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**Table 6-1****Summary of Key Findings for Intake Protection Zones - RVSPA**

## Mississippi - Rideau Source Protection Region

Municipal Drinking Water System (Source Protection Area)	Number of Intakes	Size of IPZ (km <sup>2</sup> )		Vulnerability Scores	Area of IPZ where Potential Significant Threats may be present (km <sup>2</sup> )	Number of Potential Significant Threats (line, polygon or point)	Number of Issues	Number of Conditions
Perth (RVSPA)	1	IPZ-1	0.07	10	10.21	88	0	0
		IPZ-2	2.42	9				
		IPZ-3	378	4 to 8				
		Total IPZ	380					
Smiths Falls (RVSPA)	2	IPZ-1 (Main)	0.10	10	15.69	90	0	0
		IPZ-1 (Aux)	0.06	10				
		IPZ-1 (Total)	0.14	10				
		IPZ-2	3.14	8				
		IPZ-3	899	4 to 8				
		Total IPZ	902					
Britannia (Ottawa) (RVSPA)	1	IPZ-1	0.13	9	31.45	36	0	0
		IPZ-2	31.32	8.1				
		IPZ-3	36	6.3 to 7.2				
		Total IPZ	67					
Lemieux Island (Ottawa) (RVSPA)	1	IPZ-1	0.07	9	13.02	0	0	0
		IPZ-2	12.95	8.1				
		IPZ-3	76	5.4 to 7.2				
		Total IPZ	89					
				Total	70	214	0	0

<b>Totals</b>	
Total IPZ area for Perth and Smiths Falls (km <sup>2</sup> )	903
Total IPZ area for Britannia and Lemieux Island (km <sup>2</sup> )	89
Total IPZ area for Rideau Valley Source Protection Area (km <sup>2</sup> )	992

**Notes:**

MVSPA - Mississippi Valley Source Protection Area

RVSPA - Rideau Valley Source Protection Area

Compiled from: MRSPR Surface Water Technical Reports (see Appendix A-1)

**Table 6-2****Summary of Potentially Significant Threats for Surface Water Based Municipal Drinking Water Systems - RVSPA**

Mississippi - Rideau Source Protection Region

Prescribed Drinking Water Threat		Threat Sub Category	Total Significant Threats Count for each Threat Subcategory
1	The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the Environmental Protection Act.	Application Of Untreated Septage To Land	0
		Storage, Treatment And Discharge Of Tailings From Mines	0
		Waste Disposal Site - Landfarming Of Petroleum Refining Waste	0
		Waste Disposal Site - Landfilling (Hazardous Waste)	0
		Waste Disposal Site - Landfilling (Municipal Waste)	0
		Waste Disposal Site - Landfilling (Solid Non Hazardous Industrial or Commercial)	0
		Waste Disposal Site - Liquid Industrial Waste Injection into a well	0
		Waste Disposal Site - PCB Waste Storage	0
		Waste Disposal Site - Storage Of Hazardous Waste At Disposal Sites	0
		Waste Disposal Site - Storage of wastes described in clauses (p), (q), (r), (s), (t) or (u) of the definition of hazardous waste	0
		2	The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage.
Sewage System Or Sewage Works - Discharge Of Untreated Stormwater From A Stormwater Retention Pond	0		
Sewage System Or Sewage Works - Industrial Effluent Discharges	0		
Sewage System Or Sewage Works - Sanitary Sewers and related pipes	5		
Sewage System Or Sewage Works - Septic System	0		
Sewage System Or Sewage Works - Septic System Holding Tank	0		
Sewage System Or Sewage Works - Sewage treatment plant bypass discharge to surface water	0		
Sewage System Or Sewage Works - Sewage Treatment Plant Effluent Discharges (Includes Lagoons)	0		
Sewage System Or Sewage Works - Storage Of Sewage (E.G. Treatment Plant Tanks)	0		
3	The application of agricultural source material to land.	Application Of Agricultural Source Material (ASM) To Land	67
4	The storage of agricultural source material.	Storage Of Agricultural Source Material (ASM)	32
5	The management of agricultural source material.	Management Of Agricultural Source Material - Aquaculture	0

