

# DRINKING WATER SOURCE PROTECTION

Trent Conservation Coalition Source Protection Region



## Drinking Water Threats 10 Surface Water Sites

Trent Conservation Coalition (TCC)

Source Protection Region (SPR)

Source Protection Committee Meeting – February 16, 2010

Peterborough, Ontario



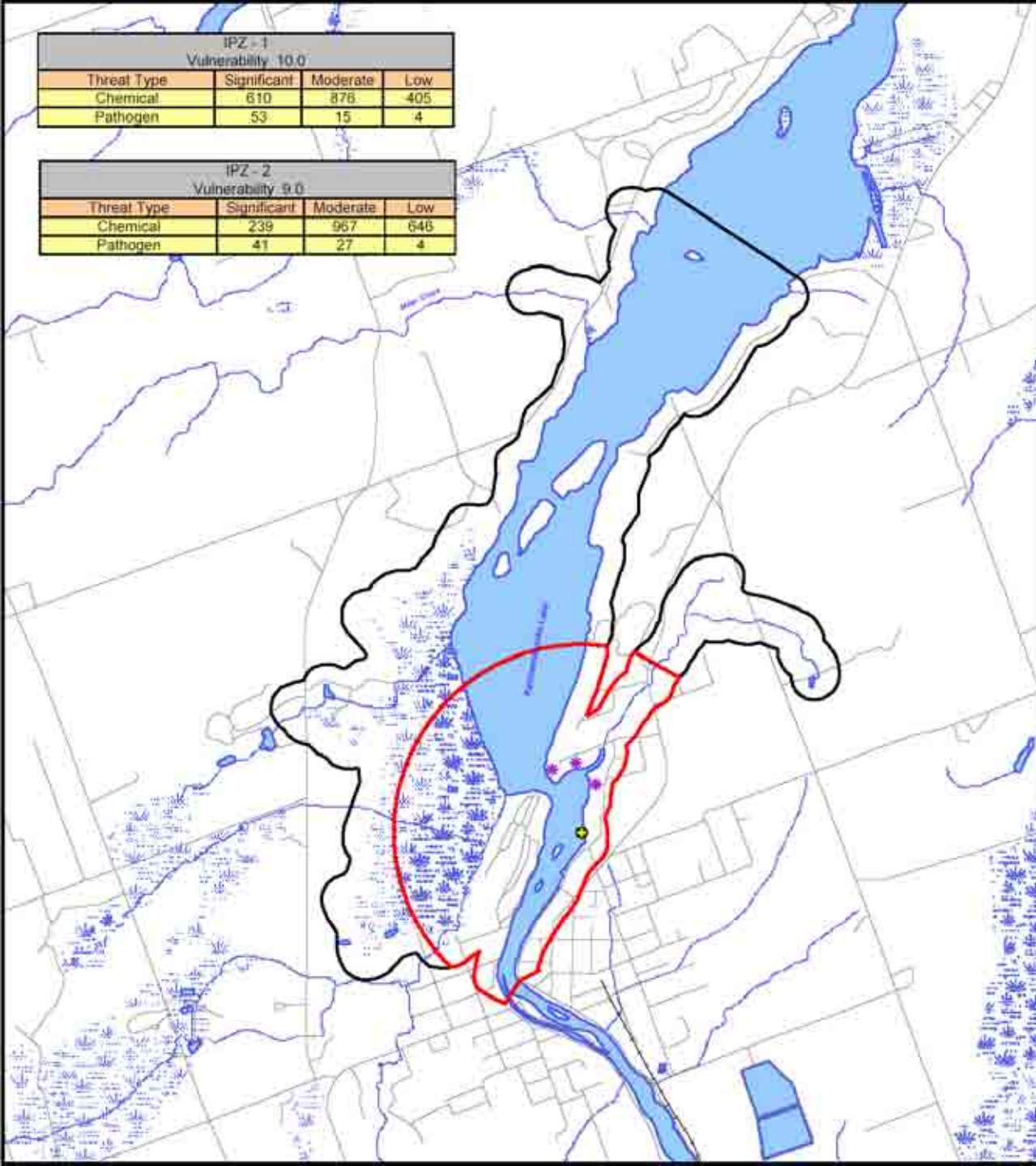
**Expert People. Better Decisions.**





IPZ - 1 Vulnerability 10.0			
Threat Type	Significant	Moderate	Low
Chemical	610	876	405
Pathogen	53	15	4

IPZ - 2 Vulnerability 9.0			
Threat Type	Significant	Moderate	Low
Chemical	239	967	646
Pathogen	41	27	4



# Step 1: Review Lakefield Vulnerability Scores

# Step 2 & 3: Review Background Information & Site Visits

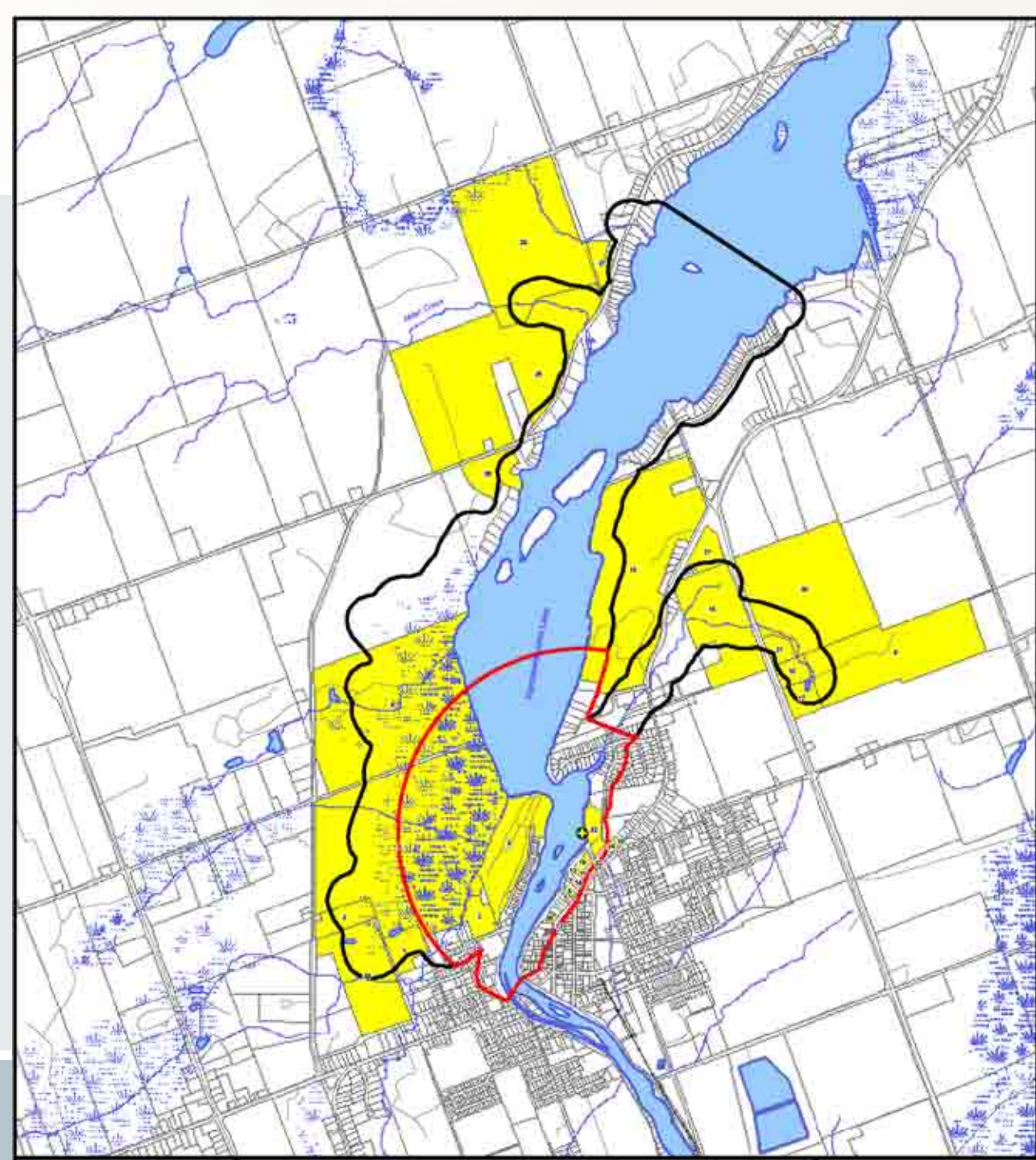


- Previous MEL work (threats database)
- XCG EcoLog ERIS report: August 2007
- Review Additional Mapping: Managed Lands, Agricultural Density, Imperviousness
- MOE Datahound Information
- Field Reconnaissance:
  - June 2006
  - October 2007



**Steps 4 & 5:**

**Overlay Parcel  
Fabric &  
Evaluate  
Potentially  
Significant  
Threats**





# Step 6: Enumerate Potentially Significant Threats

Prescribed Drinking Water Threat (PDWT)*	Score to Trigger a Significant Threat			
	Vulnerability Score = 10		Vulnerability Score = 9	
	Affected Parcels	No. of PDWT	Affected Parcels	No. of PDWT
1. The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the <i>Environmental Protection Act</i> .	16	16	14	14
2. The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage.	3	3	2	2
3. The application of agricultural source material to land.	3	3	9	9
4. The storage of agricultural source material	3	3	9	9
6. The application of no-agricultural source material to land	3	3	9	9
7. The handling and storage of non-agricultural source material	3	3	9	9
9. The handling and storage of commercial fertilizer.	4	4	-	-
10. The application of pesticide to land.	17	17	12	12
11. The handling and storage of pesticide.	4	4	9	9
12. The application of road salt.	11	11	-	-
15. The handling and storage of fuel.	17	17	-	-
16. The handling and storage of a dense non-aqueous phase liquid.	2	2	-	-
17. The handling and storage of an organic solvent.	14	14	-	-
21. The use of land as livestock grazing or pasturing the land, an outdoor confinement area or a farm-animal year. O. Reg. 385/08, s. 3.	3	3	9	9
<b>Total Number of Affected Parcels</b>	<b>18</b>	<b>103</b>	<b>14</b>	<b>82</b>

# Steps 7 & 8: Send out letters & Additional Information Gathering



- 32 parcels originally identified in IPZ-1 (10) & IPZ-2 (9)
- Letters sent out to 32 parcels (Oct 2009)
- 1 refusal; assumptions made on 12 parcels
- No site visits required

# Step 9: Enumerate Significant Threats



Prescribed Drinking Water Threat (PDWT)*	Score to Trigger a Significant Threat			
	Vulnerability Score = 10		Vulnerability Score = 9	
	Affected Parcels	No. of PDWT	Affected Parcels	No. of PDWT
1. The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the <i>Environmental Protection Act</i> .	2(1)	2(1)	-	-
2. The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage.	3	3	-	-
3. The application of agricultural source material to land.	1(1)	1(1)	7(7)	7(7)
4. The storage of agricultural source material	-	-	1(1)	1(1)
10. The application of pesticide to land.	1(1)	1(1)	8(7)	8(7)
12. The application of road salt.	5(2)	5(2)	-	-
15. The handling and storage of fuel.	1	1	-	-
17. The handling and storage of an organic solvent.	1(1)	1(1)	-	-
21. The use of land as livestock grazing or pasturing the land, an outdoor confinement area or a farm-animal year. O. Reg. 385/08, s. 3.	1	1	5(5)	5(5)
<b>Total Number of Affected Parcels</b>	<b>12</b>	<b>15</b>	<b>8</b>	<b>21</b>

