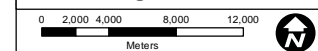


**Mississippi-Rideau
SOURCE PROTECTION REGION**

- LEGEND**
- Town/Community
 - Municipal Surface Water Intake
 - Major Road
 - Railway
 - City of Ottawa Boundary
 - Provincial Boundary
 - Gatineau Park
 - Waterbody
 - Mississippi-Rideau Source Protection Area
 - Mississippi
 - Rideau

**Location of Ottawa
Municipal Surface Water
Supply Intake**

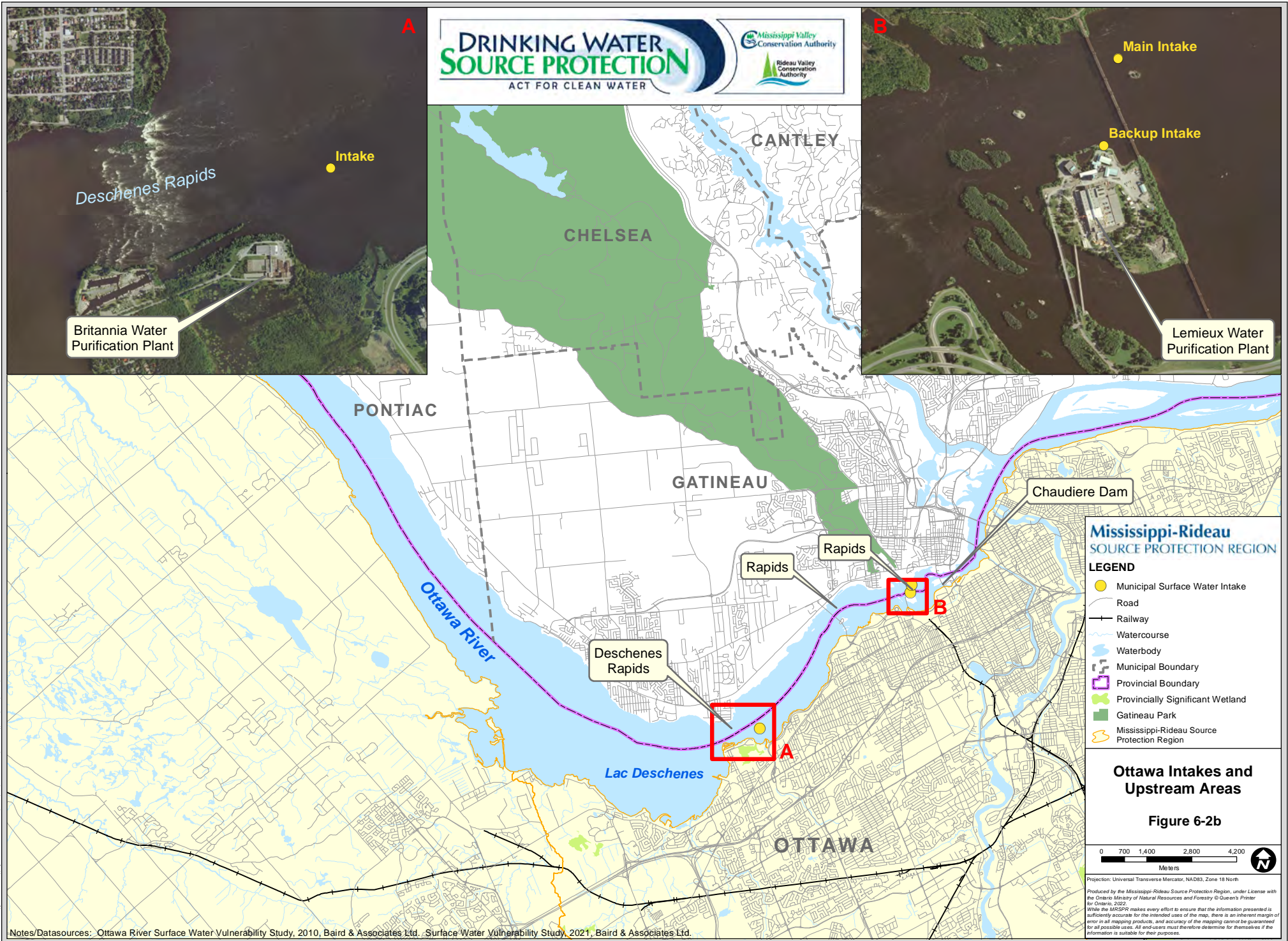
Figure 6-2a

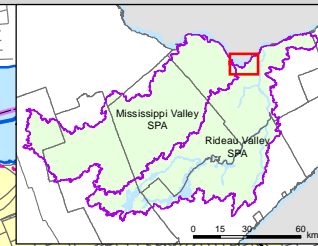
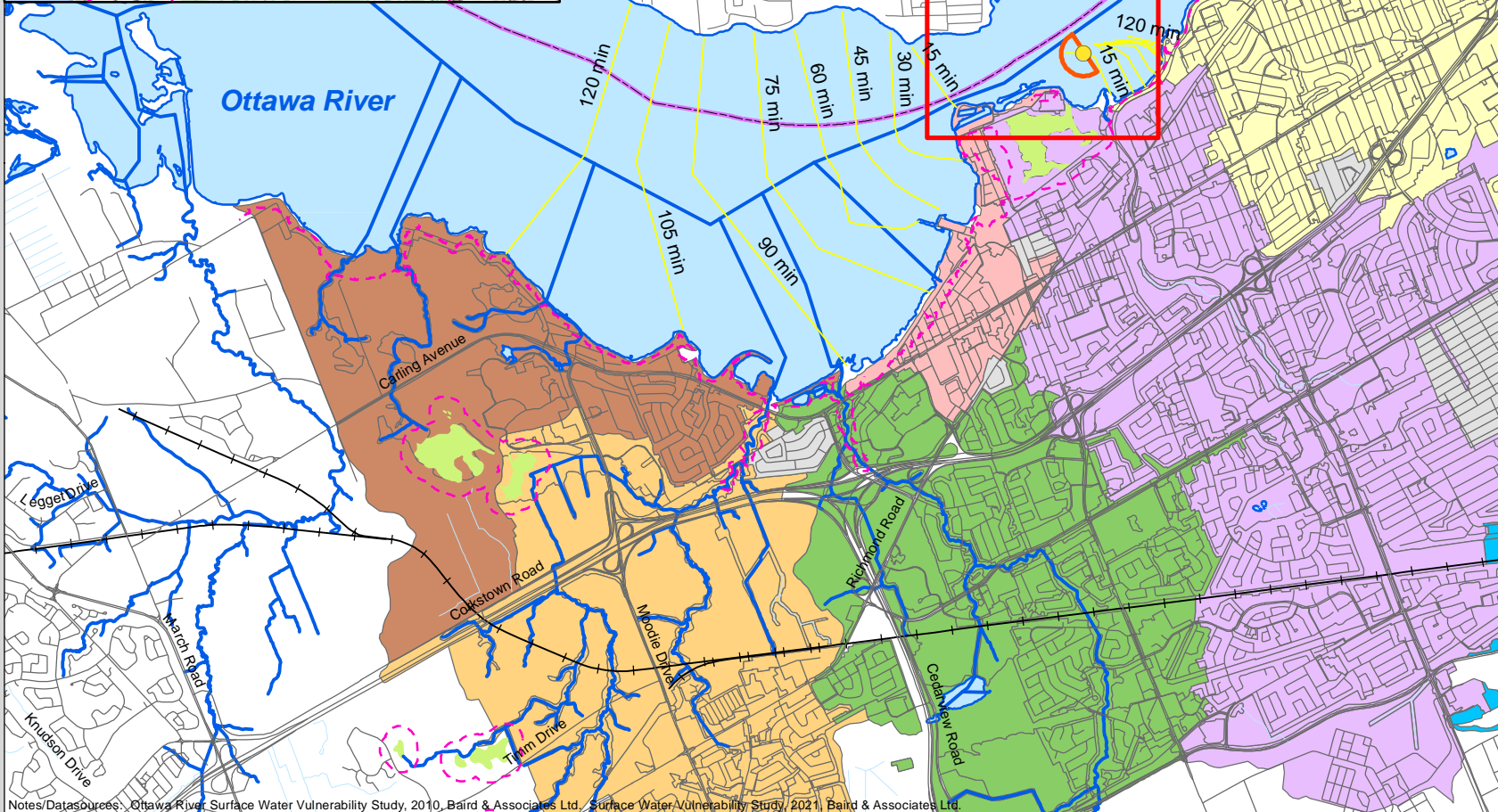


Projection: Universal Transverse Mercator, NAD83, Zone 18 North

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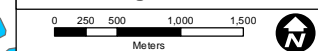


**Mississippi-Rideau
SOURCE PROTECTION REGION**

- LEGEND**
- Municipal Surface Water Intake
 - Britannia Particle Tracking Contours
 - Generic Regulation Limit
 - Road
 - Railway
 - Waterflow Network
 - Watercourse
 - Waterbody
 - Default 200m Radius - Intake
 - Provincial Boundary
 - Provincially Significant Wetland
- Sewersheds**
- Britannia Bay
 - City Core
 - Graham Creek
 - Mooney's - Billing's Reach
 - Nepean Creek
 - Ottawa River
 - Pinecrest Creek
 - Rideau Canal
 - Rideau River
 - Stillwater Creek
 - Other