Prescribed Drinking Water Threat		Threat Sub Category	Total Significant Threats Count for each Threat Subcategory
6	The application of non-agricultural source material to land.	Application Of Non-Agricultural Source Material (NASM) To Land (Including Treated Septage)	0
7	The handling and storage of non-agricultural source material.	Storage of Non-Agricultural Source Material (NASM)	0
8	The application of commercial fertilizer to land.	Application Of Commercial Fertilizer To Land	0
9	The handling and storage of commercial fertilizer.	Storage Of Commercial Fertilizer	2
10	The application of pesticide to land.	Application Of Pesticide To Land	24
11	The handling and storage of pesticide.	Storage Of A Pesticide	0
12	The application of road salt.	Application Of Road Salt	25
13	The handling and storage of road salt.	Storage Of Road Salt	0
14	The storage of snow.	Storage Of Snow	16
15	The handling and storage of fuel.	Handling Of Fuel	0
		Storage Of Fuel	0
16	The handling and storage of a dense non-aqueous phase liquid.	Handling Of A Dense Non Aqueous Phase Liquid (DNAPL)	0
		Storage Of A Dense Non Aqueous Phase Liquid (DNAPL)	0
17	The handling and storage of an organic solvent.	Storage Of An Organic Solvent	2
18	The management of runoff that contains chemicals used in the de-icing of aircraft.	Management Of Runoff Containing Chemicals Used In The De-Icing Of Aircrafts	0
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.		0
20	An activity that reduces the recharge of an aquifer.		0
21	The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard. O. Reg. 385/08, s. 3.	Management Or Handling Of Agricultural Source Material - Agricultural Source Material (ASM) Generation	33
		Management Or Handling Of Agricultural Source Material - Agricultural Source Material (ASM) Generation (Grazing and pasturing)	8
		Management Or Handling Of Agricultural Source Material - Agricultural Source Material (ASM) Generation (Yards or confinement)	0
		<b>Totals</b>	<b>214</b>

**Table 6-3****Lower/Single Tier Municipalities located in Intake Protection Zones - RVSPA**

Mississippi - Rideau Source Protection Region

Municipality	Intake Protection Zones		
	Perth	Smiths Falls	Britannia and Lemieux Island (Ottawa)
Addington Highlands			<input type="checkbox"/>
Beckwith		<input type="checkbox"/>	<input type="checkbox"/>
Carleton Place			<input type="checkbox"/>
Central Frontenac	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drummond/North Elmsley	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Greater Madawaska			<input type="checkbox"/>
Lanark Highlands			<input type="checkbox"/>
Mississippi Mills			<input type="checkbox"/>
Montague		<input type="checkbox"/>	
North Frontenac			<input type="checkbox"/>
Ottawa			<input type="checkbox"/>
Perth	<input type="checkbox"/>	<input type="checkbox"/>	
Rideau Lakes	<input type="checkbox"/>	<input type="checkbox"/>	
Smiths Falls		<input type="checkbox"/>	
South Frontenac	<input type="checkbox"/>	<input type="checkbox"/>	
Tay Valley	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Westport		<input type="checkbox"/>	

Compiled from: MRSR Surface Water Technical Reports (see Appendix A-1)

**Table 6-4****Risk to Perth and Smiths Falls IPZs Based on Managed Lands and Livestock Density**

Mississippi - Rideau Source Protection Region

<b>Municipal Drinking Water System</b>	<b>IPZ and Vulnerability Score</b>	<b>Percent Total Managed Lands</b>	<b>Risk for Over Application of Nutrients</b>	<b>Livestock Density (NU/acre)</b>	<b>Risk for Over-Application of ASM</b>
Perth	IPZ-1 (10)	35.7	LOW	0.00	LOW
	IPZ-2 (9)	44.1	MODERATE	0.42	LOW
	IPZ-3 (8)	21.5	LOW	0.13	LOW
	IPZ-3 (7)	18.2	LOW	0.13	LOW
	IPZ-3 (6)	21.0	LOW	0.13	LOW
	IPZ-3 (5)	41.9	MODERATE	0.14	LOW
Smiths Falls	IPZ-1 (10) *	24.3	LOW	0.00	LOW
	IPZ-2 (8)	11.5	LOW	0.00	LOW
	IPZ-3 (8)	7.8	LOW	0.17	LOW
	IPZ-3 (7)	9.5	LOW	0.16	LOW
	IPZ-3 (6)	31.6	LOW	0.16	LOW
	IPZ-3 (5)	23.8	LOW	0.16	LOW

