Finding Geospatial Data

A Short Introduction

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Agenda

- About Geospatial Data
- Subject Guides
- Open Data
- GeoIndex
- Mapping Thoughts

Geospatial Data

- Geospatial data is any data that includes a place – it could be an address, a postal code, a city, X/Y coordinates, latitude and longitude, or other geographic location within the data

- This includes:
  - Point, line, and polygon data (vector data)
  - Static maps or images (raster data)
  - Tabular data (eg spreadsheets)

- It can include static objects, such as a building; dynamic phenomena, such as travel from A to B or an earthquake; or temporal, such as the change of landscape over time

Geospatial Data

- Most often, geospatial data is used in GIS software
- GIS: Geographic Information System
- GIS is "…a framework for gathering, managing, and analyzing data." (https://www.esri.com/en-us/what-is-gis/overview)
- Making use of a geographic component within data to analyze and visualize the information
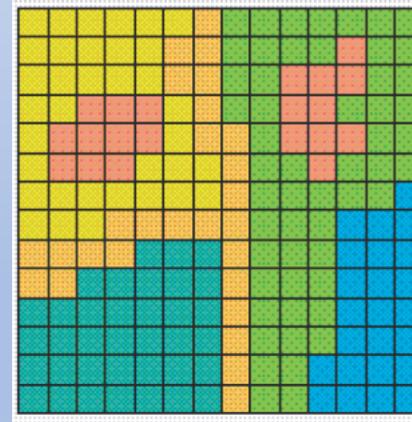- Also an excellent method of analysis and visualization of data

Examples

Vector data
points, lines, & polygons on XY coordinates
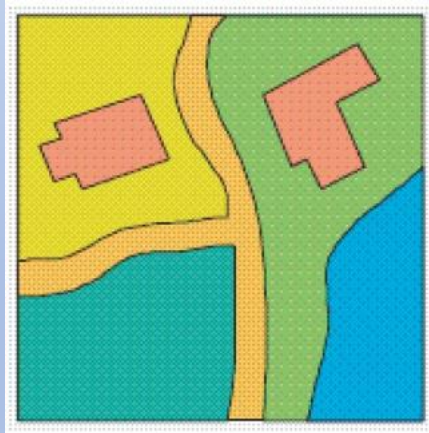
Raster Data
pixels/grid cells, usually square

