Report” pages of our website (www.mrsourcewater.ca).

Existing and Future Significant Threats

In the Mississippi-Rideau region there are some locations where existing sewage works are a significant drinking water threat. There are also some areas where new sewage works could be established resulting in new significant threats.

Drinking Water System		Existing Significant Threats	Future Significant Threats
WHPA	Almonte	Sanitary sewers and related pipes	Possible*
	Carp	Sanitary sewers and related pipes	
	Kemptville	Sanitary sewers and related pipes	
	Merrickville	Sanitary sewers and related pipes	
	Munster	Sanitary sewers and related pipes Storage of sewage	
	Richmond	Sanitary sewers and related pipes	
	Westport	Sanitary sewers and related pipes	

* Some sewage threat subcategories may already be prohibited in these areas through zoning or would not be possible due to a lack of space or incompatible adjacent land uses. New septic systems in most cases are not allowed where municipal services are available.

Drinking Water System		Existing Significant Threats	Future Significant Threats
IPZ	Carleton Place	Sanitary sewers and related pipes	Possible* except: • septic systems (new development must be connected to municipal services in all IPZ areas scored 10).
	Perth	None	
	Smiths Falls	Sanitary sewers and related pipes	
	Ottawa – Britannia & Lemieux Island	None	Possible* except: • sanitary sewers and related pipes • septic systems (no area is scored a 10 so significant threats are not possible for these subcategories)

* Some sewage threat subcategories may already be prohibited in these areas through zoning or would not be possible due to a lack of space or incompatible adjacent land uses.

Existing Regulations

Sewage works in general are regulated under:

- The *Ontario Water Resources Act* (Section 53).
 - o Requires a Sewage Works Certificate of Approval (often referred to as a “C of A”).
 - o The terms and conditions of the C of A include monitoring of the environmental impact of the works, reporting on incidents, and contingencies to prevent and deal with accidental spills.

Sewer Use By-laws regulate connections to the sanitary sewer systems as well as the types and concentrations of waste that can enter the systems. Industrial, commercial, institutional or multi-residential building developments may be required to pre-treat, monitor and report on sewage or stormwater discharge.

Stormwater works are:

- Designed in accordance with the MOE “Stormwater Management Planning and Design Manual” that focuses on quantity and quality control.
- Subject to review by Conservation Authorities with regard to maintenance of the hydrologic cycle, recognition of riparian water rights and retention and improvement of ecosystem health. Sometimes reviewed with regard to issues such as flood control, maintaining base flow in watercourses, erosion and sediment control, limiting nutrient and bacteria loading and maintaining fish habitat.

Wastewater treatment plants and sewer systems are:

- Required to have licensed operators.
- Subject to effluent standards (the most important consideration is the anticipated impact of the final effluent quality on the environment).

Large septic systems are:

- Those with a design flow greater than 10,000 litres per day or those located on more than one property parcel.
- Regulated by the Ministry of Environment under the *Ontario Water Resources Act*.
- Subject to application requirements that provide information about the impact of the sewage works on the receiving waterbody or aquifer (groundwater) such as:
 - o Background levels of contaminants in the groundwater
 - o Expected rate of contaminants discharge to the groundwater
 - o Proposed measures to be taken to reduce or prevent groundwater contamination and proposed monitoring program to assess the effectiveness of these measures
- Not subject to the new mandatory septic system re-inspection program (this only applies to septic systems regulated under the *Building Code Act*)

Sewage Works	Draft Policy Ideas
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Policy Options

There are many policy tools that can be used to address drinking water threats. Some are existing tools (education and outreach, incentives, prescribed instruments and land use planning). Others were newly created under the *Clean Water Act* (Risk Management Plans, prohibition and others). The following chart shows what policy tools are available to address sewage works where they are or would be a significant threat.

Policy Tool	Address Sewage Works
Education and Outreach	Yes
Incentives	Yes
Prescribed instruments	Yes (Sewage Works Certificates of Approval)
Land Use Planning	Yes
Risk Management Plans	<i>Clean Water Act</i> does not allow this tool to be used for sewage threats
Prohibition (under the Clean Water Act)	<i>Clean Water Act</i> does not allow this tool to be used for sewage threats
Other: • “Specify Actions” to be taken by a person or body to achieve the Source Protection Plan objectives • Establish stewardship programs • Specify and promote best management practices • Establish pilot programs • Govern research	Yes

Draft Policy Ideas

Draft policy ideas have been developed to address sewage works. These ideas were developed by staff in conjunction with:

- Sector experts; and
- Our municipal working group
 - o Meeting #4 (March 24, 2011)

The draft policy ideas are outlined in the attached table.