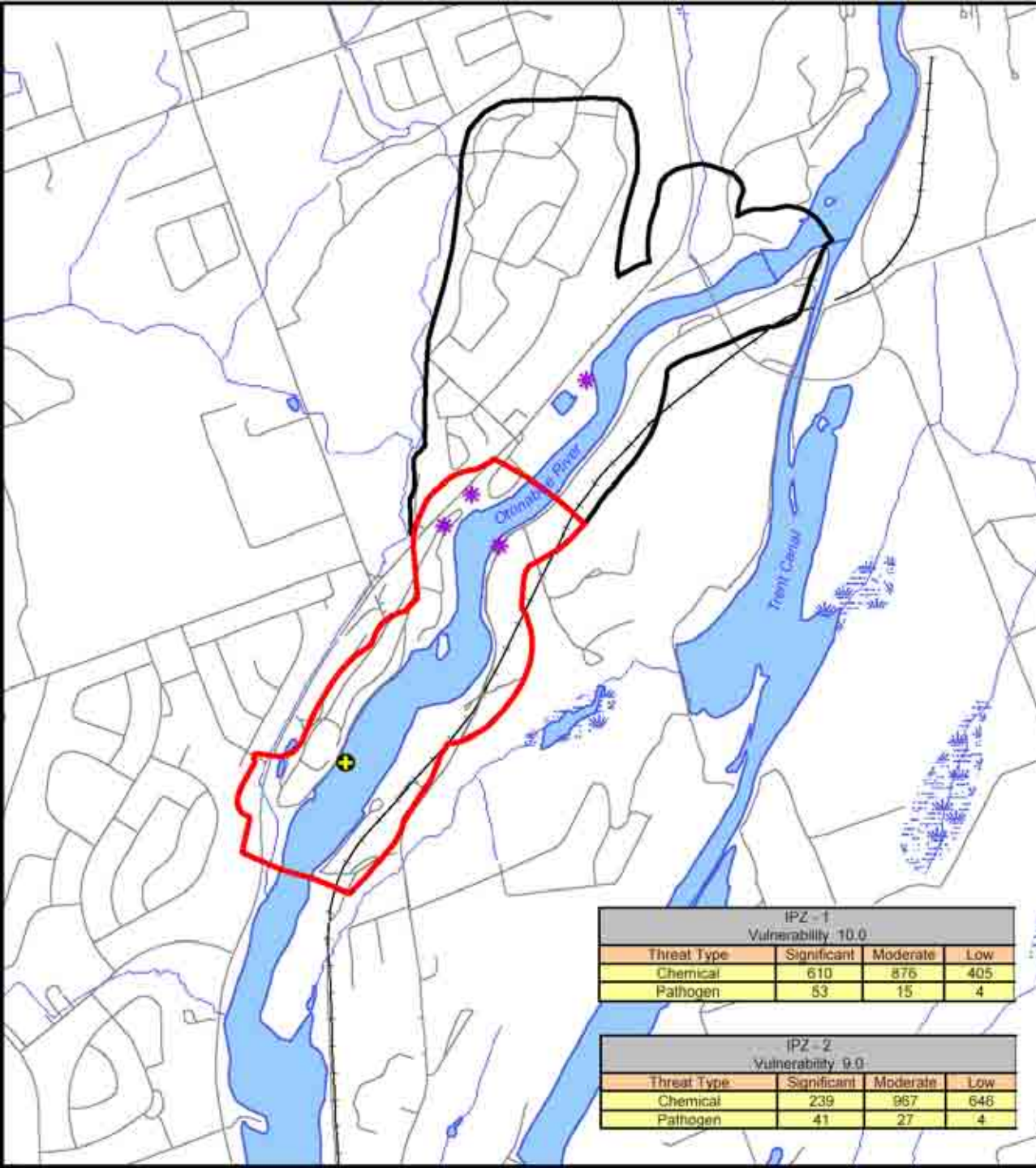
# Summary of Significant Threats - Lakefield



- 1 parcel with storage of hazardous waste and application of road salt
- 1 parcel with storage of hazardous waste and storage of organic solvents
- 4 parcels with application of road salt
- 1 parcel with application of pesticides
- 1 parcel with above grade handling of fuel
- 1 parcel with application and storage of agricultural source material, application of pesticides and livestock grazing/pasturing or an outdoor confinement area or farm-animal yard
- 5 parcels with application of agricultural source material and pesticides and livestock grazing/pasturing or an outdoor confinement area or farm-animal yard
- 3 parcels with application of agricultural source material and pesticides
- 1 parcel with a septic system
- 1 parcel with a septic holding tank
- 1 combined parcel (roadways) with sanitary sewer lines for pathogenic threats
- No Significant Conditions



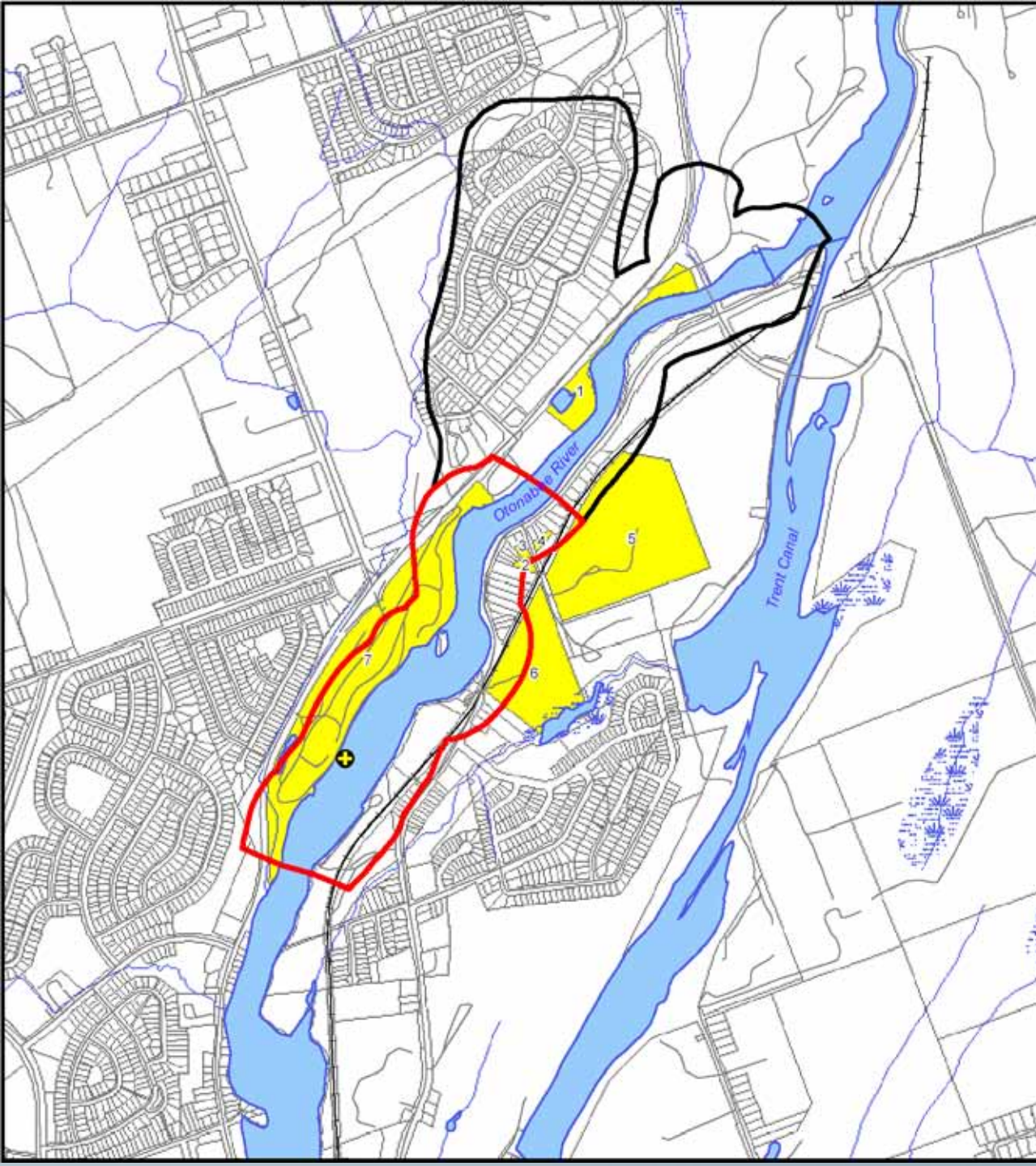
# Step 1: Review Peterborough Vulnerability Scores



# Step 2 & 3: Review Background Information & Windshield Survey



- Previous MEL work (threats database)
- XCG EcoLog ERIS report: August 2007
- Review Additional Mapping: Managed Lands, Agricultural Density, Imperviousness
- MOE Datahound files
- Field Reconnaissance:
  - June 2006
  - August 2007



**Steps 4 & 5:**

**Overlay Parcel  
Fabric &  
Evaluate  
Potentially  
Significant  
Threats**



# Step 6: Enumerate Potentially Significant Threats

Prescribed Drinking Water Threat (PDWT)*	Score to Trigger a Significant Threat			
	Vulnerability Score = 10		Vulnerability Score = 9	
	Affected Parcels	No. of PDWT	Affected Parcels	No. of PDWT
1. The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the <i>Environmental Protection Act</i> .	3	3	-	-
2. The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage.	3	3	1	1
4. The storage of agricultural source material.	1	1	-	-
9. The handling and storage of commercial fertilizer.	1	1	-	-
10. The application of pesticides.	4	4	1	1
11. The handling and storage of pesticide.	1	1	-	-
12. The application of road salt.	4	4	1	1
15. The handling and storage of fuel.	4	4	-	-
17. The handling and storage of an organic solvent.	1	1	-	-
21. The use of land as livestock grazing or pasturing land, and outdoor confinement area or a farm-animal yard. O. Reg. 385/08, s. 3.	1	1	-	-
<b>Total Number of Affected Parcels</b>	<b>6</b>	<b>23</b>	<b>1</b>	<b>3</b>

# Steps 7 & 8: Send out letters & Additional Information Gathering



- 7 parcels originally identified
- Letters sent out to land owners (Aug 2009)
- Assumptions made on 3 parcels
- No site visits required

# Step 9: Enumerate Significant Threats



Prescribed Drinking Water Threat (PDWT)*	Score to Trigger a Significant Threat			
	Vulnerability Score = 10		Vulnerability Score = 9	
	Affected Parcels**	No. of PDWT	Affected Parcels**	No. of PDWT
2. The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage.	3	3	-	-
4. The storage of agricultural source material.	1	1	-	-
12. The application of road salt.	3	3	-	-
21. The use of land as livestock grazing or pasturing land, and outdoor confinement area or a farm-animal yard. O. Reg. 385/08, s. 3.	1	1	-	-
<b>Total Number of Affected Parcels</b>	<b>5</b>	<b>8</b>	-	-

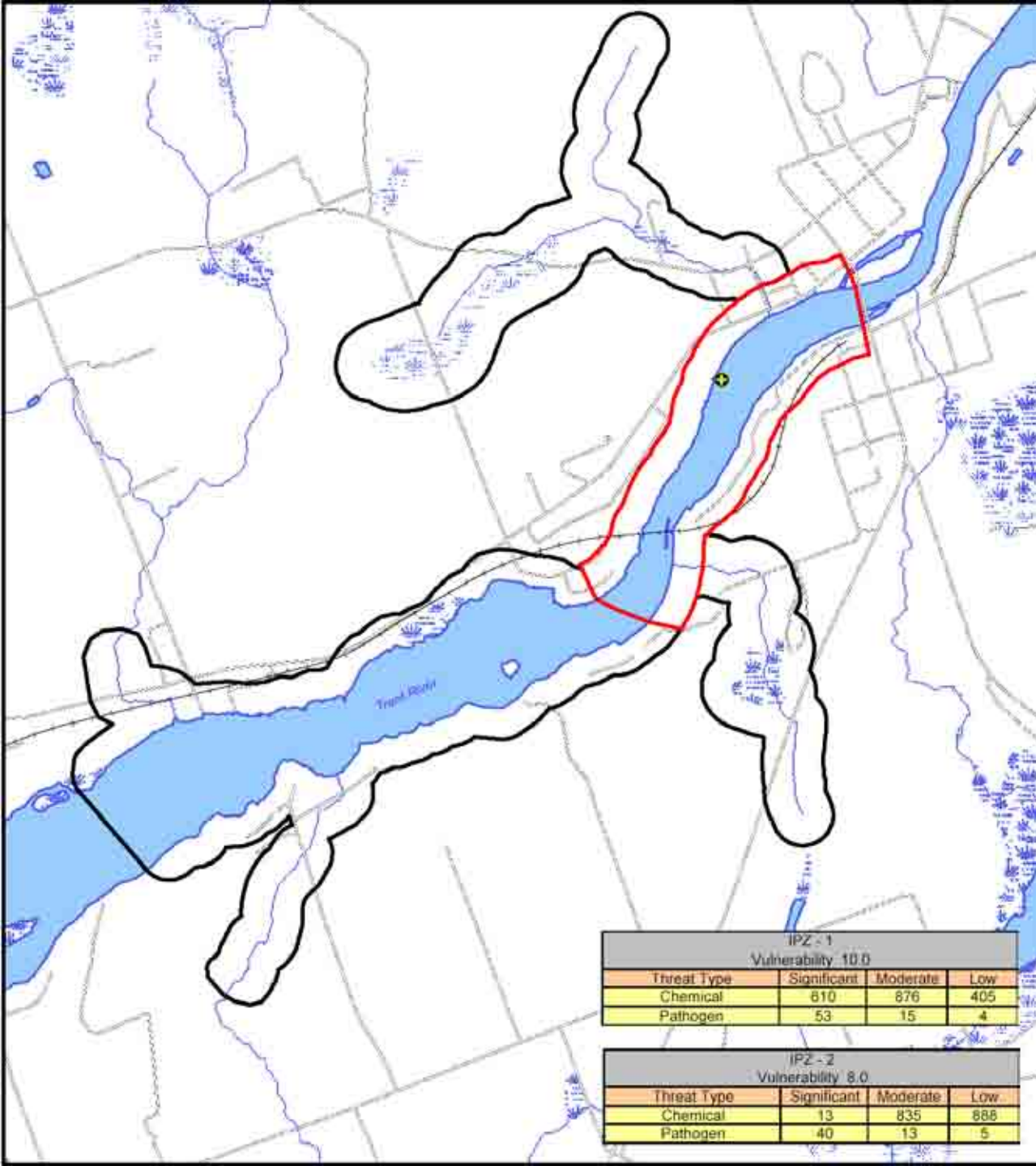
# Summary of Significant Threats – Peterborough