Example: Tabular data

FED_NUM	NID	FEDNUM	ENNAME	FRNAME	PROV	DECPOPCNT	USESDERPY	USESBOUFFON	WTF
24001	{AB0EAE36-C1EC-49F9	24001	Abitibi--Baie-James--Nur	Abitibi--Baie-James--Nuna	QC	85475	138	630	60
24002	{6C60176A-0BCC-4B37	24002	Abitibi--TÃ©miscamingu	Abitibi--TÃ©miscamingue	QC	102794	156	872	540
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24004	{94538187-0A87-4207-	24004	Alfred-Pellan	Alfred-Pellan	QC	98045	846	470	133
24005	{D97AF803-B05B-4ED4	24005	Argenteuil--La Petite-Nat	Argenteuil--La Petite-Natio	QC	94208	167	939	46
24006	{7E5624C1-5FAD-465E-	24006	Avignon--La Mitis--Matar	Avignon--La Mitis--Matane-	QC	74547	206	745	0
24007	{F4A433CE-8E4D-450A	24007	Beauce	Beauce	QC	106337	281	978	114
24008	{754BB4E4-8F8E-4E89-	24008	Beauport--Limoilou	Beauport--Limoilou	QC	92944	869	141	131
24009	{5E243D4C-2EE8-4E8C-	24009	BÃ©cancour--Nicolet--Sa	BÃ©cancour--Nicolet--Saur	QC	93779	150	623	807
24010	{D1F455BD-FFA2-4060	24010	Bellechasse--Les Etchemi	Bellechasse--Les Etchemins	QC	112385	415	598	143
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24012	{9FEF06FB-4B7F-4B89-	24012	Berthier--MaskinongÃ©	Berthier--MaskinongÃ©	QC	98590	16	704	126
24013	{BF246EF7-4729-45BD-	24013	ThÃ©rÃ¨se-De Blainville	ThÃ©rÃ¨se-De Blainville	QC	98499	861	61	44
24014	{1711BCE7-E928-41B4-	24014	Pierre-Boucher--Les Patri	Pierre-Boucher--Les Patriot	QC	95326	473	355	73
24015	{644A53FD-09EC-43E3-	24015	Bourassa	Bourassa	QC	100286	649	347	104
24016	{19AECA7D-7860-4DE3	24016	Brome--Missisquoi	Brome--Missisquoi	QC	98616	37	823	507
24017	{0C426B17-CDCD-401A	24017	Brossard--Saint-Lambert	Brossard--Saint-Lambert	QC	100828	727	504	3
24018	{0A31B4B1-7972-4A54-	24018	Rimouski-Neigette--TÃ©	Rimouski-Neigette--TÃ©m	QC	84809	233	638	142
24019	{4EA9158D-8269-42E5-	24019	Charlesbourg--Haute-Sai	Charlesbourg--Haute-Saint-	QC	103331	646	80	68
24020	{57ABE396-D834-4AC5	24020	Beauport--CÃ´te-de-Beau	Beauport--CÃ´te-de-Beaupi	QC	92496	460	648	41
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24022	{400EF08D-8993-4CBC-	24022	Chicoutimi--Le Fjord	Chicoutimi--Le Fjord	QC	81501	201	722	41
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24025	{042D5699-FD0B-4524-	24025	Drummond	Drummond	QC	98681	307	634	933
24026	{CF02F254-5D4A-43BF-	24026	GaspÃ©sie--Les ÃŽles-de	GaspÃ©sie--Les ÃŽles-de-l	QC	78833	480	549	194
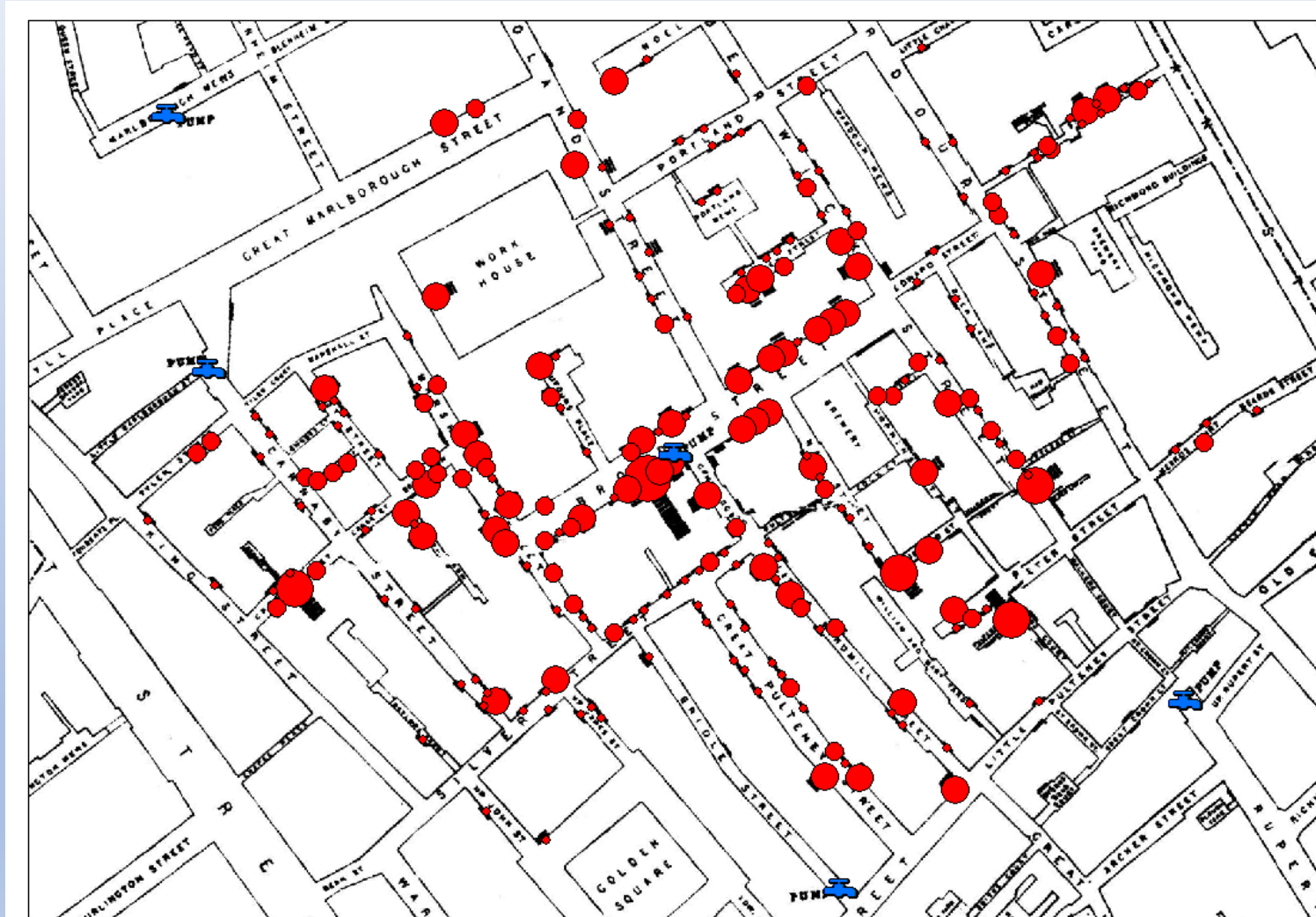
- An updated version of one of the first uses of GIS (John Snow's Cholera map, 1854, updated with current software)

SUBJECT GUIDES!

- https://www.mcgill.ca/library/find/maps

- Of particular note, the Geospatial Data Request Form: https://www.mcgill.ca/library/find/maps/datarequest

What is Open Data?

- In short:

- It is "Accessible, understandable, and open to reuse." (Wessels et al, 2014)

- Can be divided into
    1. public data or information from the public sector
    2. data from research institutions, especially publicly funded
    3. private sector data

Where to find Open Data

- Are you looking for governmental data, already-produced research data, or miscellaneous data?
  - Each has different places/modes for searching
- What is the geographic region you're looking at (if any)?
  - Geography will determine where to search, especially for government data
- What is the group you're researching?
  - Partly will determine whether this will exist as open data or not – data, especially about people, is often protected

Where to find Open Data

- What time period are you researching?
  - The older the data, the less available it will be (eg data pre-1950 will be more difficult to find, unless it's a heavily-researched subject)
- Who else might be asking your question?
  - Depending on the people researching, they may be more or less committed to open data, and/or knowledgeable about it

Where to find: Government Open Data

- http://bartlettr.github.io/opendatawebsites/
- https://library.carleton.ca/find/gis/geospatial-data/open-data-repositories
- https://www.data.gov/
- https://data.gov.uk/
- https://data.europa.eu/euodp/en/data/
- https://dataportal.opendataforafrica.org/
- You can search for "[Place X] Open Data"
- Remember counties/regions (eg. Niagara Open Data)!

Where to find: Research data

- Federated Research Data Repository (FRDR): https://www.frdr-dfdr.ca/repo/

- To help searching the above, Geodisy: https://geo.frdr-dfdr.ca/

- <Odesi>: https://search1.odesi.ca/#/

- Many institutions have their own research data repositories (McGill's: https://dataverse.scholarsportal.info/dataverse/mcgill)

- To find the above, it's good to know any publications from the data – you can then use the institutional affiliation of the researcher to look in that institution's repository.

Where to find: Big data

- Google
  - Various (research?) https://datasetsearch.research.google.com/
  - Public https://www.google.com/publicdata/directory

- Esri's Living Atlas (mainly geospatial data).

