



SOUTH NATION CONSERVATION
BEAR BROOK WATERSHED
Characterization Study Maps



South Nation
Conservation
de la Nation Sud



South Nation Conservation (SNC) is a non-profit environmental agency with a longstanding history of leadership in watershed management, environmental stewardship, and natural hazard protection across 4,480 km² of Eastern Ontario.

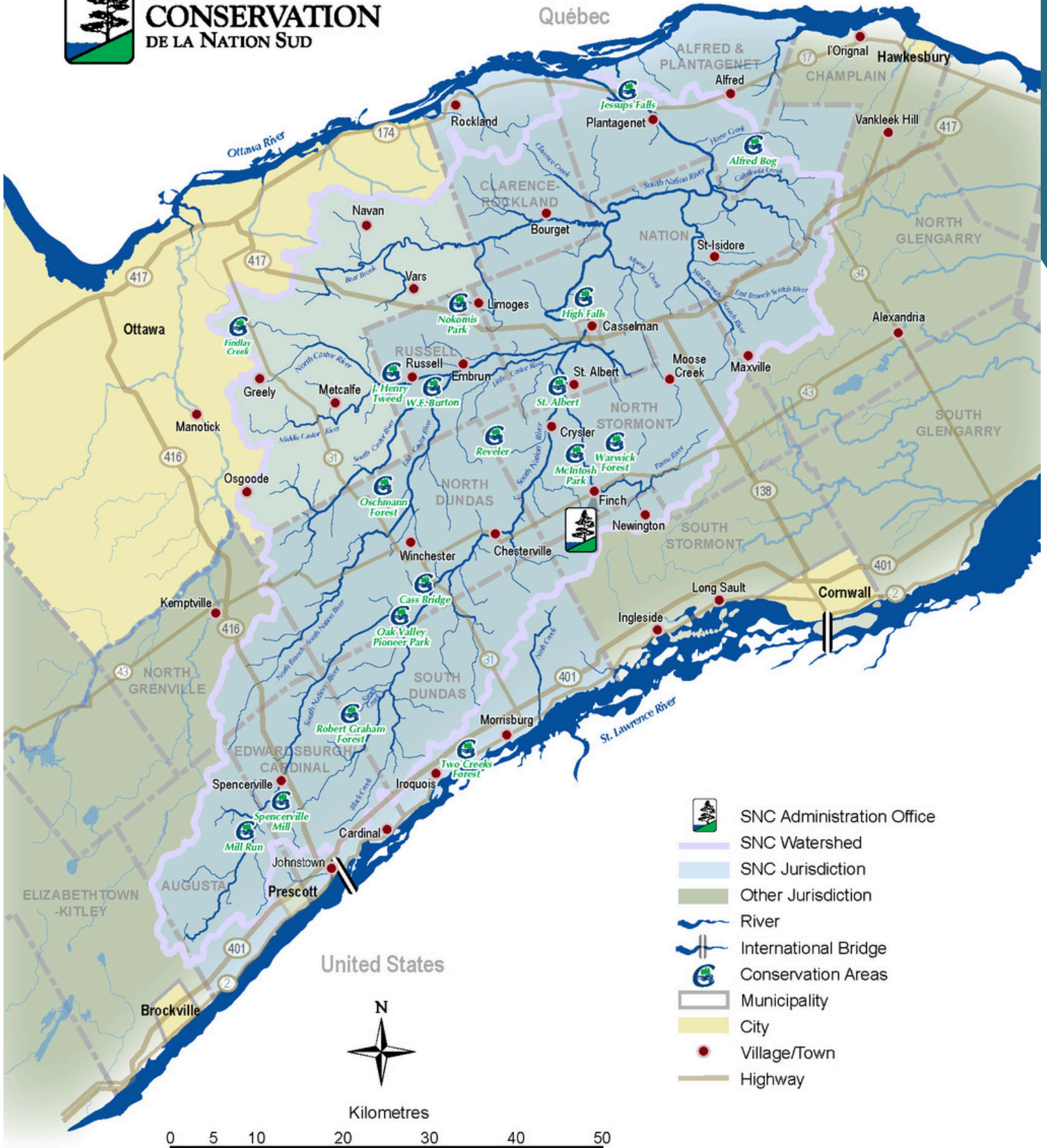
Established in 1947 under Ontario's Conservation Authorities Act, SNC works collaboratively with 16 municipal partners across the City of Ottawa, United Counties of Prescott and Russell, United Counties of Stormont, Dundas and Glengarry, and United Counties of Leeds and Grenville.

SNC's vision is to improve water quality for a healthy ecosystem, ensuring safe and sustainable water resources for people and nature alike. Its mission includes protecting people and property from natural hazards, conserving forests and wetlands, restoring natural areas, and engaging communities in environmental stewardship.





SOUTH NATION CONSERVATION DE LA NATION SUD



- SNC Administration Office
- SNC Watershed
- SNC Jurisdiction
- Other Jurisdiction
- River
- International Bridge
- Conservation Areas
- Municipality
- City
- Village/Town
- Highway

CONSERVATION LANDS MANAGEMENT

SNC owns and manages over 13,000 acres of forests, wetlands, flood control areas, parks, and restored habitats. These lands provide environmental, social, and economic benefits to local communities:

- 8,845 acres of productive forest
- 1,540 acres of protected forest
- 1,645 acres of wetlands
- 836 acres of flood control areas
- 192 acres of parks and recreation sites

The SNC Forest is home to over 850 species of plants and animals, including species at risk, and features 51 unique ecological communities.

Each year, more than 200,000 visitors enjoy hiking, birdwatching, hunting, and other outdoor activities on SNC lands.

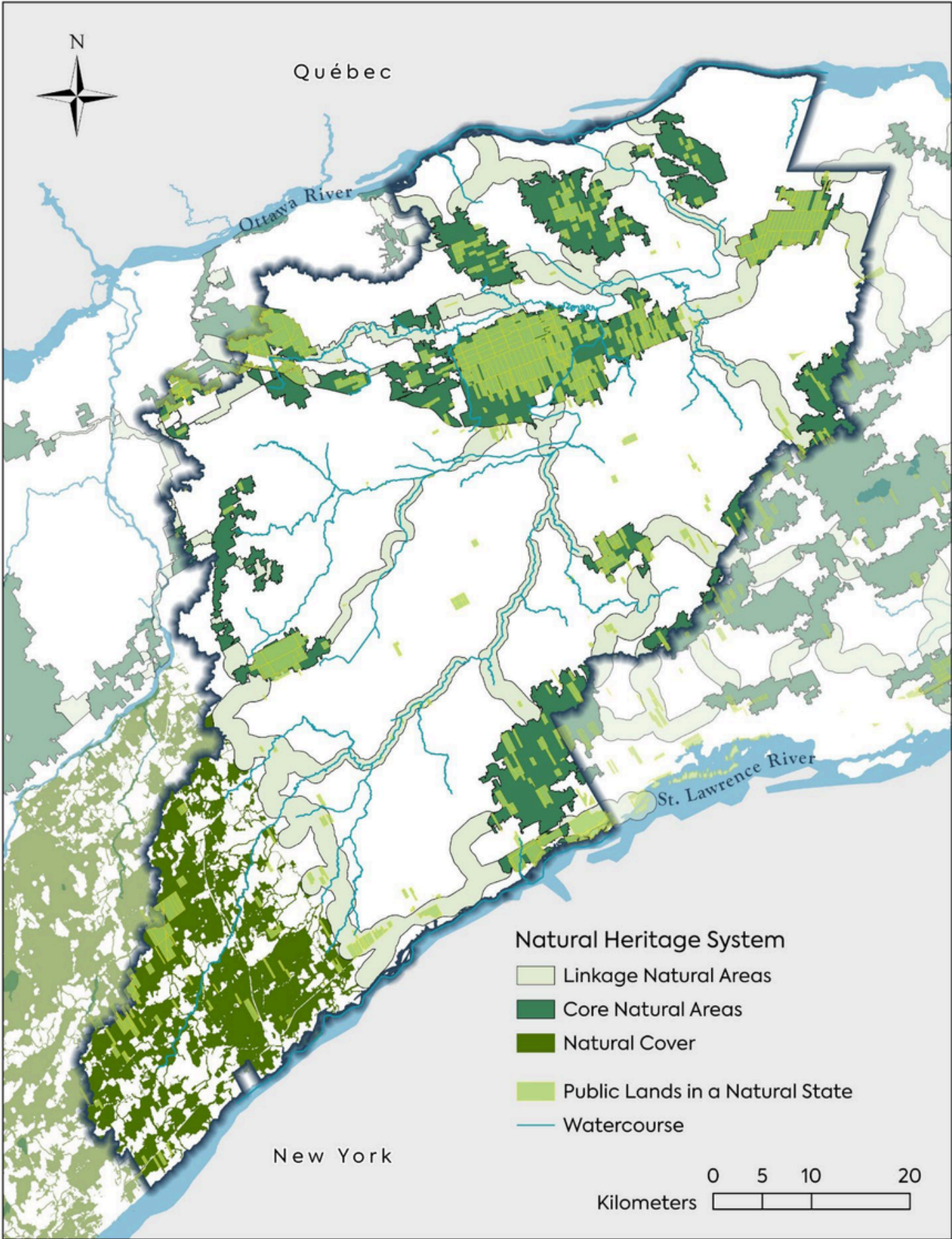
SNC is also a partner in the management of over 20,000 acres of community forest land in Eastern Ontario, including support for County forest management activities.

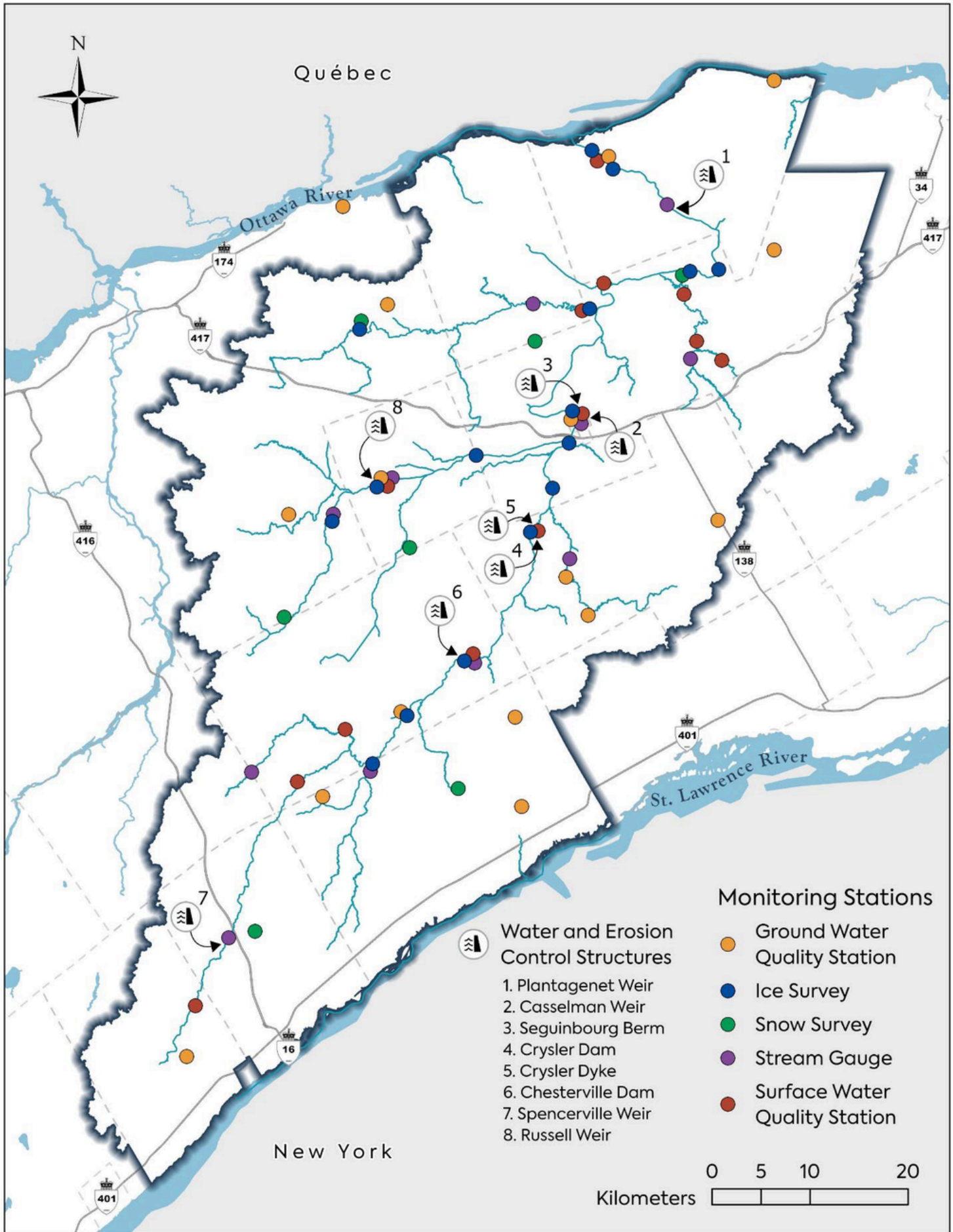


Our teams deliver a wide range of services for partners and landowners, including:

- Forest and operational management planning
- Forest inventory data collection and digital mapping
- Tree marking, planting, and operations inspections
- Advisory services for private woodlots
- Public and First Nations consultation
- Property administration

All SNC lands are managed to strict environmental standards, including Forest Stewardship Council (FSC) certification since 2005 and Sustainable Forestry Initiative (SFI) certification since 2024, ensuring biodiversity, forest health, and long-term sustainability.