- 1 parcel with application of road salt storage
- 1 parcel with application of road salt storage and a septic system
- 1 parcel with a septic system
- 1 parcel with application of road salt, temporary storage of agricultural source material and an animal confinement area.
- 1 combined parcel (roadways) with sanitary sewer lines for pathogenic threats
- No Conditions



# Step 1: Review Hastings Vulnerability Scores



# Step 2 & 3: Review Background Information & Windshield Survey

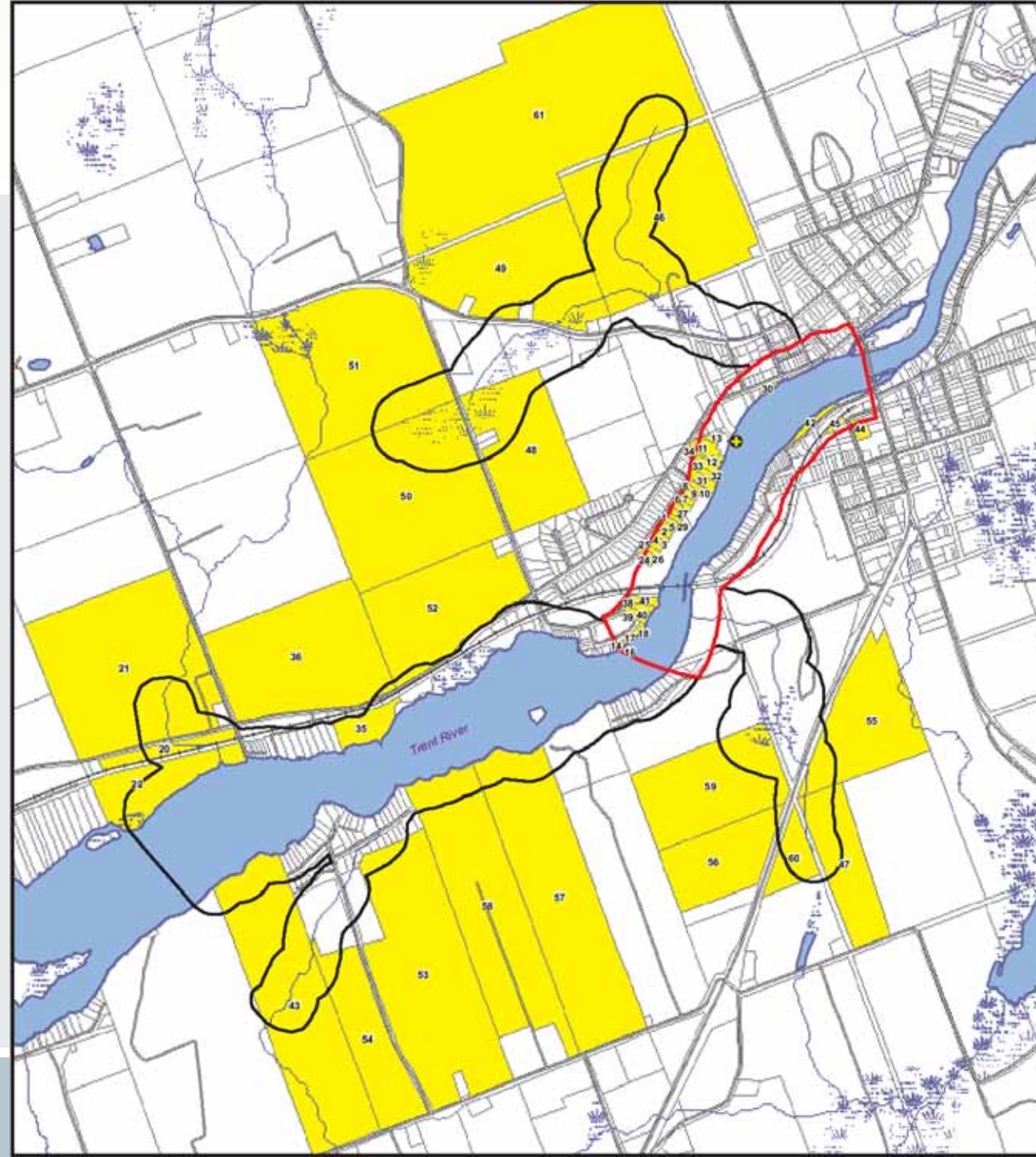


- Previous MEL work (threats database)
- XCG EcoLog ERIS report: August 2007
- Review Additional Mapping: Managed Lands, Agricultural Density, Imperviousness
- MOE Datahound files
- Field Reconnaissance:
  - June 2006
  - October 2007



**Steps 4 & 5:**

**Overlay Parcel  
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Potentially  
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# Step 6: Enumerate Potentially Significant Threats

Prescribed Drinking Water Threat (PDWT)*	Score to Trigger a Significant Threat			
	Vulnerability Score = 10		Vulnerability Score = 8	
	Affected Parcels	No. of PDWT	Affected Parcels	No. of PDWT
1. The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the <i>Environmental Protection Act</i> .	3	3	19	19
2. The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage.	40	40	3	3
3. The application of agricultural source material to land.	-	-	19	19
4. The storage of agricultural source material.	-	-	19	19
6. The application of non-agricultural source material to land.	-	-	19	19
7. The handling and storage of non-agricultural source material to land.	-	-	19	19
10. The application of pesticides.	27	27	-	-
15. The handling and storage of fuel.	27	27	-	-
17. The handling and storage of an organic solvent.	2	2	-	-
21. The use of land as livestock grazing or pasturing land, and outdoor confinement area or a farm-animal yard. O. Reg. 385/08, s. 3.	-	-	19	19
<b>Total Number of Affected Parcels</b>	<b>40</b>	<b>99</b>	<b>22</b>	<b>117</b>

# Steps 7 & 8: Send out letters & Additional Information Gathering



- 62 parcels identified
- No listings for 4 properties
- Letters sent out to land owners (Aug 2009)
- Assumptions on 21 parcels
- No site visits required

# Step 9: Enumerate Significant Threats



Prescribed Drinking Water Threat (PDWT)*	Score to Trigger a Significant Threat			
	Vulnerability Score = 10		Vulnerability Score = 8	
	Affected Parcels	No. of PDWT	Affected Parcels	No. of PDWT
2. The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage.	31(16)	31(16)	-	-
3. The application of agricultural source material to land.	-	-	10(5)	10(5)
4. The storage of agricultural source material.	-	-	6(3)	6(3)
21. The use of land as livestock grazing or pasturing land, and outdoor confinement area or a farm-animal yard. O. Reg. 385/08, s. 3.	-	-	11(5)	11(5)
<b>Total Number of Affected Parcels</b>	<b>31</b>	<b>31</b>	<b>12</b>	<b>27</b>

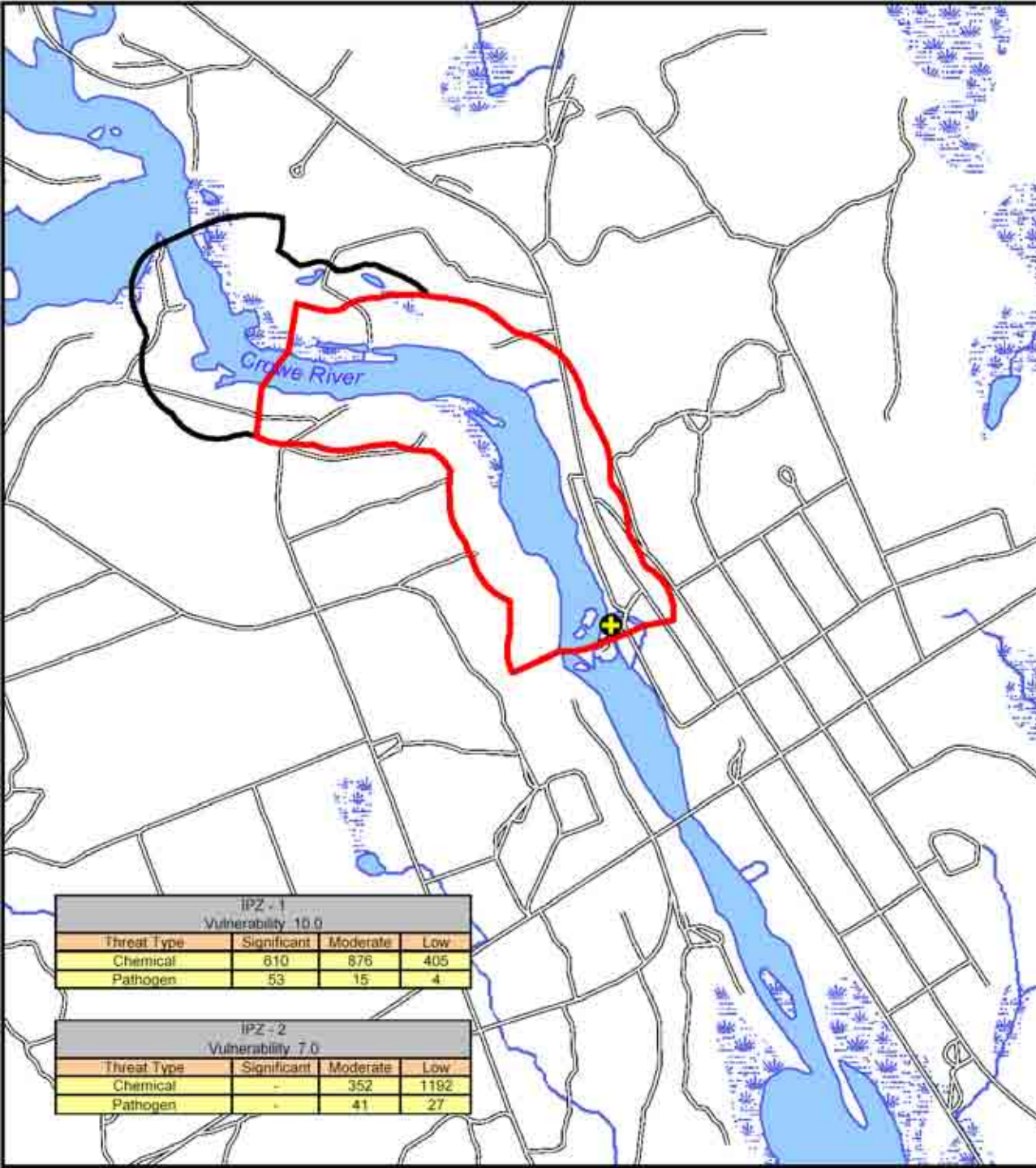
# Summary of Significant Threats – Hastings



- 5 parcels with application and storage of agricultural source material and livestock grazing/pasturing lands, an outdoor confinement area or farm-animal yard
- 3 parcels with application of agricultural source material and livestock grazing/pasturing lands
- 1 parcel with application of agricultural source material
- 2 parcels with livestock grazing/pasturing lands
- 30 parcels with septic systems
- 1 combined parcel (roadways) with sanitary sewer lines for pathogenic threats
- No Conditions