- Various companies (eg BIXI).

- Creative Commons.

- Often searching "[Company/Subject X] Open Data" will bring results (maybe, and of varying degrees of trustworthiness).

GéoIndex

- https://geoapp.bibl.ulaval.ca/
- You will need to log in every time
- Can use it in both English and French
- A repository of data for Universities in Québec
- More direct method of searching for data by location
- Primarily Québec data, but some for the rest of Canada as well

https://geoapp.bibl.ulaval.ca

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Français

Geoindex
Shared platform of geospatial data

Connect to Geoindex

Organization ▾

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Geoindex
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Organization

École de technologie supérieure
HEC Montréal
Institut national de la recherche scientifique
Polytechnique Montréal
Université Bishop's
Université Concordia
Université de Montréal
Université de Québec à Trois-Rivières
Université de Sherbrooke
Université du Québec à Chicoutimi
Université du Québec à Montréal
Université du Québec à Rimouski
Université du Québec en Abitibi-Témiscamingue
Université du Québec en Outaouais
Université Laval
Université McGill

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Search (metadata)

Search (metadata)

1890   2020

Data type

Geometry type

Subjects

Topics

Collections

Producers
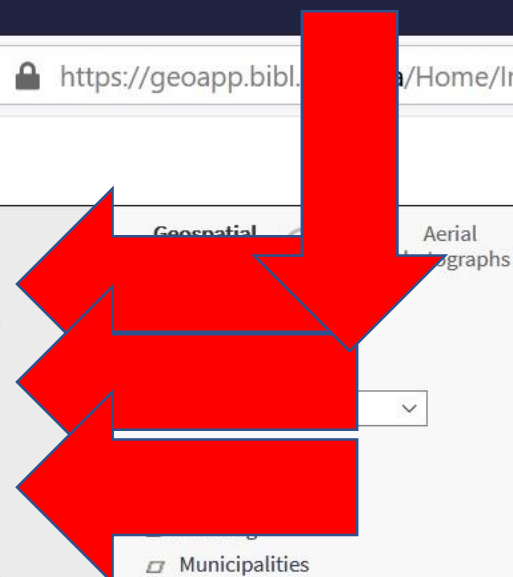
Geospatial   Aerial Photographs
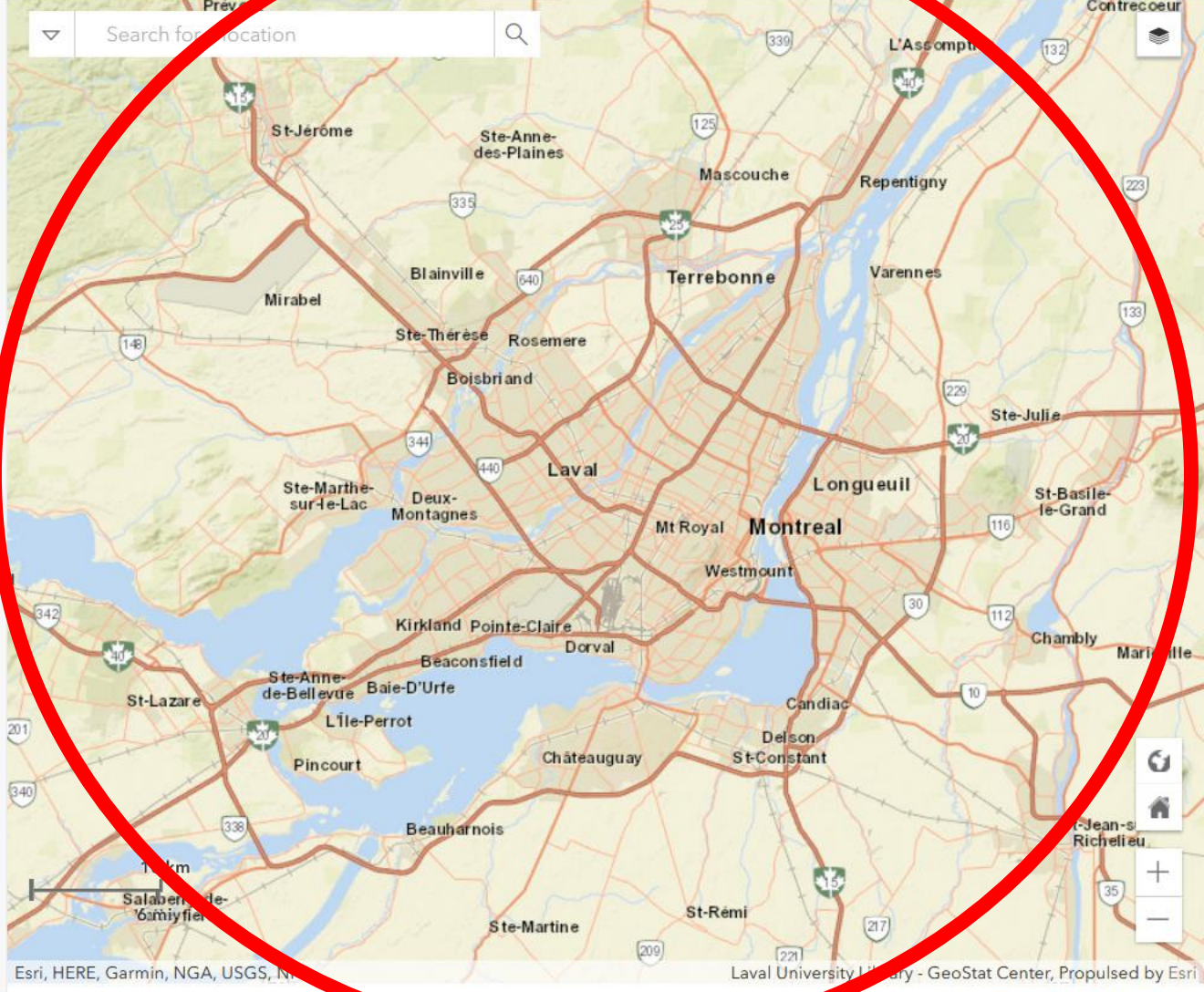
Search for a location