WATER RESPONSE PROGRAMS

Flood Forecasting

SNC maintains a flood warning system to provide the latest information to municipalities, media, emergency response services, and governments.

The flood warning system is two-fold, to:

1. provide advance notice of flood conditions so that preparation measures can be taken to minimize the impact on people and property; and
2. provide updates of flood forecasts and watershed conditions during a flood event.

Ontario's 36 Conservation Authorities are mandated to provide this service. SNC, in partnership with the Ministry of Natural Resources, maintains a network of stream gauges, rain gauges and snow course sites in the jurisdiction. This data is used to determine the potential for flooding due to runoff from snow melt and precipitation.

Staff perform a daily planning cycle which includes an analysis of the following parameters:

- Daily calculation of flows;
- Daily check of forecasts for weather conditions, precipitation and temperatures; and
- Snow and ice survey data.

SNC uses this analysis to predict the flood potential and issue the appropriate message.



Flood Forecasting and Warning & Low Water Response

What We Do



Provide municipalities with advanced notice of flooding and low water conditions



Model and predict flood events



Operate and maintain dams and other water control structures



Monitor stream flow



Track radar information



Conduct snow and ice surveys

WATER RESPONSE PROGRAMS

Low Water

Ontario Low Water Response is intended to ensure provincial preparedness, to assist in coordination, and to support local response in the event of a drought. This recognizes the partnership between provincial and local authorities, and that natural resource and environmental management must be approached at both the provincial and local levels.

At the local jurisdiction, the emphasis is on directed to collecting streamflow and precipitation information, interpreting policies, and delivering programs to minimize the effects of low water conditions. SNC works with a Low Water Response Team made up of provincial and municipal government, agriculture, and special interest groups.

The Water Response Team meets to identify severity of the conditions, identify local water supply needs and concerns, recommend water conservation and preservation, and evaluate effectiveness of local actions.

Low water conditions can cause algal blooms, fish kills from reduced dissolved oxygen, increased risk of forest fires and other impacts on trees including early leaf drop, trig dieback, and stunted growth.



Voluntary Conservation

The potential for water supply problems is identified.
Target: 10% use reduction



Conservation and Restrictions on Non-Essential Use

Minor water supply issues are encountered.
Target: An additional 10% reduction,
municipal by-laws enacted



Conservation, Restriction, Regulation

Supply no longer meets demand.
Social and economic impacts are experienced.
Target: Reduce/manage water demands to the maximum extent
(ex: amend PTTW, new by-laws)

DEVELOPMENT REVIEWS & REGULATIONS

SNC works closely with municipalities, developers and residents to protect the natural environment while ensuring the safety of people and their property from natural hazards.

Development Approvals and Regulations Program

SNC reviews development proposals to determine how proposed work may impact the local environment. Approvals are issued for work that protects people and property from natural hazards.

The [Conservation Authorities Act](#) and [Ontario Regulation 41/24](#) establish regulated areas in and around natural hazards, watercourses, and wetlands where an SNC permit is required to undertake development activities.

An SNC permit is required to:

- (a) straighten, change, divert or interfere in any way with the existing channel of a river, creek, stream or watercourse or to change or interfere in any way with a wetland; or
- (b) undertake development activities in:
 - i. floodplains;
 - ii. unstable slopes;
 - iii. unstable soils and bedrock;
 - iv. hazardous lands;
 - v. wetlands; and
 - vi. other areas within 30 metres of a wetland.



Development activity means:

- (a) the construction, reconstruction, erection or placing of a building or structure of any kind,
- (b) any change to a building or structure that would have the effect of altering the use or potential use of the building or structure, increasing the size of the building or structure or increasing the number of dwelling units in the building or structure,
- (c) site grading, or
- (d) the temporary or permanent placing, dumping or removal of any material, originating on the site or elsewhere

Septic Program

SNC reviews applications and issues permits for septic installation and maintenance on behalf of 16 participating municipalities under Part 8 of the Ontario Building Code.

DRINKING WATER SOURCE PROTECTION

Clean, safe drinking water starts long before it reaches your tap. Ontario uses a multi-barrier approach to safeguard drinking water systems. Protecting water at its source is the first and most important step, followed by:

- Treatment of water
- Testing to ensure safety
- Training of water operators
- Monitoring and maintenance of distribution systems



The Raisin–South Nation Source Protection Area covers more than 7,000 km² across Eastern Ontario, including the jurisdictions of Raisin Region Conservation Authority and South Nation Conservation.

This area includes:

- 26 municipal drinking water systems (19 wells, 7 surface water intakes) serving 175,000+ residents.
- 6 vulnerable wellhead protection areas (WHPAs) and 7 intake protection zones (IPZs) where source water is most at risk.
- A mix of urban centres, rural communities, and agricultural lands—all dependent on clean and reliable water supplies.

The Clean Water Act, 2006 ensures that communities identify and manage risks to their municipal drinking water sources. Locally developed Source Protection Plans, prepared by committees of municipal, provincial, and community representatives, guide this work in the Raisin–South Nation Source Protection Area.

Threats to drinking water are ranked as low, moderate, or significant risks. There are 21 types of activities that can be considered threats, depending on location and scale—for example, handling fuel, storing road salt, or applying certain pesticides and fertilizers.

Source Protection Plans reduce risk through policies that may include:

- Education and outreach to raise awareness
- Prescribed instruments (permits, approvals)
- Risk management plans for specific activities
- Prohibition of high-risk activities near municipal wells or intakes
- Restricted land uses

Protecting sources of drinking water is a shared responsibility. By reducing risks to water quality and quantity at the source, we safeguard both human health and the environment.



LANDOWNER GRANTS & STEWARDSHIP PROGRAMS

Clean Water Grant Program

SNC administers cost-share funding to help rural landowners improve water quality and environmental stewardship on private lands. Grants range from \$1,000 to \$15,000 per project covering 50-100% of eligible expenses, with increased funding available within the City of Ottawa.

Funding is available for a range of projects, including:

- Riparian buffers, windbreaks, and grassed waterways
- Fragile land retirement and runoff control measures
- Livestock access control and barnyard diversion
- Streambank stabilization and erosion control
- Nutrient management and controlled tile drainage
- Manure storage improvements
- Septic system upgrades
- Well decommissioning

Tree Replacement Program

On behalf of the City of Ottawa, SNC delivers cost-share grants for the removal and replacement of trees affected by invasive species (e.g. emerald ash borer) or storm damage—support for both removal and native tree replacement. Applicants must provide professional quotes and follow application guidelines.

Tree Planting Services & Subsidies

- Forests Canada Program: Subsidized planting services with full site preparation, planting, and management for properties ≥ 0.5 ha (1.25 acres). Cost: \$1.11 per conifer, \$1.68 per deciduous seedling.
- City of Ottawa Green Acres: Grants of \$0.50 per seedling, for landowners with ≥ 0.4 ha and planting at least 1,000 trees; includes full-service assistance or over-the-counter options.
- Over-the-Counter Seedling Sales: For those not eligible for above programs—minimum 100 seedlings, landowner pickup, no management agreement required.
- Spring Free Tree Giveaway: Annual free tree giveaways hosted by SNC and partners for conservation awareness.

Woodlot Advisory Service

Available to landowners with ≥ 4 hectares (10 acres) in select counties. Offers:

- Free woodlot site evaluations by technicians
- Guidance on management planning and program access
- Assistance with forest certification options (e.g., MFTIP)
- Up to \$500 subsidy for a Managed Forest Tax Incentive Program (MFTIP) plan

Grassland Stewardship Initiative

Delivered collaboratively with Grasslands Ontario and ALUS Ontario East, this initiative targets habitat restoration for grassland species at risk (e.g., Bobolink, Eastern Meadowlark). Cost-shares between 35%–100% for landowners dedicating ≥ 4 hectares toward grasslands or bird-friendly hay clipping.

NEW RURAL AGRICULTURAL LANDSCAPE PROGRAM - MARGINAL LANDS INITIATIVE -

**APPLY
NOW**

**90% of costs covered to improve
natural features on your farm!**



Trees & Windbreaks

reduce erosion, protect crops, and improve the watershed



Grassland & Pollinator Habitat

support wildlife and boost biodiversity



Wetlands & Water Retention Ponds

store water and improve drainage

www.eofsc.ca | 1-877-984-2948





BEAR BROOK WATERSHED CHARACTERIZATION STUDY

Healthy watersheds support biodiversity, reduce risks from flooding and erosion, provide clean water and air, and help communities adapt to climate change. The Bear Brook Watershed plays a vital role in the health of ecosystems, residents, and the regional economy.

A Landscape Shaped by People and Nature

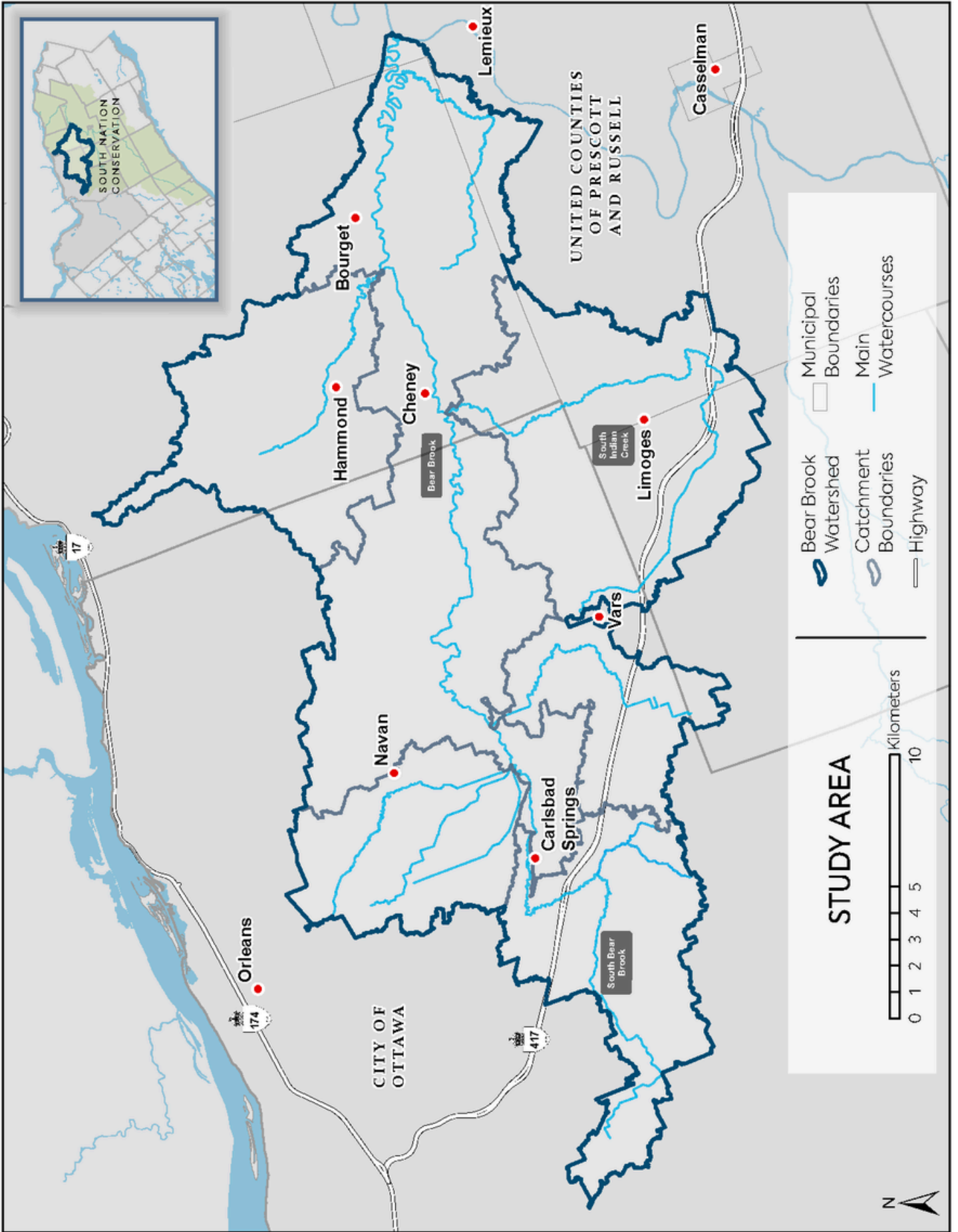
Spanning 488 km² across the City of Ottawa and the United Counties of Prescott and Russell, Bear Brook is a diverse watershed of farmland, wetlands, woodlands, and urban areas. Indigenous Peoples have lived here for over 9,000 years, and the area remains within the traditional territory of the Algonquin Anishinaabe and Haudenosaunee Confederacy.