**Ottawa (Britannia)
IPZ-1 and IPZ-2
Components**

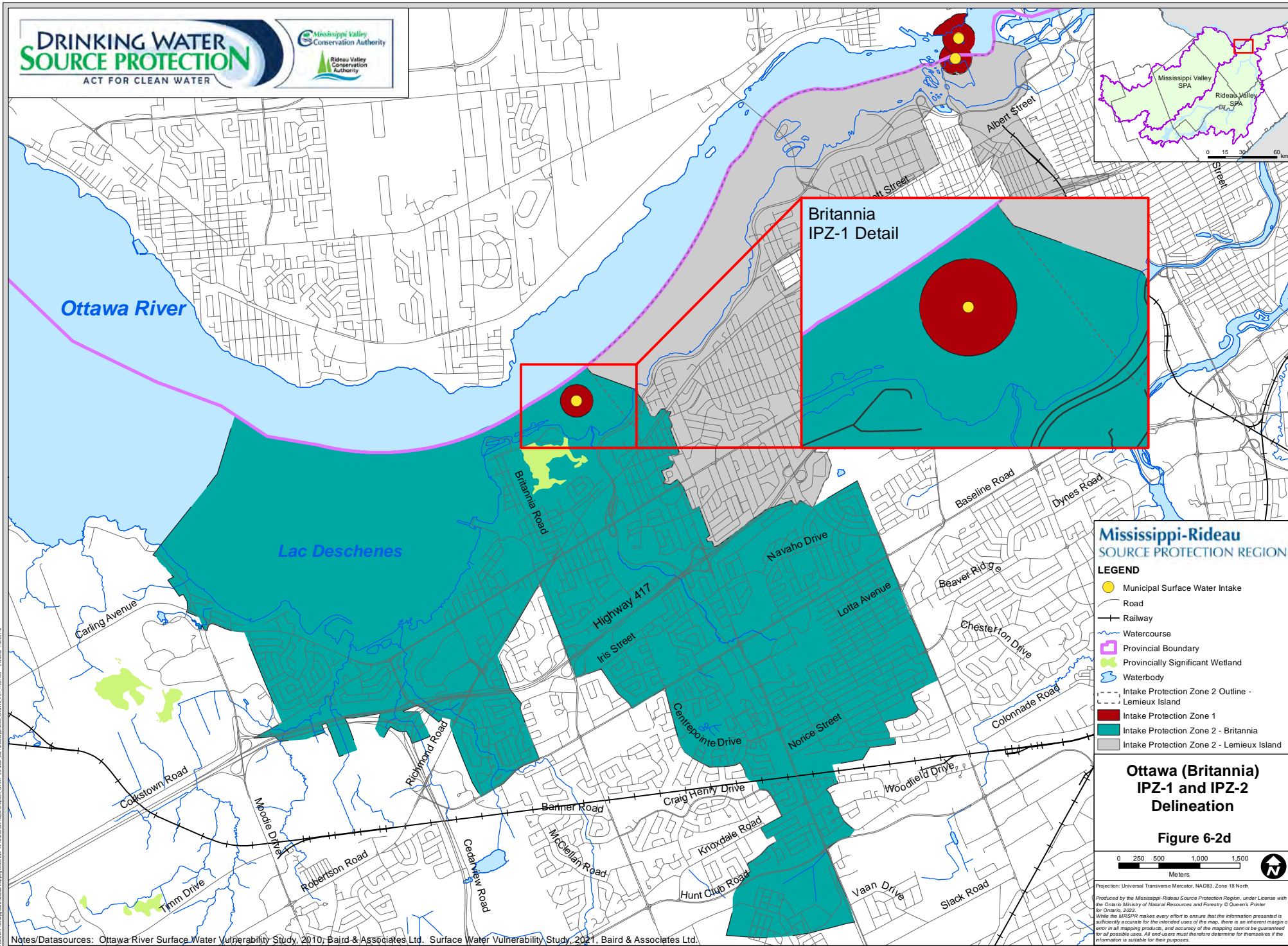
Figure 6-2c

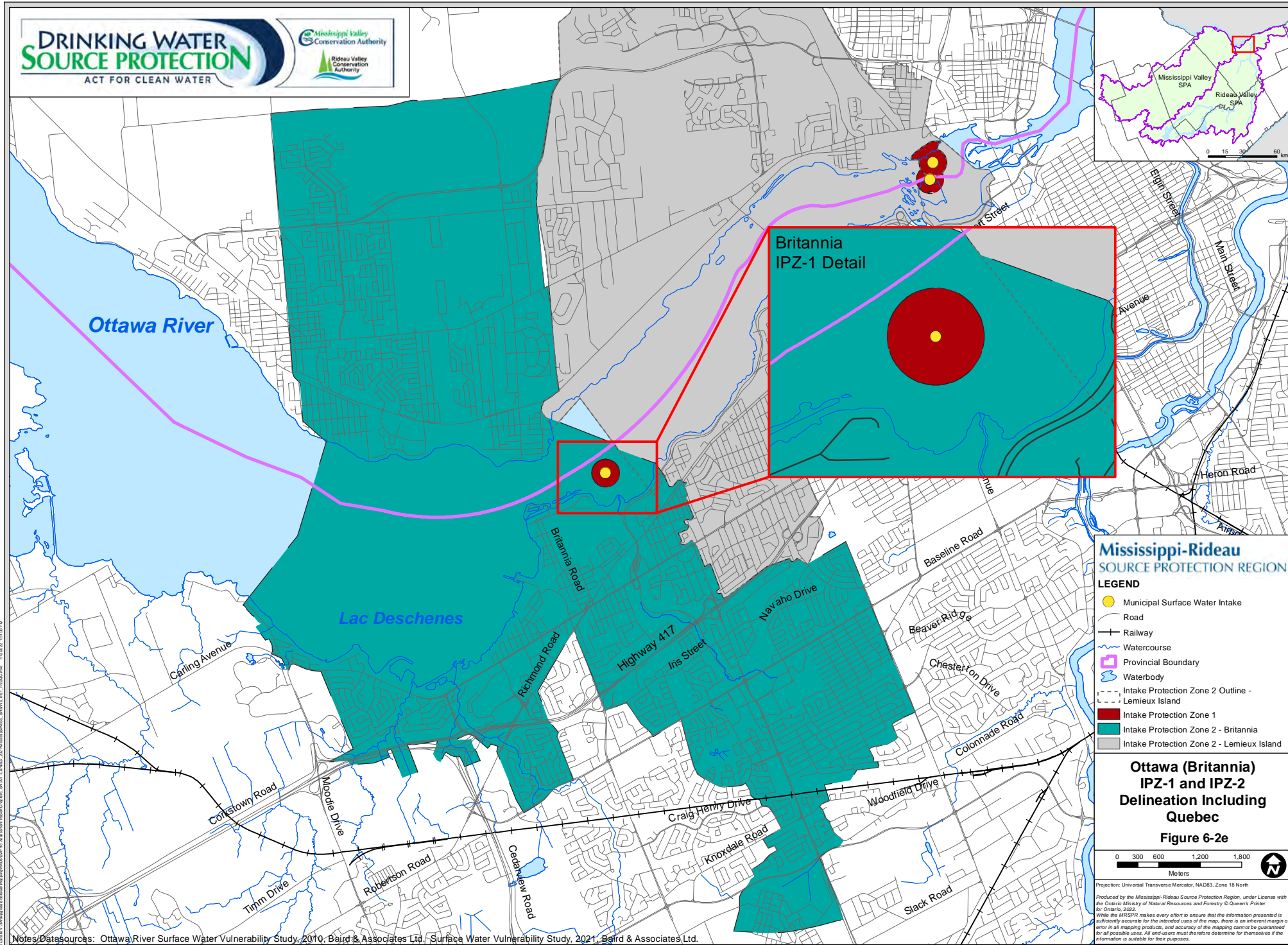


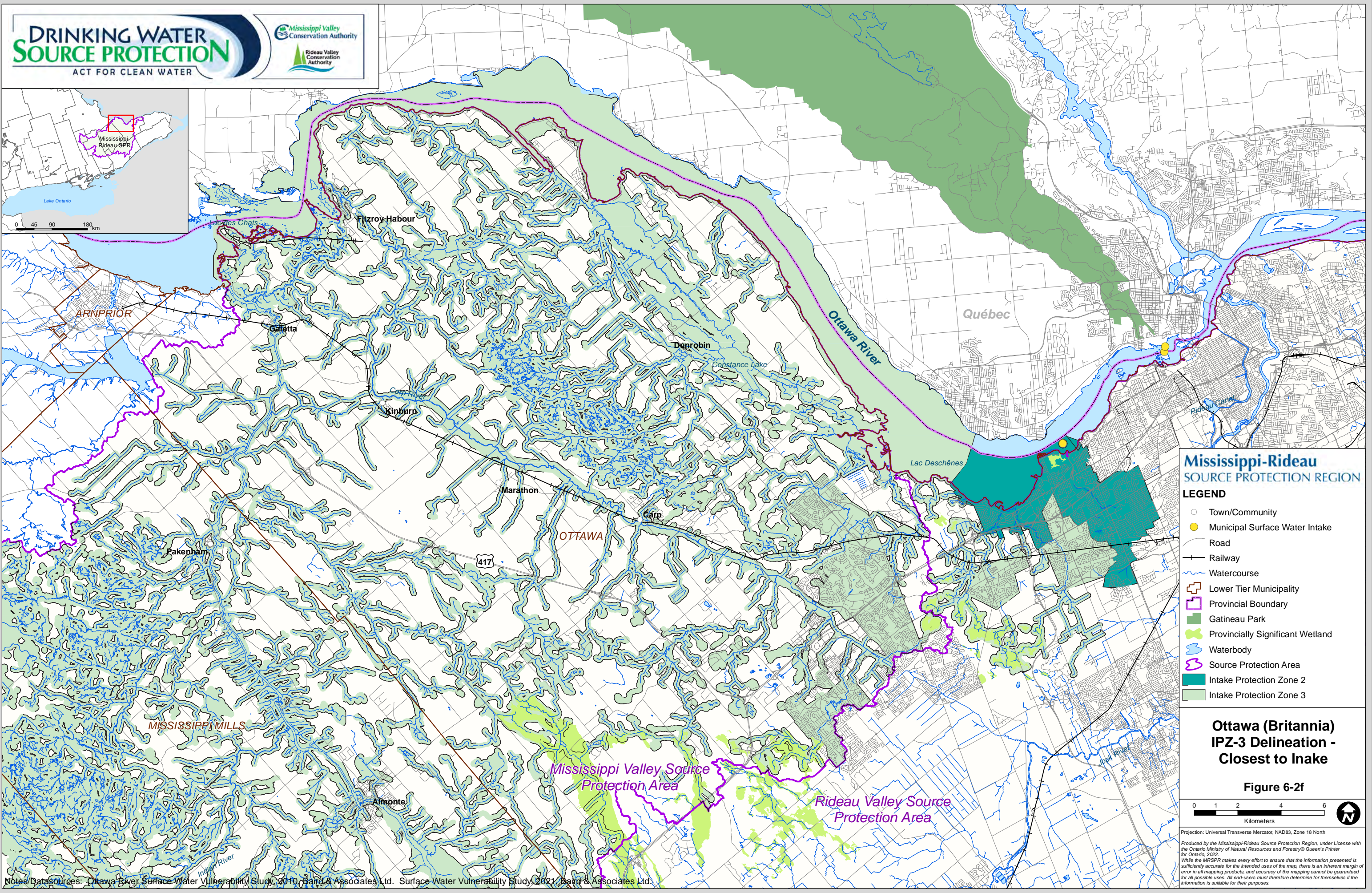
Projection: Universal Transverse Mercator, NAD83, Zone 18 North

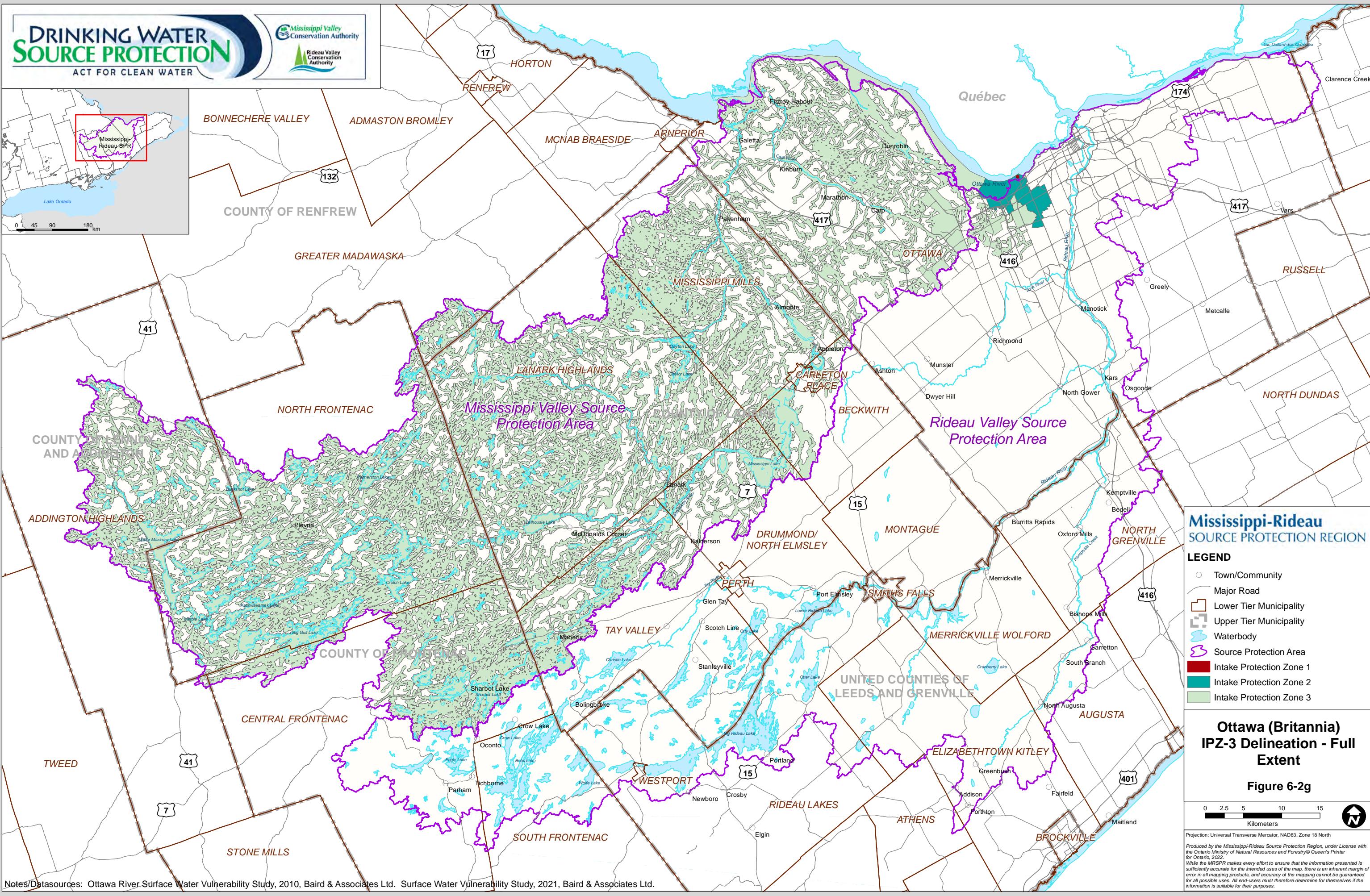
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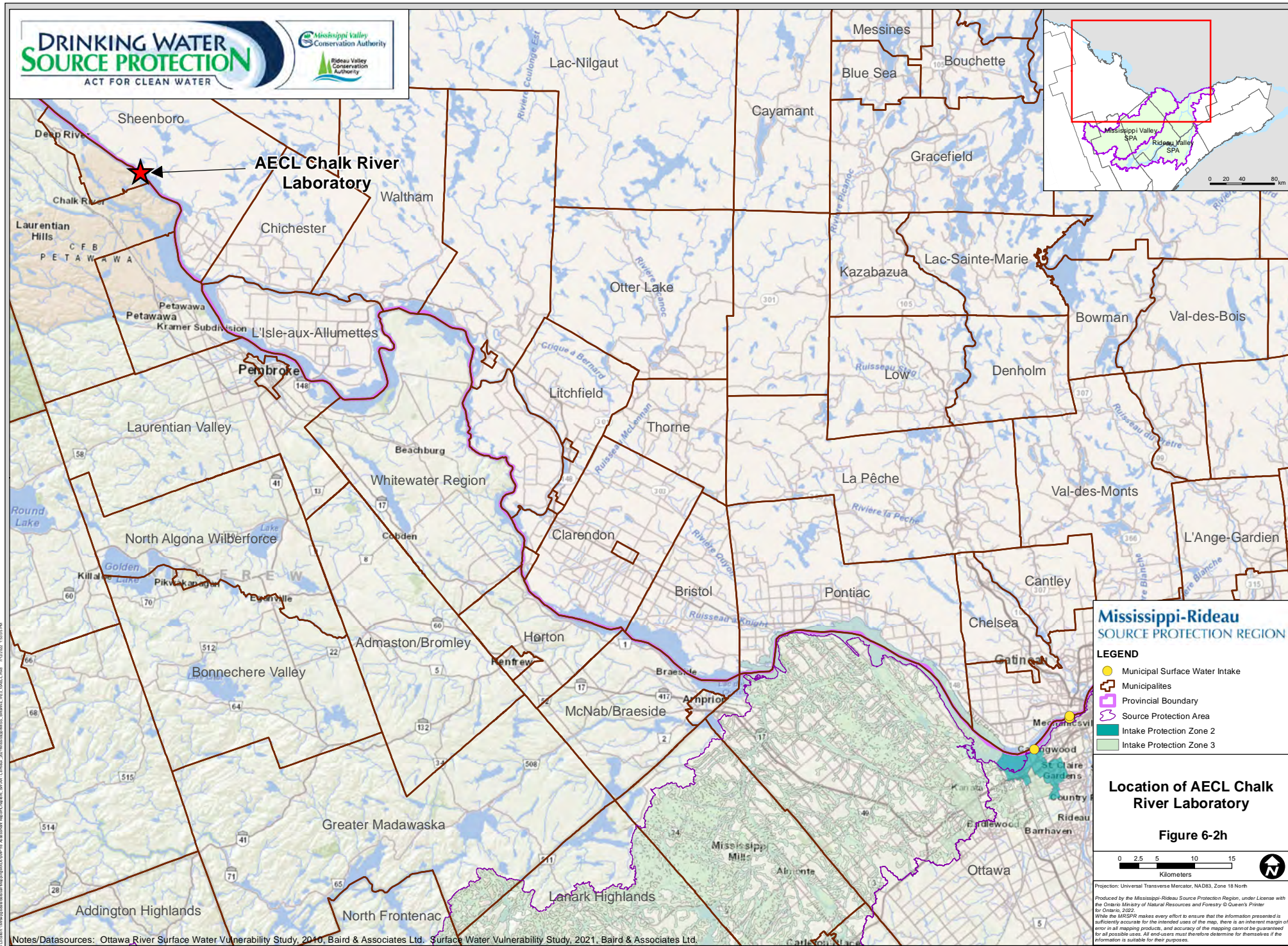
While the MRSPR makes every effort to ensure that the information presented is sufficiently accurate for the intended uses of the map, there is an inherent margin of error in all mapping products, and accuracy of the mapping cannot be guaranteed for all possible uses. All end-users must therefore determine for themselves if the information is suitable for their purposes.











**Mississippi-Rideau
SOURCE PROTECTION REGION**

LEGEND

- Municipal Surface Water Intake
- Municipalities
- Provincial Boundary
- Source Protection Area
- Intake Protection Zone 2
- Intake Protection Zone 3

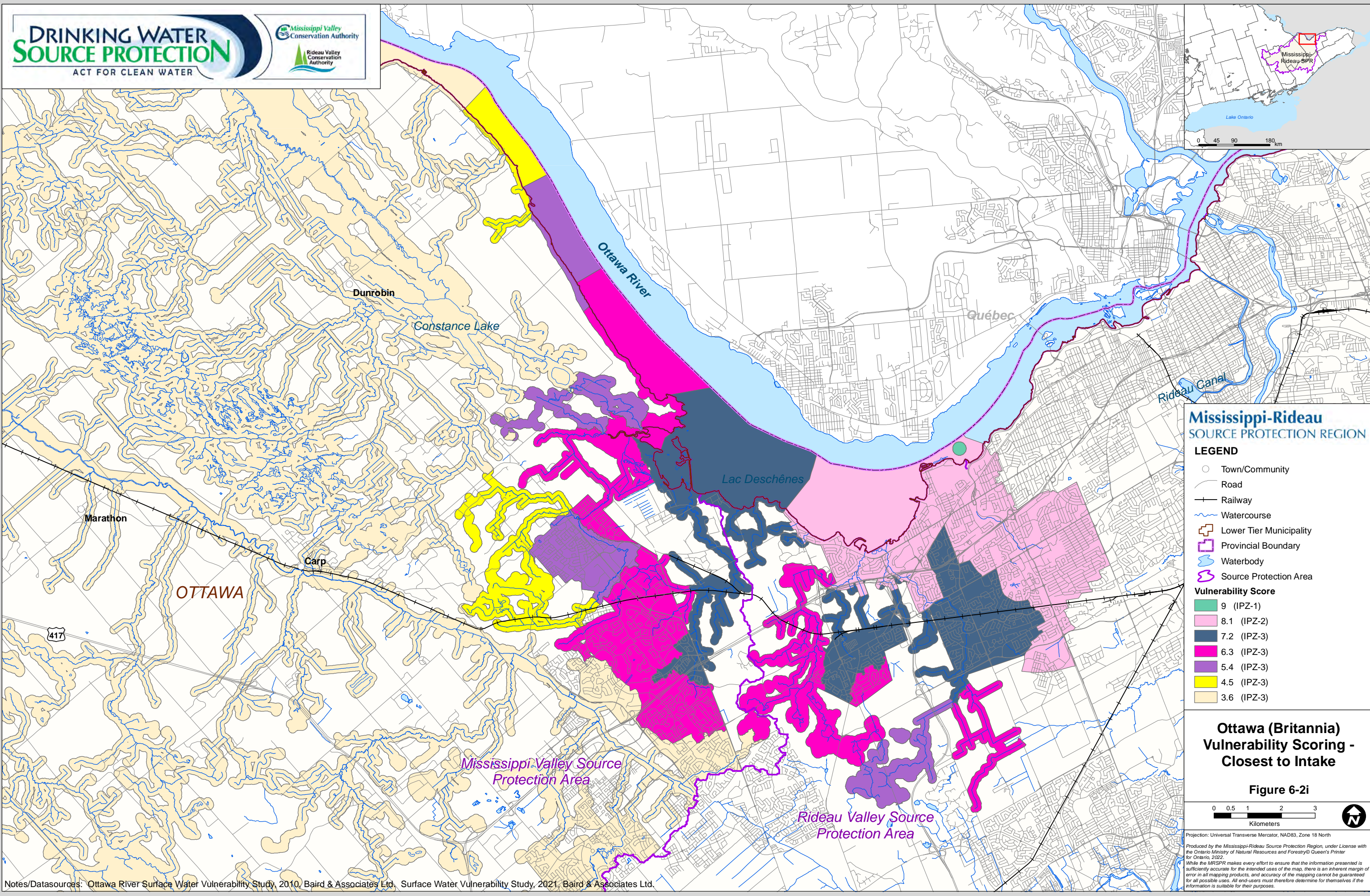
**Location of AECL Chalk
River Laboratory**