Municipalities

Map Island Montreal 1924

Lot polygon

Building-Annotation

Wetlands

Lot polygon

Administrative regions

Transportation route

MNA 1/20 000

Trails

Transportation route

Vegetation

Building

Municipalities

Boroughs

Map Island Montreal 1912

|< < 1 2 3 > >|

Select an area   Extract

Esri, HERE, Garmin, NGA, USGS, NPS

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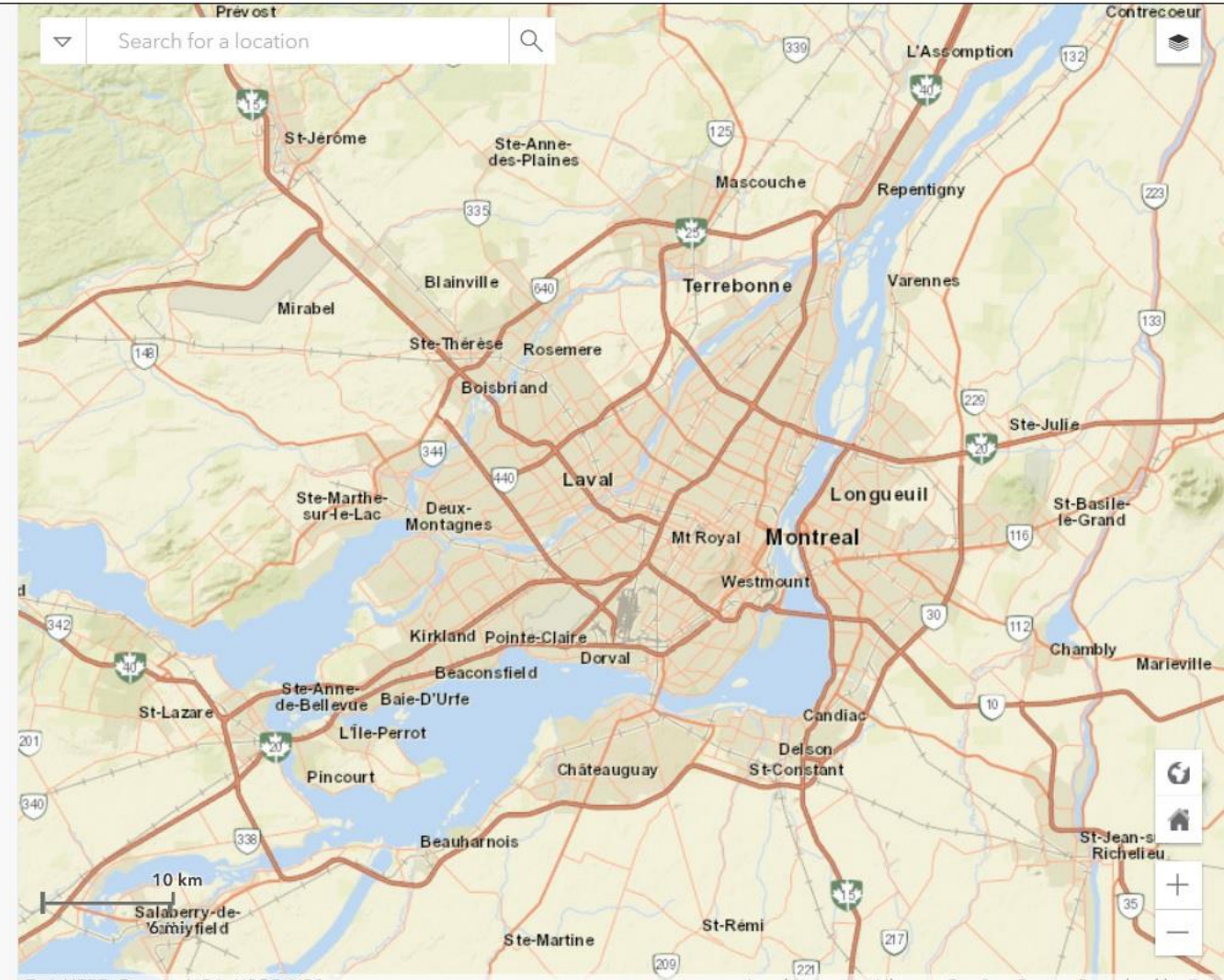
Search (metadata)