\* includes main and auxiliary intakes N/A = Not Available

**Notes:**

Managed lands and livestock density to be completed for IPZ-3 following the completion of IPZ-3 vulnerability scoring

Compiled from: Dillon Managed Lands and Livestock Density Technical Report (see Appendix A-1)

**Table 6-5**

**Summary of Potentially Significant Threats to Perth Source Water**

Mississippi - Rideau Source Protection Region  
Perth

Vulnerability Score		10			9	8		
Prescribed Drinking Water Threat	Threat Subcategory / Land Use Activities	Golf Courses and Country Clubs	Road Salt Application	Snow Storage	Golf Courses and Country Clubs	Golf Courses and Country Clubs	Other Crop Farming	Total
The application of pesticide to land.	Application Of Pesticide To Land	2			6	1		9
The application of road salt.	Application Of Road Salt		2					2
The storage of snow.	Storage Of Snow			1				1
	<b>Total</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>6</b>	<b>1</b>	<b>2</b>	<b>14</b>

Drummond / North Elmsley

Vulnerability Score		8	
Prescribed Drinking Water Threat	Threat Subcategory / Land Use Activities	Other Crop Farming	Total
	<b>Total</b>	<b>1</b>	<b>1</b>

Tay Valley

Vulnerability Score		9		8			
Prescribed Drinking Water Threat	Threat Subcategory / Land Use Activities	Cattle Ranching and Farming	Other Animal Production	Cattle Ranching and Farming	Other Animal Production	Other Crop Farming	Total
The storage of agricultural source material.	Storage Of Agricultural Source Material (ASM)	2	2	16	1		21
The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard. O. Reg. 385/08, s. 3.	Management Or Handling Of Agricultural Source Material - Agricultural Source Material (ASM) Generation	3	2	16	1		22
	Management Or Handling Of Agricultural Source Material (ASM) Generation (Grazing and pasturing)	3	2	2	1		8
	<b>Total</b>	<b>8</b>	<b>6</b>	<b>34</b>	<b>3</b>	<b>22</b>	<b>73</b>

Total number of Potentially Significant Threats to Perth Source Water = 88

**Table 6-6 (Part 1 of 2)**

**Summary of Potentially Significant Threats to Smiths Falls Source Water**

Mississippi - Rideau Source Protection Region  
Smiths Falls

Vulnerability Score		10					8	
Prescribed Drinking Water Threat	Threat Subcategory / Land Use Activities	Electric Power Generation, Transmission and	Road Salt Application	RV (Recreational Vehicle) Parks and Recreational	Sewer Mainlines and Connections	Snow Storage	Other Crop Farming	Total
		The application of agricultural source material to land.	Application Of Agricultural Source Material (ASM) To Land					
The application of road salt	Application Of Road Salt		22					22
The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage.	Sewage System Or Sewage Works - Sanitary Sewers and related pipes				5			4
The handling and storage of an organic solvent.	Storage Of An Organic Solvent	1		1				2
The handling and storage of commercial fertilizer	Storage Of Commercial Fertilizer	1		1				2
The storage of snow.	Storage Of Snow							
	<b>Total</b>	<b>2</b>	<b>22</b>	<b>2</b>	<b>5</b>	<b>15</b>	<b>2</b>	<b>48</b>

**Drummond / North Elmsley**

Vulnerability Score		8			
Prescribed Drinking Water Threat	Threat Subcategory / Land Use Activities	Cattle Ranching and Farming	Other Animal Production	Other Crop Farming	Total
		The application of agricultural source material to land.	Application Of Agricultural Source Material (ASM) To Land		
The storage of agricultural source material.	Storage Of Agricultural Source Material (ASM)	3	1		4
The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard. O. Reg. 385/08, s. 3.	Management Or Handling Of Agricultural Source Material - Agricultural Source Material (ASM) Generation	3	1		4
	<b>Total</b>	<b>6</b>	<b>2</b>	<b>6</b>	<b>14</b>