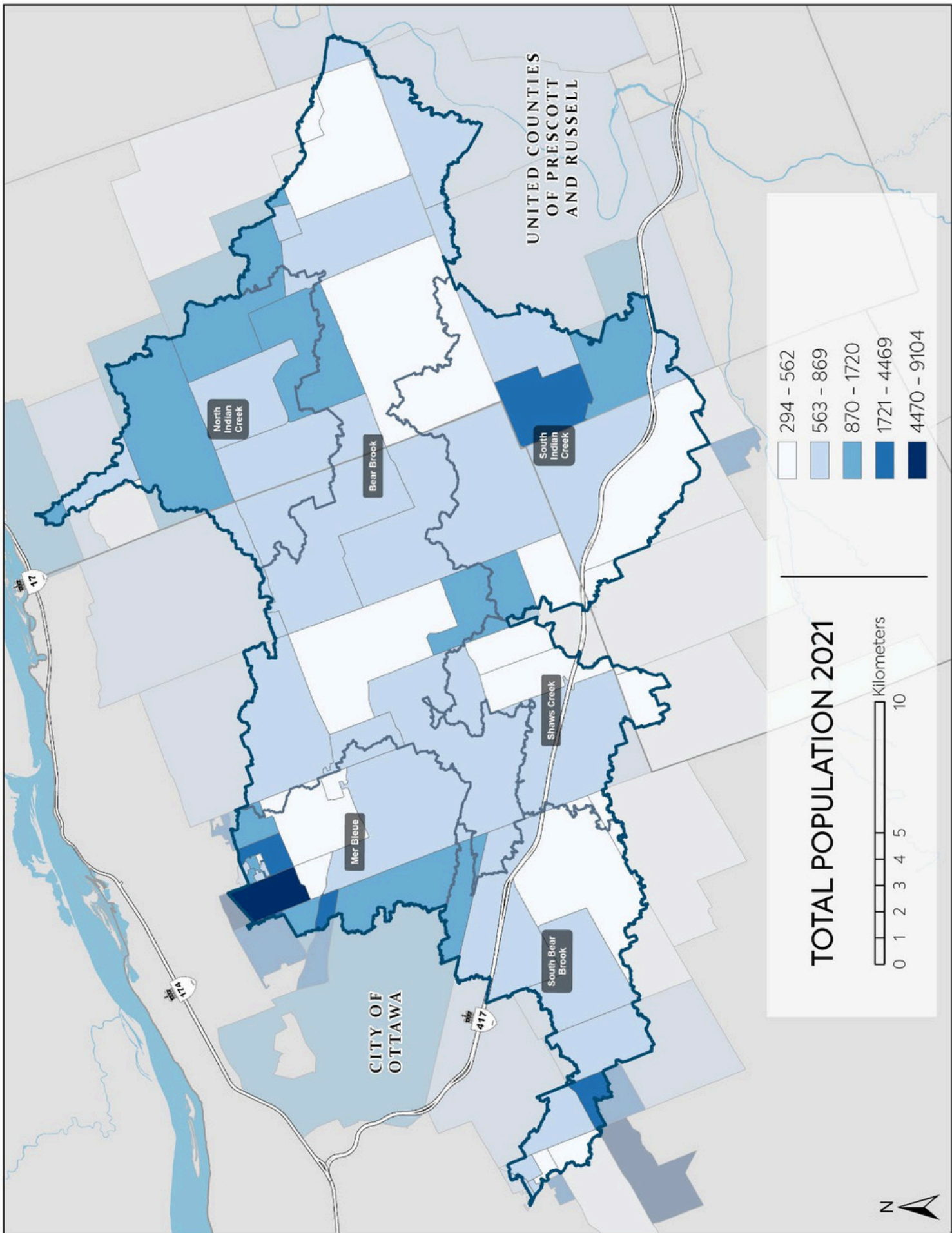
European settlement led to deforestation and soil loss, forming the Bourget Desert in the early 1900s. Large-scale restoration, including the creation of Larose Forest, stabilized soils and restored natural systems.

To guide sustainable growth, the City of Ottawa retained South Nation Conservation to complete a three-phase watershed study:

1. Characterization Report – current conditions
2. Scenario Planning – assess future risks from land use and climate change
 - includes a Class Environmental Assessment on Flood Mitigation
3. Watershed Plan – recommend tools, policies, and actions

The Bear Brook Characterization Study provides the scientific foundation for protecting water, land, and communities while balancing growth and climate adaptation. The next phases will ensure long-term strategies to sustain this important watershed.





TOTAL POPULATION 2021

- 294 - 562
- 563 - 869
- 870 - 1720
- 1721 - 4469
- 4470 - 9104



CITY OF OTTAWA

UNITED COUNTIES OF PRESCOTT AND RUSSELL

North Indian Creek

Bear Brook

South Indian Creek

Shaws Creek

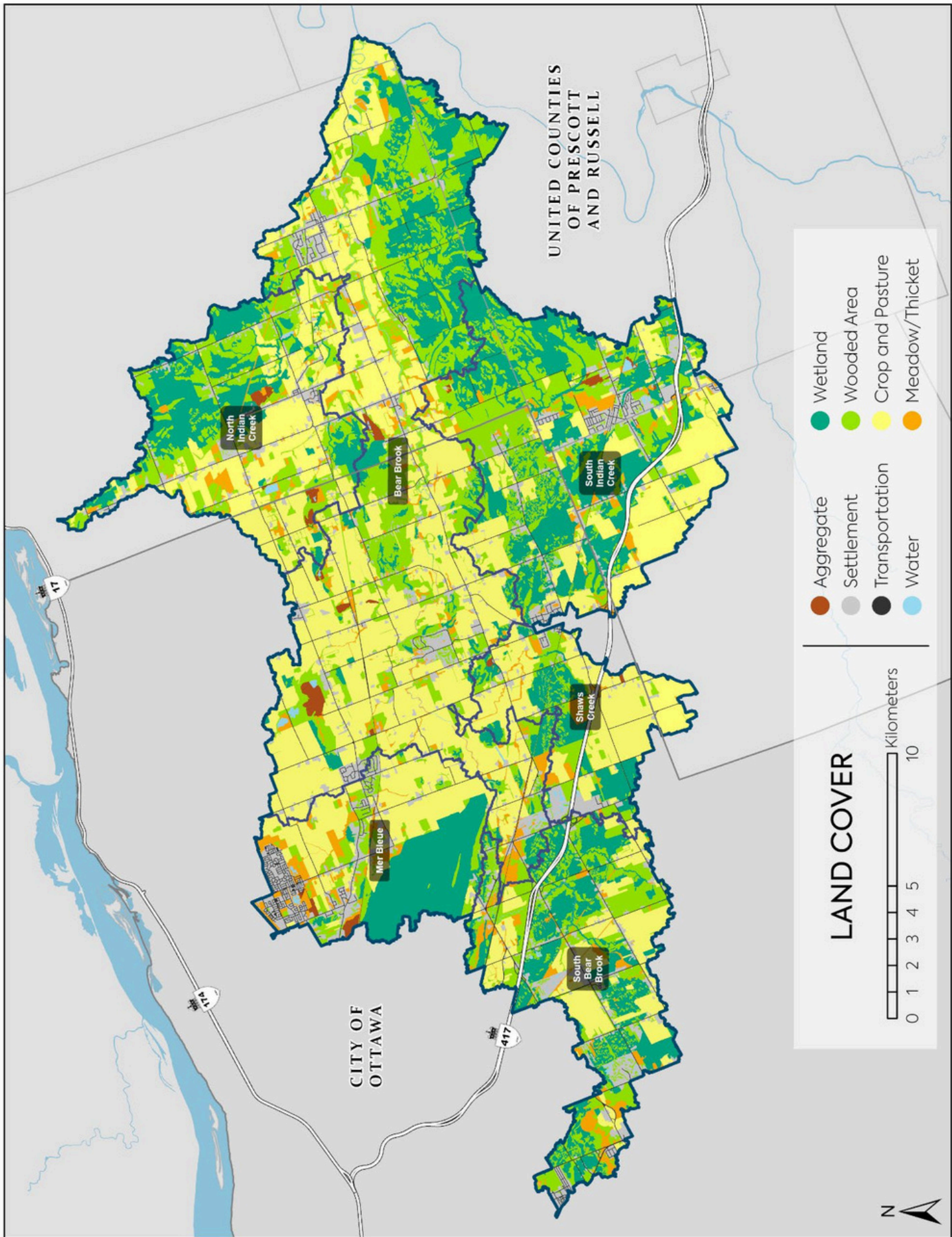
Mer Bleue

South Bear Brook

417

414

417



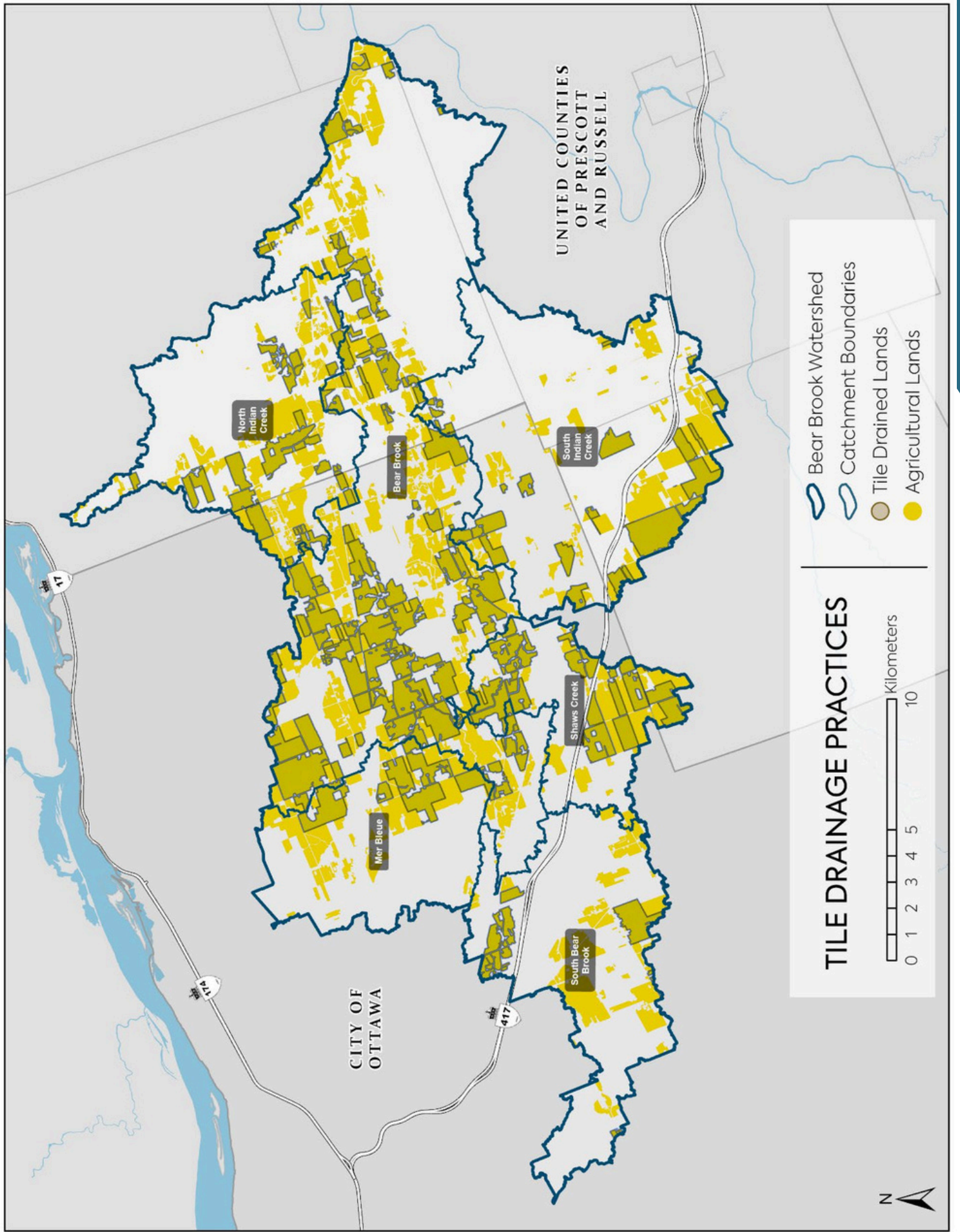
UNITED COUNTIES
OF PRESCOTT
AND RUSSELL

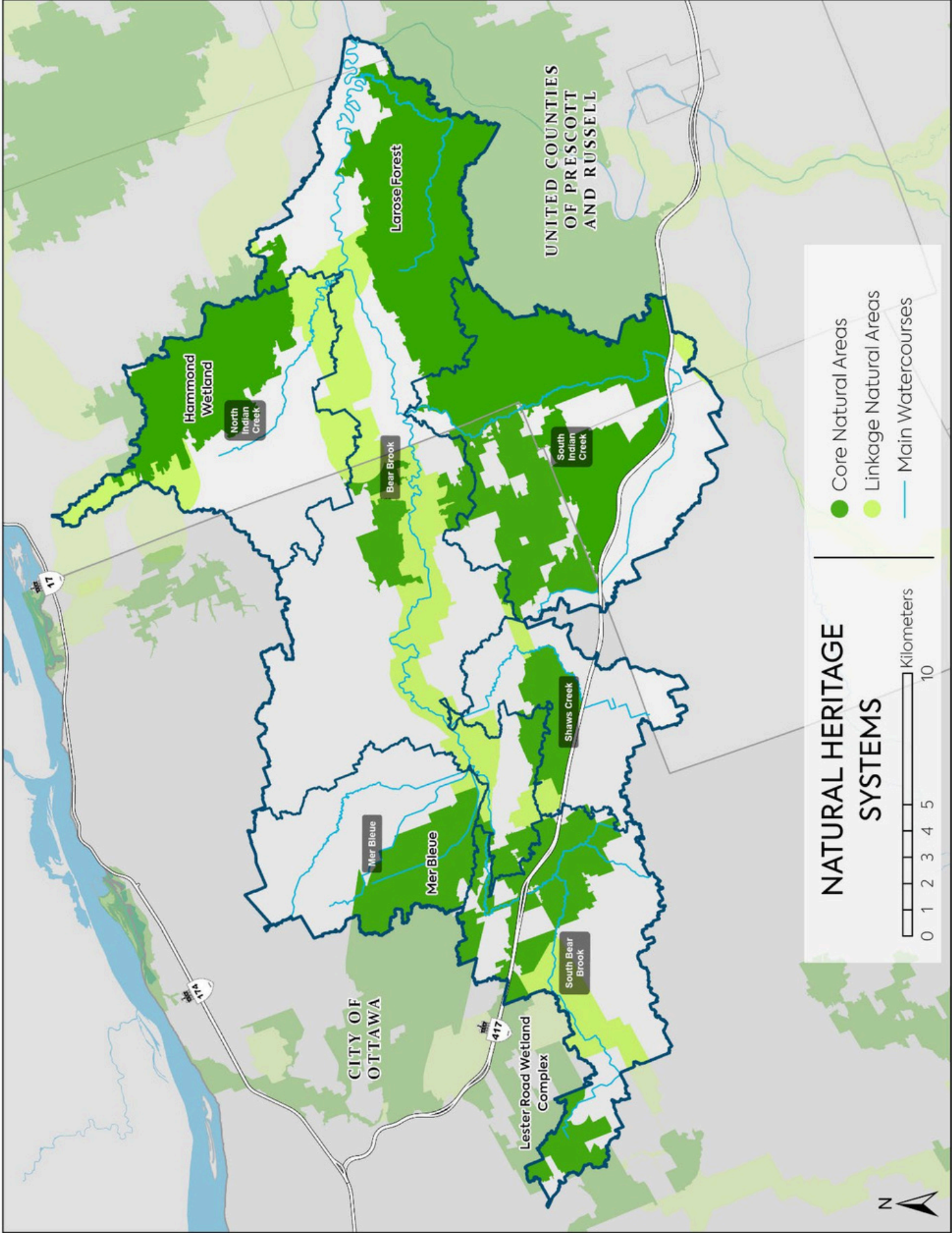
CITY OF
OTTAWA

- Aggregate
- Settlement
- Transportation
- Water
- Wetland
- Wooded Area
- Crop and Pasture
- Meadow/Thicket