cadastral   ⊗ 🔍

Banque de données **cadastral**es du Québec - 2015 (1) - Collections

Banque de données **cadastral**es du Québec - 2018 (2) - Collections

Banque de données **cadastral**es du Québec - 2019 (2) - Collections

Data type   ⌄

Geometry type   ⌄

Subjects   ⌄

Topics   ⌄

Collections   ⌄

Producers   ⌄

Geospatial data ⚪⚫   Aerial photographs

Search for a location   🔍
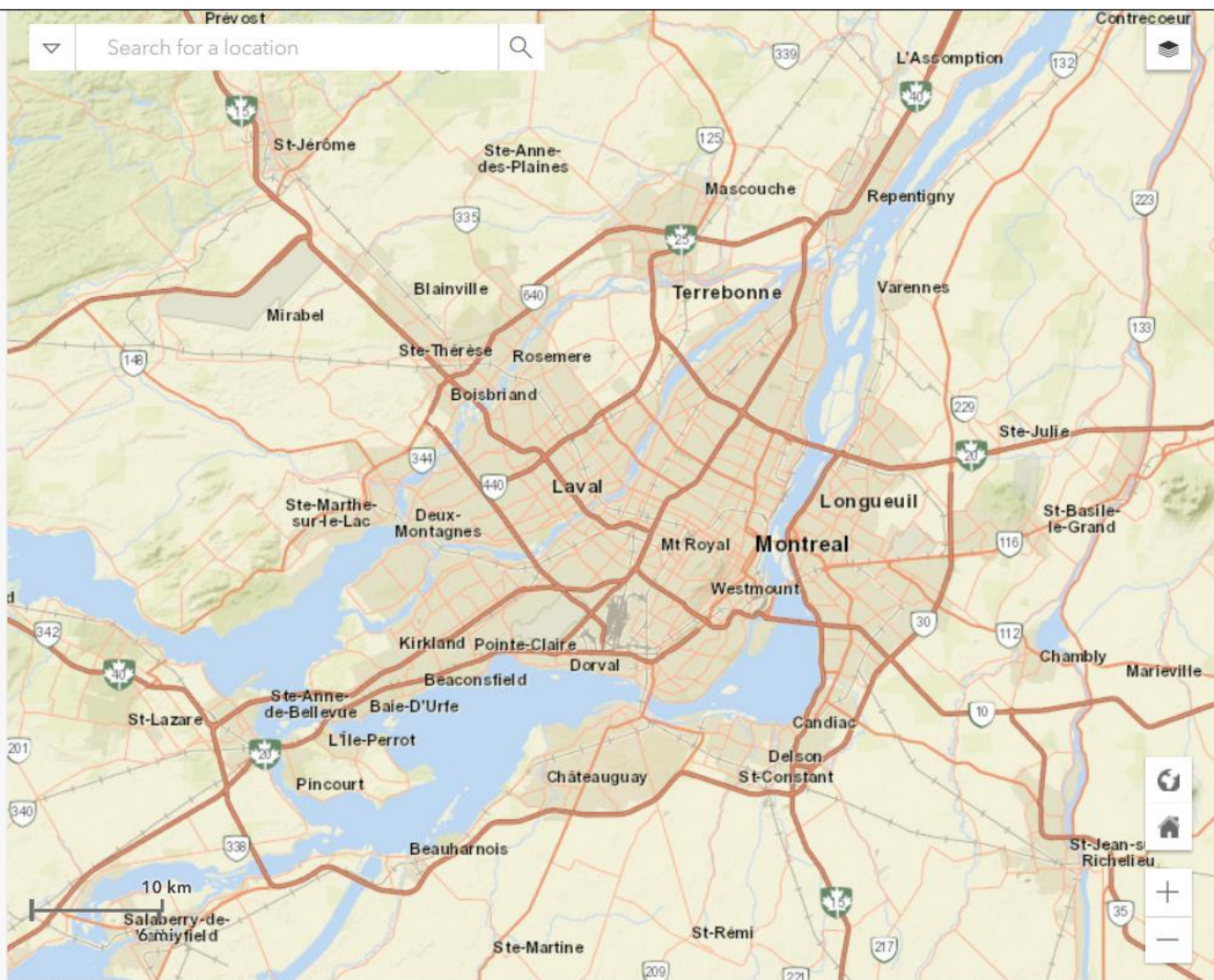
Results 1 to 25 of 60

Popularity   ⌄

Island Montreal 1924

⬚ Lot polygon

⬚ Lot polygon

▦ Map Island Montreal 1912

▦ Island of Montreal 1890

⬚ Lot polygon

⬚ Bird colony

⊥ Hydro - rivières (FLC - 2011)

⊥ Réseau routier (FLC - 2011)

⬚ White-tailed deer

⊥ Lot line

⬚ Formalized lots

⊥ Formalized surveys

⬚ Formalized boundaries

⬚ Waterfowl

⬚ Heronry

⬚ Bird colony

⬚ Muskrat habitat

⬚ Waterfowl

|◀   ◀   **1**   2   3   ▶   ▶|

Select an area   ⬇ Extract

Prévost   Contrecoeur
L'Assomption

St-Jérôme   Ste-Anne-des-Plaines

Mascouche   Repentigny

Blainville   Terrebonne   Varennes

Mirabel   Ste-Thérèse Rosemere

Boisbriand

Ste-Julie

Ste-Marthe-sur-le-Lac   Laval   Longueuil   St-Basile-le-Grand

Deux-Montagnes   Mt Royal Montreal

Westmount

Kirkland Pointe-Claire   Chambly

Beaconsfield   Dorval   Marieville

St-Lazare   Ste-Anne-de-Bellevue Baie-D'Urfe   Candiac

L'Île-Perrot

Pincourt   Châteauguay   Delson St-Constant

10 km   Beauharnois

Salaberry-de-   St-Rémi St-Jean-s Richelieu
Valleyfield

Ste-Martine

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Search (metadata)