Rationale

Each Source Protection Committee has to write an Explanatory Document to accompany their Source Protection Plan. This document must provide a rationale for each source protection policy. It will therefore be important to document at each stage of policy development, why Committees approve certain draft ideas, concepts and policies.

The Mississippi-Rideau Source Protection Committee developed a qualitative evaluation framework to help them evaluate different policy options and ultimately decide which ones to use. The framework has four categories: Effectiveness, Cost, Practicality and Acceptance. At each stage of our policy development process (draft policy ideas, draft policy concepts, draft policies and proposed policies) this evaluation framework will be used by the Committee to make decisions. This will form the content of the Explanatory Document.

Below, staff used the four main categories of the framework to do an initial evaluation of the draft policy ideas proposed for sewage works.

Managing Existing Significant Threats:

- **sanitary sewers and related pipes (various locations)**
- **storage of sewage (Munster sewage lagoon)**

Effectiveness

- There are no existing significant threats regarding untreated stormwater from a stormwater retention pond, sewage treatment plant effluent discharges, combined sewer discharges, sewage treatment plant bypass discharges, industrial effluent discharges or large septic systems. Therefore, no policies are required.
- There are existing significant threats regarding sanitary sewers and related pipes. The policy idea is to make these sewers and pipes subject to a Municipal Sanitary Sewer Maintenance Program that would be established and carried out by the municipality. The purpose of the program would be to identify sections of the sewer network that require remedial work to address leaks thereby keeping the system in good repair and managing the significant drinking water threat.
- The Munster sewage lagoon is also an existing significant threat. The lagoon is governed by a C of A which requires that the sewage works, including the lagoon, be maintained but it does not contain any specific procedures that must be followed. The lagoon is lined to prevent infiltration into the groundwater and it is only used as an open air holding tank in case of emergency (e.g. broken force main). It has been used twice in the last four to five years and when it is activated staff do a visual inspection to ensure proper operation. When the situation is resolved the contents are drained back into the sewer system. The policy idea is to require the Ministry of the Environment to review the C of A terms and conditions, and amend if necessary, to adequately manage the significant drinking water threat.

Cost

- There would be a cost to municipalities to conduct the Sewer Maintenance Program, although periodic monitoring, maintenance or upgrades of sanitary sewers and related pipes does already occur in most municipalities. The cost of remedial work resulting from the maintenance program will depend on a number of factors including the age of the sewer system.
- The Munster sewage lagoon is visually checked prior to its use but is not subject to a regular monitoring or maintenance program. There could be a cost to the municipality if the Ministry of the Environment decides to require additional measures through an amended C of A. Possible amendments are not known at this time but may be determined through pre-consultation with the Ministry of the Environment.

Practicality

- While sewers and related pipes often have a C of A (older systems may not), there is typically no requirement for ongoing maintenance. Therefore, it seems appropriate to require the municipality to undertake a regular Sewer Maintenance Program to ensure the integrity of the sewers and related pipes where they pose a significant drinking water threat.
- Monitoring of the Sanitary Sewer Maintenance Program would consist of the municipality providing the Source Protection Authority with documentation related to the maintenance program (method, schedule and identified remedial work).
- Using an existing Prescribed Instrument to address the Munster sewage lagoon avoids regulatory duplication, uses a tool the system operators are familiar with, and allows the agency who currently regulates the system to determine if additional terms and conditions are required to manage the drinking water threat.
- Monitoring of the Munster sewage lagoon policy would consist of the Ministry of the Environment copying the Source Protection Authority on any amended C of A.

Acceptance

- The idea of a Sanitary Sewer Maintenance Program was acceptable to the municipal working group and those public works staff who were consulted. However, there was one municipality who was concerned about whether there would be funding available to undertake such a program.
- The Munster sewage lagoon is an important part of the Munster sewage system because it provides overflow storage during periods of prolonged power failures, unscheduled maintenance and significant wet weather events. Therefore, it is important to the community that the lagoon remains in operation. If monitored and well maintained, the lagoon should not pose a significant threat to source water despite its close proximity to the municipal well.
- Draft policy concepts will be provided to potentially affected people and bodies for review and their comments will be provided to the SPC prior to considering a draft policy for the draft Source Protection Plan.