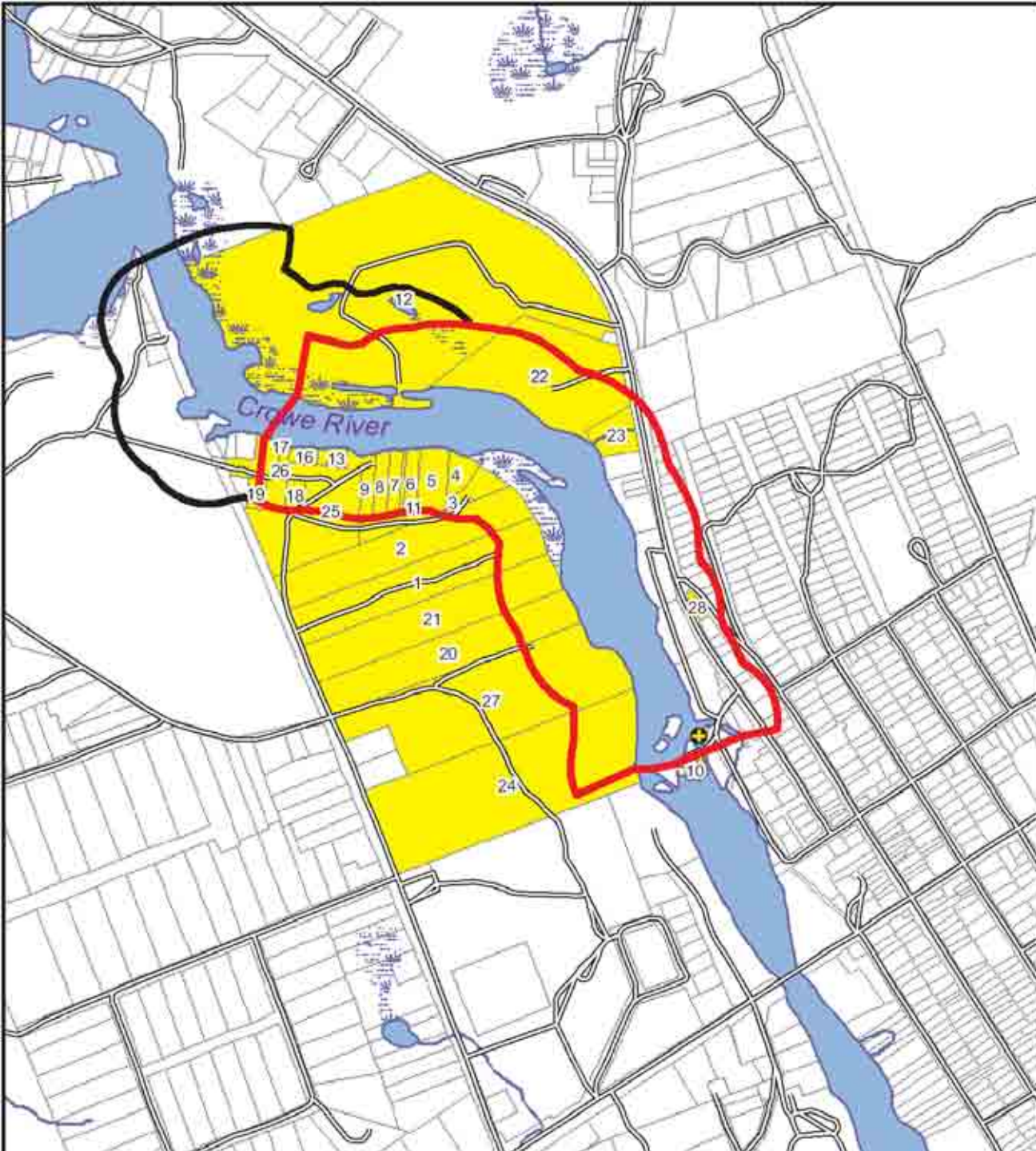
# Step 1: Review Marmora Vulnerability Scores



# Step 2 & 3: Review Background Information & Windshield Survey



- Previous MEL work (threats database)
- XCG EcoLog ERIS report: August 2007
- Review Additional Mapping: Managed Lands, Agricultural Density, Imperviousness
- MOE Datahound files
- Field Reconnaissance:
  - June 2006
  - October 2007



**Steps 4 & 5:**

**Overlay Parcel  
Fabric &  
Evaluate  
Potentially  
Significant  
Threats**



# Step 6: Enumerate Potentially Significant Threats

Prescribed Drinking Water Threat (PDWT)*	Score to Trigger a Significant Threat	
	Vulnerability Score = 10	
	Affected Parcels	No. of PDWT
1. The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the <i>Environmental Protection Act</i> .	9	9
2. The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage.	28	28
3. The application of agricultural source material to land.	6	6
4. The storage of agricultural source material.	6	6
6. The application of non-agricultural source material to land.	6	6
7. The handling and storage of non-agricultural source material.	6	6
9. The handling and storage of commercial fertilizer.	6	6
10. The application of pesticide to land.	28	28
11. The handling and storage of pesticide.	6	6
12. The application of road salt.	10	10
15. The handling and storage of fuel.	9	9
17. The handling and storage of an organic solvent.	7	7
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.	7	7
<b>Total Number of Affected Parcels</b>	<b>28</b>	<b>134</b>

# Steps 7 & 8: Send out letters & Additional Information Gathering



- 28 parcels originally identified
- One parcel with no listing
- Letters sent out to land owners (August 2009)
- Assumptions made on 14 parcels
- No site visits required

# Step 9: Enumerate Significant Threats



Prescribed Drinking Water Threat (PDWT)*	Score to Trigger a Significant Threat	
	Vulnerability Score = 10	
	Affected Parcels	No. of PDWT
2. The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage.	18	18
3. The application of agricultural source material to land.	1	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.	1	1
<b>Total Number of Affected Parcels</b>	<b>18</b>	<b>20</b>

# Summary of Significant Threats – Marmora

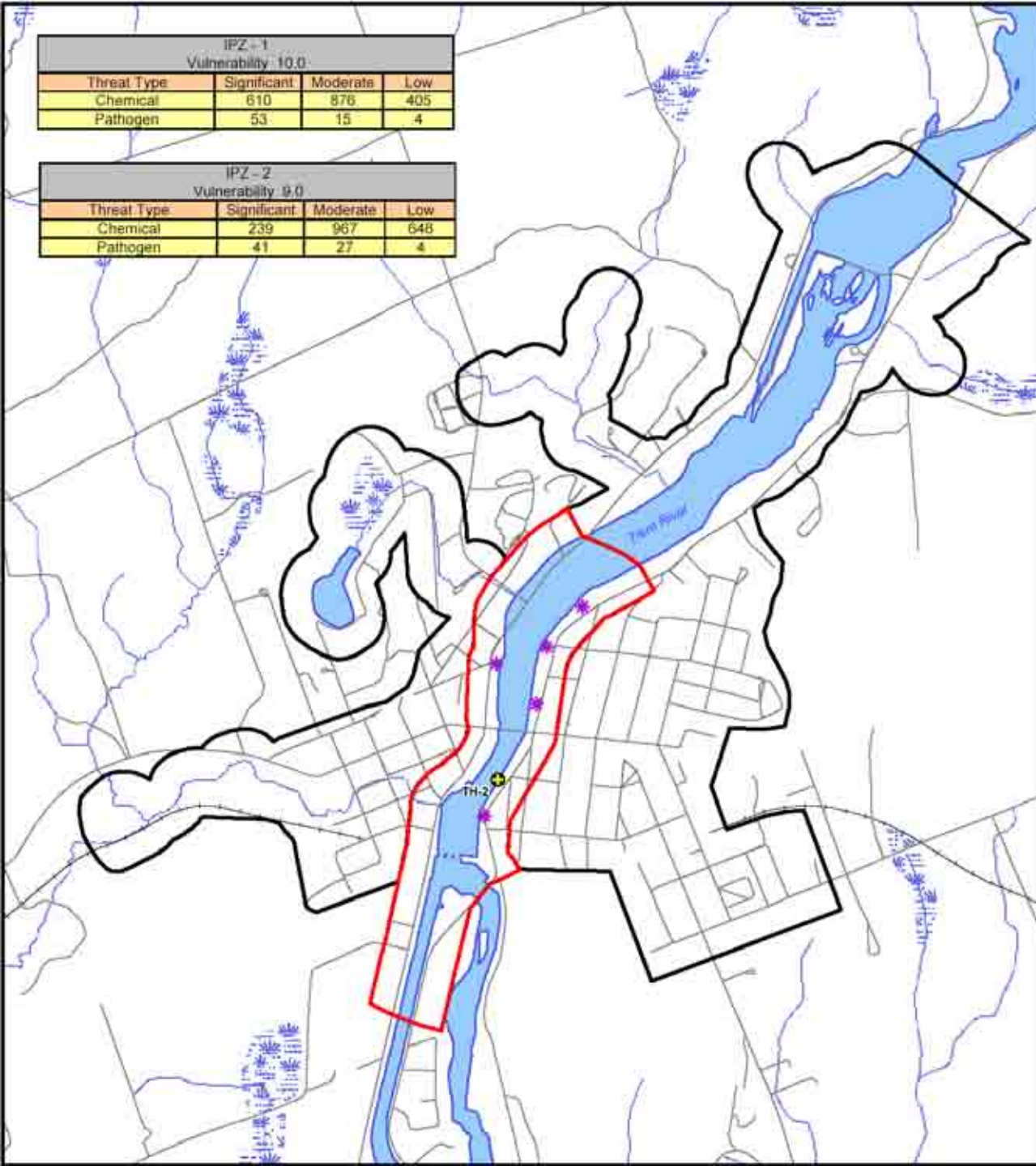


- 1 parcel with a septic system, application of agricultural source material and livestock grazing / pasturing
- 18 parcels with septic systems
- No Conditions



IPZ - 1 Vulnerability 10.0			
Threat Type	Significant	Moderate	Low
Chemical	610	876	405
Pathogen	53	15	4

IPZ - 2 Vulnerability 9.0			
Threat Type	Significant	Moderate	Low
Chemical	239	967	648
Pathogen	41	27	4

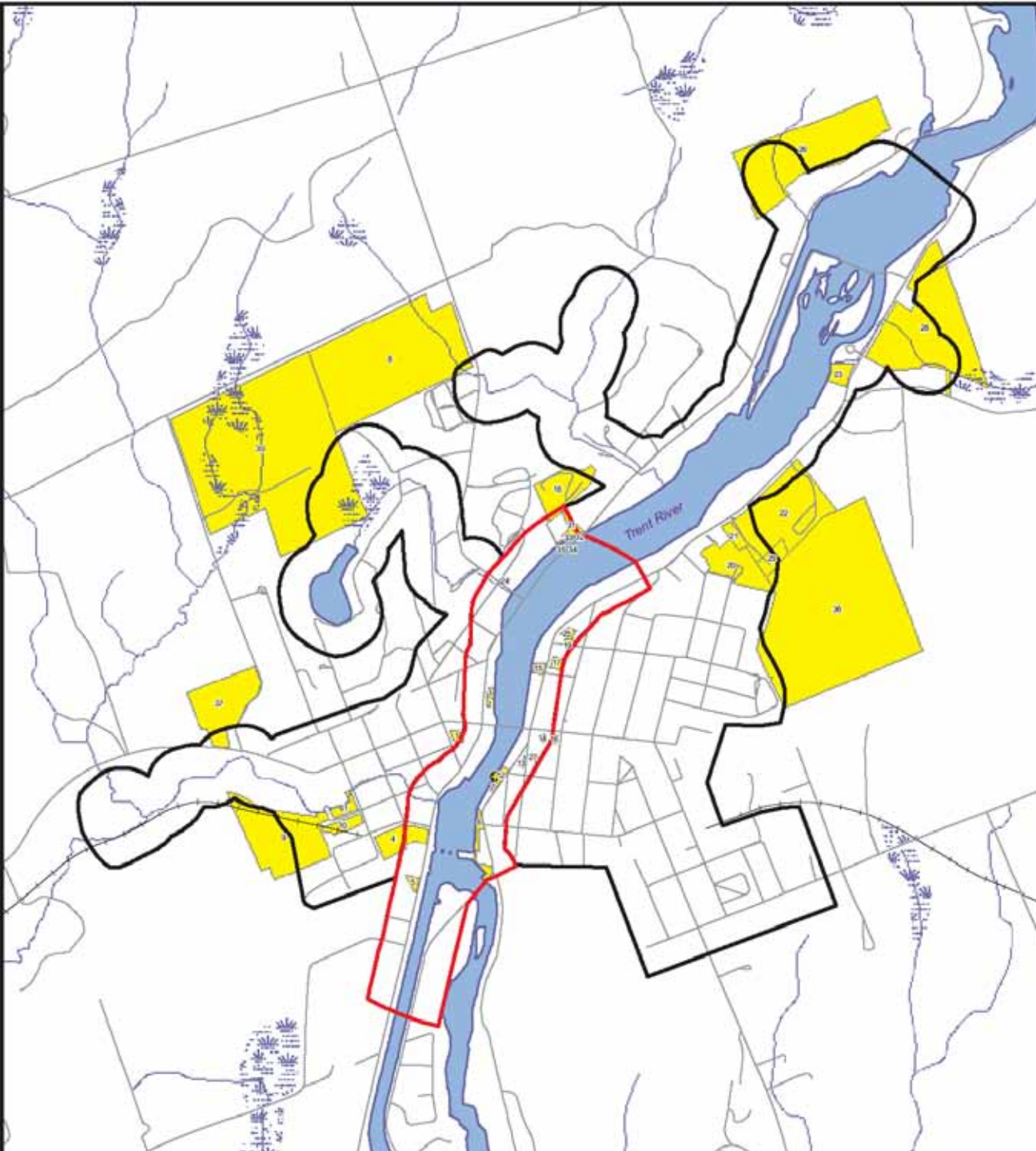


# Step 1: Review Campbellford Vulnerability Scores

# Step 2 & 3: Review Background Information & Windshield Survey



- Previous MEL work (threats database)
- XCG EcoLog ERIS report: August 2007
- Review Additional Mapping: Managed Lands, Agricultural Density, Imperviousness
- MOE Datahound files
- Field Reconnaissance:
  - June 2006
  - October 2007