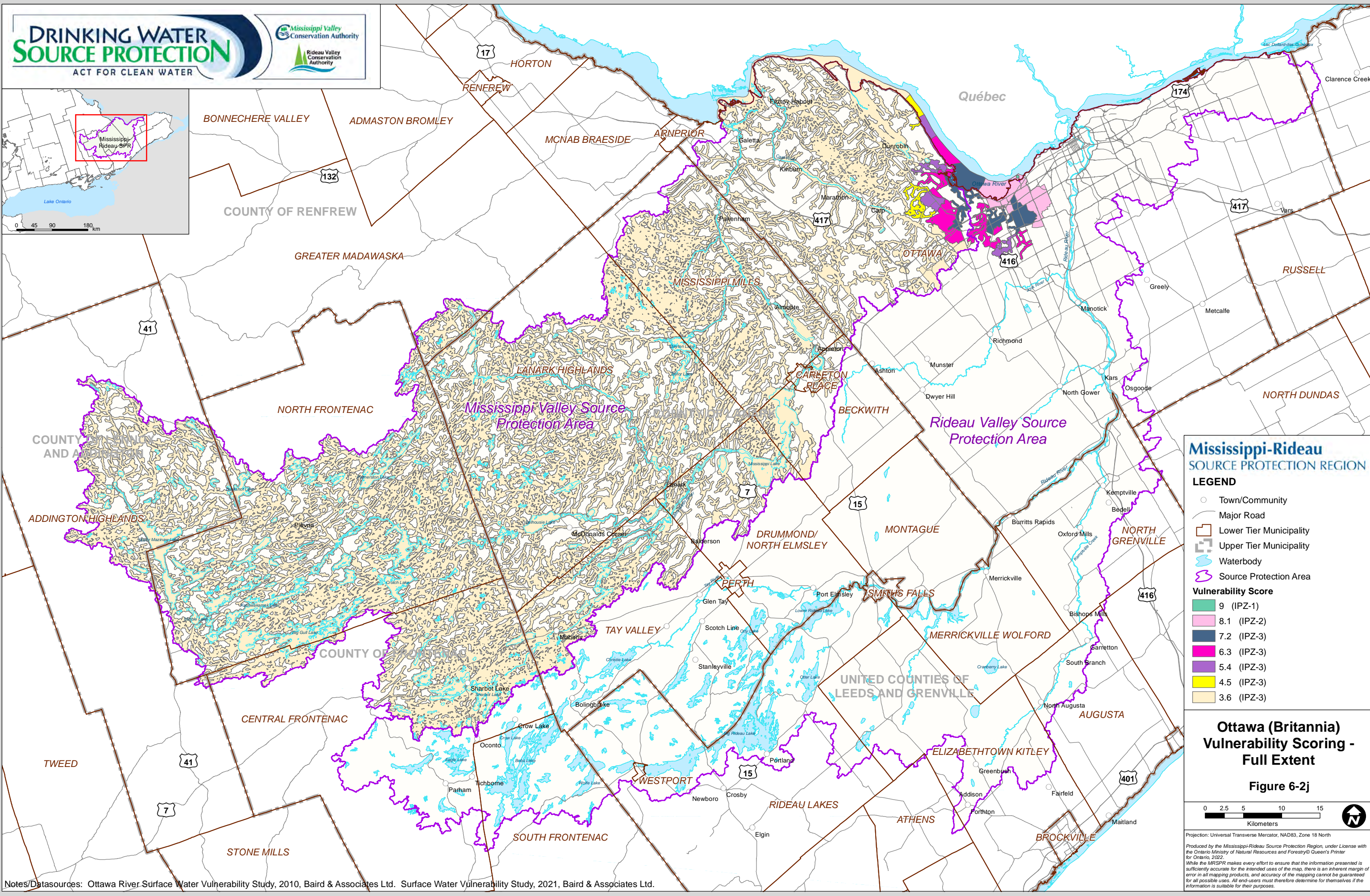
Figure 6-2h

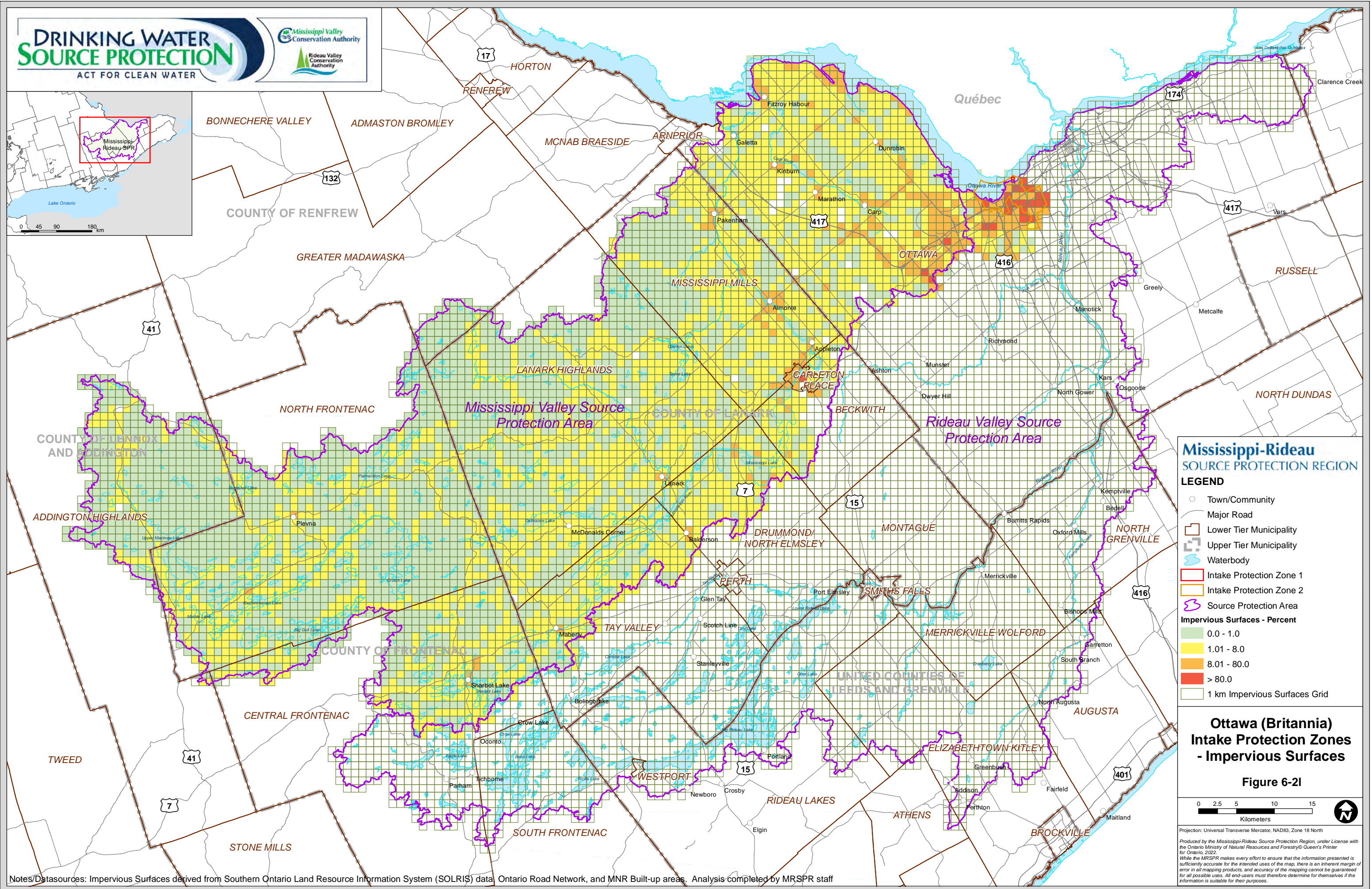
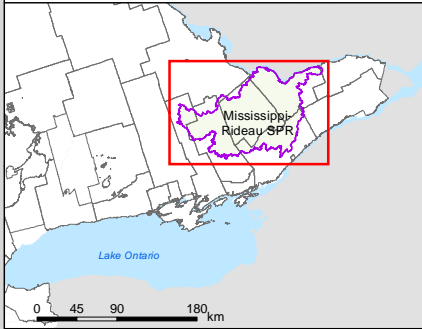
0 2.5 5 10 15
Kilometers



Projection: Universal Transverse Mercator, NAD83, Zone 18 North
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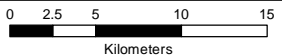


Mississippi-Rideau
SOURCE PROTECTION REGION
LEGEND

- Town/Community
- Major Road
- Lower Tier Municipality
- Upper Tier Municipality
- Waterbody
- Intake Protection Zone 1
- Intake Protection Zone 2
- Source Protection Area
- Impervious Surfaces - Percent
 - 0.0 - 1.0
 - 1.01 - 8.0
 - 8.01 - 80.0
 - > 80.0
- 1 km Impervious Surfaces Grid

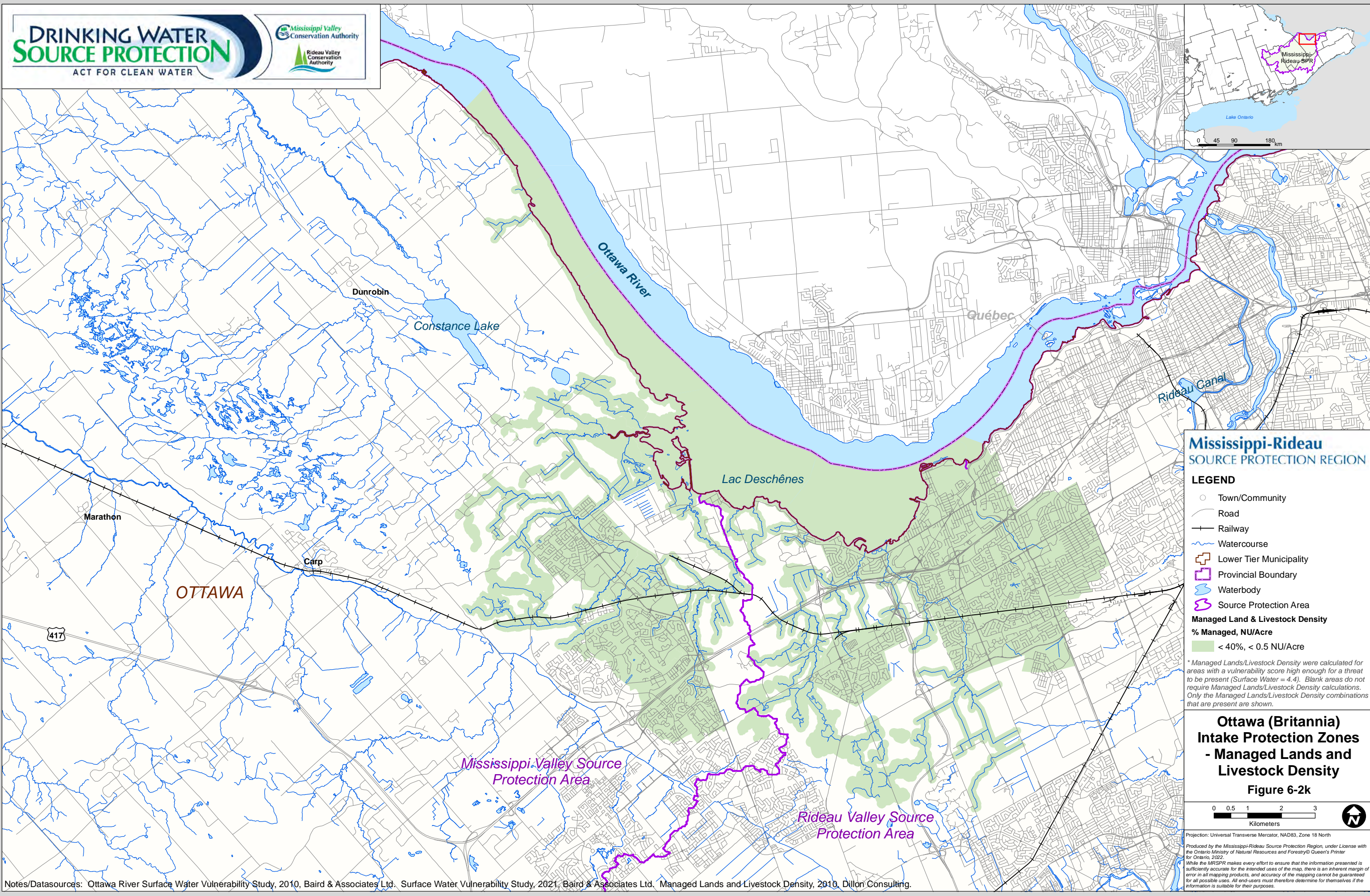
Ottawa (Britannia)
Intake Protection Zones
- Impervious Surfaces

Figure 6-2I



Projection: Universal Transverse Mercator, NAD83, Zone 18 North
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Notes/Datasources: Impervious Surfaces derived from Southern Ontario Land Resource Information System (SOLRIS) data, Ontario Road Network, and MNR Built-up areas. Analysis completed by MRSPR staff



Notes/Datasources: Ottawa River Surface Water Vulnerability Study, 2010, Baird & Associates Ltd. Surface Water Vulnerability Study, 2021, Baird & Associates Ltd. Managed Lands and Livestock Density, 2010, Dillon Consulting.

Mississippi-Rideau SOURCE PROTECTION REGION

LEGEND

- Town/Community
- Road
- Railway
- Watercourse
- Lower Tier Municipality
- Provincial Boundary
- Waterbody
- Source Protection Area

Managed Land & Livestock Density

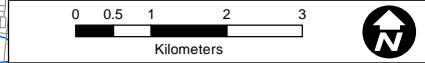
% Managed, NU/Acre

- < 40%, < 0.5 NU/Acre

* Managed Lands/Livestock Density were calculated for areas with a vulnerability score high enough for a threat to be present (Surface Water = 4.4). Blank areas do not require Managed Lands/Livestock Density calculations. Only the Managed Lands/Livestock Density combinations that are present are shown.

Ottawa (Britannia) Intake Protection Zones - Managed Lands and Livestock Density

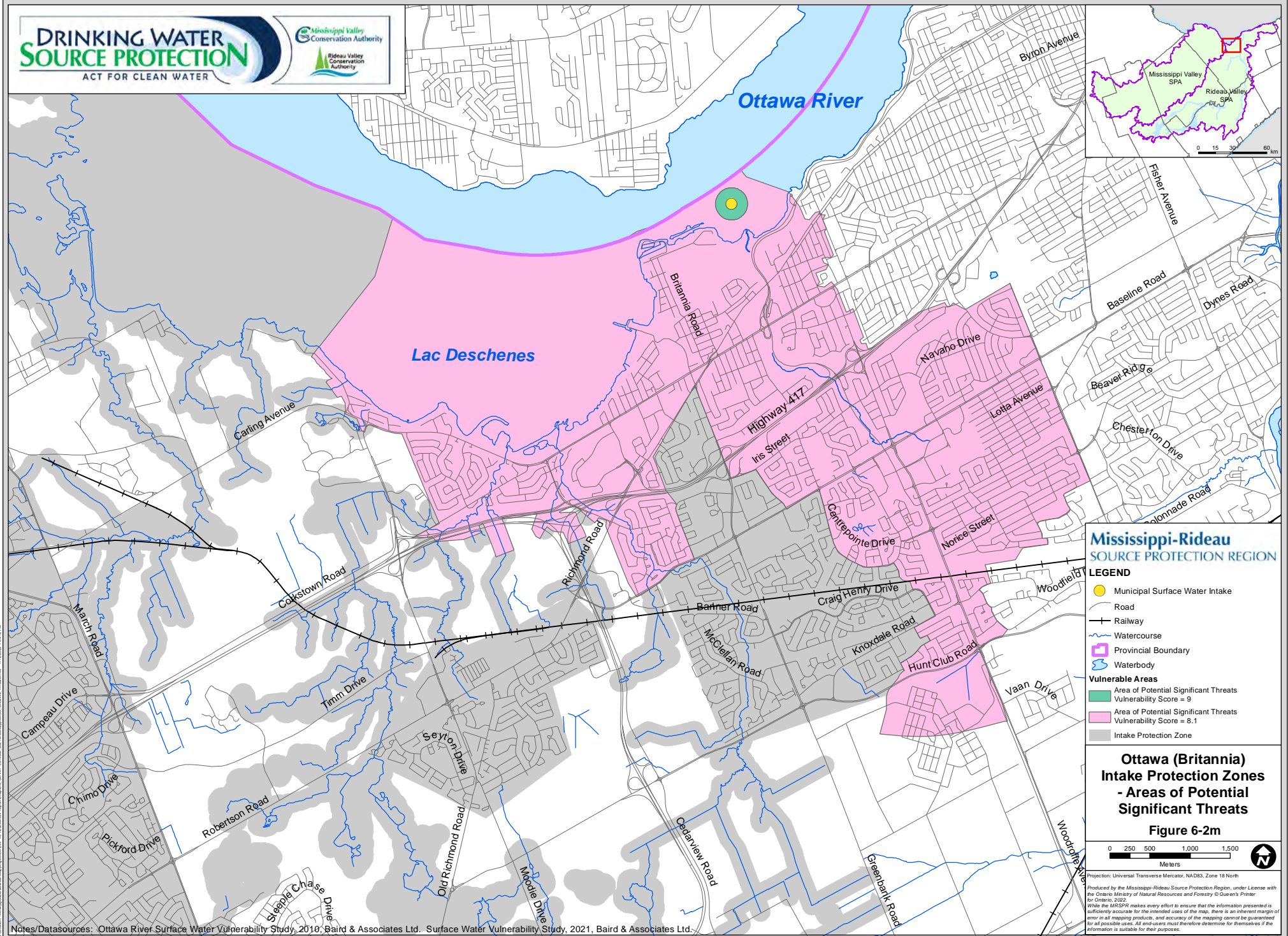
Figure 6-2k



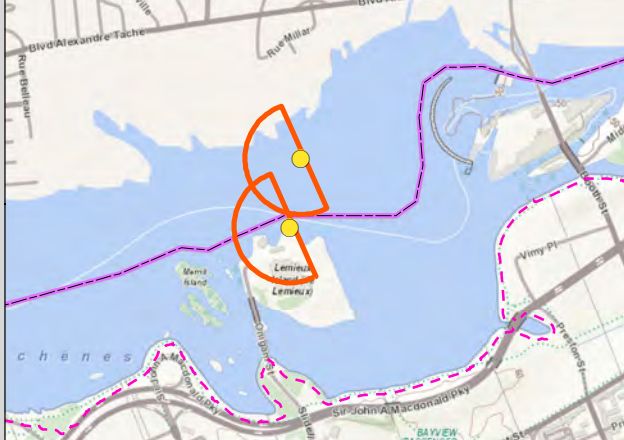
Projection: Universal Transverse Mercator, NAD83, Zone 18 North

Produced by the Mississippi-Rideau Source Protection Region, under License with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2022.