Managing Future Significant Threats:

- **Sanitary sewers and related pipes**
- **Stormwater ponds (outside areas scored 10)**
- **Large septic systems**

Effectiveness

- As discussed in the “Existing Significant Threats” section above, the risk posed by sanitary sewers and related pipes can be effectively managed through a Sanitary Sewer Maintenance Program.
- Stormwater ponds could also be effectively managed through their Certificate of Approval. The policy idea is to require MOE staff, who already regulate the establishment of

stormwater systems, to determine what standard terms and conditions need to be attached to a Sewage Works C of A to effectively manage the risk to drinking water. The current conditions may be sufficient or additional measures may be required such as enhanced treatment for surface water discharge or extra leak prevention measures to protect groundwater. This approach will also allow for site-specific and project specific conditions to be considered and addressed.

- New septic systems approved under the *Ontario Water Resources Act* are already subject to rigorous requirements regarding preventing and monitoring for contamination. It seems that managing this activity through the existing Prescribed Instrument would be effective. It also seems appropriate to require connection to existing municipal services where feasible which is consistent with the policy concept for small septic systems (March 3, 2011 agenda package).
 - It should be noted that in some instances new septic systems in vulnerable areas may be denied approval regardless of the Source Protection Plan policy. Guideline B-7 (*Incorporation of the Reasonable Use Concept into MOEE Groundwater Management Activities*) sets out circumstances where a new septic system would be unsuitable. One of these circumstances is where “the consequences of failure are unacceptable (e.g. impact the only water supply for a community)”. So even though the policy idea is to manage future septic systems, the Ministry of the Environment may choose to prohibit some future septic systems under certain circumstances.

Cost

- As discussed in the “Existing Significant Threats” section above, there would be costs to the municipality for a Sanitary Sewer Maintenance Program.
- If the MOE changes the design, operation and/or maintenance requirements for future stormwater systems where they would be a significant threat, there could be additional costs to developers. There could also be costs to municipalities if they take over the operation of stormwater works and operate them over the long term.
- If the MOE changes the requirements or denies approvals for new large septic systems there could be a cost of lost opportunity to landowners or developers. However, the majority of properties where large septic systems would be a significant threat either have municipal sanitary sewer services available or are far enough from the drinking water source (e.g. outside the urban boundary of Almonte) that the MOE would not likely deny approvals but rather choose to manage the risk through the existing requirements.

Practicality

- As discussed in the “Existing Significant Threats” section above, sewers and related pipes typically have no ongoing maintenance stipulated in the conditions of the C of A. Therefore, it is appropriate for the municipality to create and commit to a maintenance program to ensure the long term integrity of new sewers and related pipes where they would be a significant threat.
- Using the existing Prescribed Instrument to ensure future stormwater systems and future large septic systems would not be a significant threat has several practical advantages: it avoids regulatory duplication, uses an instrument developers and municipal public works staff are familiar with, and allows the agency that already regulates this type of activity to determine appropriate conditions to effectively manage the risk to drinking water.
- Monitoring of the Sanitary Sewer Maintenance Program policy would consist of the municipality providing the Source Protection Authority with documentation related to the maintenance program (method, schedule and identified remedial work).
- Monitoring of the policy for future stormwater systems and new large septic systems would consist of the MOE copying the Source Protection Authority on any revised guidance for Environmental Officers who review applications.

Acceptance

- The idea of a Sanitary Sewer Maintenance Program was acceptable to the municipal working group and those public works staff who were consulted. However, there was one municipality who was concerned about whether there would be funding available to undertake such a program.
- Stormwater systems are a necessary part of new development. For that reason, the municipal working group and other municipal staff who were consulted did not support prohibiting their establishment except in the small area scored 10 in the immediate vicinity of municipal wells and surface water intakes. Instead, they favoured managing the threat where it is established in vulnerable areas in the future.
- Septic systems are also a necessary part of new development where municipal services are unavailable. Therefore allowing new systems but ensuring the drinking water risk is effectively managed is likely to be accepted by the public and other stakeholders.
- Draft policy concepts will be provided to potentially affected people and bodies for review and their input and comments provided to the SPC prior to considering a draft policy for the draft Source Protection Plan.

Prohibiting Future Significant Threats:

- **Sewage treatment plants and associated sewage storage and discharge sites**
- **Combined sewers**
- **Stormwater ponds (in areas scored 10)**
- **Industrial discharges**

Effectiveness

- MOE guidance acknowledges that prohibition is an effective and efficient source protection tool that may be appropriate for ensuring certain hazardous activities get located in less vulnerable areas.
- Prohibiting the sewage threats listed above, in areas where they would be a significant drinking water threat, will ensure they will never become a significant threat.