**Steps 4 & 5:**

**Overlay Parcel  
Fabric &  
Evaluate  
Potentially  
Significant  
Threats**



# Step 6: Enumerate Potentially Significant Threats

Prescribed Drinking Water Threat (PDWT)*	Score to Trigger a Significant Threat			
	Vulnerability Score = 10		Vulnerability Score = 9	
	Affected Parcels	No. of PDWT	Affected Parcels	No. of PDWT
1. The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the <i>Environmental Protection Act</i> .	17	17	14	14
2. The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage.	8	8	5	5
3. The application of agricultural source material to land.	-	-	6	6
4. The storage of agricultural source material.	-	-	7	7
6. The application of non-agricultural source material to land.	-	-	6	6
7. The handling and storage of non-agricultural source material.	-	-	6	6
9. The handling and storage of commercial fertilizer.	2	2	-	-
10. The application of pesticide to land.	21	21	13	13
11. The handling and storage of pesticide.	2	2	11	11
12. The application of road salt.	13	13	3	3
13. The handling and storage of road salt.	1	1	2	2
14. The storage of snow.	-	-	1	1
15. The handling and storage of fuel.	21	21	-	-
17. The handling and storage of an organic solvent.	14	14	-	-
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.	-	-	7	7
<b>Total Number of Affected Parcels</b>	<b>24</b>	<b>99</b>	<b>14</b>	<b>81</b>

# Steps 7 & 8: Send out letters & Additional Information Gathering



- 38 parcels originally identified
- 4 properties with no listing
- 1 parcel added during the assessment
- Letters sent out to land owners (August 2009)
- Assumptions made for 9 parcels
- No site visits required

# Step 9: Enumerate Significant Threats



Prescribed Drinking Water Threat (PDWT)*	Score to Trigger a Significant Threat			
	Vulnerability Score = 10		Vulnerability Score = 9	
	Affected Parcels	No. of PDWT	Affected Parcels	No. of PDWT
1. The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the <i>Environmental Protection Act</i> .	1	1	-	-
2. The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage.	1	1	-	-
3. The application of agricultural source material to land.	-	-	2(2)	2(2)
4. The storage of agricultural source material.	-	-	2(1)	2(1)
12. The application of road salt.	5(1)	5(1)	-	-
14. The storage of snow.	-	-	1(1)	1(1)
15. The handling and storage of fuel.	5(3)	5(3)		
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.	-	-	2(2)	2(2)
<b>Total Number of Affected Parcels</b>	<b>10</b>	<b>12</b>	<b>4</b>	<b>7</b>

# Summary of Significant Threats – Campbellford

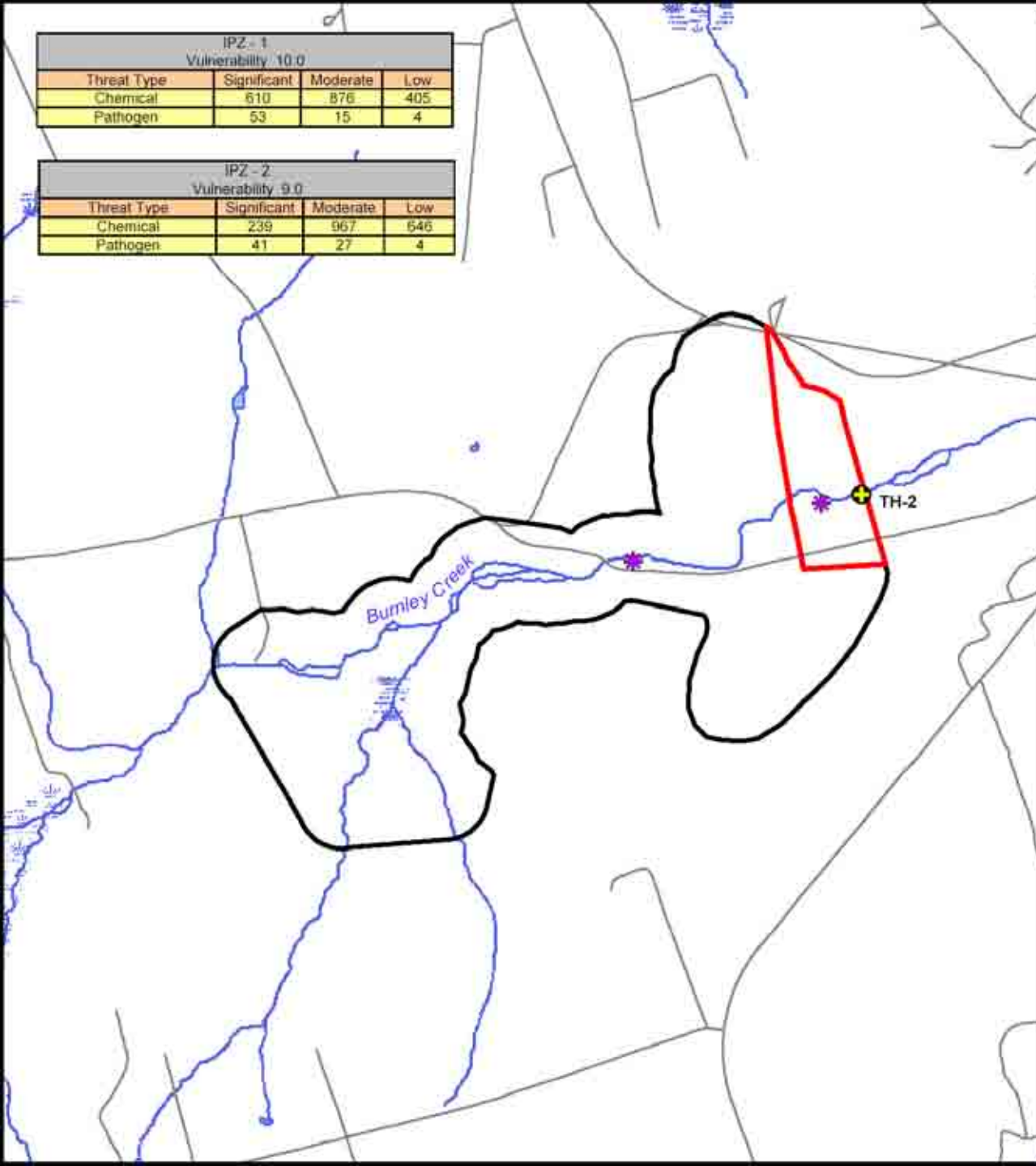


- 1 parcel with storage of hazardous or liquid waste and application of road salt
- 1 parcel with storage of snow
- 3 parcels with application of road salt
- 1 parcel with application of road salt and above grade handling of fuel
- 4 parcels with above grade handling of fuel
- 1 parcel with application and storage of agricultural source material and livestock grazing/pasturing lands or an outdoor confinement area or farm-animal yard
- 1 parcel with application of agricultural source material and livestock grazing/pasturing land
- 1 parcel with temporary storage of agricultural source material
- 1 combined parcel (roadways) with sanitary sewer lines for pathogenic threats
- No Significant Conditions



IPZ - 1 Vulnerability 10.0			
Threat Type	Significant	Moderate	Low
Chemical	610	876	405
Pathogen	53	15	4

IPZ - 2 Vulnerability 9.0			
Threat Type	Significant	Moderate	Low
Chemical	239	967	646
Pathogen	41	27	4



## Step 1: Review Warkworth Vulnerability Scores

# Step 2 & 3: Review Background Information & Windshield Survey

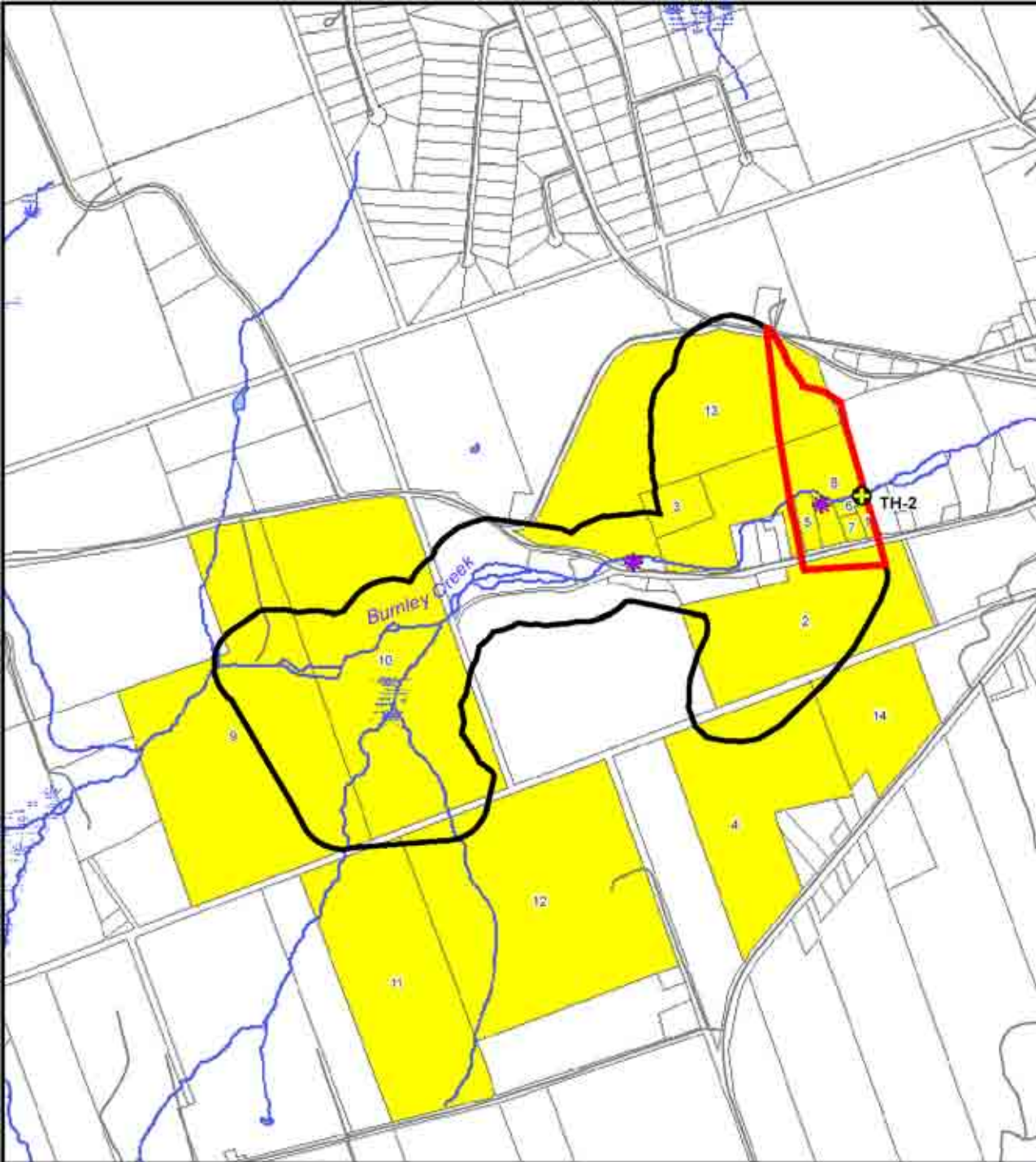


- Previous MEL work (threats database)
- XCG EcoLog ERIS report: August 2007
- Review Additional Mapping: Managed Lands, Agricultural Density, Imperviousness
- MOE Datahound files
- Field Reconnaissance:
  - June 2006
  - August 2007



**Steps 4 & 5:**

**Overlay Parcel  
Fabric &  
Evaluate  
Potentially  
Significant  
Threats**





# Step 6: Enumerate Potentially Significant Threats

Prescribed Drinking Water Threat (PDWT)*	Score to Trigger a Significant Threat			
	Vulnerability Score = 10		Vulnerability Score = 9	
	Affected Parcels	No. of PDWT	Affected Parcels	No. of PDWT
1. The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the <i>Environmental Protection Act</i> .	3	3	8	8
2. The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage.	7	7	-	-
3. The application of agricultural source material to land.	3	3	8	8
4. The storage of agricultural source material.	3	3	8	8
6. The application of non-agricultural source material to land.	3	3	8	8
7. The handling and storage of non-agricultural source material.	3	3	8	8
9. The handling and storage of commercial fertilizer.	3	3	-	-
10. The application of pesticide to land.	7	7	8	8
11. The handling and storage of pesticide.	3	3	7	7
15. The handling and storage of fuel.	3	3	-	-
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.	3	3	8	8
<b>Total Number of Affected Parcels</b>	<b>7</b>	<b>45</b>	<b>8</b>	<b>63</b>

# Steps 7 & 8: Send out letters & Additional Information Gathering



- 15 parcels identified
- Letters sent out to land owners (August 2009)
- 1 parcel with no listing
- No site visits required