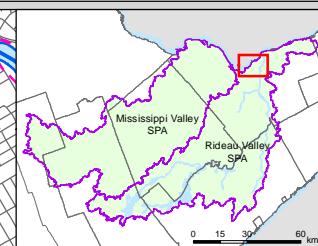
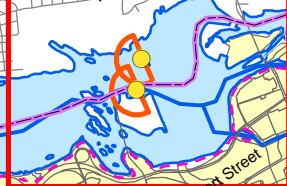
While the MRSPR makes every effort to ensure that the information presented is sufficiently accurate for the intended uses of the map, there is an inherent margin of error in all mapping products, and accuracy of the mapping cannot be guaranteed for all possible uses. All end-users must therefore determine for themselves if the information is suitable for their purposes.



Lemieux Island Intakes



Inset Map



Mississippi-Rideau SOURCE PROTECTION REGION

LEGEND

- Municipal Surface Water Intake
 - Lemieux Island Particle Tracking Contours
 - Generic Regulation Limit
 - Road
 - +— Railway
 - ~ Waterflow Network
 - ~ Watercourse
 - ~ Waterbody
 - Default 200m Radius - Intake
 - Provincial Boundary
 - ~ Provincially Significant Wetland
- Sewersheds**
- Britannia Bay
 - City Core
 - Graham Creek
 - Mooney's - Billing's Reach
 - Nepean Creek
 - Ottawa River
 - Pinecrest Creek
 - Rideau Canal
 - Rideau River
 - Stillwater Creek
 - Other

Ottawa (Lemieux Island) IPZ-1 and IPZ-2 Components

Figure 6-3a

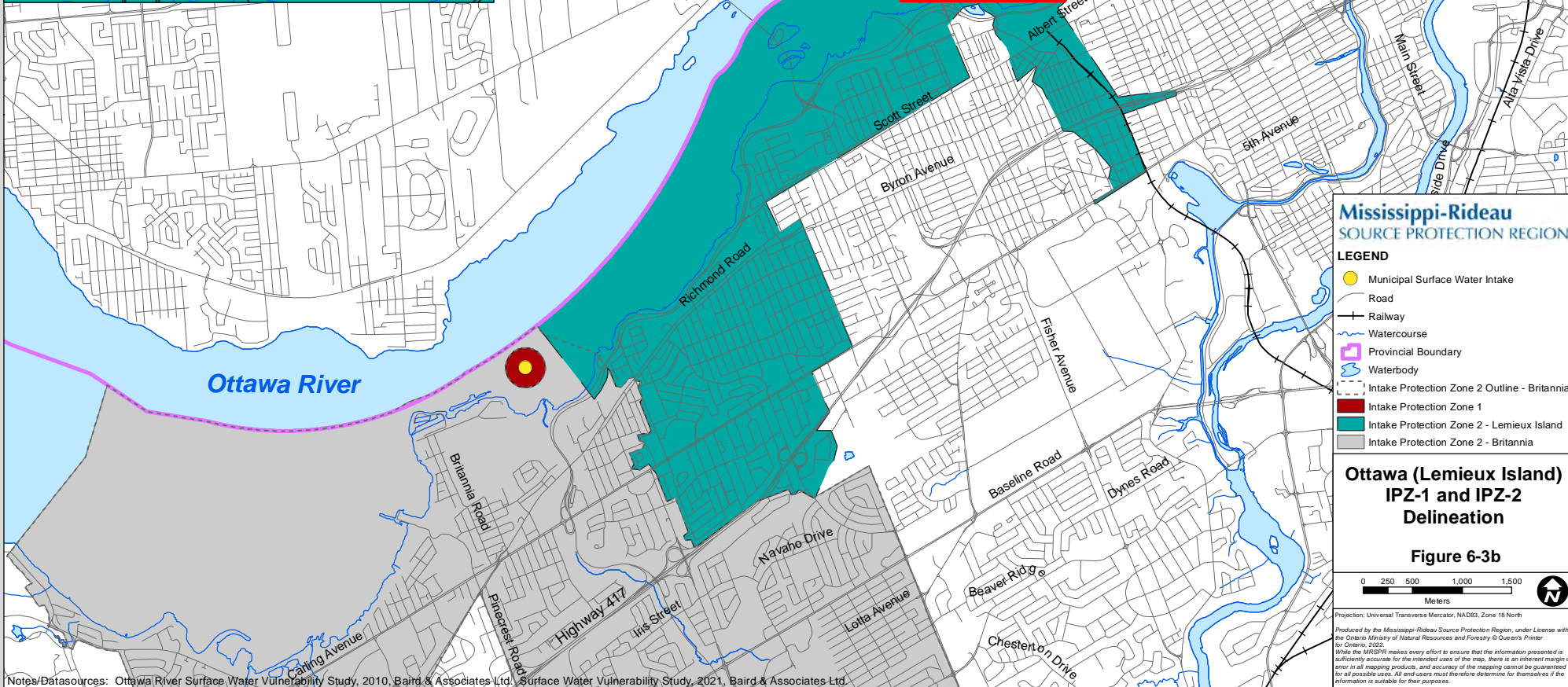
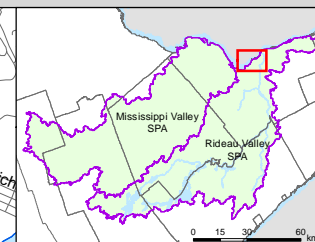
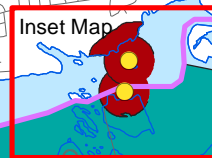
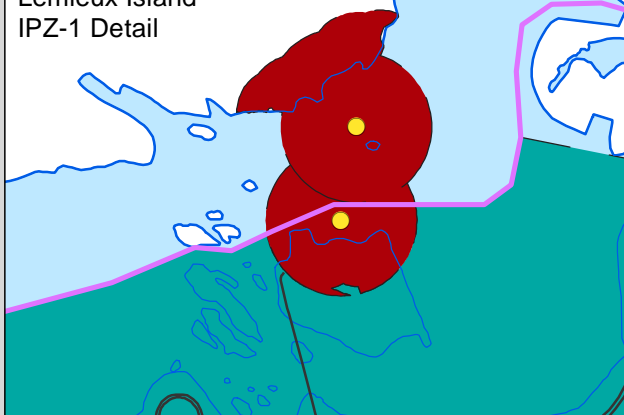


Projection: Universal Transverse Mercator, NAD83, Zone 18 North

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Lemieux Island
IPZ-1 Detail

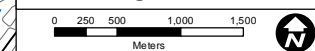


**Mississippi-Rideau
SOURCE PROTECTION REGION**

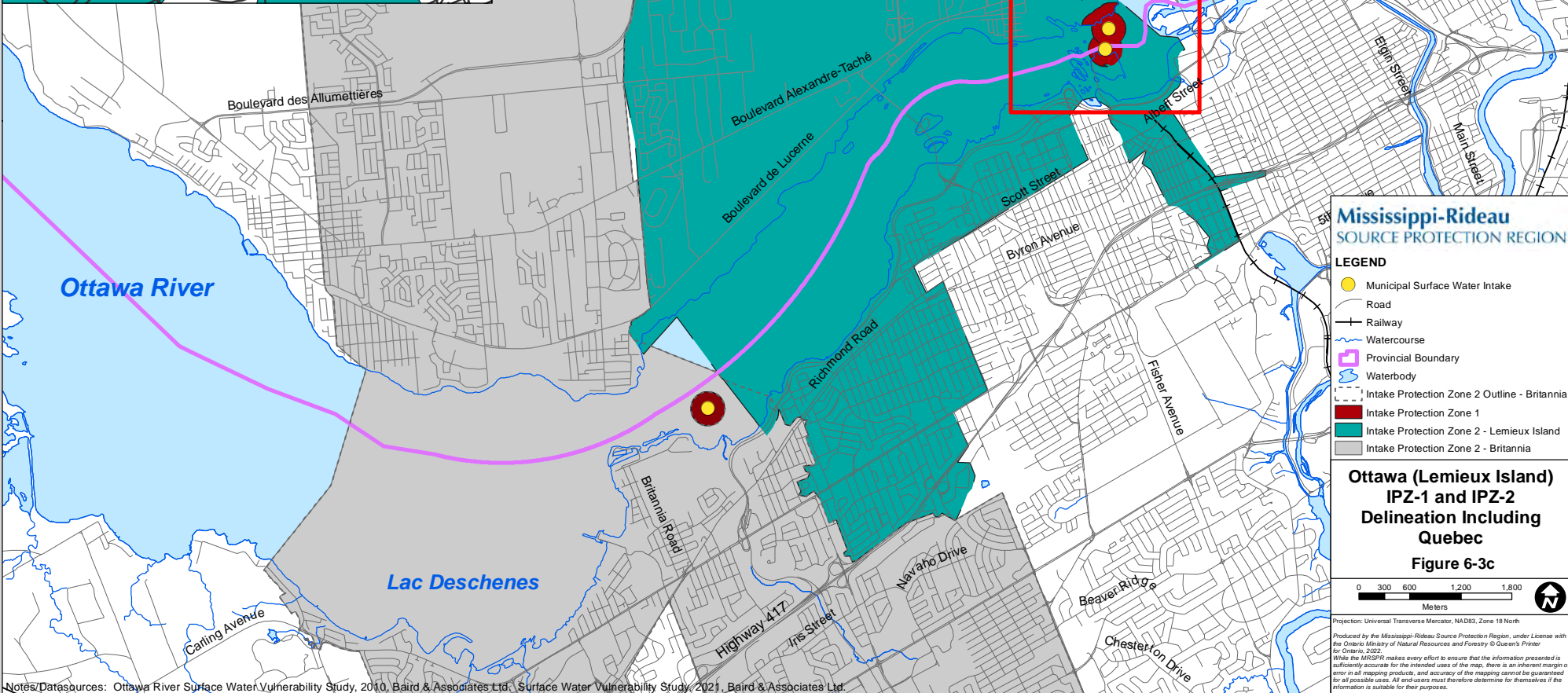
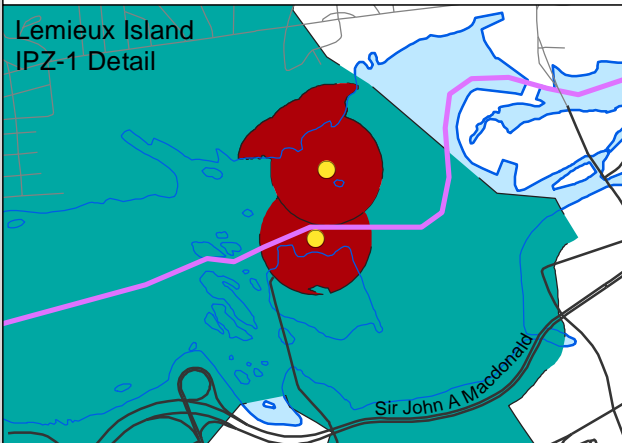
- LEGEND**
- Municipal Surface Water Intake
 - Road
 - Railway
 - Watercourse
 - Provincial Boundary
 - Waterbody
 - Intake Protection Zone 2 Outline - Britannia
 - Intake Protection Zone 1
 - Intake Protection Zone 2 - Lemieux Island
 - Intake Protection Zone 2 - Britannia

**Ottawa (Lemieux Island)
IPZ-1 and IPZ-2
Delineation**

Figure 6-3b



**Lemieux Island
IPZ-1 Detail**



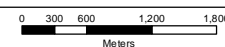
**Mississippi-Rideau
SOURCE PROTECTION REGION**

LEGEND

- Municipal Surface Water Intake
- Road
- Railway
- Watercourse
- Provincial Boundary
- Waterbody
- Intake Protection Zone 2 Outline - Britannia
- Intake Protection Zone 1
- Intake Protection Zone 2 - Lemieux Island
- Intake Protection Zone 2 - Britannia

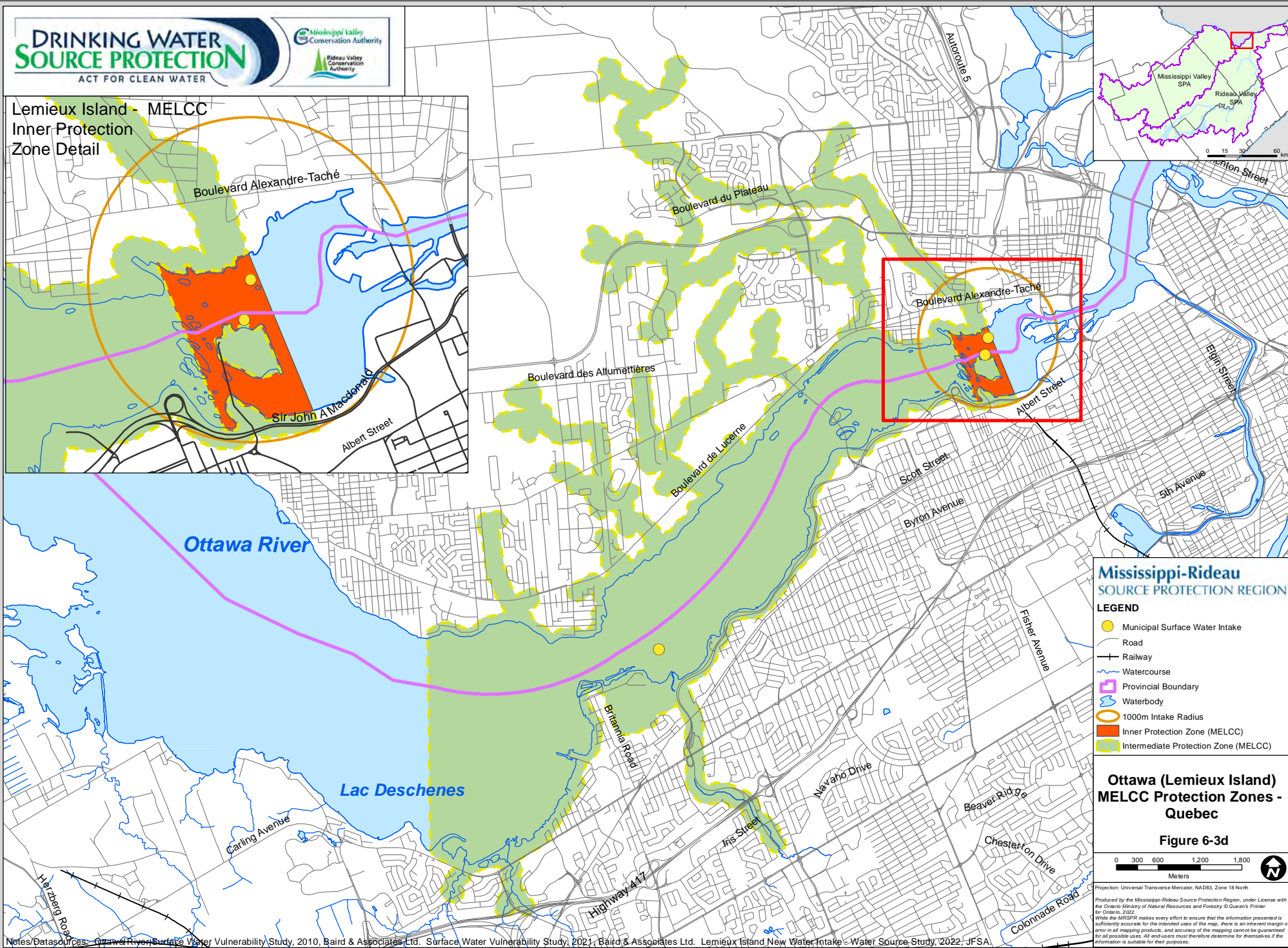
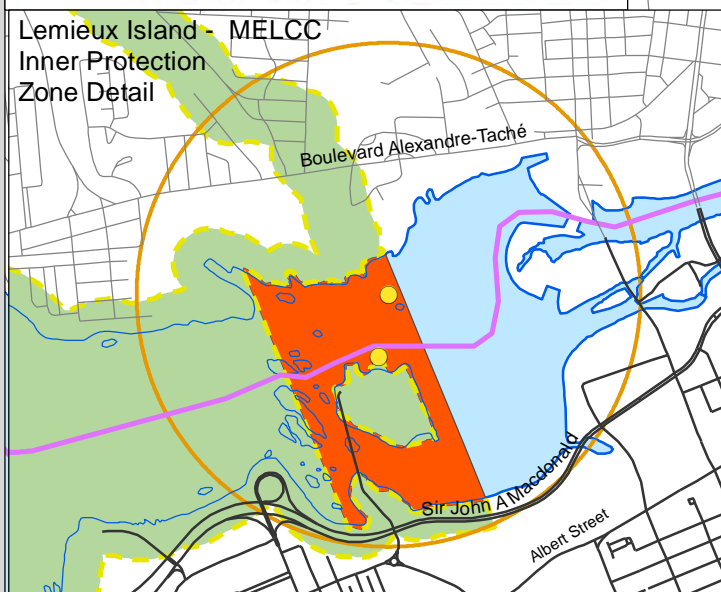
**Ottawa (Lemieux Island)
IPZ-1 and IPZ-2
Delineation Including
Quebec**