Cost

- The cost implications of the draft policy ideas are administrative in nature:
 - o Some municipalities will need to amend their Official Plan and Zoning by-laws
 - o MOE will have to alter their guidance materials and information used by staff who review Sewage Works C of A applications.

Practicality

- Prohibiting through Prescribed Instruments (Certificates of Approval) and creating complementary Land Use Planning policies (Official Plans and Zoning) makes use of existing tools and processes which prevents regulatory duplication.
- Land Use Planning policies in the Source Protection Plan have legal effect as soon as the Plan is approved by the province, therefore municipalities do not need to rush to amend their Official Plans and Zoning By-laws in order for the requirements or restrictions to take effect. Source Protection Plans will likely trigger multiple amendments to local Official Plans and Zoning By-laws so municipalities can do all the amendments at once when it is convenient.
- Monitoring of these policies would consist of the MOE copying Source Protection Authorities on any revised guidance for Environmental Officers who review C of A applications and the municipality notifying the Source Protection Authority when their Official Plan and Zoning amendments are completed.

Acceptance

- Municipal staff from each municipality where the policy would be implemented supported this approach. They felt it was important to, where possible, establish hazardous activities such as large-scale sewage works and industrial land uses elsewhere in the watershed provided that rural wells and other sensitive features were protected (e.g. large setbacks).
- Draft policy concepts will be provided to potentially affected people and bodies for review and their input and comments provided to the SPC prior to considering a draft policy for the draft Source Protection Plan.

Additional Information

- MOE Bulletin: Source Protection Planning Bulletin – Overview of Prescribed Instruments
- MOE Bulletin: Source Protection Planning Bulletin – Certificates of Approval

Attached:

- Draft Policy Ideas for Sewage Works

3.0a

Draft Policy Ideas: Sewage Works

The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage

Situation		Description	Policy Tool and Concept	Monitoring Policy	Implementer	Legal Effect	Compliance Date
Existing Significant Threats*	#1	Sanitary sewers and related pipes (various locations)	Specify Action: Municipal Sanitary Sewer Maintenance Program - A sanitary sewer maintenance program must be carried out at least every five years. - Where possible, the program should include sewer pipe cleaning followed by a camera inspection focused on identifying sources of infiltration. - Pressure testing of pipes may also be conducted in lieu of the camera inspection. - Remedial work is required if areas of significant infiltration are identified.	Municipality shall provide the Source Protection Authority with documentation related to the Sanitary Sewer Maintenance Program (proposed method, schedule and remedial work).	Municipality	Must comply	Within five years of the Source Protection Plan taking effect and five year intervals thereafter.
	#2	Storage of sewage (Munster sewage lagoon)	Prescribed Instrument: The Ministry of the Environment must review (and amend if necessary) the existing Certificate of Approval issued under Section 53 of the <i>Ontario Water Resources Act</i> to ensure that the Munster sewage lagoon ceases to be a significant drinking water threat.	The Ministry of the Environment shall provide the Source Protection Authority with a copy of the amended C of A or, if not revised, an explanation of the existing factors or measures that manage the risk posed by the Munster lagoon so that it is not a significant threat.	Ministry of the Environment	Must conform	Newly issued or amended instruments must conform immediately upon Source Protection Plan taking effect
Future Significant Threats	#3	Sanitary sewers and related pipes	Specify Action: Advanced Sewer Design Standards New sanitary sewers and related pipes are permitted but should be designed, constructed and tested in accordance with forcemain standards. Specify Action: Municipal Sanitary Sewer Maintenance Program New systems must be subject to a Municipal Sanitary Sewer Maintenance Program. - A sanitary sewer maintenance program must be carried out at least every five years. - Where possible, the program should include sewer pipe cleaning followed by a camera inspection focused on identifying sources of infiltration. - Pressure testing of pipes may also be conducted in lieu of the camera inspection. - Remedial work is required if areas of significant infiltration are identified.	Municipality shall provide the Source Protection Authority with documentation related to the Sanitary Sewer Maintenance Program (proposed method, schedule and remedial work).	Municipality	Must comply	Within five years of the Source Protection Plan taking effect and five year intervals thereafter.
	#4	Untreated stormwater from a stormwater retention pond	Prescribed Instrument: - New stormwater management works are not permitted where they would be a significant threat in an IPZ with a vulnerability score of 10 or in a WHPA-A. The Ministry of the Environment shall not issue a Certificate of Approval under Section 53 of the <i>Ontario Water Resources Act</i> for new stormwater management works in these locations. - New stormwater management works are permitted in an IPZ with a vulnerability score of 9, 8.1 or 8 or in a WHPA-B with a vulnerability score of 10. Certificates of Approval issued under Section 53 of the <i>Ontario Water Resources Act</i> must contain terms and conditions to ensure that the new facility will not be a significant drinking water threat.	- The Ministry of the Environment shall notify the Source Protection Authority when guidance for Environmental Officers, permit applications and related documents have been amended. - The Ministry of the Environment shall notify the Source Protection Authority annually of any applications received related to stormwater management works where they would be a significant threat and a summary of the decisions rendered.	Ministry of the Environment	Must conform	Newly issued or amended instruments must conform immediately upon Source Protection Plan taking effect
	#5	Large septic systems	Prescribed Instrument: New large septic systems are permitted. Certificates of Approval issued under the <i>Ontario Water Resources Act</i> must contain terms and conditions to ensure that a new septic system will not be a significant drinking water threat.				
	#6	- Sewage treatment plant effluent discharges - Storage of sewage - Combined sewer discharges - Sewage treatment plant bypass discharges - Industrial effluent discharges	Land Use Planning: Establish a by-law requiring connection to municipal sewer services where available**.	Municipality shall notify the Source Protection Authority when the by-law has been established.	Municipality	Must conform	Planning Act decisions must conform immediately upon Source Protection Plan taking effect
			Prescribed Instrument: Sewage Works Certificates of Approval The Ontario Ministry of the Environment shall not issue a Certificate of Approval under Section 53 of the <i>Ontario Water Resources Act</i> for these types of sewage works where they would be a significant drinking water threat.	Ministry of the Environment shall notify the Source Protection Authority when guidance for Environmental Officers, permit applications and related documents have been amended.	Ministry of the Environment	Must comply	Newly issued or amended instruments must conform immediately upon Source Protection Plan taking effect
			Land Use Planning Municipalities shall ensure their Official Plans and Zoning By-laws prohibit the establishment of these types of sewage works where they would be a significant drinking water threat.	Municipality shall notify the Source Protection Authority when their Official Plan and Zoning By-laws prohibit these types of sewage works where they would be a significant threat.	Municipality	Must conform	Planning Act decisions must conform immediately upon Source Protection Plan taking effect