LAND COVER



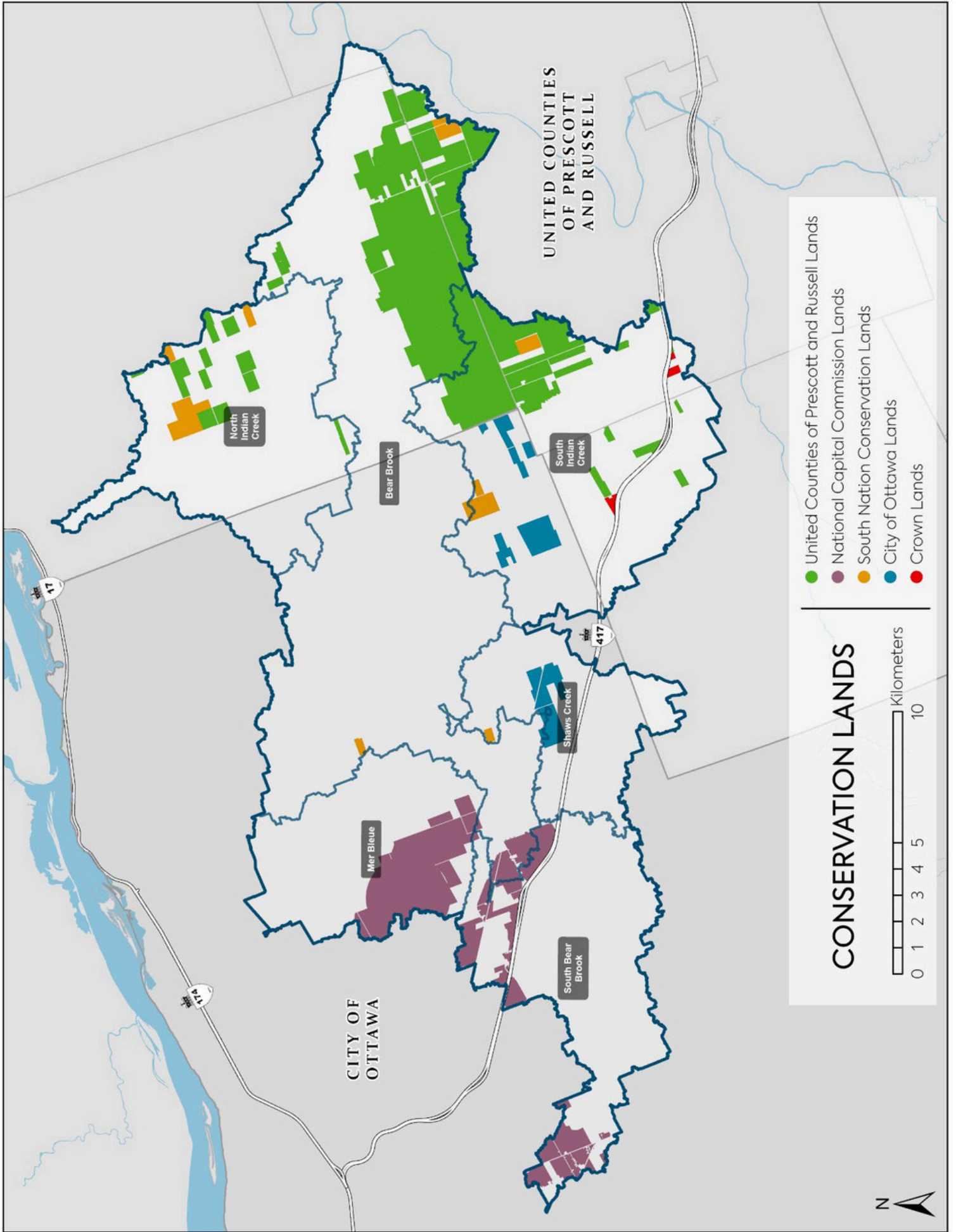




NATURAL HERITAGE SYSTEMS

- Core Natural Areas
- Linkage Natural Areas
- Main Watercourses





UNITED COUNTIES
OF PRESCOTT
AND RUSSELL

CITY OF
OTTAWA

North
Indian
Creek

Bear
Brook

South
Indian
Creek

Mer
Bleue

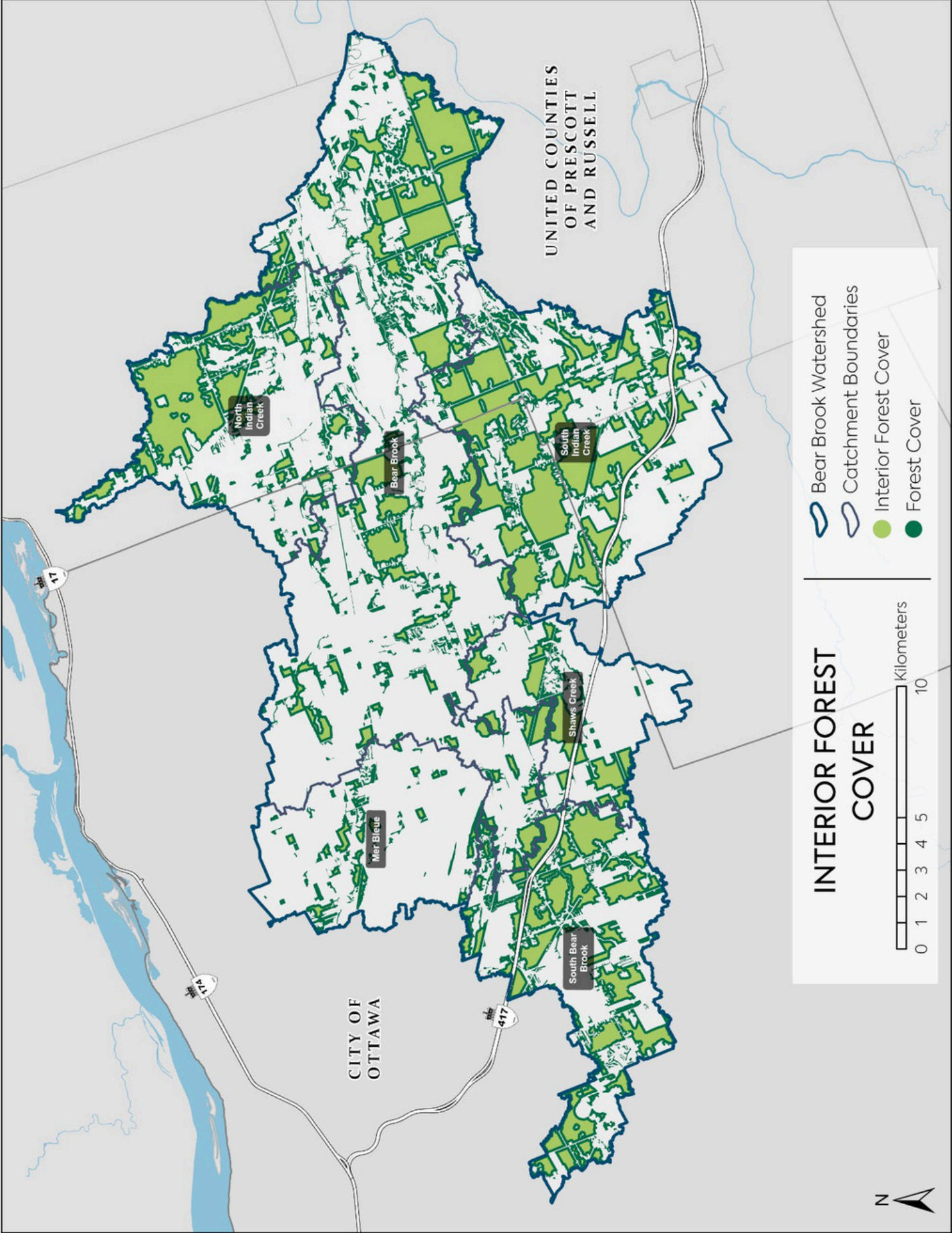
Shaw's
Creek

South
Bear
Brook

- United Counties of Prescott and Russell Lands
- National Capital Commission Lands
- South Nation Conservation Lands
- City of Ottawa Lands
- Crown Lands

CONSERVATION LANDS





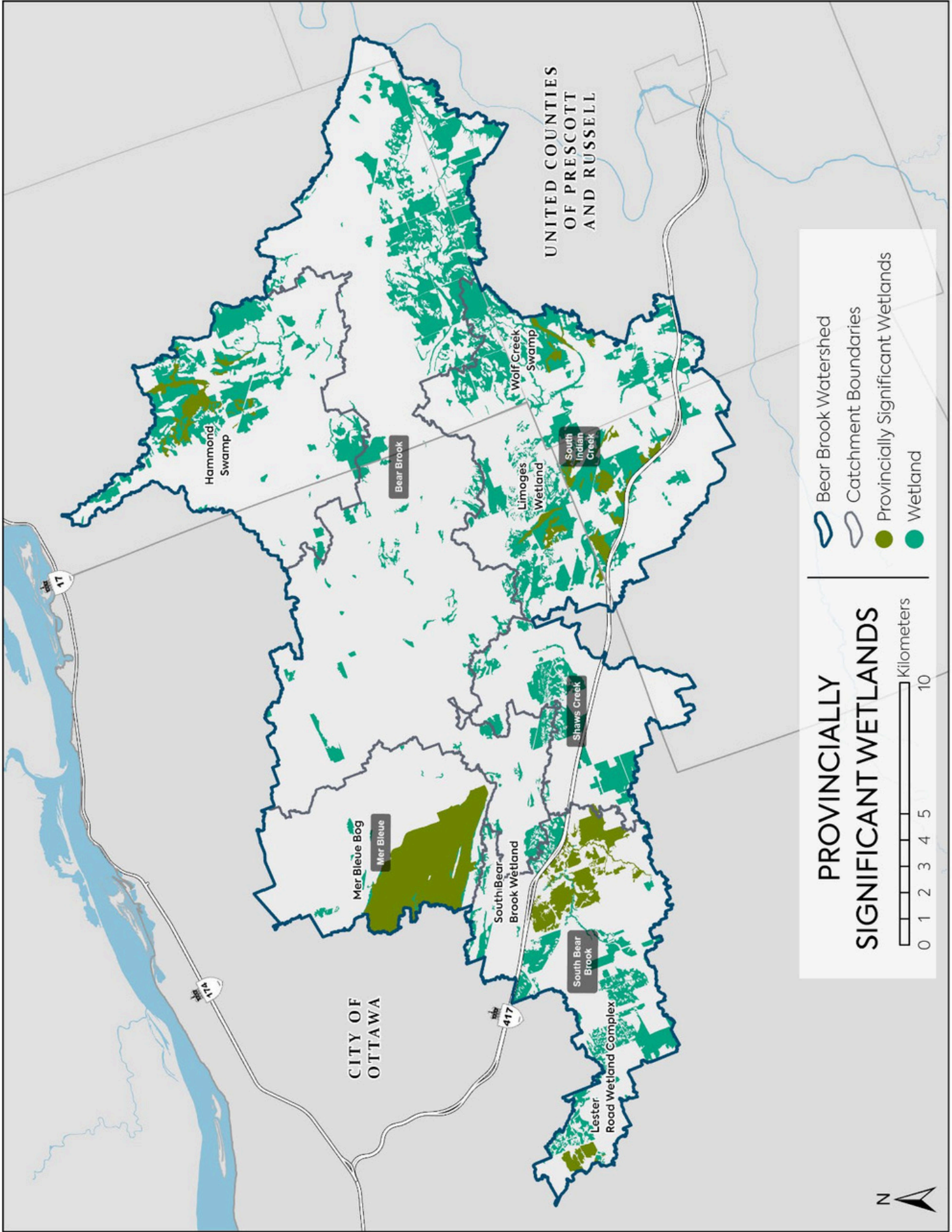
UNITED COUNTIES
OF PRESCOTT
AND RUSSELL

CITY OF
OTTAWA

INTERIOR FOREST COVER




-  Bear Brook Watershed
-  Catchment Boundaries
-  Interior Forest Cover
-  Forest Cover