# Step 9: Enumerate Significant Threats



Prescribed Drinking Water Threat (PDWT)*	Score to Trigger a Significant Threat			
	Vulnerability Score = 10		Vulnerability Score = 9	
	Affected Parcels**	No. of PDWT	Affected Parcels**	No. of PDWT
2. The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage.	2	2	-	-
3. The application of agricultural source material to land.	2	2	4	4
4. The storage of agricultural source material.	-	-	1	1
10. The application of pesticide to land.	1	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.	2	2	3	3
<b>Total Number of Affected Parcels</b>	<b>4</b>	<b>7</b>	<b>5</b>	<b>8</b>

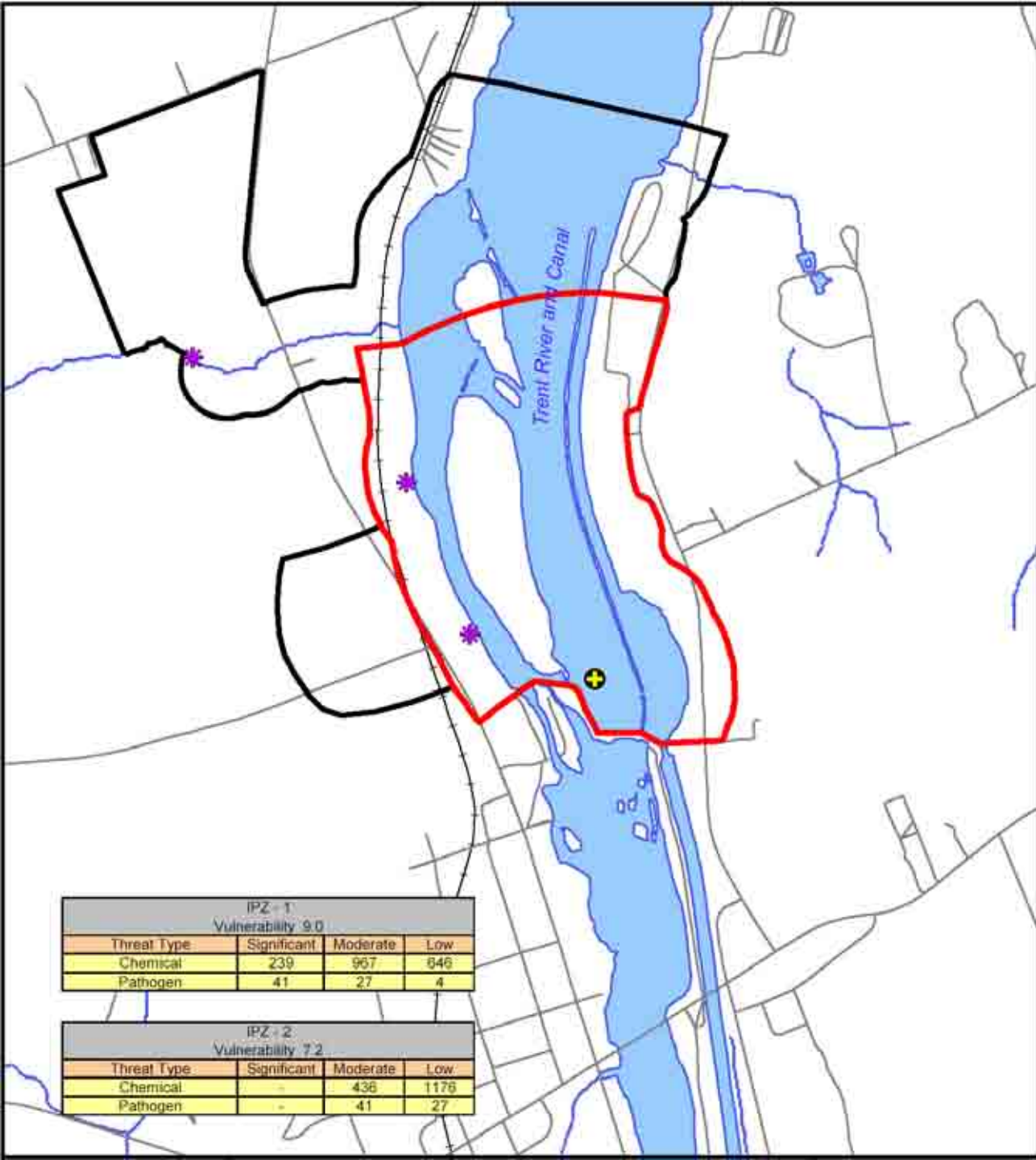
# Summary of Significant Threats – Warkworth



- 1 parcel with the application of agricultural source material, the application of pesticides and livestock grazing / pasturing
- 1 parcel with the application and storage of agricultural source material and livestock grazing / pasturing
- 2 parcels with application of agricultural source material and livestock grazing / pasturing or an outdoor confinement area or farm-animal yard
- 2 parcels with application of agricultural source material
- 1 parcel with livestock grazing / pasturing
- 2 parcels with septic systems
- No Conditions



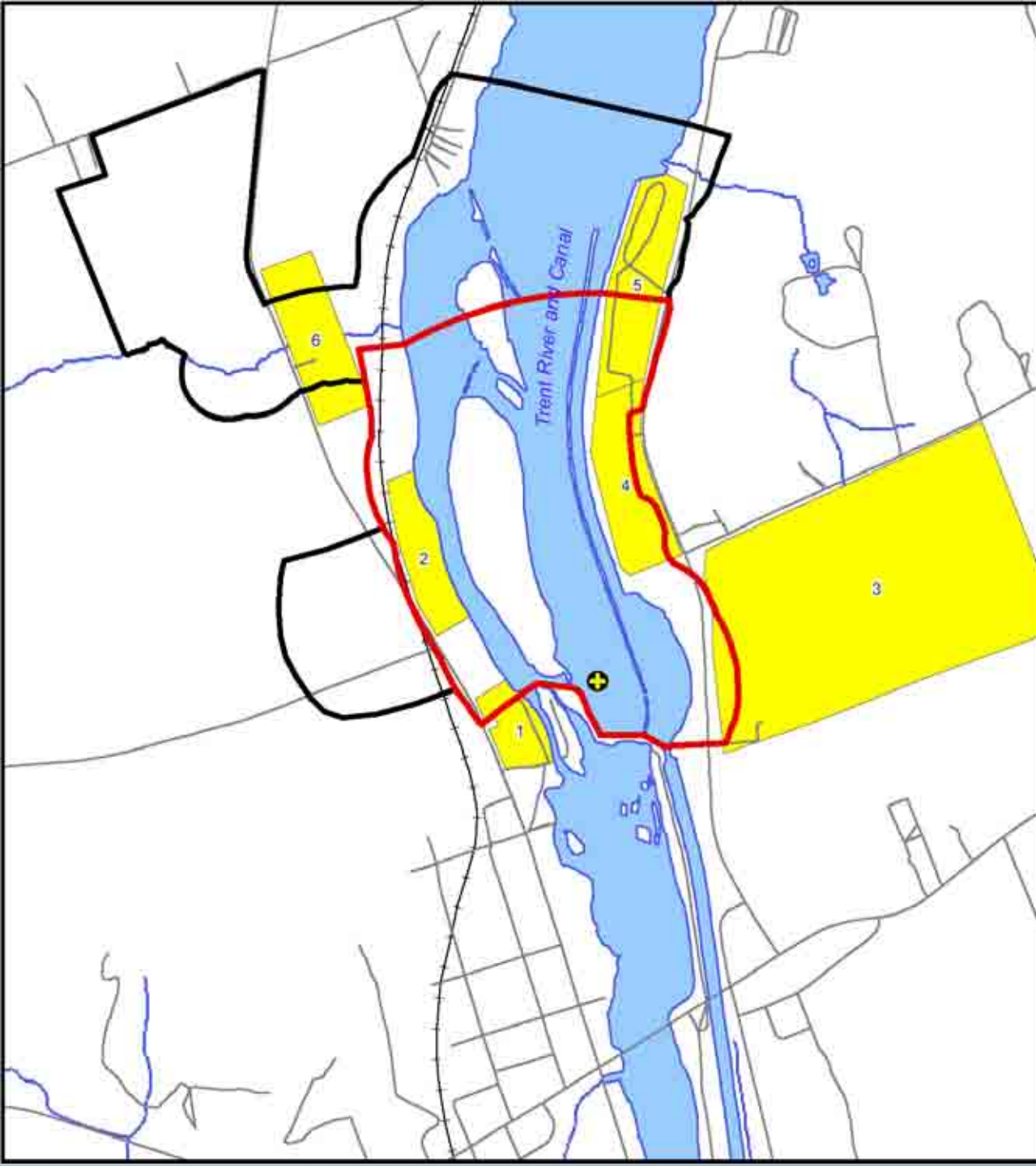
# Step 1: Review Frankford Vulnerability Scores



# Step 2 & 3: Review Background Information & Windshield Survey



- Previous MEL work (threats database)
- XCG EcoLog ERIS report: August 2007
- Review Additional Mapping: Managed Lands, Agricultural Density, Imperviousness
- MOE Datahound files
- Field Reconnaissance:
  - June 2006
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  - November 2007



**Steps 4 & 5:**

**Overlay Parcel  
Fabric &  
Evaluate  
Potentially  
Significant  
Threats**



# Step 6: Enumerate Potentially Significant Threats

Prescribed Drinking Water Threat (PDWT)*	Score to Trigger a Significant Threat	
	Vulnerability Score = 9	
	Affected Parcels	No. of PDWT
1. The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the <i>Environmental Protection Act</i> .	5	5
2. The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage.	1	1
3. The application of agricultural source material to land.	2	2
4. The storage of agricultural source material.	2	2
6. The application of non-agricultural source material to land.	2	2
7. The handling and storage of non-agricultural source material.	2	2
9. The handling and storage of commercial fertilizer.	2	2
10. The application of pesticide to land.	6	6
11. The handling and storage of pesticide.	2	2
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.	2	2
<b>Total Number of Affected Parcels</b>	<b>6</b>	<b>26</b>

# Steps 7 & 8: Send out letters & Additional Information Gathering



- 6 parcels originally identified
- Letters sent out to land owners (Oct 2009)
- Assumptions made on 2 parcels
- No site visits required

# Step 9: Enumerate Significant Threats



Prescribed Drinking Water Threat (PDWT)*	Score to Trigger a Significant Threat	
	Vulnerability Score = 9	
	Affected Parcels	No. of PDWT
3. The application of agricultural source material to land.	2	2
10. The application of pesticide to land.	2	2
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.	2	2
<b>Total Number of Affected Parcels</b>	<b>2</b>	<b>6</b>

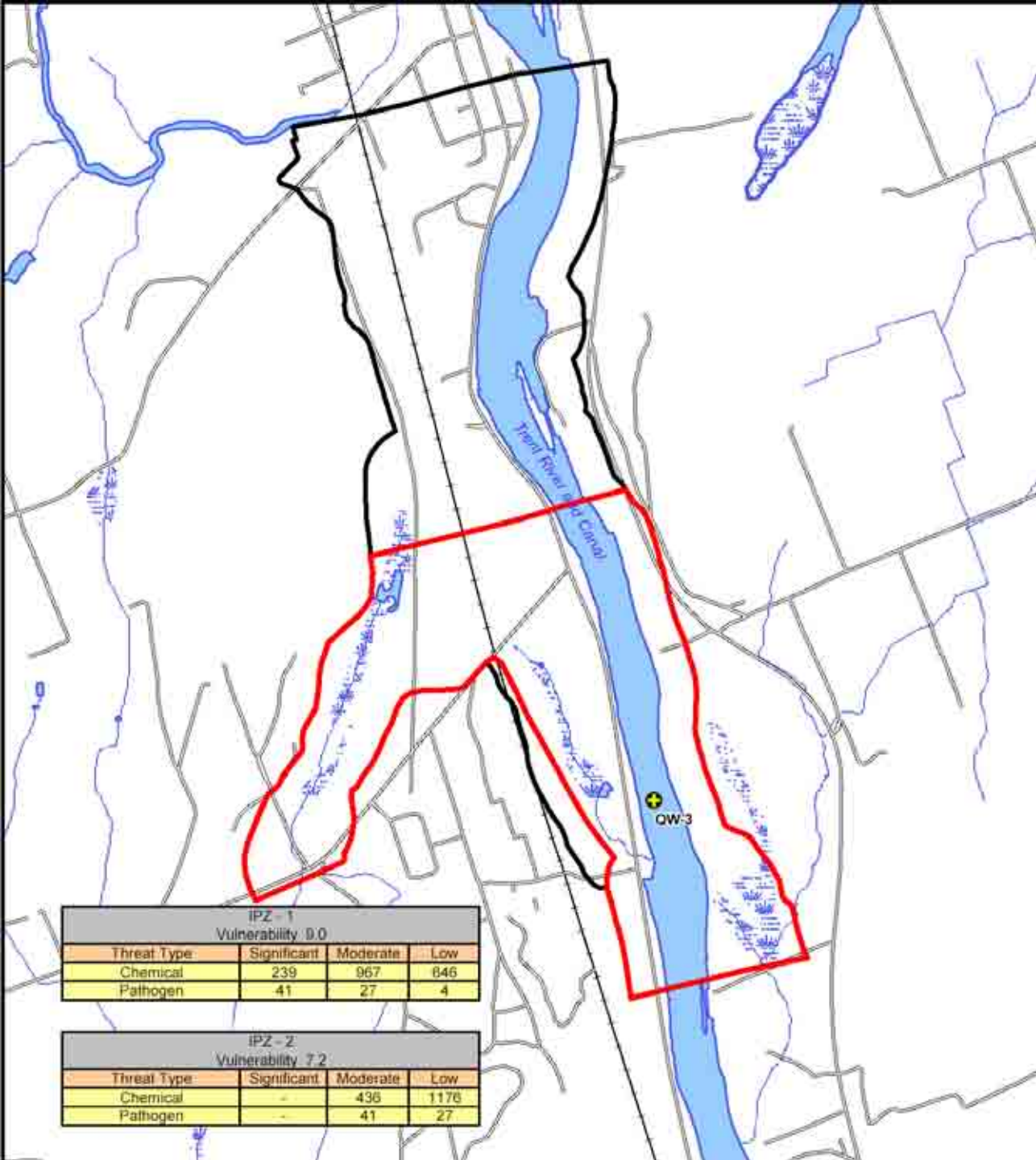
# Summary of Significant Threats – Frankford