*There are no existing threats so no policy is required for:

- Untreated stormwater from a stormwater retention pond
- Sewage treatment plant effluent discharges
- Combined sewer discharges
- Sewage treatment plant bypass discharges
- Industrial effluent discharges
- Large septic systems

** Available means: required work would be limited to the property because the truck line is adjacent to the property

4.0 Community Outreach

Date: June 23, 2011
To: Mississippi-Rideau Source Protection Committee
From: Sommer Casgrain-Robertson, Co-Project Manager
Mississippi – Rideau Source Protection Region

Recommendation:

That the Mississippi-Rideau Source Protection Committee receive the Community Outreach staff report for information.

Background

Staff and MRSPC members participate in many different community outreach activities to raise awareness and understanding of the source protection planning process. These activities include information booths at events, presentations at meetings and articles in newsletters and local papers. It is important that staff and members keep each other informed about the activities they are involved in so that we can coordinate our participation and prepare appropriate materials in advance. This includes coordinating with our neighbouring regions for outreach covering Eastern Ontario.

Past Activities

Members & staff are asked to give a verbal update on any other activities that took place in the past month related to source protection.

1. *Source Protection Plan Advisory Committee meeting*
 - o June 6, Toronto (Allison and Sommer attended)
2. *Ontario Road Salt Management Group*
 - o June 9, Ottawa (Allison and Sommer attended and presented)
3. *Glens Community Association – Annual General Meeting*
 - o June 13, Ottawa (Sommer presented)
4. *Municipal Working Group Meeting*
 - o June 16, Perth (staff and some members attended)
5. *Rideau Valley Source Protection Authority*
 - o June 23, Manotick (Sommer attended)
6. *Eastern Regions Meetings*
 - o June 27, Brockville (Sommer and Brian attended)

Upcoming Activities

Members & staff are asked to give a verbal update about any other activities they know about in the coming months related to source protection.

1. *Lanark County Council*
 - o September 7, Perth (Sommer presenting)
2. *Municipal Working Group Meeting*
 - o October 20, Perth (staff and some members attending)