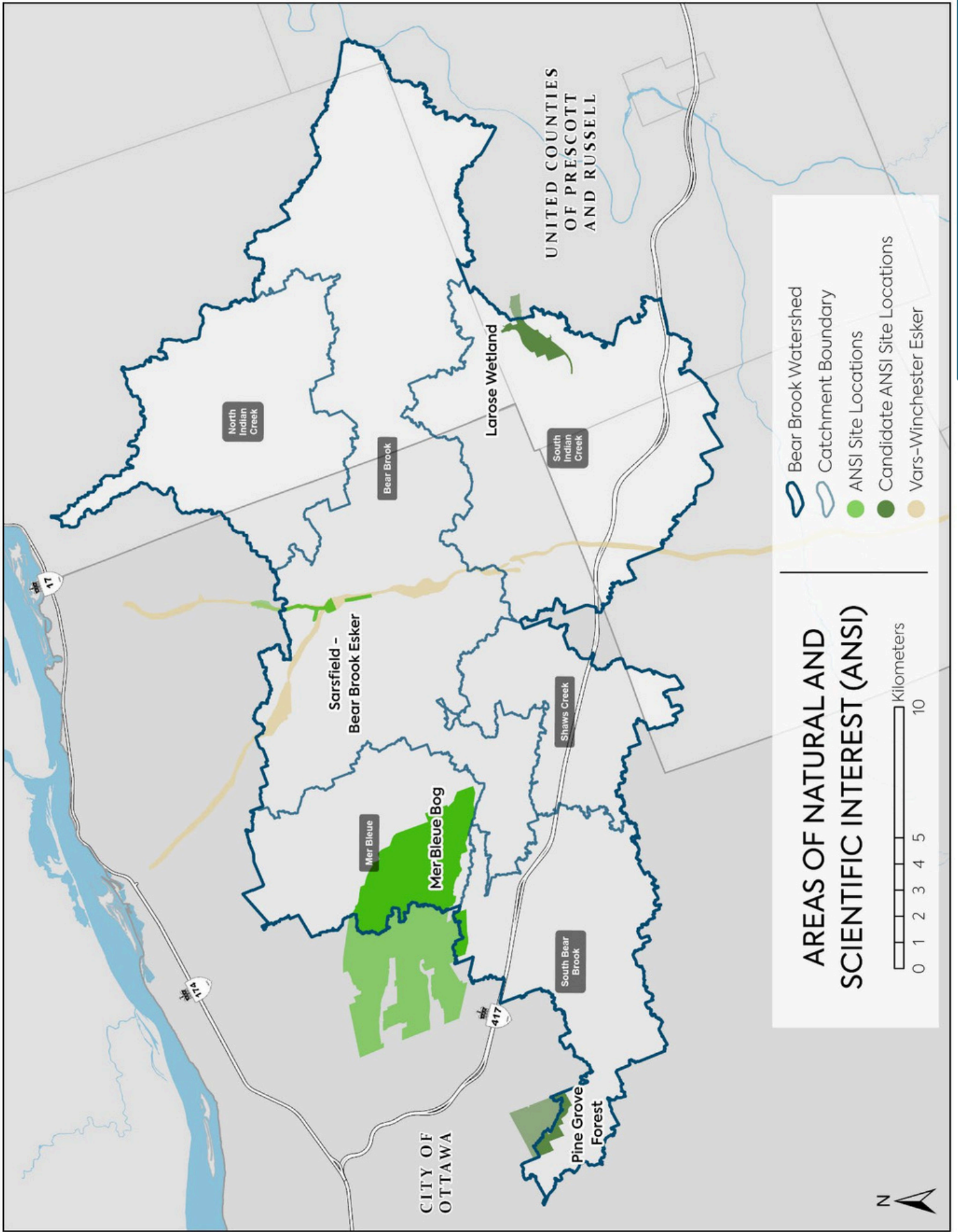


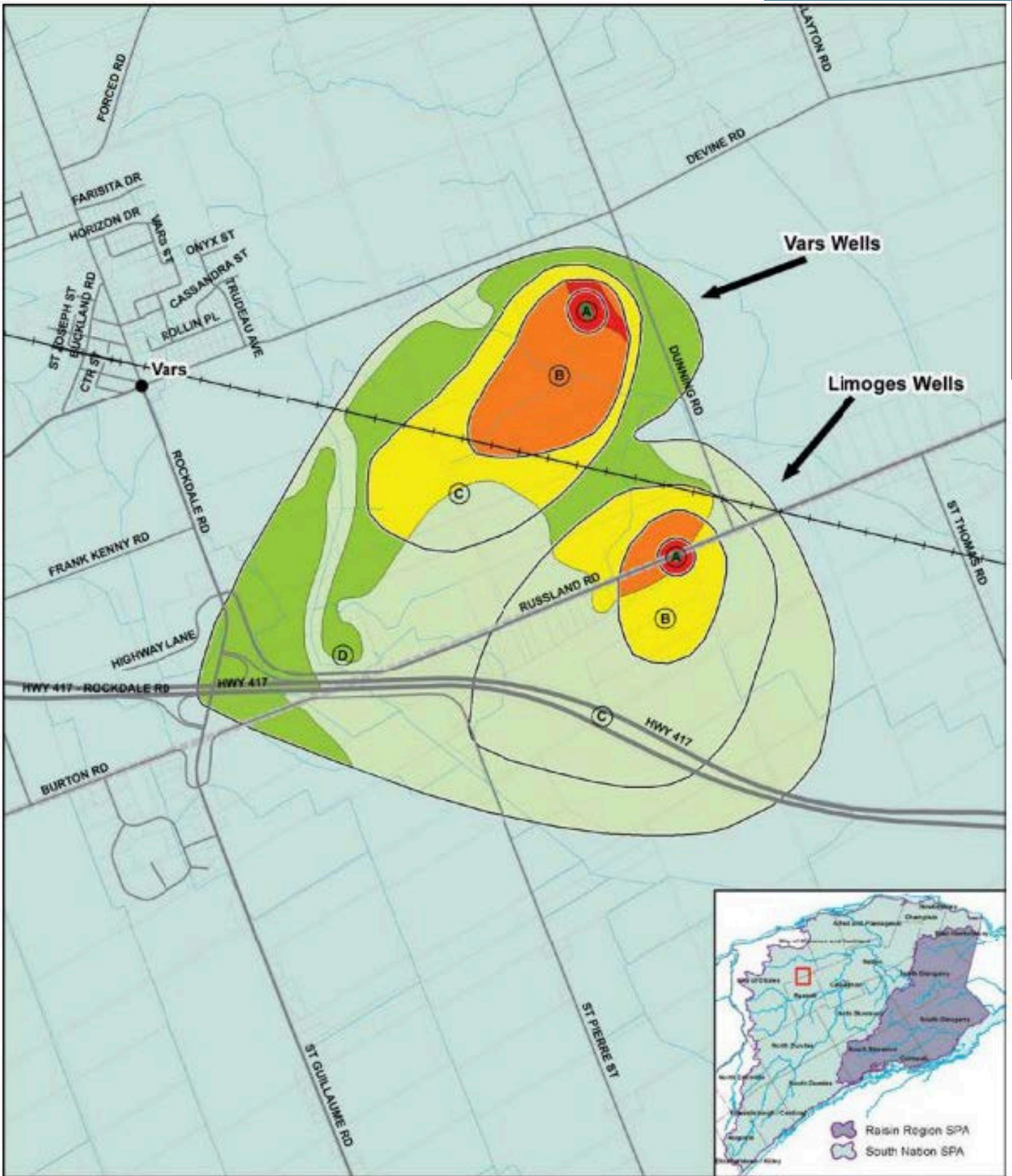
PROVINCIALY SIGNIFICANT WETLANDS



-  Bear Brook Watershed
-  Catchment Boundaries
-  Provincially Significant Wetlands
-  Wetland







This map is for illustrative purposes and may be subject to change. Please consult the local Conservation Authority for the latest version and assistance with proper interpretation.

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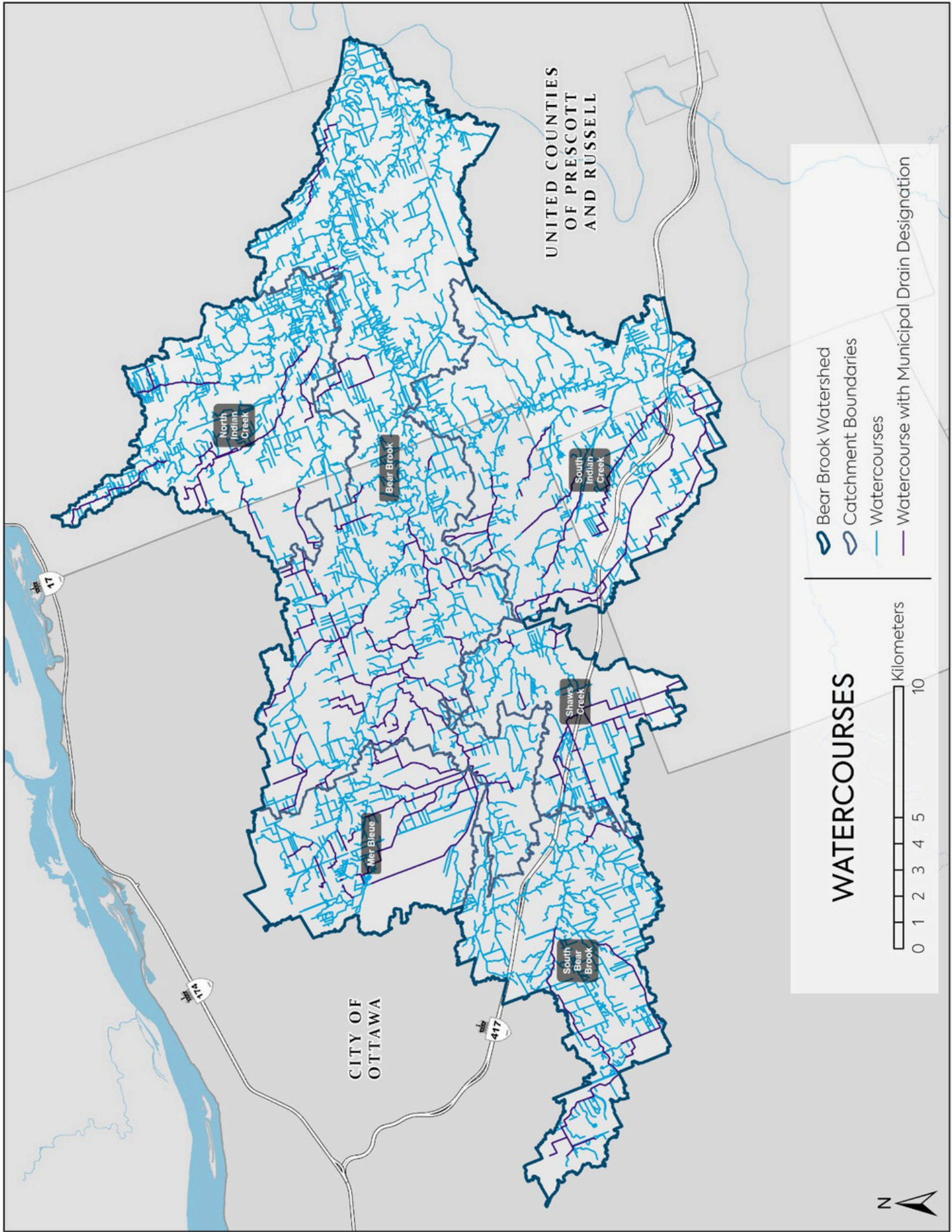
Legend

- Villages/Towns
- +— Railway Tracks
- Primary Roads
- Secondary Roads
- Other Roads
- ▭ Property Boundary
- ▭ Municipal Boundary
- Wellhead