**Table 6-6 (Part 2 of 2)**

**Summary of Potentially Significant Threats to Smiths Falls Source Water**

Mississippi - Rideau Source Protection Region  
Montague

<b>Vulnerability Score</b>		<b>8</b>		
<b>Prescribed Drinking Water Threat</b>	<b>Threat Subcategory / Land Use Activities</b>	<b>Cattle Ranching and Farming</b>	<b>Other Crop Farming</b>	<b>Total</b>
The application of agricultural source material to land.	Application Of Agricultural Source Material (ASM) To Land		4	4
The storage of agricultural source material.	Storage Of Agricultural Source Material (ASM)	2		2
The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard. O. Reg. 385/08, s. 3.	Management Or Handling Of Agricultural Source Material - Agricultural Source Material (ASM) Generation	2		2
	<b>Total</b>	<b>4</b>	<b>4</b>	<b>8</b>

**Rideau Lakes**

<b>Vulnerability Score</b>		<b>10</b>	<b>8</b>		
<b>Prescribed Drinking Water Threat</b>	<b>Threat Subcategory / Land Use Activities</b>	<b>Road Salt Application</b>	<b>Cattle Ranching and Farming</b>	<b>Other Crop Farming</b>	<b>Total</b>
The application of agricultural source material to land.	Application Of Agricultural Source Material (ASM) To Land			15	15
The application of road salt.	Application Of Road Salt	1			1
The storage of agricultural source material.	Storage Of Agricultural Source Material (ASM)		2		2
The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard. O. Reg. 385/08, s. 3.	Management Or Handling Of Agricultural Source Material - Agricultural Source Material (ASM) Generation		2		2
	<b>Total</b>	<b>1</b>	<b>4</b>	<b>15</b>	<b>20</b>

Total number of Potentially Significant Threats to Smiths Falls Source Water = 90

**Table 6-7****Risk to Britannia and Lemieux IPZs Based on Managed Lands and Livestock Density**

Mississippi - Rideau Source Protection Region

<b>Municipal Drinking Water System</b>	<b>IPZ and Vulnerability Score</b>	<b>Percent Total Managed Lands</b>	<b>Risk for Over Application of Nutrients</b>	<b>Livestock Density (NU/acre)</b>	<b>Risk for Over-Application of ASM</b>
Britannia	IPZ-1 (9)	0	LOW	0.00	LOW
	IPZ-2 (8.1)	27.8	LOW	0.004	LOW
	IPZ-3 (7.2)	15.2	LOW	0.14	LOW
	IPZ-3 (6.3)	17.9	LOW	0.14	LOW
	IPZ-3 (5.4)	36.8	LOW	0.13	LOW
	IPZ-3 (4.5)	35.3	LOW	0.13	LOW
Lemieux Island	IPZ-1 (9)	0	LOW	0.00	LOW
	IPZ-2 (8)	20.5	LOW	0.00	LOW
	IPZ-3 (7.2)	7.3	LOW	0.15	LOW
	IPZ-3 (6.3)	28.1	LOW	0.13	LOW
	IPZ-3 (5.4)	42.7	MODERATE	0.13	LOW
	IPZ-3 (4.5)	40.6	MODERATE	0.13	LOW

N/A = Not Available

Compiled from: Dillon Managed Lands and Livestock Density Technical Report (see Appendix A-1)

**Table 6-8****Summary of Potentially Significant Threats to Britannia Source Water**

Mississippi - Rideau Source Protection Region City of Ottawa

<b>Vulnerability Score</b>		<b>10</b>			
<b>Prescribed Drinking Water Threat</b>	<b>Threat Subcategory / Land Use Activities</b>	<b>Fruit and Tree Nut Farming</b>	<b>Oilseed and Grain Farming</b>	<b>Other Animal Production</b>	<b>Total</b>
The application of agricultural source material to land.	Application Of Agricultural Source Material (ASM) To Land	2	13		15
The application of pesticide to land.	Application Of Pesticide To Land	2	13		15
The storage of agricultural source material.	Storage Of Agricultural Source Material (ASM)			3	3
The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard. O. Reg. 385/08, s. 3.	Management Or Handling Of Agricultural Source Material - Agricultural Source Material (ASM) Generation			3	3
	<b>Total</b>	<b>4</b>	<b>26</b>	<b>6</b>	<b>36</b>