cadastral ⊗ 🔍

2008   2019

✖ Reset years

Data type ⌄

Geometry type ⌄

Subjects ⌄

Topics ⌄

Collections ⌄

Producers ⌄

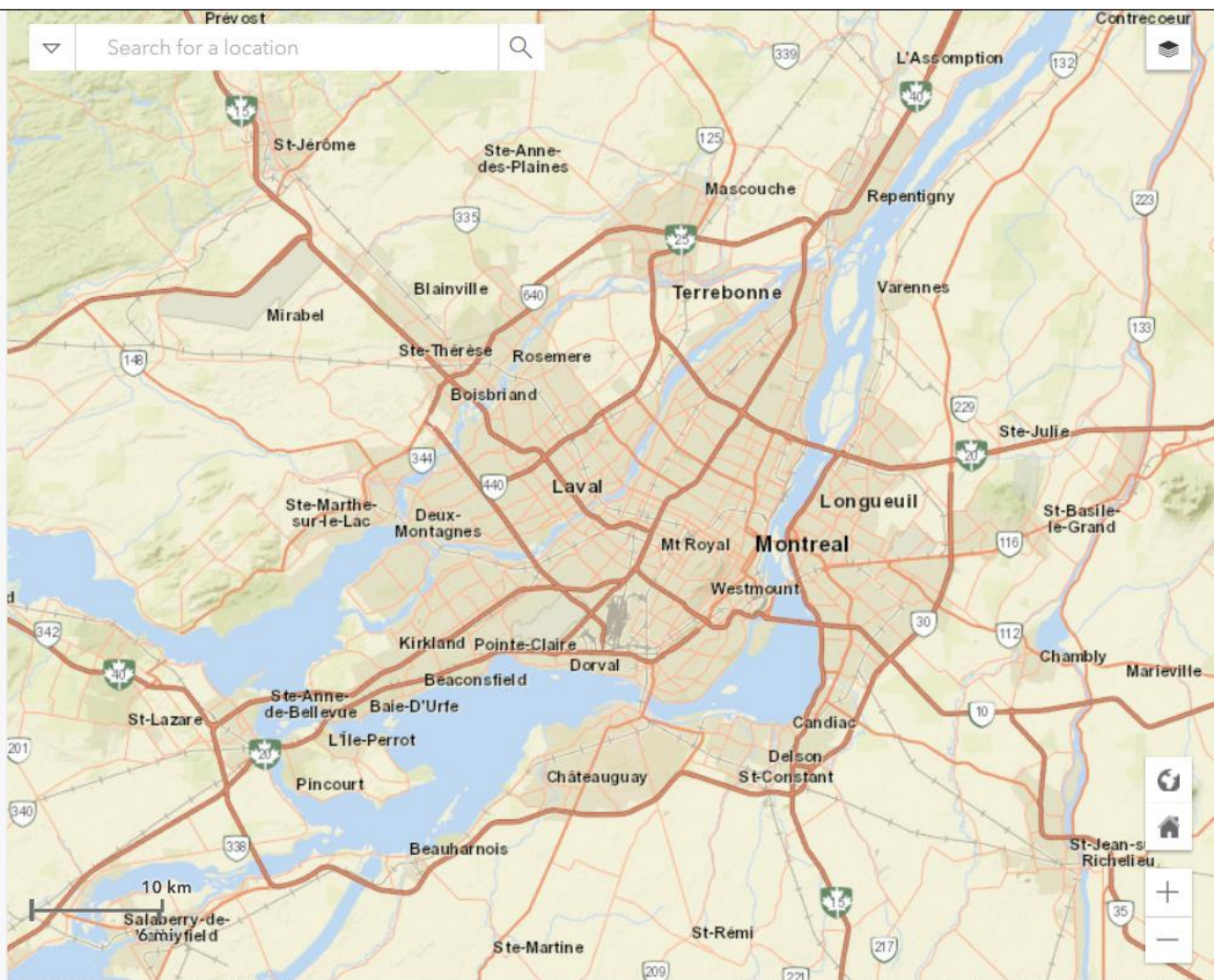Geospatial data ⚪   Aerial photographs

▼ Results 1 to 25 of 57 filtered

Sort by : Popularity ⌄

⊡ Lot polygon
⊡ Lot polygon
⊡ Lot polygon
⊡ Bird colony
⊥ Hydro - rivières (FLC - 2011)
⊥ Réseau routier (FLC - 2011)
⊡ White-tailed deer
⊥ Lot line
⊡ Formalized lots
⊥ Formalized surveys
⊡ Formalized boundaries
⊡ Waterfowl
⊡ Heronry
⊡ Bird colony
⊡ Muskrat habitat
⊡ Waterfowl
⊡ Muskrat habitat
⊡ Heronry
⊡ White-tailed deer

|◄ ◄ **1** 2 3 ► ►|

Select an area   ⬇ Extract

Search for a location 🔍

10 km

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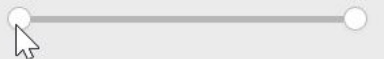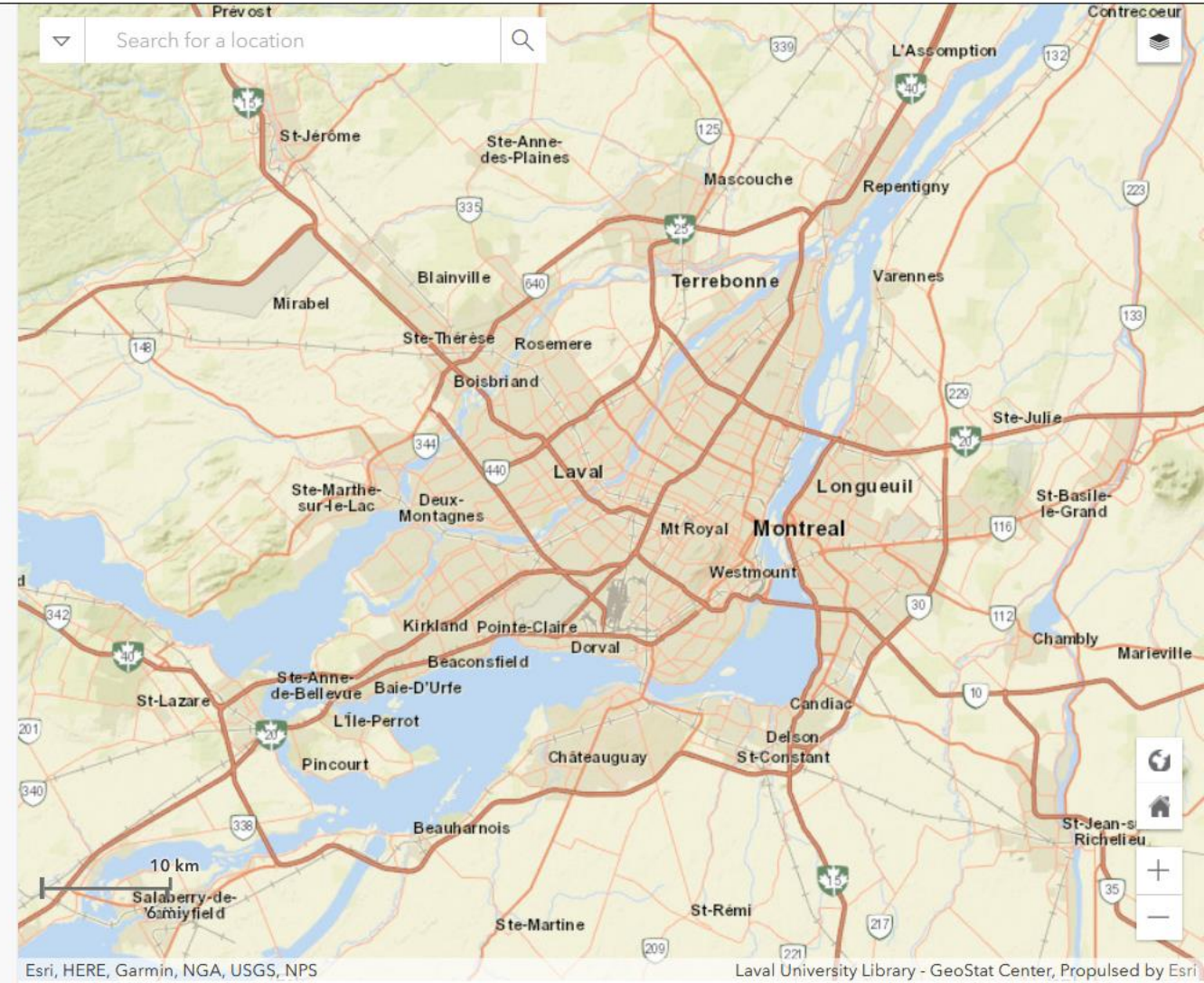
Search (metadata)