Vulnerable Areas and Scores

- (A) WHPA-A 10
- (B) WHPA-B 8
- (C) WHPA-C 6
- (D) WHPA-D 4





UNITED COUNTIES
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AND RUSSELL

CITY OF
OTTAWA

North
Indian
Creek

Bear Brook

South
Indian
Creek

Shaws
Creek

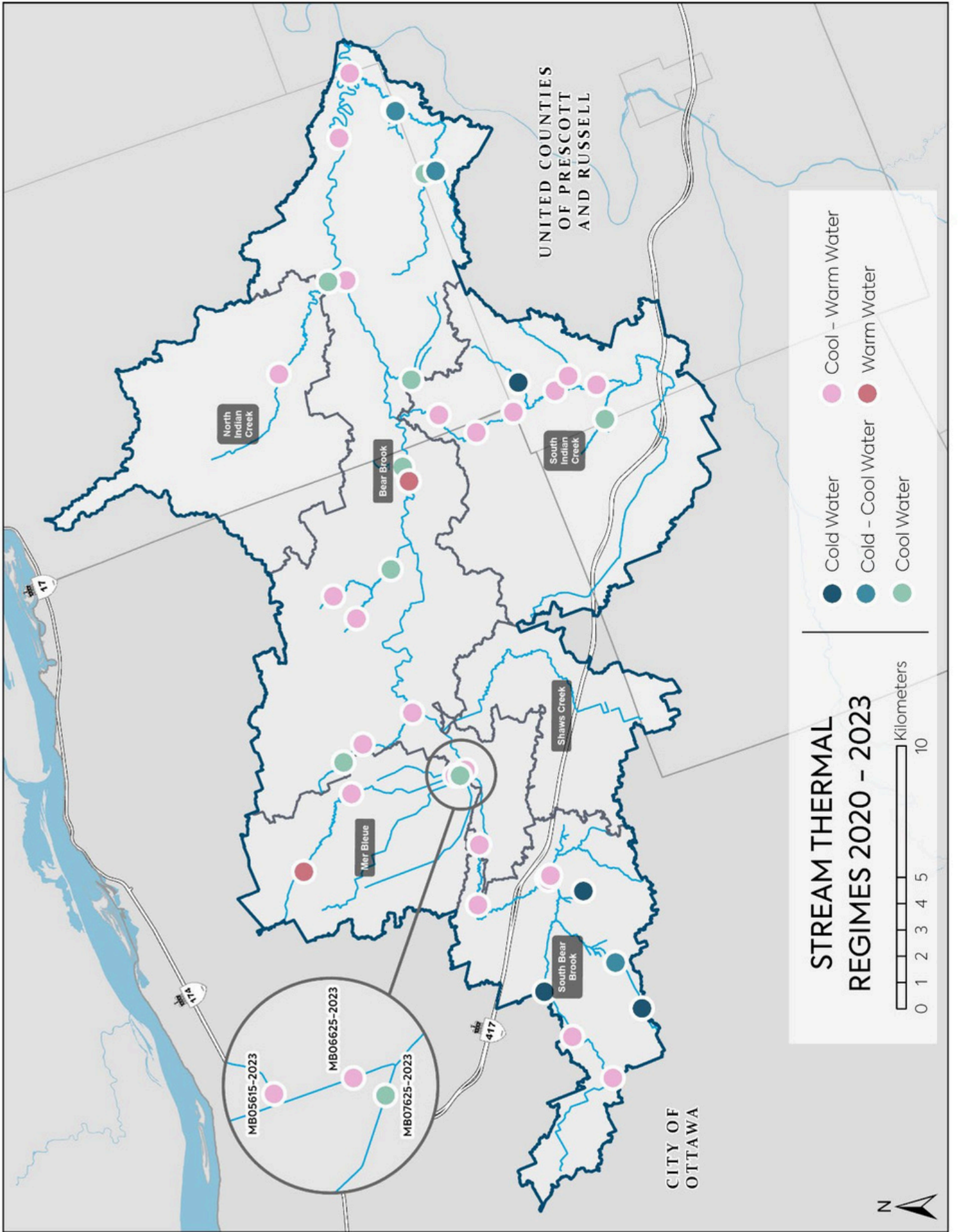
South
Bear
Brook

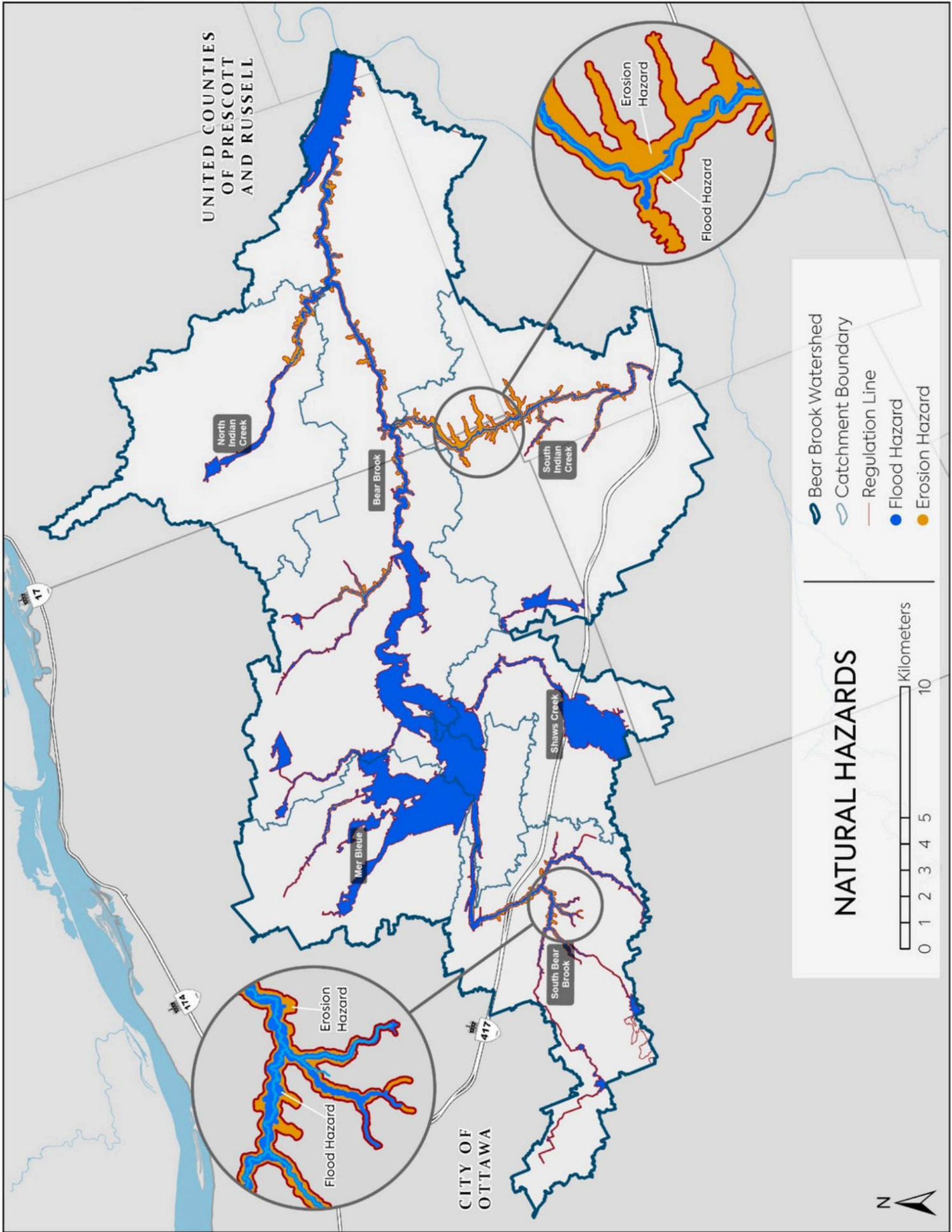
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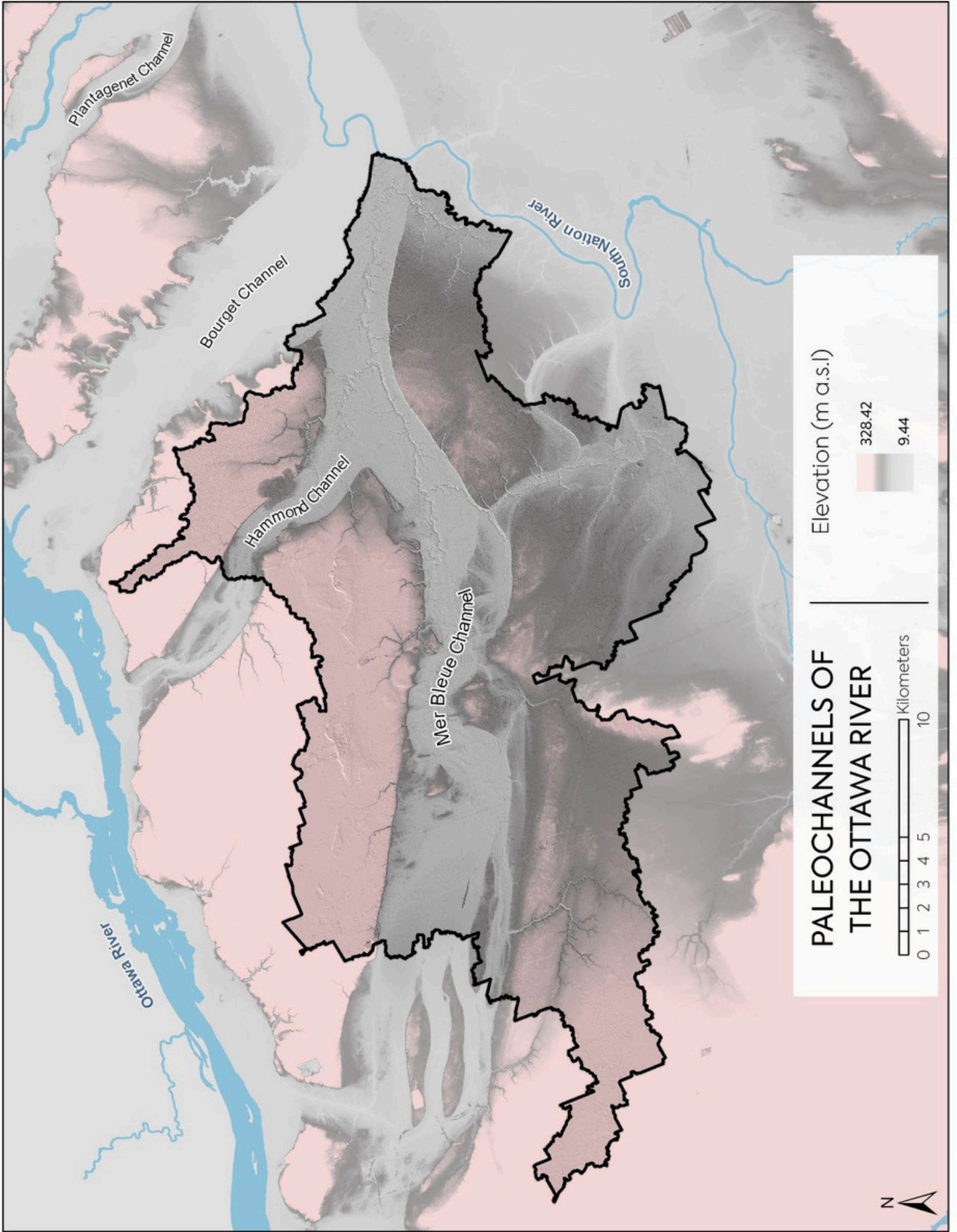
-  Bear Brook Watershed
-  Catchment Boundaries
-  Watercourses
-  Watercourse with Municipal Drain Designation