Figure 6-3c



Projection: Universal Transverse Mercator, NAD83, Zone 18 North
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**Lemieux Island - MELCC
Inner Protection
Zone Detail**



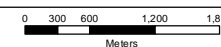
**Mississippi-Rideau
SOURCE PROTECTION REGION**

LEGEND

- Municipal Surface Water Intake
- Road
- Railway
- ~ Watercourse
- Provincial Boundary
- Waterbody
- 1000m Intake Radius
- Inner Protection Zone (MELCC)
- Intermediate Protection Zone (MELCC)

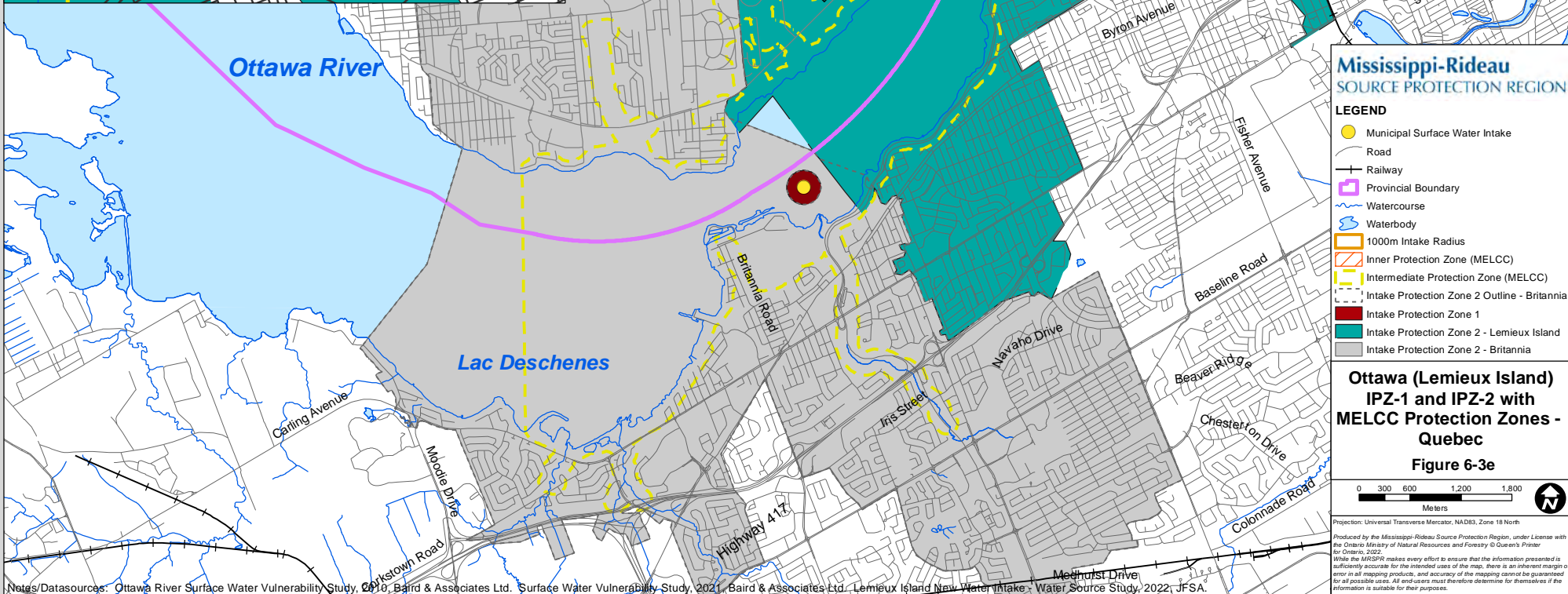
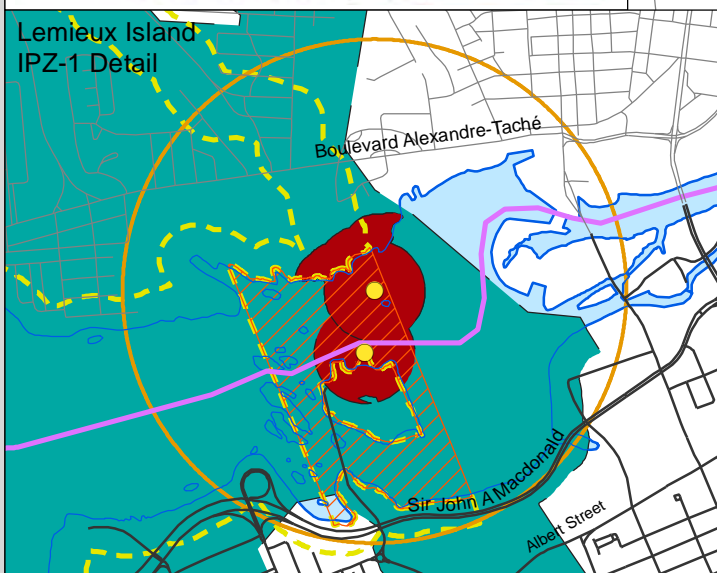
**Ottawa (Lemieux Island)
MELCC Protection Zones -
Quebec**

Figure 6-3d



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**Lemieux Island
IPZ-1 Detail**



**Mississippi-Rideau
SOURCE PROTECTION REGION**

LEGEND

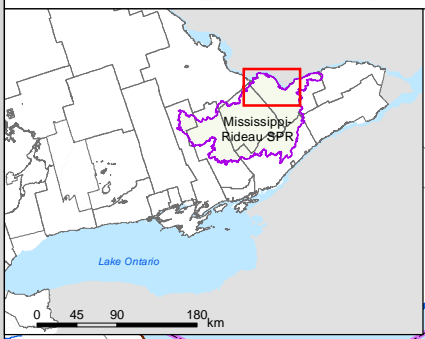
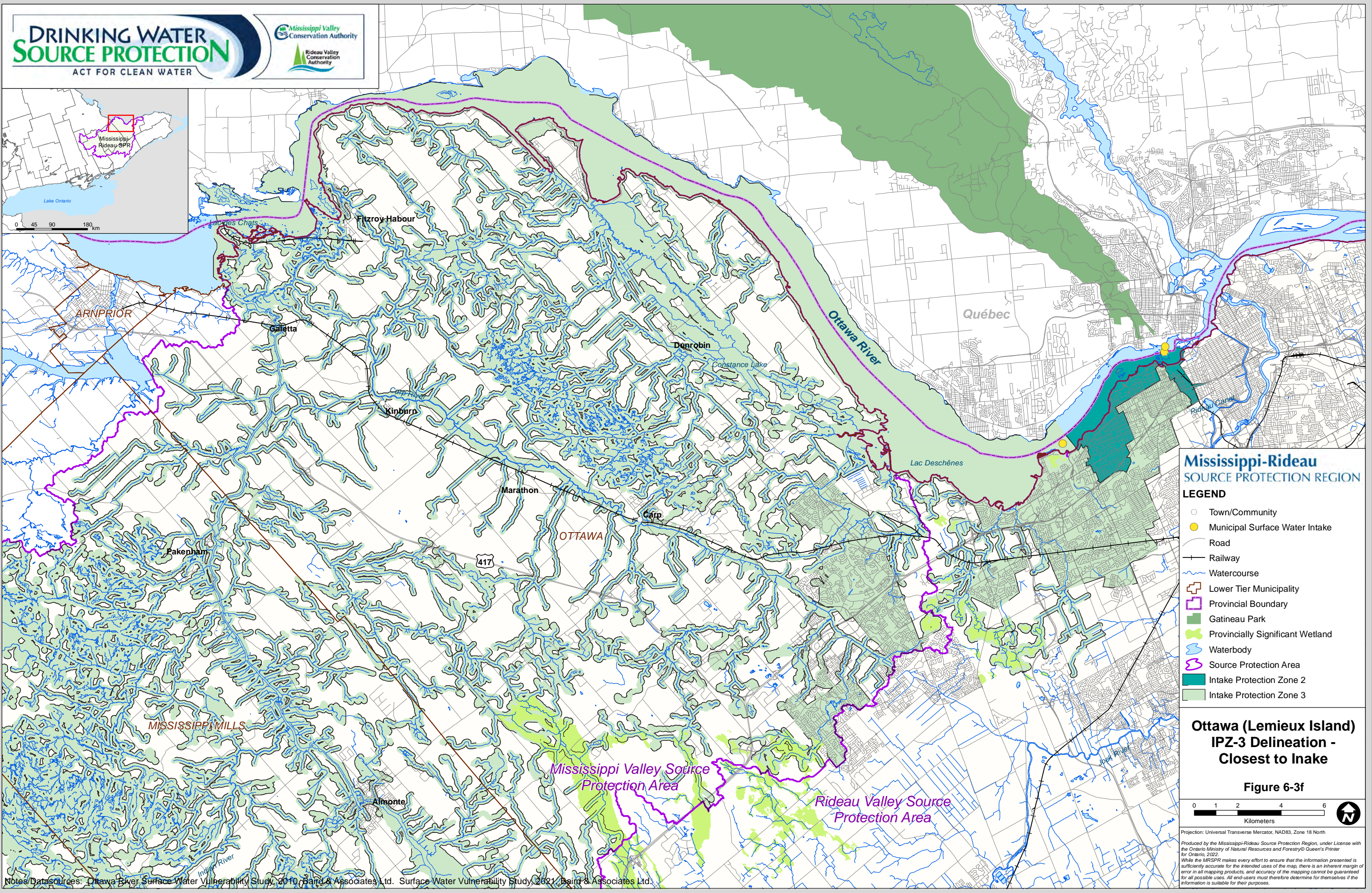
- Municipal Surface Water Intake
- Road
- Railway
- Provincial Boundary
- Watercourse
- Waterbody
- 1000m Intake Radius
- Inner Protection Zone (MELCC)
- Intermediate Protection Zone (MELCC)
- Intake Protection Zone 2 Outline - Britannia
- Intake Protection Zone 1
- Intake Protection Zone 2 - Lemieux Island
- Intake Protection Zone 2 - Britannia

**Ottawa (Lemieux Island)
IPZ-1 and IPZ-2 with
MELCC Protection Zones -
Quebec**

Figure 6-3e



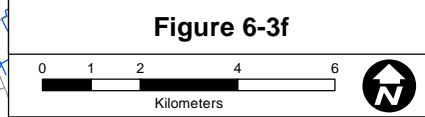
Projection: Universal Transverse Mercator, NAD83, Zone 18 North
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While the MRSPR makes every effort to ensure that the information presented is sufficiently accurate for the intended uses of the map, there is an inherent margin of error in all mapping products, and accuracy of the mapping cannot be guaranteed for all possible uses. All end-users must therefore determine for themselves if the information is suitable for their purposes.

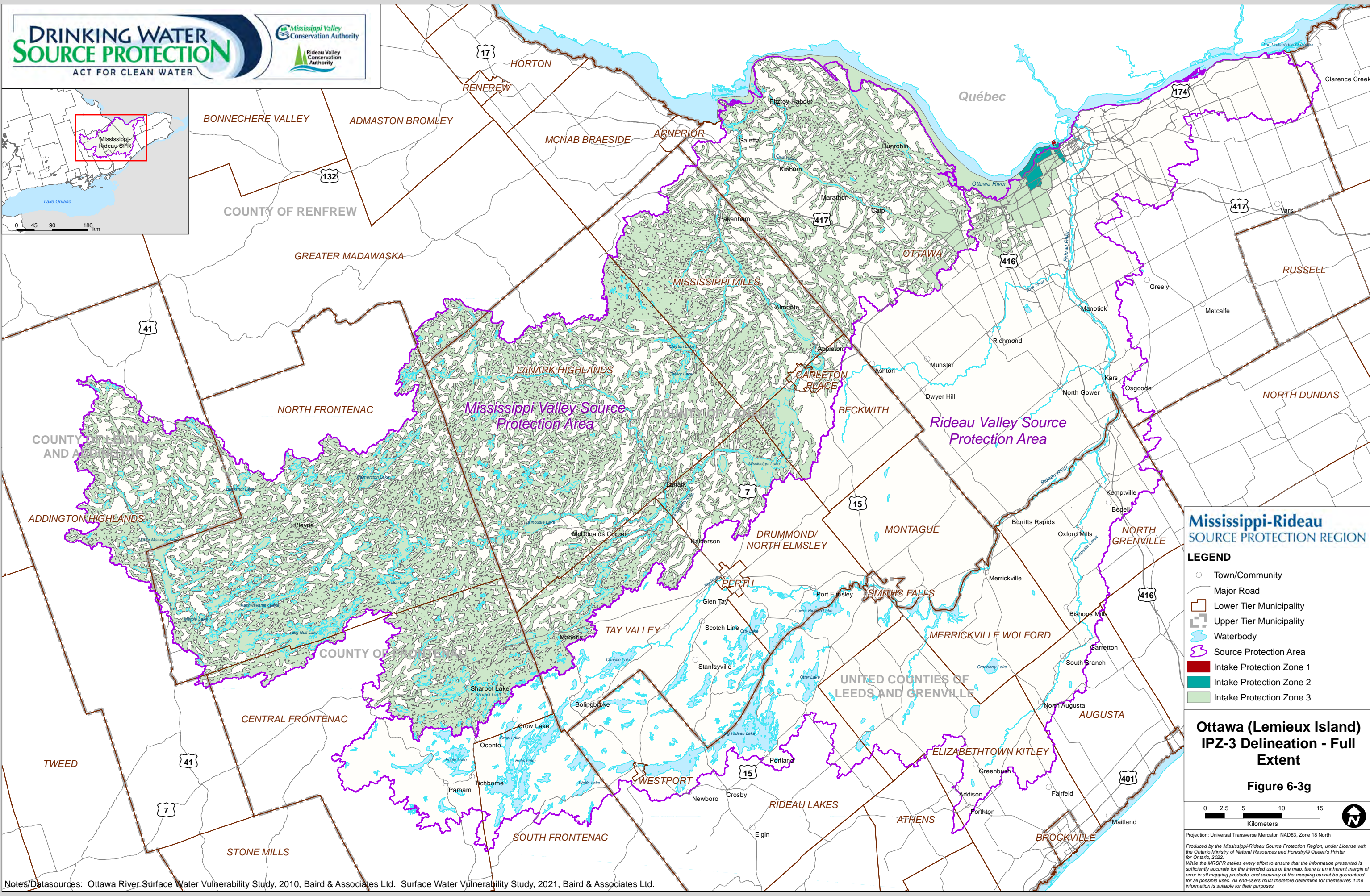


Mississippi-Rideau SOURCE PROTECTION REGION

- LEGEND**
- Town/Community
 - Municipal Surface Water Intake
 - Road
 - Railway
 - Watercourse
 - Lower Tier Municipality
 - Provincial Boundary
 - Gatineau Park
 - Provincially Significant Wetland
 - Waterbody
 - Source Protection Area
 - Intake Protection Zone 2
 - Intake Protection Zone 3

Ottawa (Lemieux Island) IPZ-3 Delineation - Closest to Inake





Notes/Datasources: Ottawa River Surface Water Vulnerability Study, 2010, Baird & Associates Ltd. Surface Water Vulnerability Study, 2021, Baird & Associates Ltd.