- 2 parcels with application of agricultural source material and pesticides and livestock grazing / pasturing
- No Conditions



# Step 1: Review Batawa Vulnerability Scores



IPZ - 1 Vulnerability 9.0				
Threat Type	Significant	Moderate	Low	
Chemical	239	967	846	
Pathogen	41	27	4	

IPZ - 2 Vulnerability 7.2				
Threat Type	Significant	Moderate	Low	
Chemical	-	436	1176	
Pathogen	-	41	27	

# Step 2 & 3: Review Background Information & Windshield Survey



- Previous MEL work (threats database)
- XCG EcoLog ERIS report: August 2007
- Review Additional Mapping: Managed Lands, Agricultural Density, Imperviousness
- MOE Datahound files
- Field Reconnaissance:
  - June 2006
  - August 2007



**Steps 4 & 5:**

**Overlay Parcel  
Fabric &  
Evaluate  
Potentially  
Significant  
Threats**



# Step 6: Enumerate Potentially Significant Threats

Prescribed Drinking Water Threat (PDWT)*	Score to Trigger a Significant Threat	
	Vulnerability Score = 9	
	Affected Parcels**	No. of PDWT
1. The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the <i>Environmental Protection Act</i> .	1	1
2. The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage.	1	1
15. The handling and storage of fuel.	1	
17. The handling and storage of an organic solvent.	1	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.	1	1
<b>Total Number of Affected Parcels</b>	<b>1</b>	<b>5</b>

# Steps 7 & 8: Send out letters & Additional Information Gathering



- 1 parcel originally identified
- Letters sent out to land owner (August 2009)
- No site visits required

# Step 9: Enumerate Significant Threats



<b>Prescribed Drinking Water Threat (PDWT)*</b>	<b>Score to Trigger a Significant Threat</b>	
	<b>Vulnerability Score = 9</b>	
	<b>Affected Parcels**</b>	<b>No. of PDWT</b>
None		

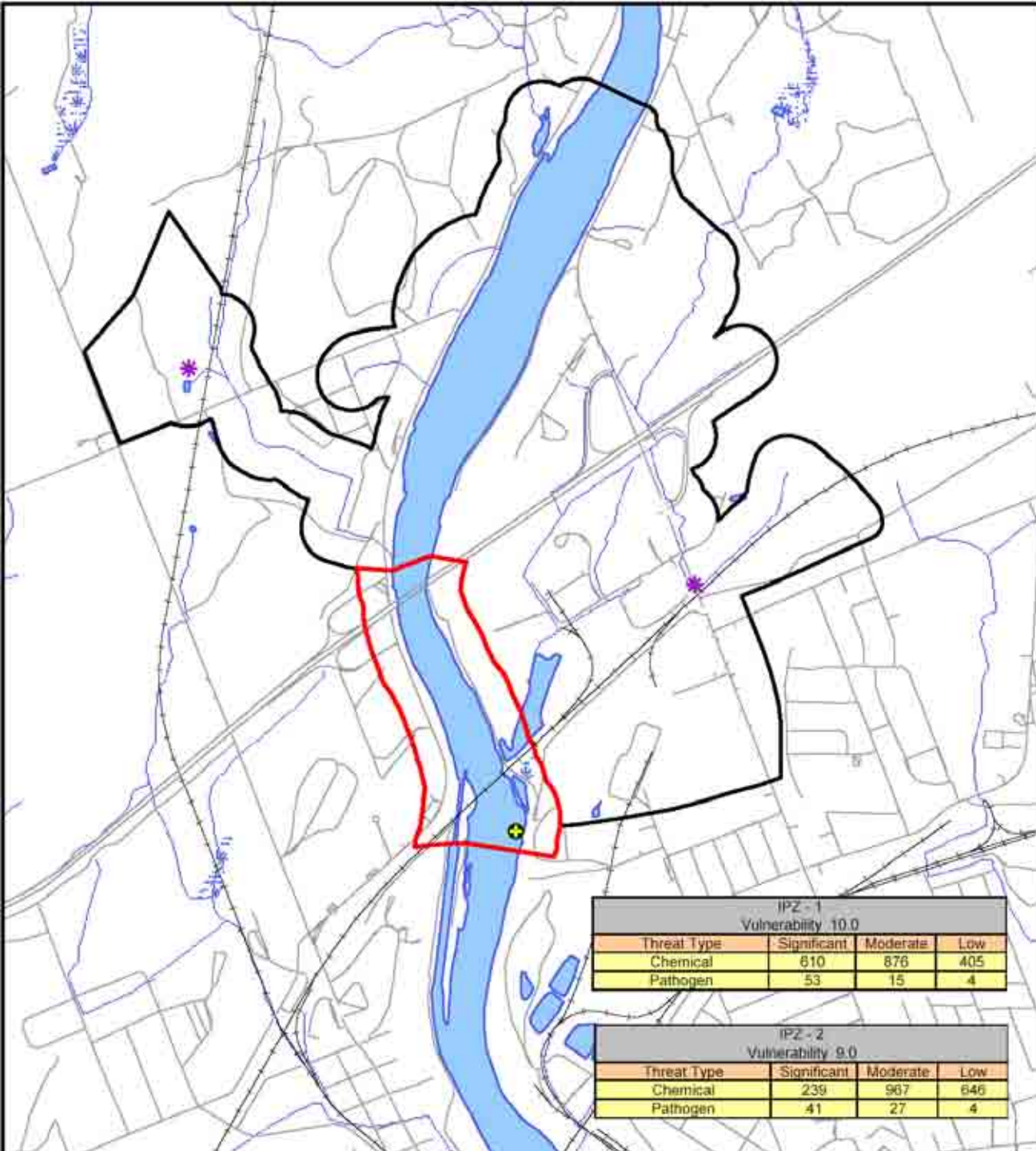
# Summary of Significant Threats – Batawa



- No Activity Significant Threats
- No Significant Conditions



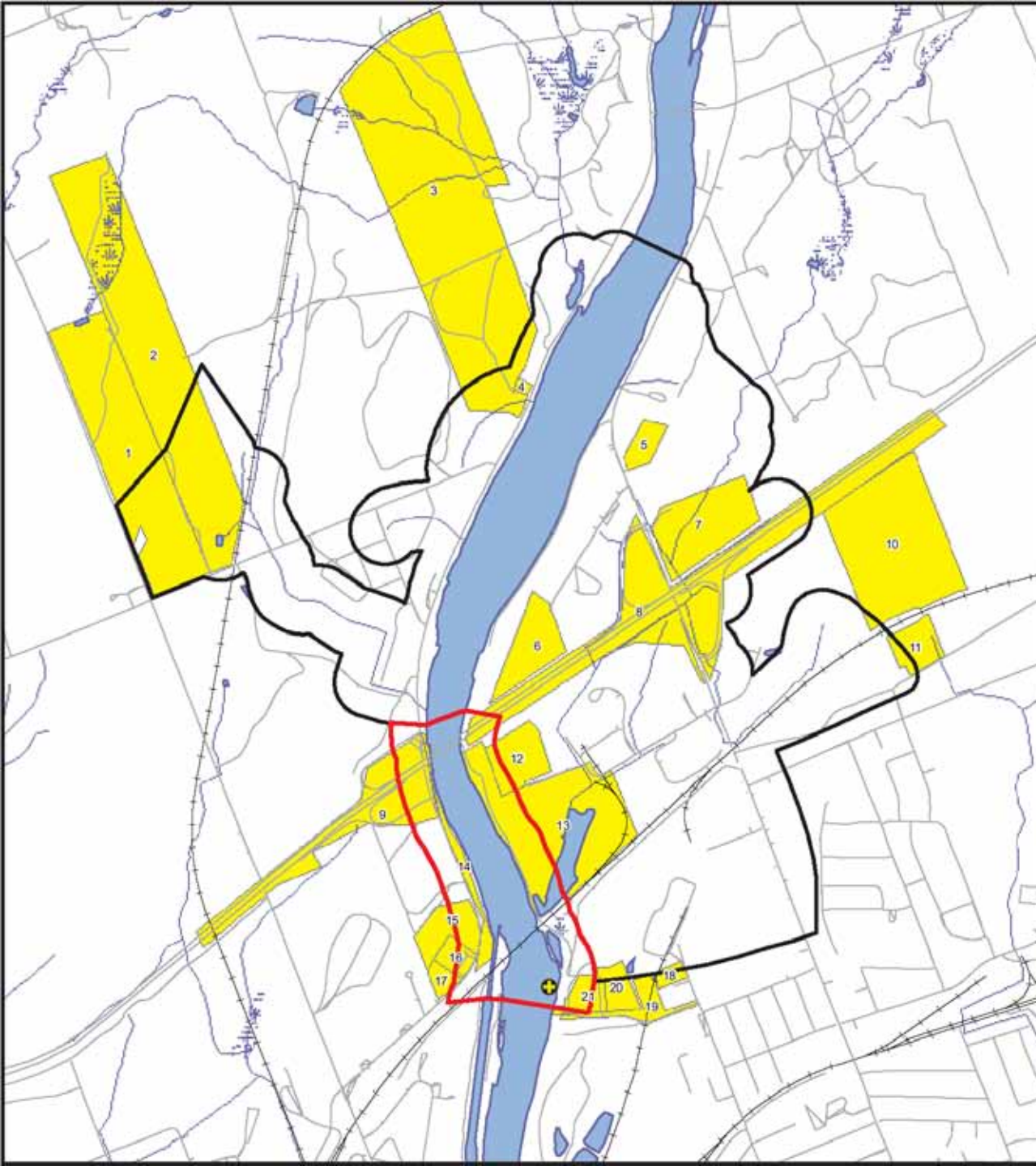
# Step 1: Review Trenton Vulnerability Scores



# Step 2 & 3: Review Background Information & Windshield Survey



- Previous MEL work (threats database)
- XCG EcoLog ERIS report: August 2007
- Review Additional Mapping: Managed Lands, Agricultural Density, Imperviousness
- MOE Datahound files
- Field Reconnaissance:
  - June 2006
  - October 2007
  - November 2007



**Steps 4 & 5:**

**Overlay Parcel  
Fabric &  
Evaluate  
Potentially  
Significant  
Threats**



# Step 6: Enumerate Potentially Significant Threats

Prescribed Drinking Water Threat (PDWT)*	Score to Trigger a Significant Threat			
	Vulnerability Score = 10		Vulnerability Score = 9	
	Affected Parcels	No. of PDWT	Affected Parcels	No. of PDWT
1. The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the <i>Environmental Protection Act</i> .	6	6	11	11
2. The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage.	3	3	-	-
3. The application of agricultural source material to land.	-	-	5	5
4. The storage of agricultural source material.	-	-	5	5
6. The application of non-agricultural source material to land.	-	-	5	5
7. The handling and storage of non-agricultural source material.	-	-	5	5
9. The handling and storage of commercial fertilizer.	1	1	-	-
10. The application of pesticide to land.	7	7	12	12
11. The handling and storage of pesticide.	1	1	8	8
12. The application of road salt.	4	4	4	4
13. The handling and storage of road salt.	-	-	2	2
15. The handling and storage of fuel.	7	7	-	-
17. The handling and storage of an organic solvent.	5	5	-	-
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.	-	-	5	5
<b>Total Number of Affected Parcels</b>	<b>10</b>	<b>34</b>	<b>12</b>	<b>62</b>