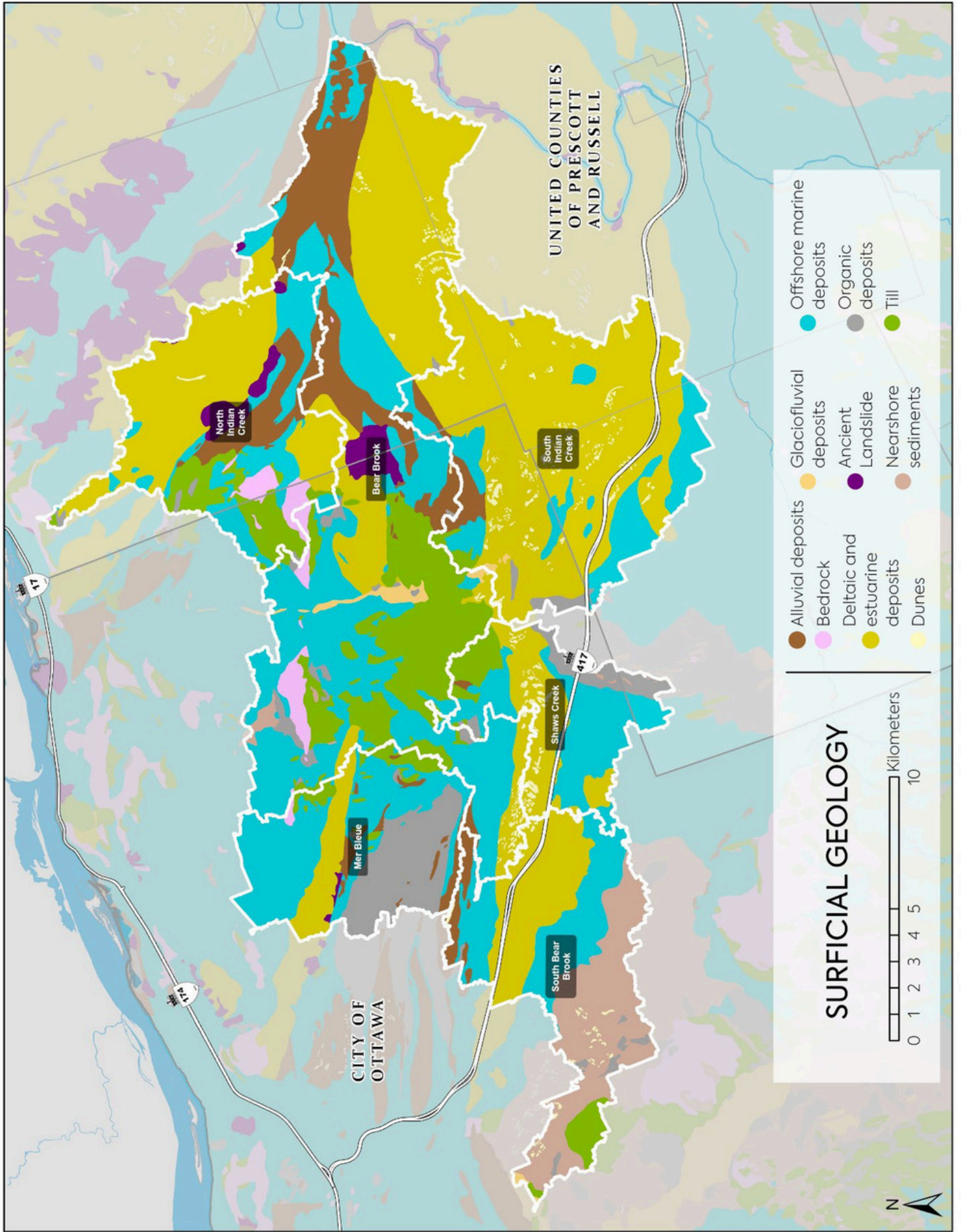
WATERCOURSES

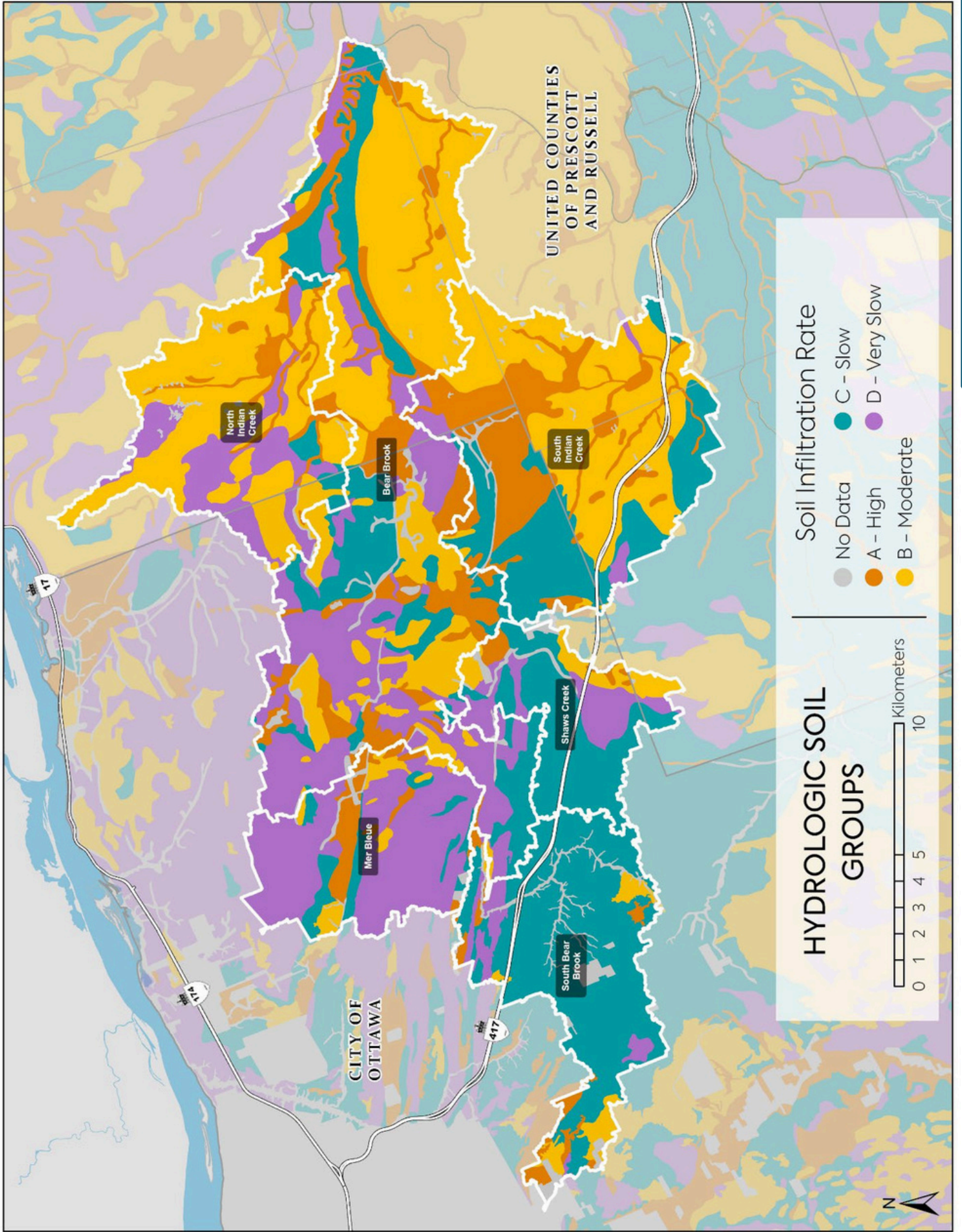












UNITED COUNTIES
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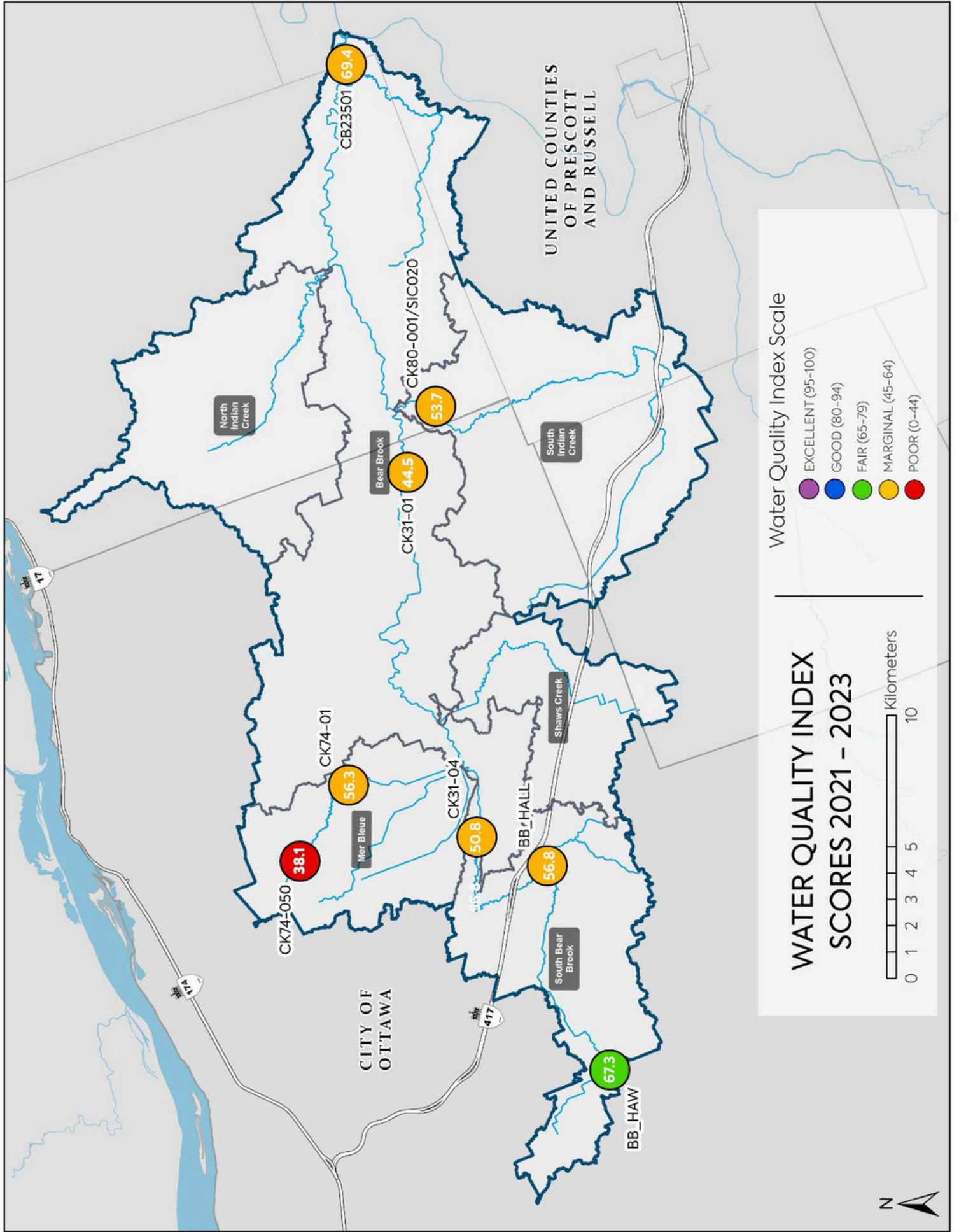
CITY OF
OTTAWA

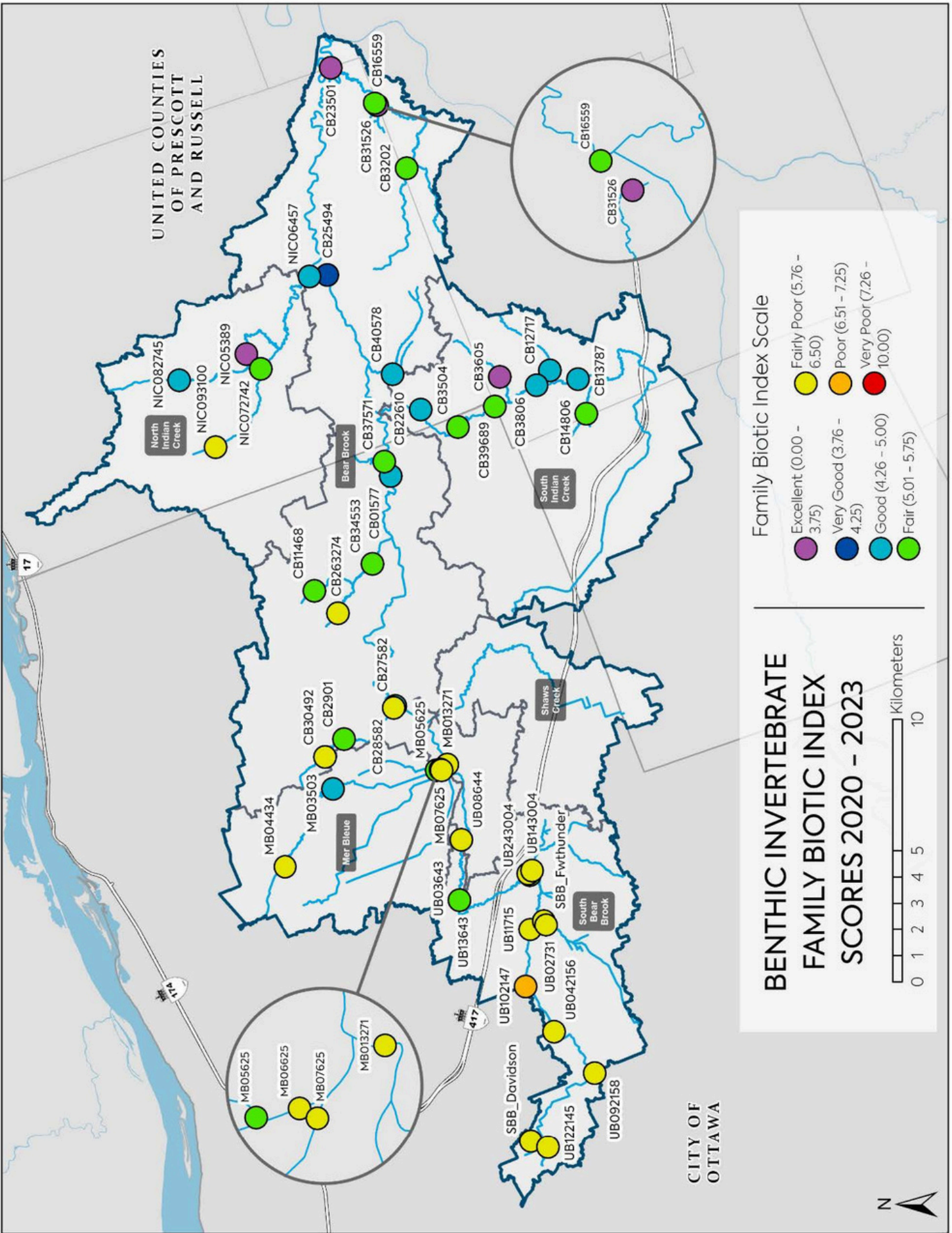
Soil Infiltration Rate

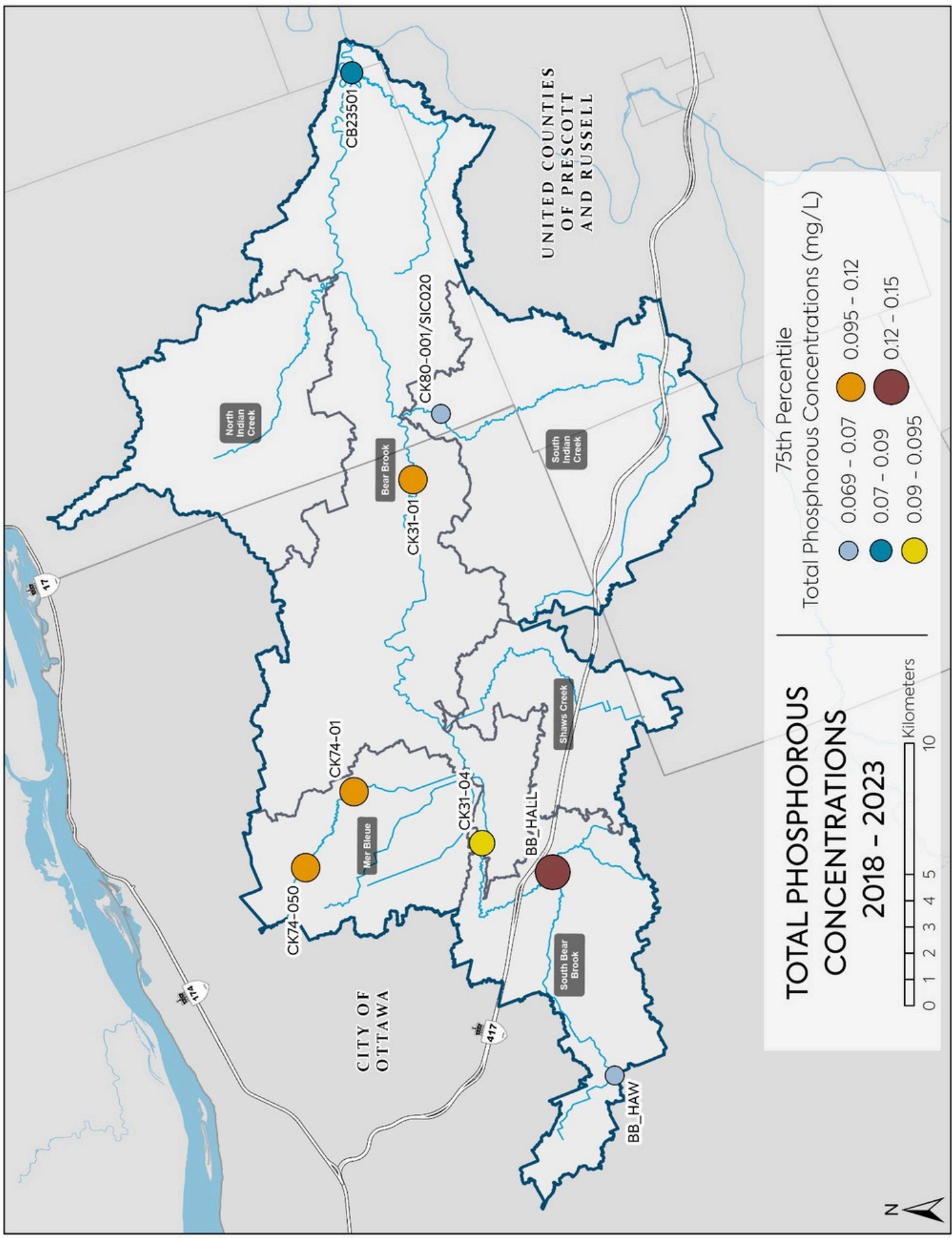
- No Data
- A - High
- B - Moderate
- C - Slow
- D - Very Slow