Mississippi-Rideau SOURCE PROTECTION REGION

LEGEND

- Town/Community
- Major Road
- Lower Tier Municipality
- Upper Tier Municipality
- Waterbody
- Source Protection Area
- Intake Protection Zone 1
- Intake Protection Zone 2
- Intake Protection Zone 3

Ottawa (Lemieux Island) IPZ-3 Delineation - Full Extent

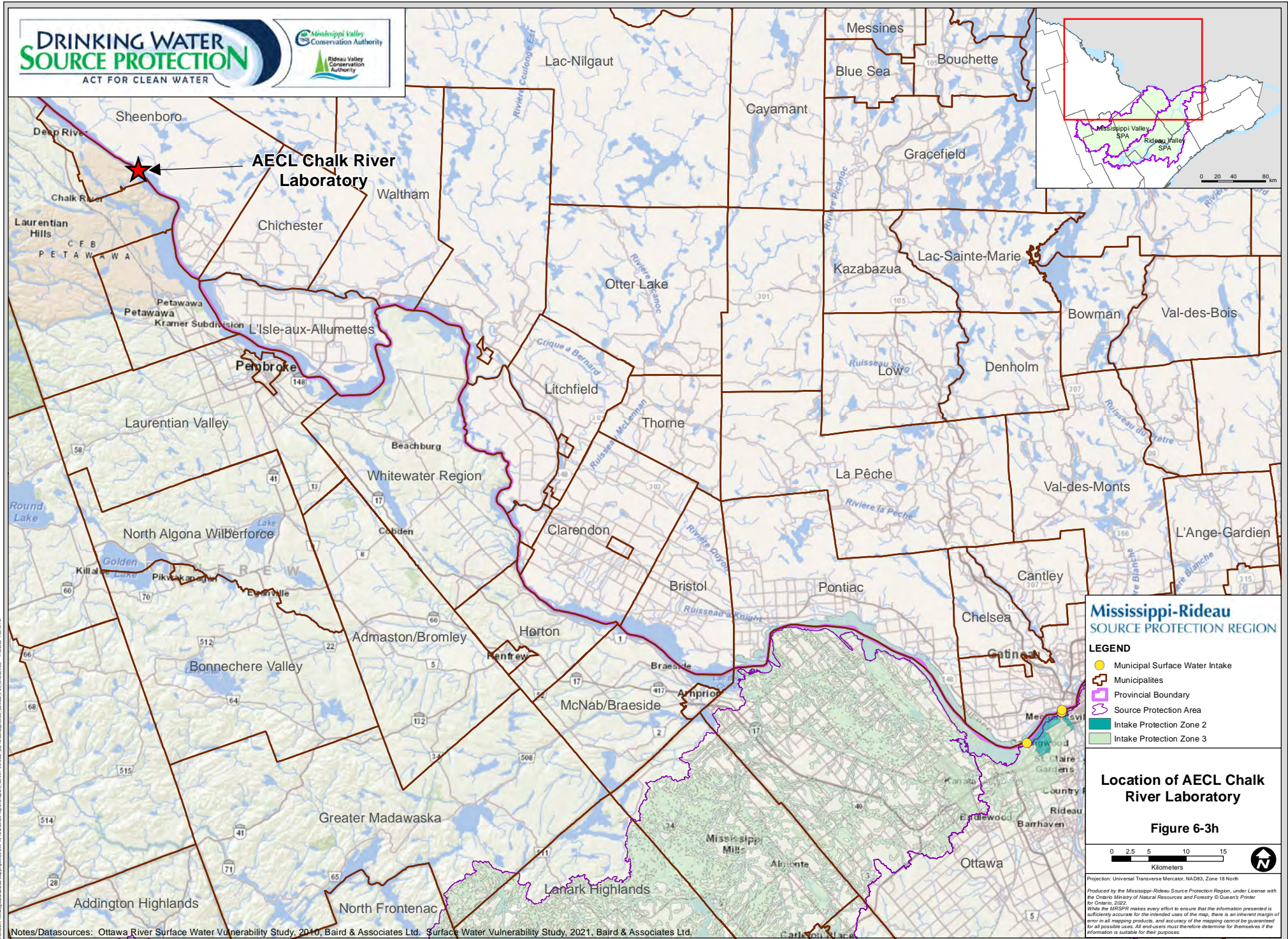
Figure 6-3g

0 2.5 5 10 15
Kilometers

Projection: Universal Transverse Mercator, NAD83, Zone 18 North

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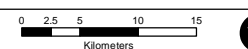
**Mississippi-Rideau
SOURCE PROTECTION REGION**

LEGEND

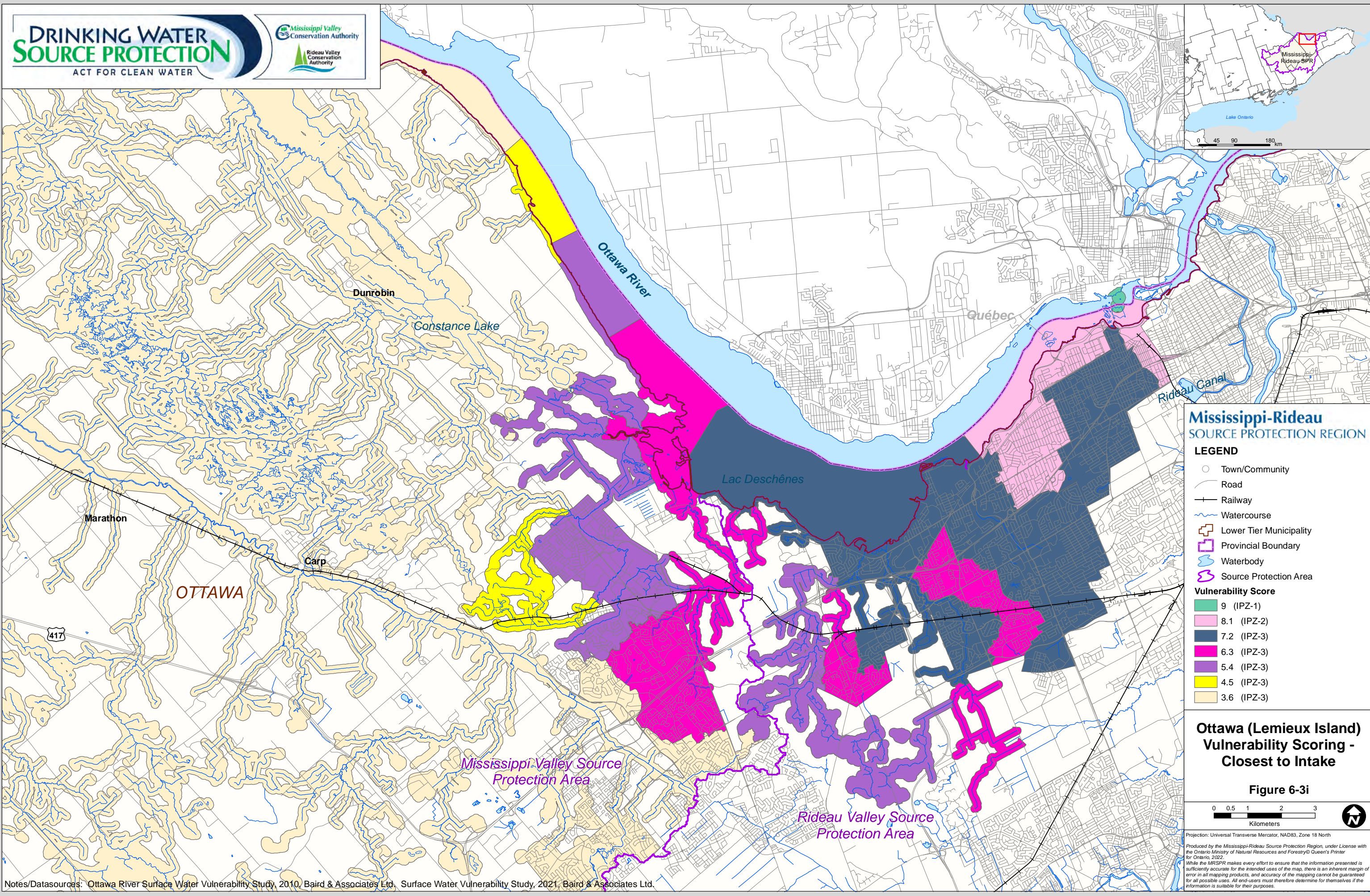
- Municipal Surface Water Intake
- Municipalities
- Provincial Boundary
- Source Protection Area
- Intake Protection Zone 2
- Intake Protection Zone 3