cadastral   ⊗ 🔍

2008   2019

✖ Reset years

Data type ⌄

Geometry type ⌄

Subjects ⌄

Topics ⌄

Collections ⌄
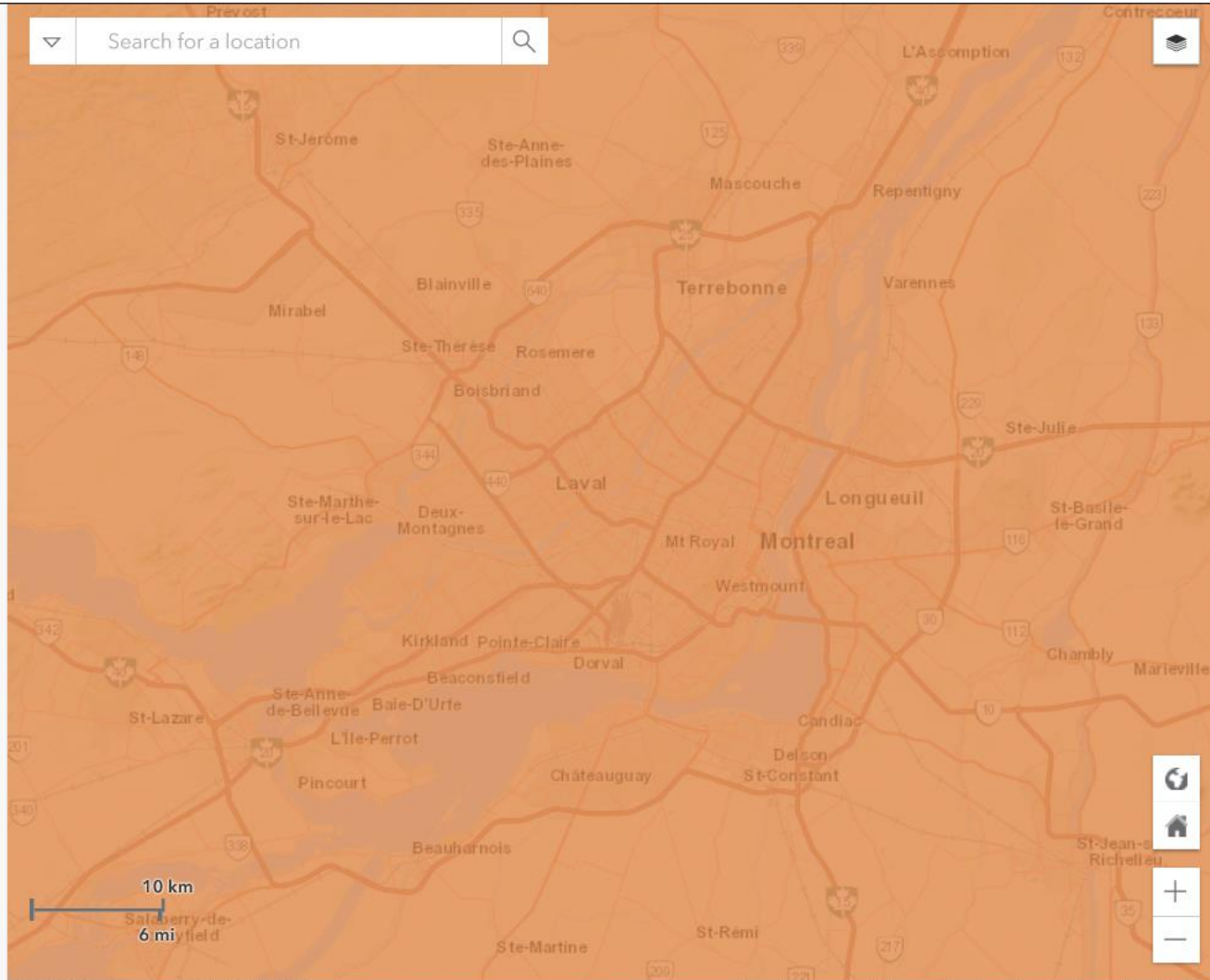
Producers ⌄

Geospatial data   Aerial photographs

▼ Results 1 to 25 o... ltered

Sort by : Popularity ⌄

⊿ Lot polygon
⊿ Lot polygon
⊿ Lot polygon
⊿ Bird colony
⊥ Hydro - rivières (FLC - 2011)
⊥ Réseau routier (FLC - 2011)
⊿ White-tailed deer
⊥ Lot line
⊿ Formalized lots
⊥ Formalized surveys
⊿ Formalized boundaries
⊿ Waterfowl
⊿ Heronry
⊿ Bird colony
⊿ Muskrat habitat
⊿ Waterfowl
⊿ Muskrat habitat
⊿ Heronry
⊿ White-tailed deer