# Steps 7 & 8: Send out letters & Additional Information Gathering



- 22 parcels originally identified
- Letters sent out to land owners (August 2009)
- 2 parcels added during assessment
- Assumptions made on 3 parcels
- No site visits required

# Step 9: Enumerate Significant Threats



Prescribed Drinking Water Threat (PDWT)*	Score to Trigger a Significant Threat			
	Vulnerability Score = 10		Vulnerability Score = 9	
	Affected Parcels	No. of PDWT	Affected Parcels	No. of PDWT
1. The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the <i>Environmental Protection Act</i> .	1	1	1	1
2. The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage.	1	1	-	-
3. The application of agricultural source material to land.	-	-	3(2)	3(2)
4. The storage of agricultural source material.	-	-	1(1)	1(1)
10. The application of pesticide to land.	-	-	4(2)	4(2)
12. The application of road salt.	3	3	-	-
15. The handling and storage of fuel.	1	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.	-	-	3(2)	3(2)
<b>Total Number of Affected Parcels</b>	<b>5</b>	<b>6</b>	<b>5</b>	<b>12</b>



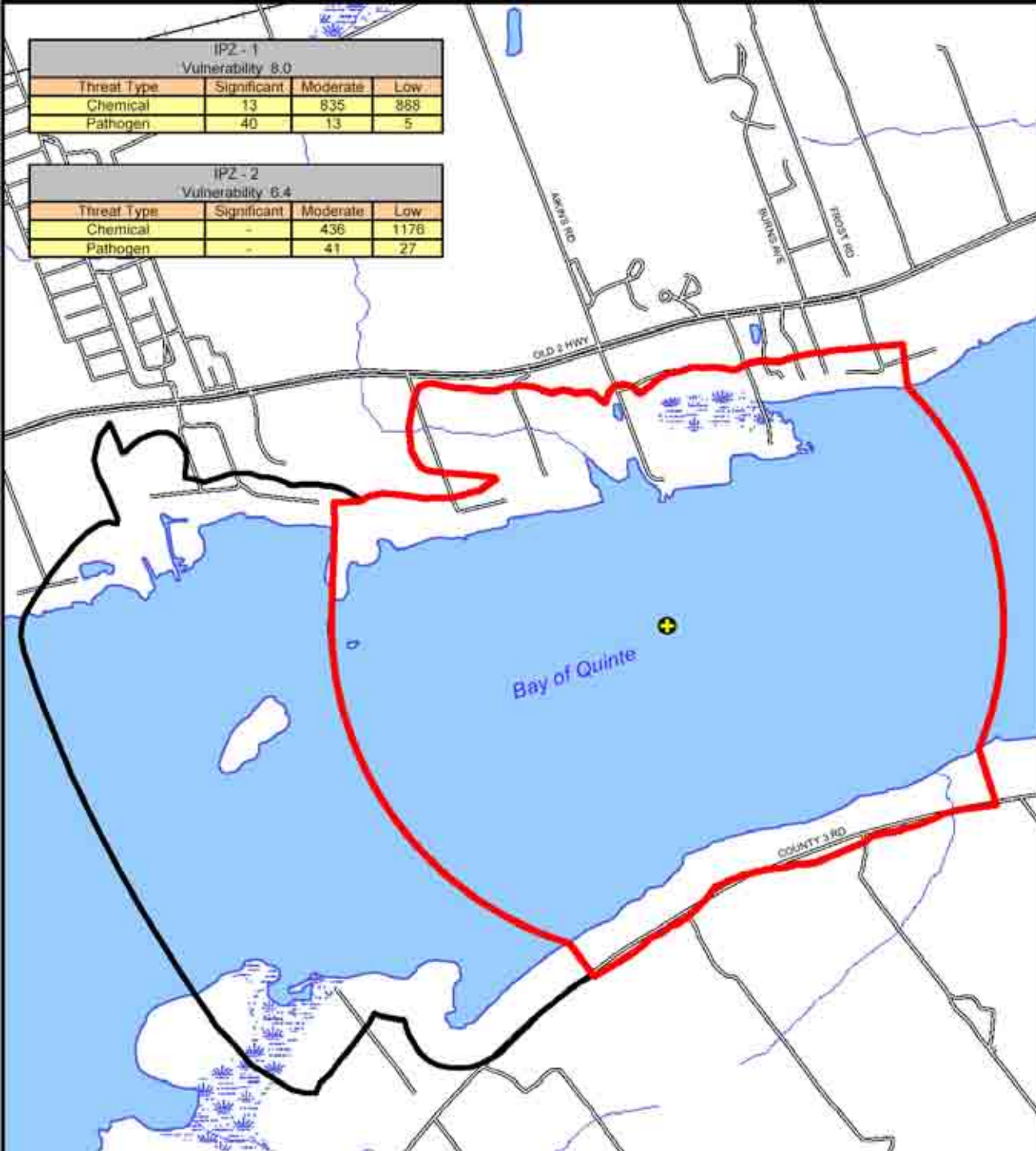
# Summary of Significant Threats – Trenton

- 1 parcel with storage of hazardous waste and storage of fuel
- 1 parcel with storage of hazardous waste
- 3 parcels with application of road salt
- 1 parcel with application of pesticides
- 1 parcel with application and storage of agricultural source material, application of pesticides and livestock grazing/pasturing lands or an outdoor confinement area or farm animal-yard
- 2 parcels with application of agricultural source material and pesticides and livestock grazing/pasturing lands or an outdoor confinement area or farm animal-yard
- 1 combined parcel (roadways) with sanitary sewer lines for pathogenic threats
- No Conditions



IP2 - 1 Vulnerability 8.0			
Threat Type	Significant	Moderate	Low
Chemical	13	835	888
Pathogen	40	13	5

IP2 - 2 Vulnerability 6.4			
Threat Type	Significant	Moderate	Low
Chemical	-	436	1176
Pathogen	-	41	27

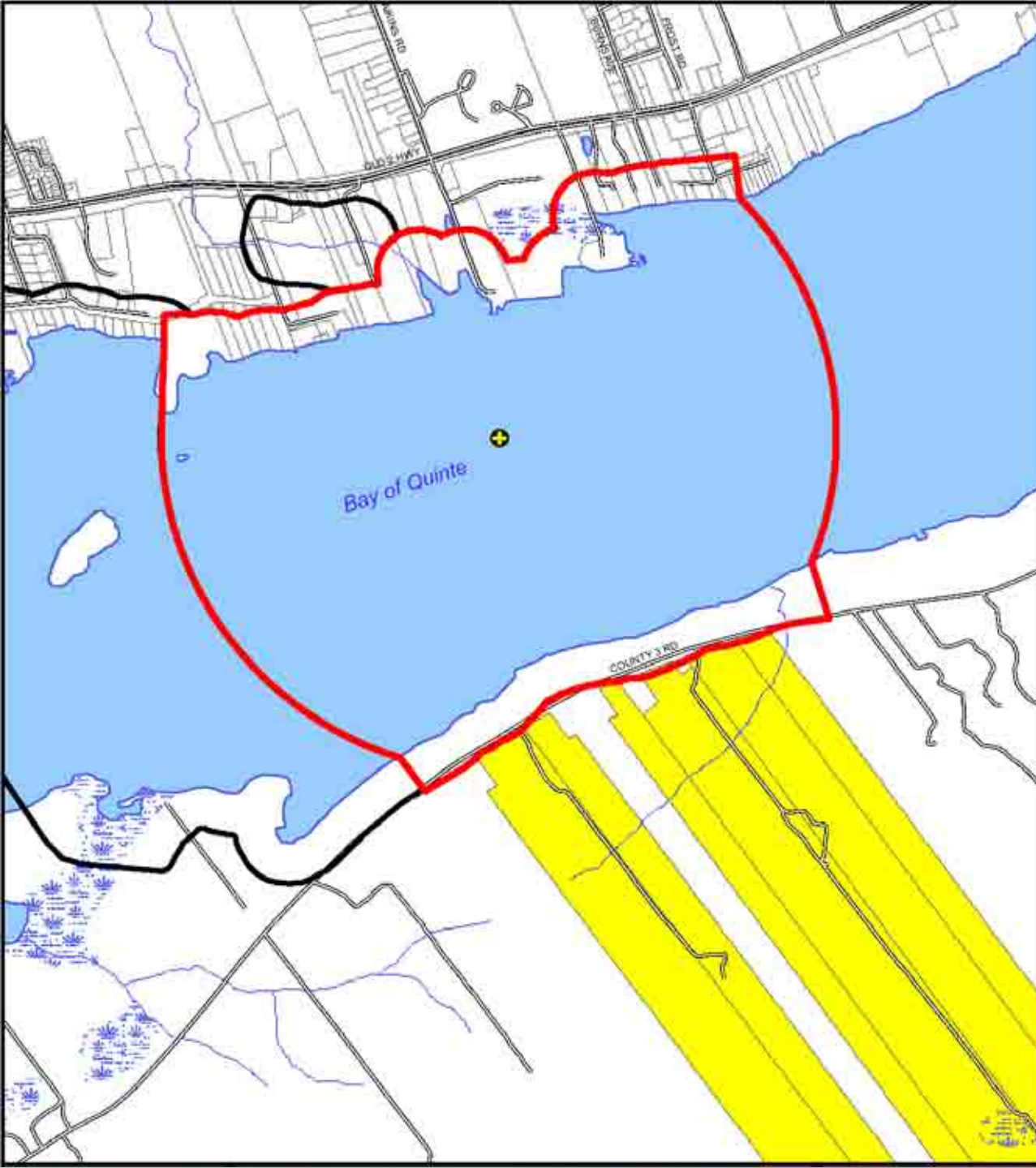


# Step 1: Review Bayside Vulnerability Scores

# Step 2 & 3: Review Background Information & Windshield Survey



- Previous MEL work (threats database)
- XCG EcoLog ERIS report: August 2007
- Review Additional Mapping: Managed Lands, Agricultural Density, Imperviousness
- MOE Datahound files
- Field Reconnaissance:
  - June 2006
  - August 2007
  - October 2007



**Steps 4 & 5:**

**Overlay Parcel  
Fabric &  
Evaluate  
Potentially  
Significant  
Threats**



# Step 6: Enumerate Potentially Significant Threats

Prescribed Drinking Water Threat (PDWT)*	Score to Trigger a Significant Threat	
	Vulnerability Score = 8	
	Affected Parcels	No. of PDWT
3. The application of agricultural source material to land.	6	6
4. The storage of agricultural source material.	6	6
6. The application of non-agricultural source material to land.	6	6
7. The handling and storage of non-agricultural source material.	6	6
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.	6	6
<b>Total Number of Affected Parcels</b>	<b>6</b>	<b>30</b>

# Steps 7 & 8: Send out letters & Additional Information Gathering



- 6 parcels originally identified
- Letters sent out to land owners (August 2009)
- No site visits required

# Step 9: Enumerate Significant Threats



Prescribed Drinking Water Threat (PDWT)*	Score to Trigger a Significant Threat	
	Vulnerability Score = 8	
	Affected Parcels	No. of PDWT
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.	1	1
<b>Total Number of Affected Parcels</b>	<b>1</b>	<b>1</b>

# Summary of Significant Threats – Bayside



- 1 parcel with an outdoor confinement area or farm-animal yard
- No Conditions

# Summary of Significant Threats



Prescribed Drinking Water Threat (Reference Number)	Lakefield	Peterborough	Hastings	Marmora	Campbellford	Warkworth	Frankford	Batawa	Trenton	Bayside
Storage of hazardous/liquid industrial waste –registered (1884-1893)	1								1	
Storage of hazardous/liquid industrial waste –not registered (1914, 1916,1917,1920,1934, 1936, 1937, 1940)	1				1				1	
On-site septic systems (1956)	1	2	30	18		2				
On-site septic holding tank (1957)	1									
Sanitary sewer lines (1958)	1	1	1		1				1	
Application of ASM (1944)	8		10	1	2	6	2		3	
Storage of ASM (1962-1964)	1	1	6		2	1			1	
Application of pesticides (66-69,71-74, 76) 1-10 ha	8					1	2		4	
Application of pesticides (77-80, 83-85) >10 ha	1									
Application of road salt (92, 93)	5	3			5				3	
Storage of snow (1492)					1					
Above grade fuel handling (177, 178)	1				5					
Storage of organic solvents <2500 L (1249, 1257)	1									
Pasture /Confinement Yard (1945, 1946)	6	1	11	1	2	5	2		3	1
<b>Total Number of Affected Parcels</b>	<b>20</b>	<b>5</b>	<b>43</b>	<b>18</b>	<b>14</b>	<b>9</b>	<b>2</b>	<b>0</b>	<b>10</b>	<b>1</b>