**Location of AECL Chalk
River Laboratory**

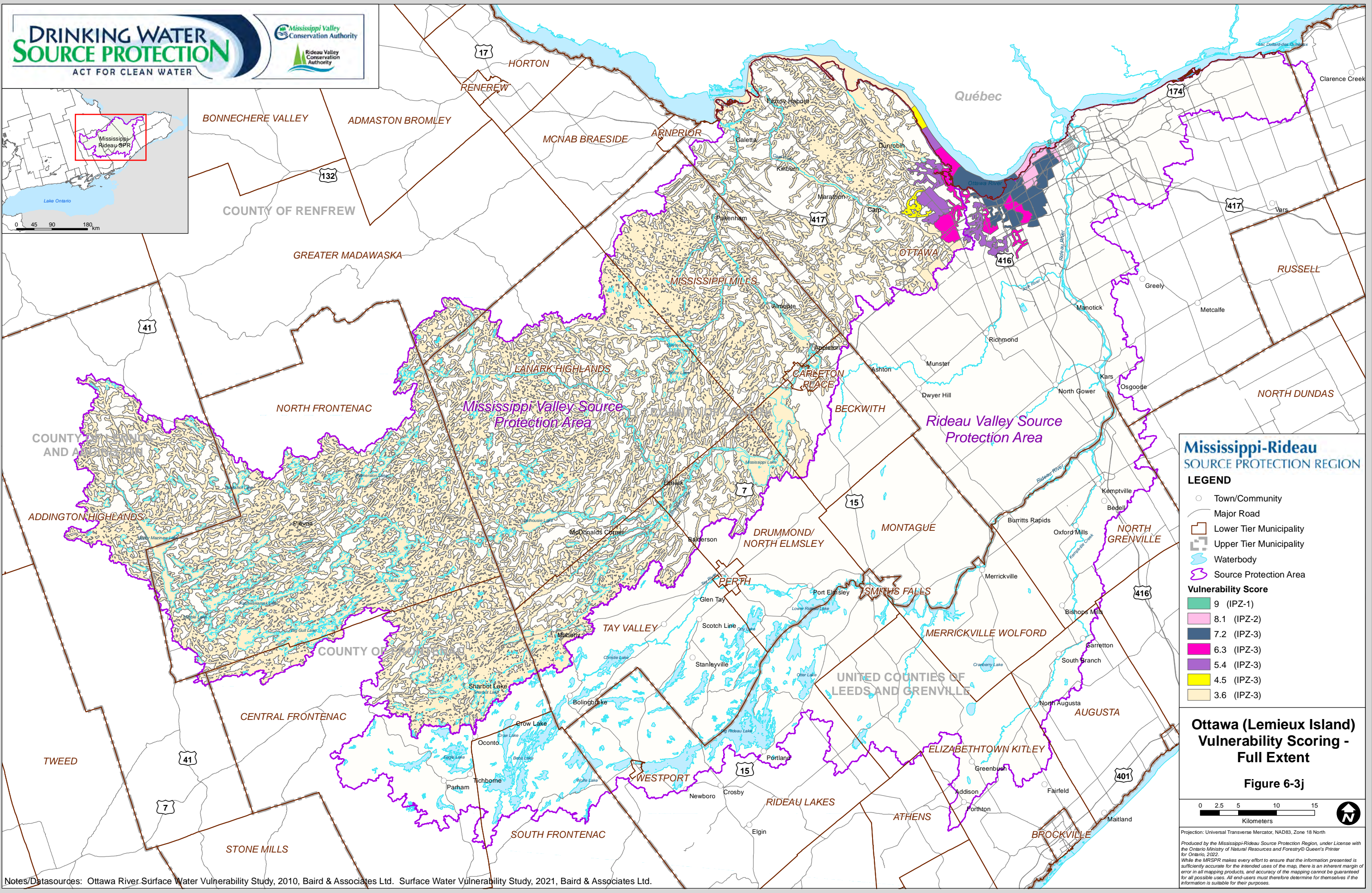
Figure 6-3h

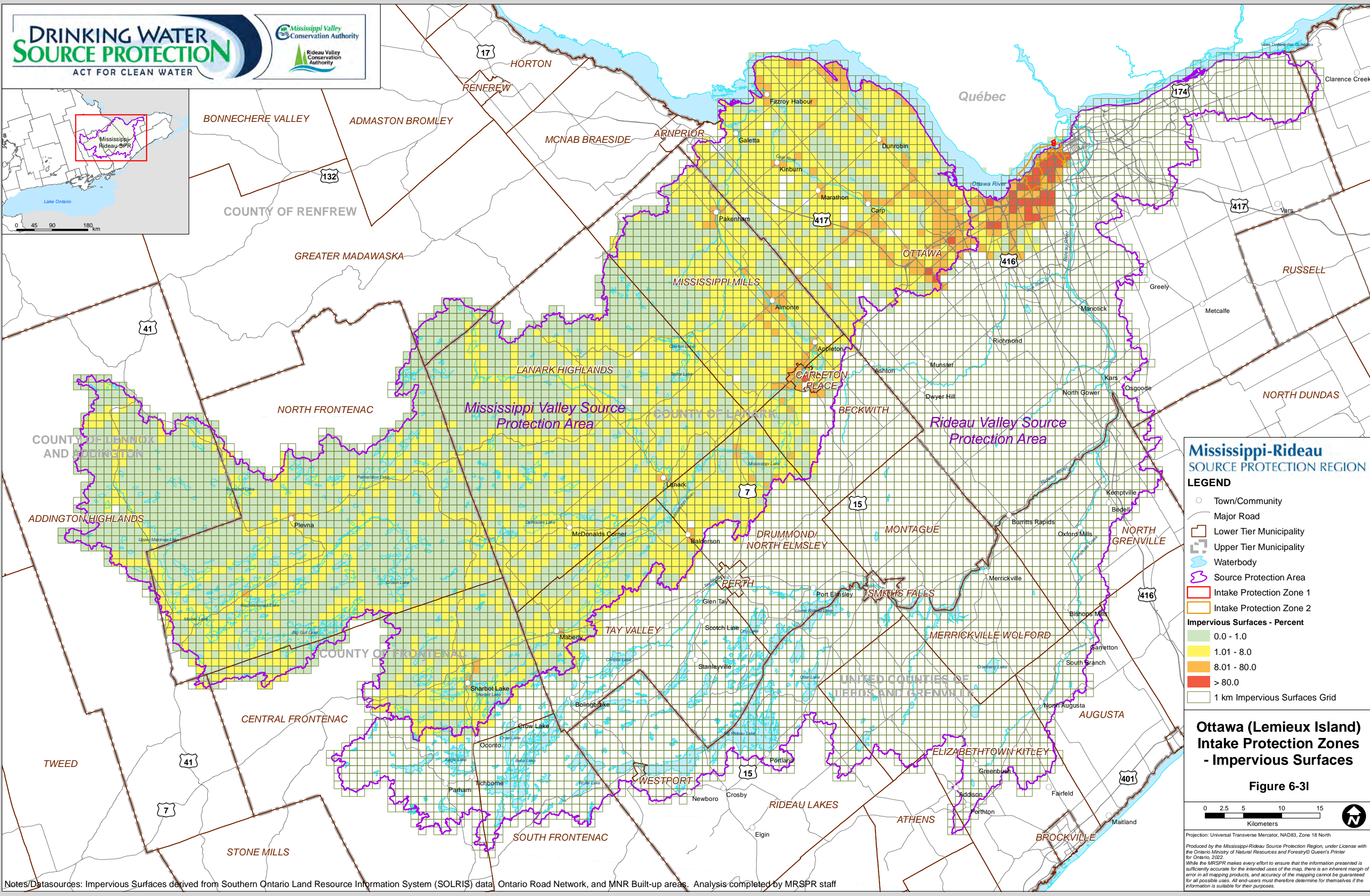


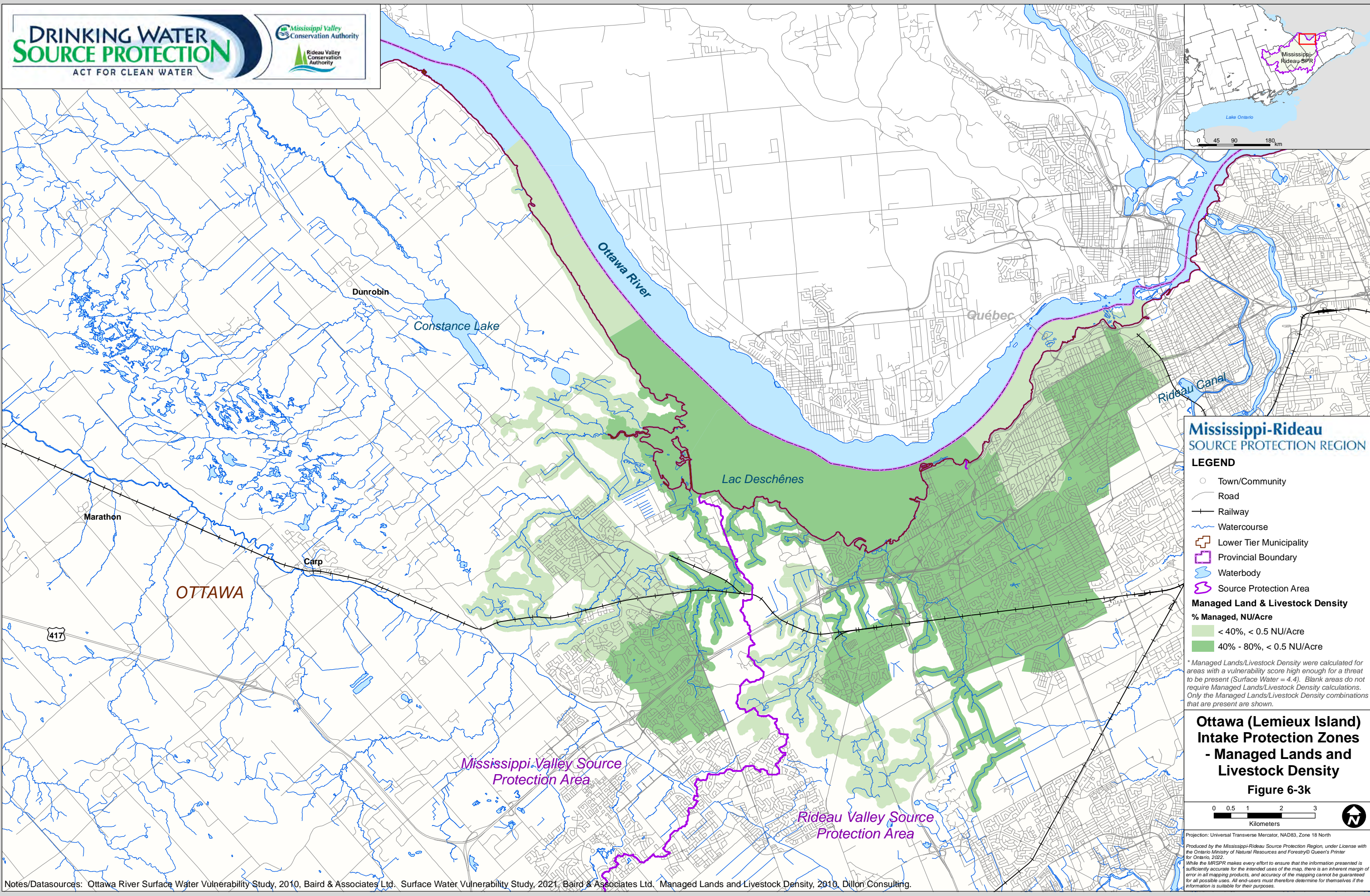
Projection: Universal Transverse Mercator, NAD83, Zone 18 North
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Notes/Datasources: Ottawa River Surface Water Vulnerability Study, 2010, Baird & Associates Ltd. Surface Water Vulnerability Study, 2021, Baird & Associates Ltd.







Notes/Datasources: Ottawa River Surface Water Vulnerability Study, 2010, Baird & Associates Ltd. Surface Water Vulnerability Study, 2021, Baird & Associates Ltd. Managed Lands and Livestock Density, 2010, Dillon Consulting.

Mississippi-Rideau
SOURCE PROTECTION REGION

LEGEND

- Town/Community
- Road
- Railway
- Watercourse
- Lower Tier Municipality
- Provincial Boundary
- Waterbody
- Source Protection Area

Managed Land & Livestock Density
% Managed, NU/Acre

- < 40%, < 0.5 NU/Acre
- 40% - 80%, < 0.5 NU/Acre

* Managed Lands/Livestock Density were calculated for areas with a vulnerability score high enough for a threat to be present (Surface Water = 4.4). Blank areas do not require Managed Lands/Livestock Density calculations. Only the Managed Lands/Livestock Density combinations that are present are shown.

Ottawa (Lemieux Island) Intake Protection Zones - Managed Lands and Livestock Density
Figure 6-3k

0 0.5 1 2 3

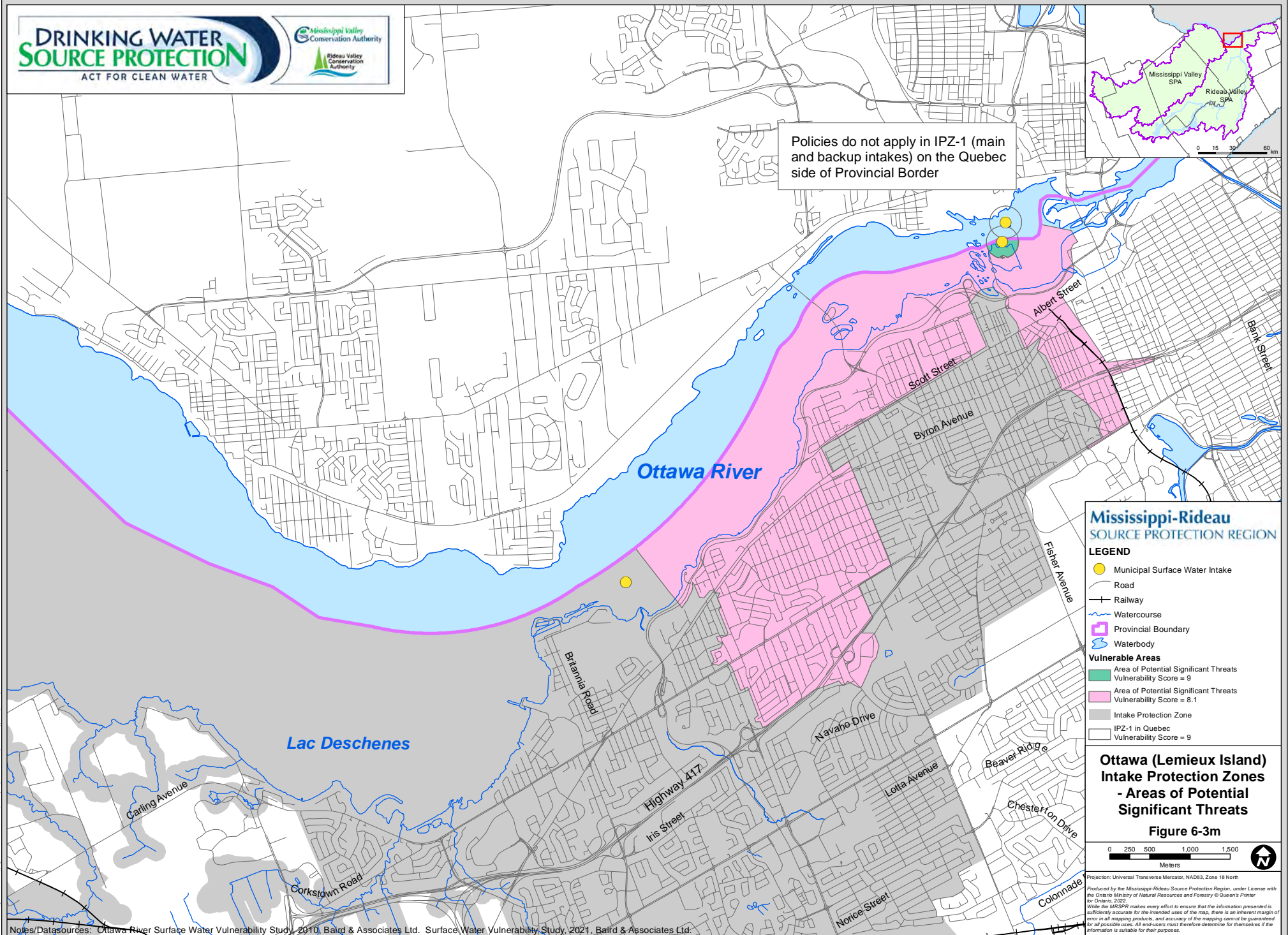
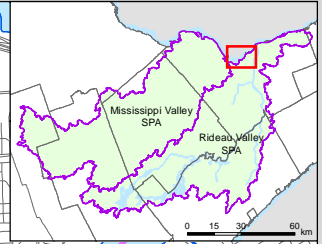
Kilometers

Projection: Universal Transverse Mercator, NAD83, Zone 18 North

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While the MRSPR makes every effort to ensure that the information presented is sufficiently accurate for the intended uses of the map, there is an inherent margin of error in all mapping products, and accuracy of the mapping cannot be guaranteed for all possible uses. All end-users must therefore determine for themselves if the information is suitable for their purposes.

Policies do not apply in IPZ-1 (main and backup intakes) on the Quebec side of Provincial Border



**Mississippi-Rideau
SOURCE PROTECTION REGION**

LEGEND

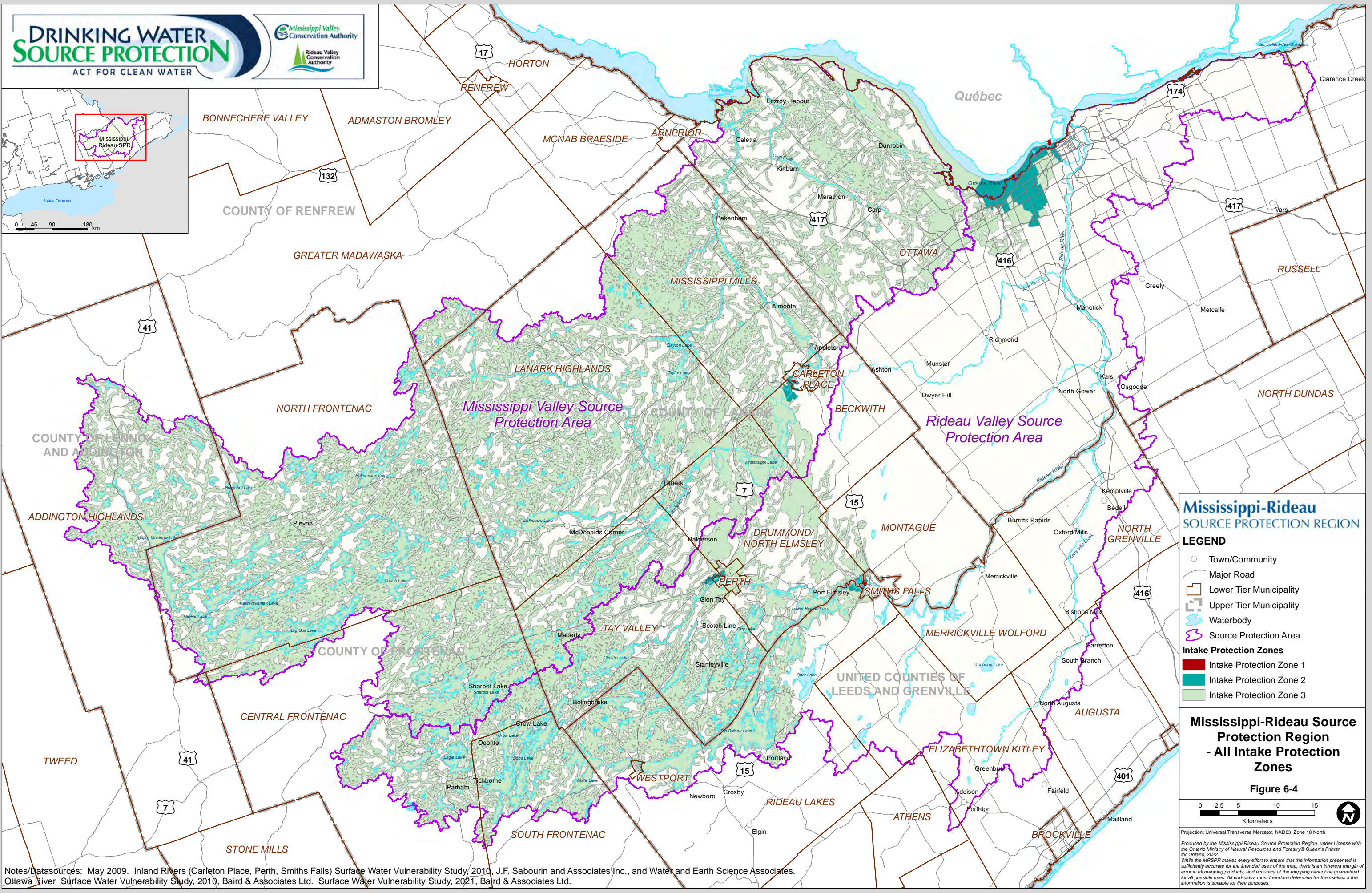
- Municipal Surface Water Intake
- Road
- +— Railway
- ~ Watercourse
- Provincial Boundary
- Waterbody
- Vulnerable Areas**
 - Area of Potential Significant Threats
Vulnerability Score = 9
 - Area of Potential Significant Threats
Vulnerability Score = 8.1
 - Intake Protection Zone
 - IPZ-1 in Quebec
 - Vulnerability Score = 9

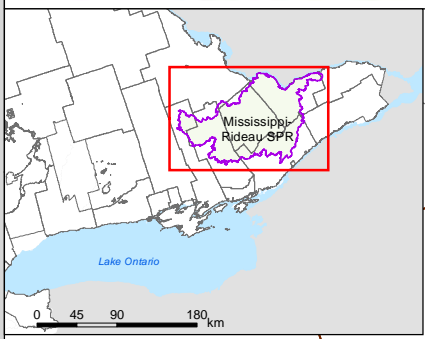
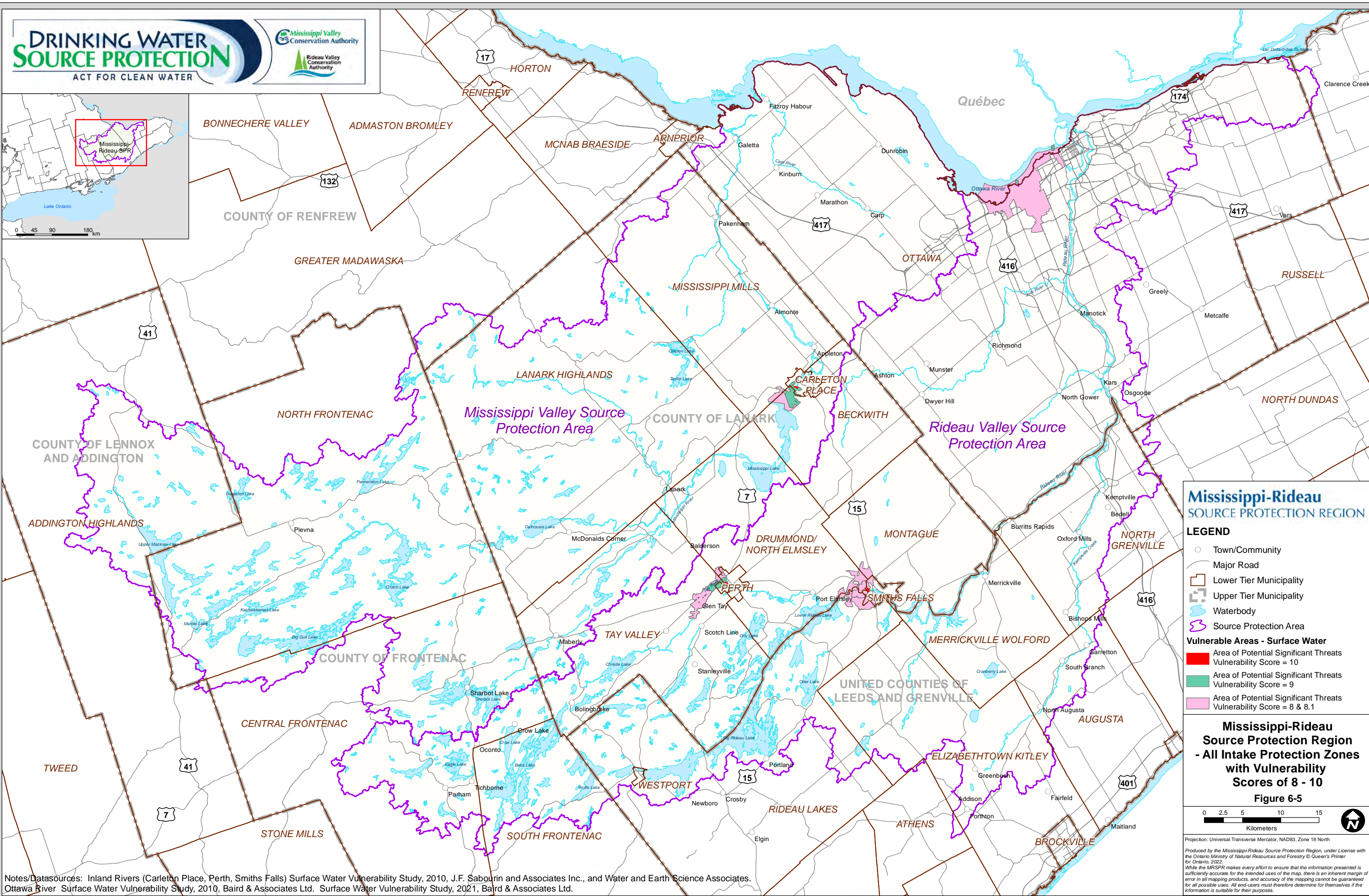
**Ottawa (Lemieux Island)
Intake Protection Zones
- Areas of Potential
Significant Threats**