**HYDROLOGIC SOIL
GROUPS**









CITY OF OTTAWA

UNITED COUNTIES OF PRESCOTT AND RUSSELL

North Indian Creek

Bear Brook

South Indian Creek

Mer Bleue

Shaws Creek

South Bear Brook

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CK74-01

CK31-04

CK31-01

CK80-001/SIC020

CB23501

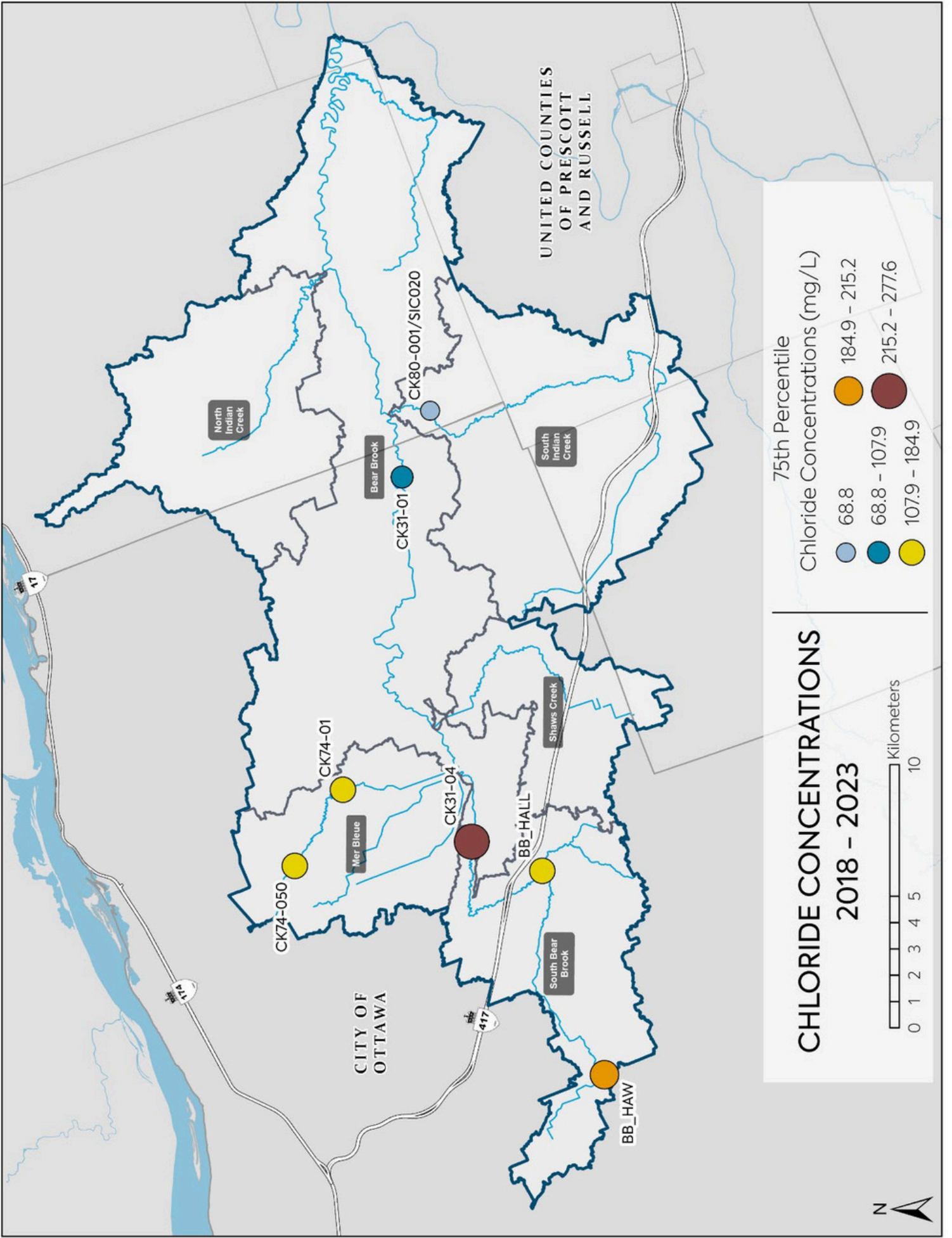
BB_HALL

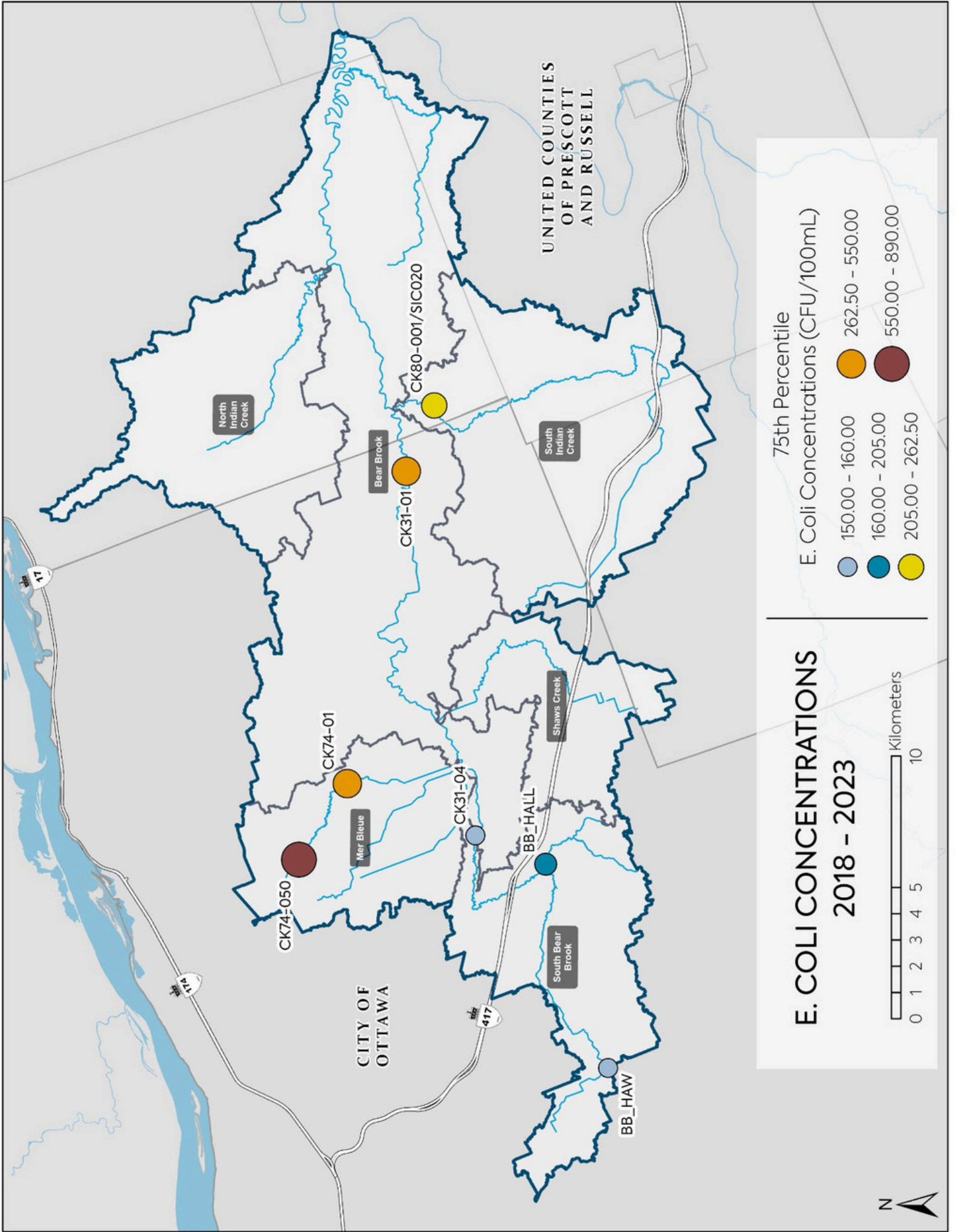
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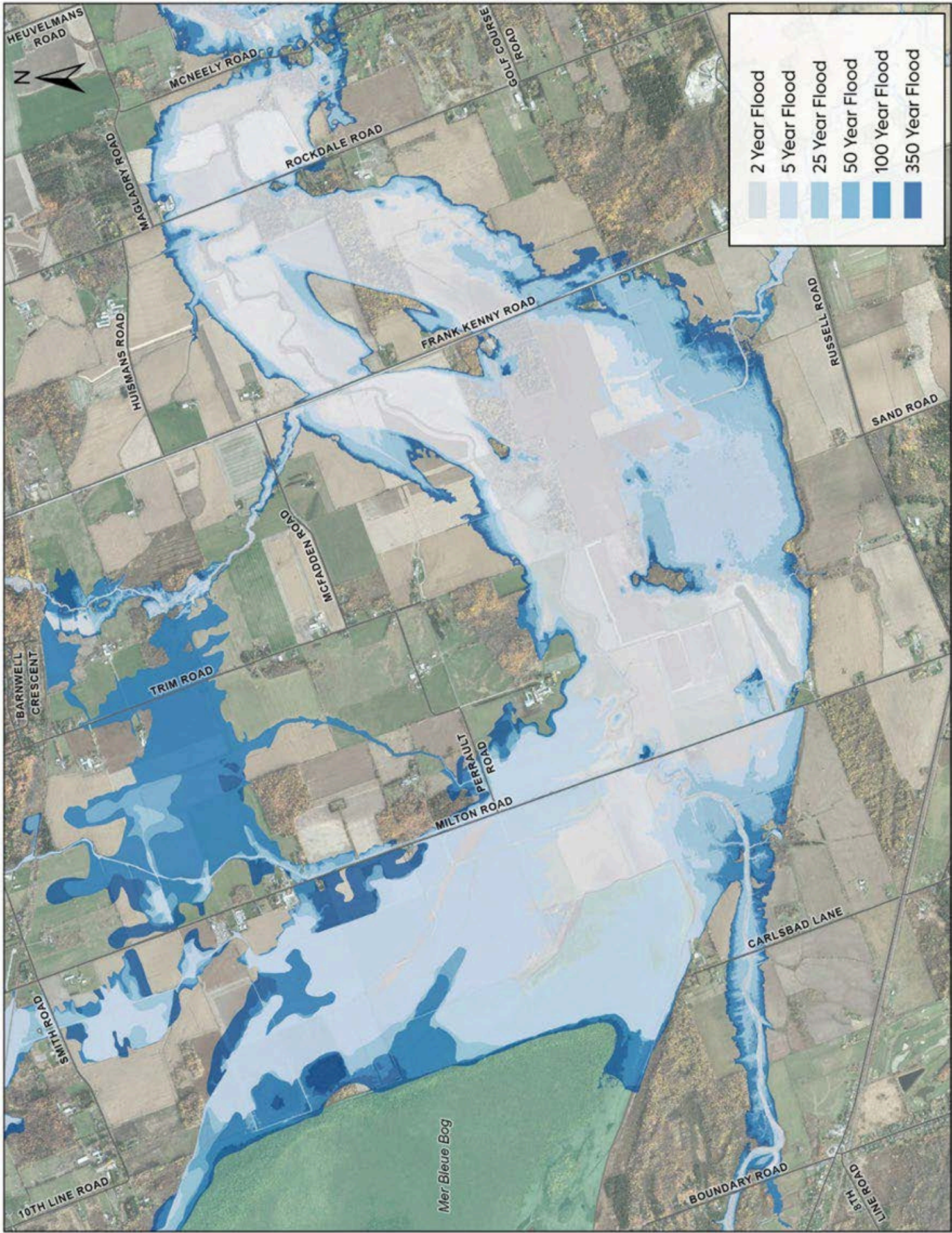
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Our Local Environment;
We're in it Together.

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