Figure 6-3m



Projection: Universal Transverse Mercator, NAD83, Zone 18 North
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**Mississippi-Rideau
SOURCE PROTECTION REGION**

LEGEND

- Town/Community
- Major Road
- Lower Tier Municipality
- Upper Tier Municipality
- Waterbody
- Source Protection Area

Vulnerable Areas - Surface Water

- Area of Potential Significant Threats
Vulnerability Score = 10
- Area of Potential Significant Threats
Vulnerability Score = 9
- Area of Potential Significant Threats
Vulnerability Score = 8 & 8.1

**Mississippi-Rideau
Source Protection Region
- All Intake Protection Zones
with Vulnerability
Scores of 8 - 10**

Figure 6-5

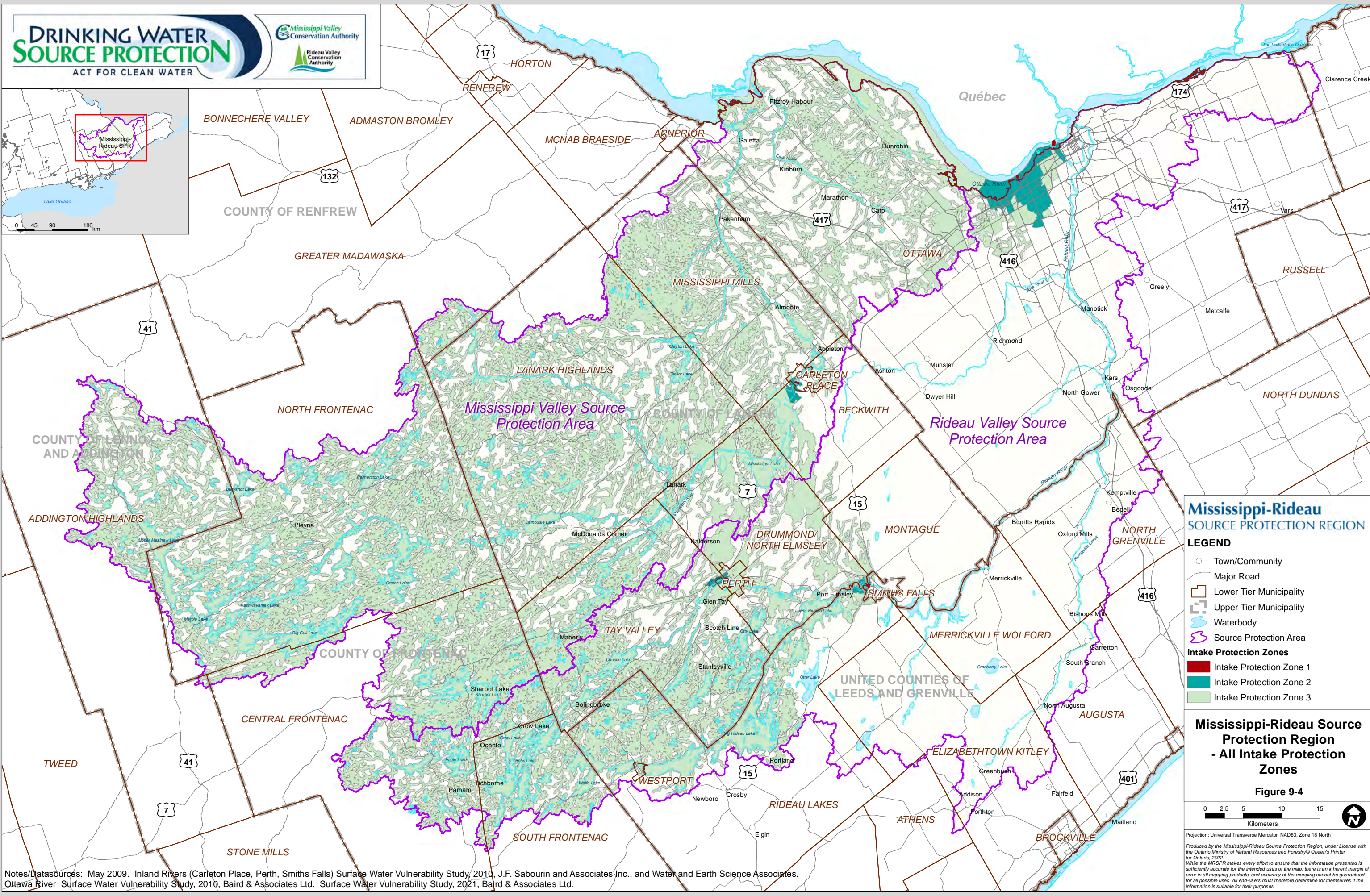
0 2.5 5 10 15
Kilometers

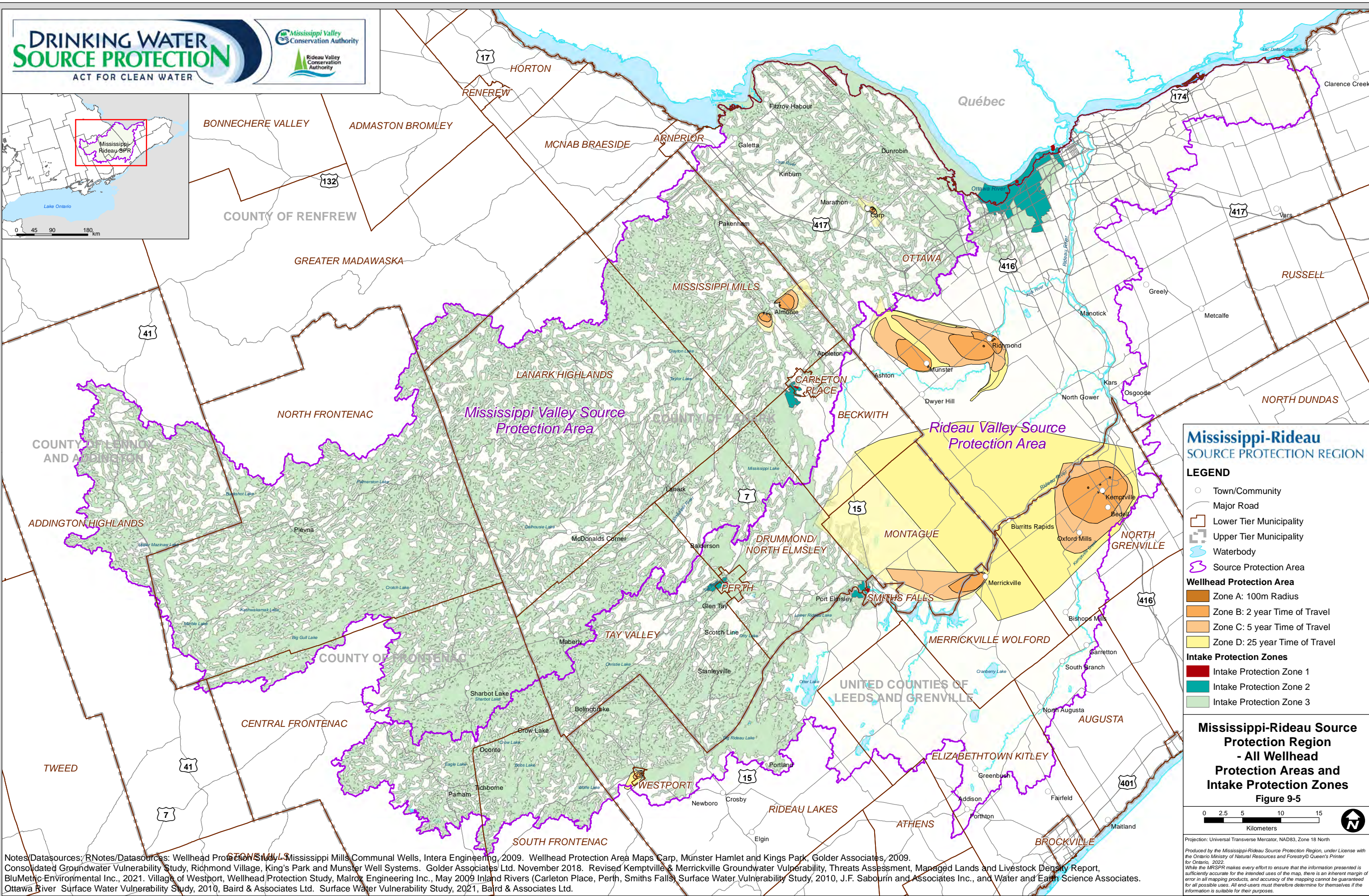
Projection: Universal Transverse Mercator, NAD83, Zone 18 North

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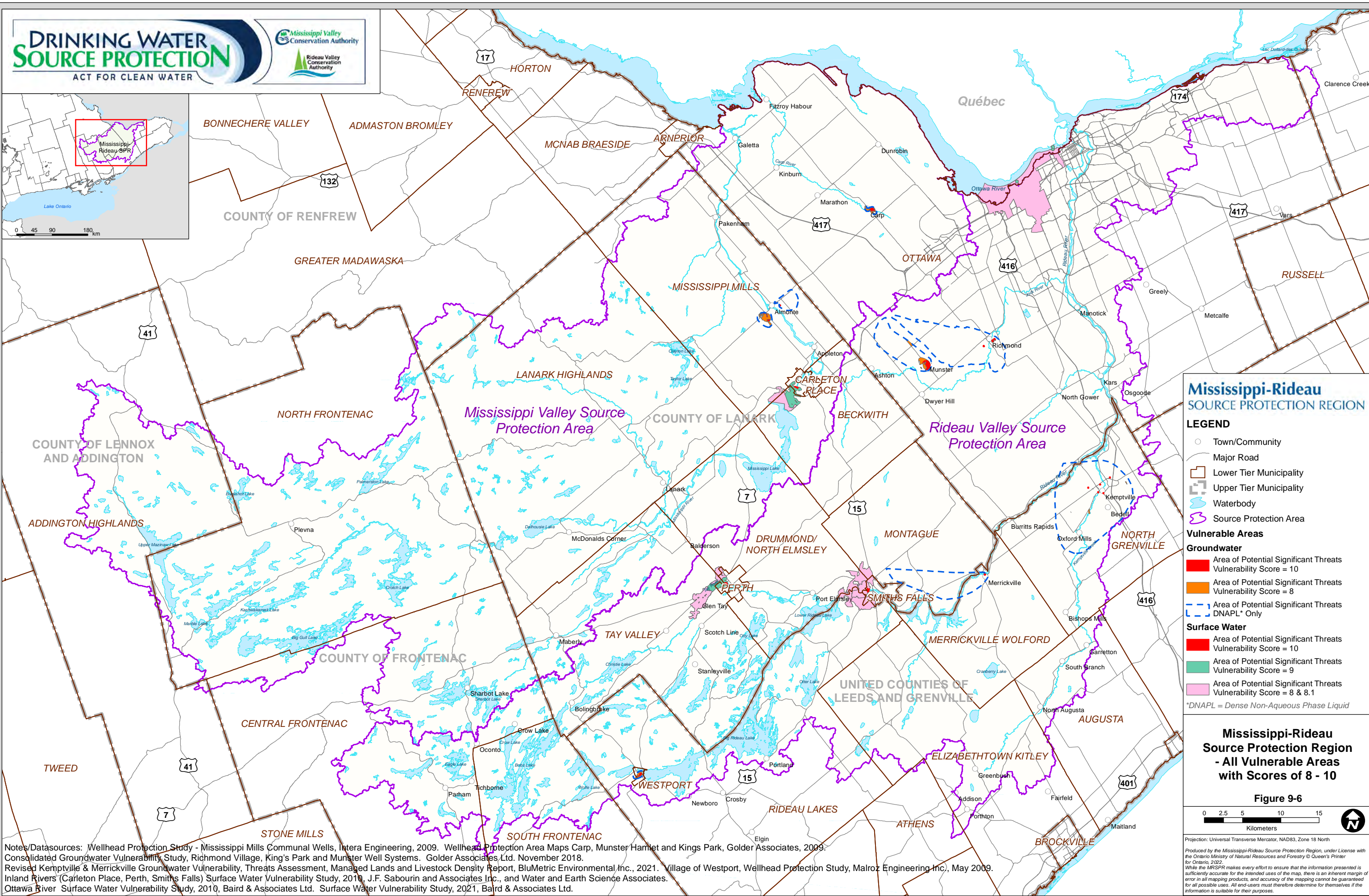
While the MRSPR makes every effort to ensure that the information presented is sufficiently accurate for the intended uses of the map, there is an inherent margin of error in all mapping products, and accuracy of the mapping cannot be guaranteed for all possible uses. All end-users must therefore determine for themselves if the information is suitable for their purposes.

Notes/Datasources: Inland Rivers (Carleton Place, Perth, Smiths Falls) Surface Water Vulnerability Study, 2010, J.F. Sabourin and Associates Inc., and Water and Earth Science Associates. Ottawa River Surface Water Vulnerability Study, 2010, Baird & Associates Ltd. Surface Water Vulnerability Study, 2021, Baird & Associates Ltd.





Notes/Datasources: RNotes/Datasources: Wellhead Protection Study, Mississippi Mills Communal Wells, Intera Engineering, 2009. Wellhead Protection Area Maps Carp, Munster Hamlet and Kings Park, Golder Associates, 2009. Consolidated Groundwater Vulnerability Study, Richmond Village, King's Park and Munster Well Systems. Golder Associates Ltd. November 2018. Revised Kemptville & Merrickville Groundwater Vulnerability, Threats Assessment, Managed Lands and Livestock Density Report, BluMetric Environmental Inc., 2021. Village of Westport, Wellhead Protection Study, Malrox Engineering Inc., May 2009 Inland Rivers (Carleton Place, Perth, Smiths Falls) Surface Water Vulnerability Study, 2010, J.F. Sabourin and Associates Inc., and Water and Earth Science Associates. Ottawa River Surface Water Vulnerability Study, 2010, Baird & Associates Ltd. Surface Water Vulnerability Study, 2021, Baird & Associates Ltd.



Notes/Datasources: Wellhead Protection Study - Mississippi Mills Communal Wells, Intera Engineering, 2009. Wellhead Protection Area Maps Carp, Munster Hamlet and Kings Park, Golder Associates, 2009. Consolidated Groundwater Vulnerability Study, Richmond Village, King's Park and Munster Well Systems. Golder Associates, Ltd. November 2018. Revised Kemptville & Merrickville Groundwater Vulnerability, Threats Assessment, Managed Lands and Livestock Density Report, BluMetric Environmental Inc., 2021. Village of Westport, Wellhead Protection Study, Malroz Engineering Inc., May 2009. Inland Rivers (Carleton Place, Perth, Smiths Falls) Surface Water Vulnerability Study, 2010, J.F. Sabourin and Associates Inc., and Water and Earth Science Associates. Ottawa River Surface Water Vulnerability Study, 2010, Baird & Associates Ltd. Surface Water Vulnerability Study, 2021, Baird & Associates Ltd.

Mississippi-Rideau SOURCE PROTECTION REGION

LEGEND

- Town/Community
- Major Road
- Lower Tier Municipality
- Upper Tier Municipality
- Waterbody
- Source Protection Area

Vulnerable Areas

Groundwater

- Area of Potential Significant Threats
Vulnerability Score = 10
- Area of Potential Significant Threats
Vulnerability Score = 8
- Area of Potential Significant Threats
DNAPL* Only

Surface Water

- Area of Potential Significant Threats
Vulnerability Score = 10
- Area of Potential Significant Threats
Vulnerability Score = 9
- Area of Potential Significant Threats
Vulnerability Score = 8 & 8.1

*DNAPL = Dense Non-Aqueous Phase Liquid

Mississippi-Rideau Source Protection Region - All Vulnerable Areas with Scores of 8 - 10

Figure 9-6

0 2.5 5 10 15
Kilometers

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