⏮ ◀ 1 2 3 ▶ ⏭

Select an area   ⬇ Extract

Search for a location 🔍

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Search (metadata)

cadastral   ⊗ 🔍

2008 ————————○———————— 2019

✖ Reset years

Data type   ⌄

Geometry type   ⌄

Subjects   ⌄

Topics   ⌄

Collections   ⌄

‹

Lot polygon

Author :	Québec (Province). Ministère des Ressources naturelles et de la Faune (13)
Collection :	Banque de données cadastrales du Québec - 2018 (2)
Subjects :	lots (4), Cadastres (6)
Year :	2018 (2)

Geospatial data ◯ Aerial photographs

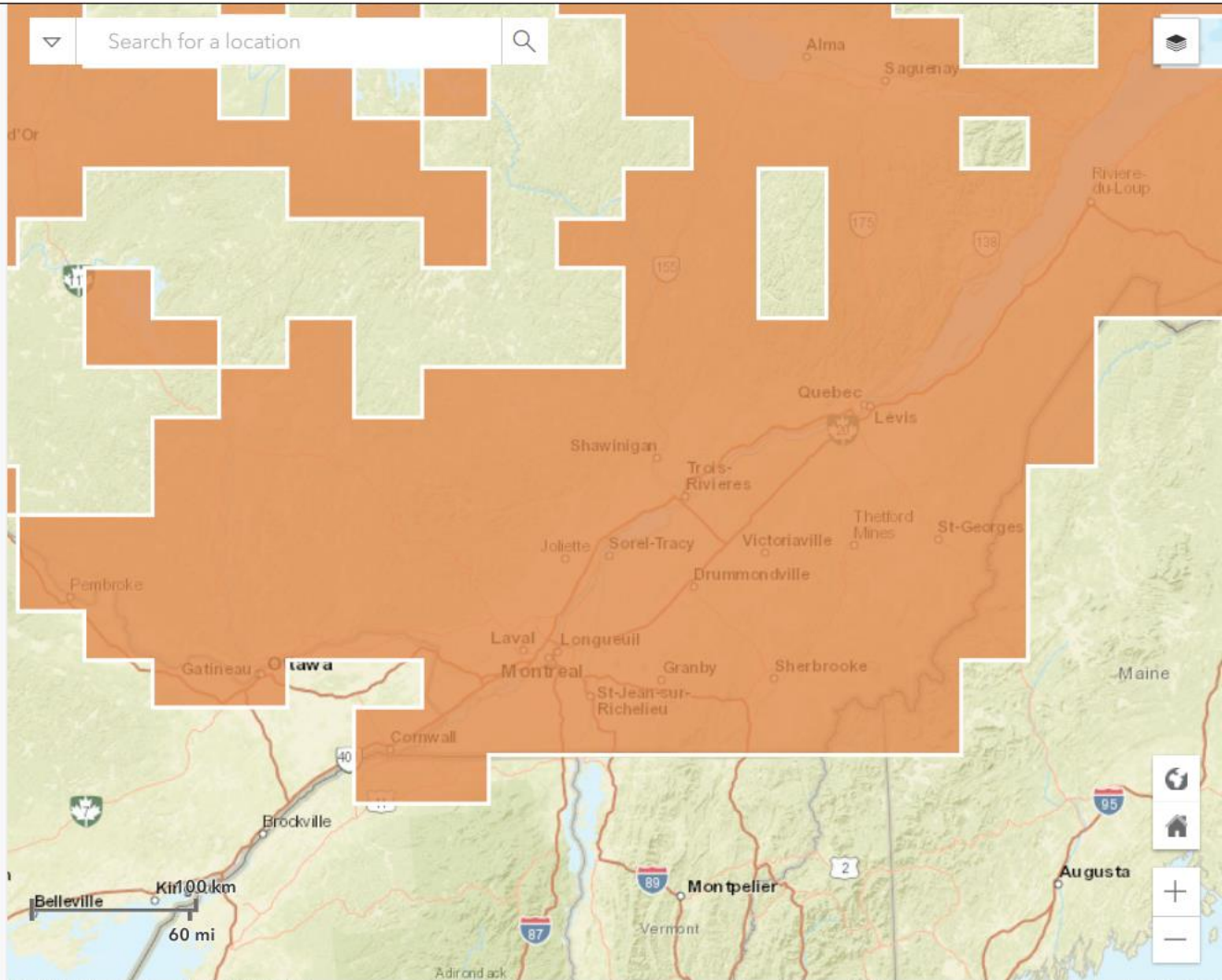▼ Results 1 to 25 of 57 filtered

Sort by : Popularity ⌄

- ▱ Lot polygon
- ▱ Lot polygon   ▤ ⤢ 👁 ⤵
- ▱ Lot polygon
- ▱ Bird colony
- ⊥ Hydro - rivières (FLC - 2011)
- ⊥ Réseau routier (FLC - 2011)
- ▱ White-tailed deer
- ⊥ Lot line
- ▱ Formalized lots
- ⊥ Formalized surveys
- ▱ Formalized boundaries
- ▱ Waterfowl
- ▱ Heronry
- ▱ Bird colony
- ▱ Muskrat habitat
- ▱ Waterfowl
- ▱ Muskrat habitat
- ▱ Heronry
- ▱ White-tailed deer

⏮ ◄ **1** 2 3 ► ⏭

Select an area   ⬇ Extract

Search for a location   🔍

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Shows metadata about the data

Zooms to the layer's coverage on the map

Shows the layer on the map

Adds the data to your cart for extracting

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Search (metadata)

cadastral 🔍

2008 — 2019

✖ Reset years

Data type ⌄

Geometry type ⌄

Subjects ⌄

Topics ⌄

Collections ⌄

Producers ⌄

Geospatial data ⬤

▼ Results 1 to 25 of 57 fil

Sort by : Popularity
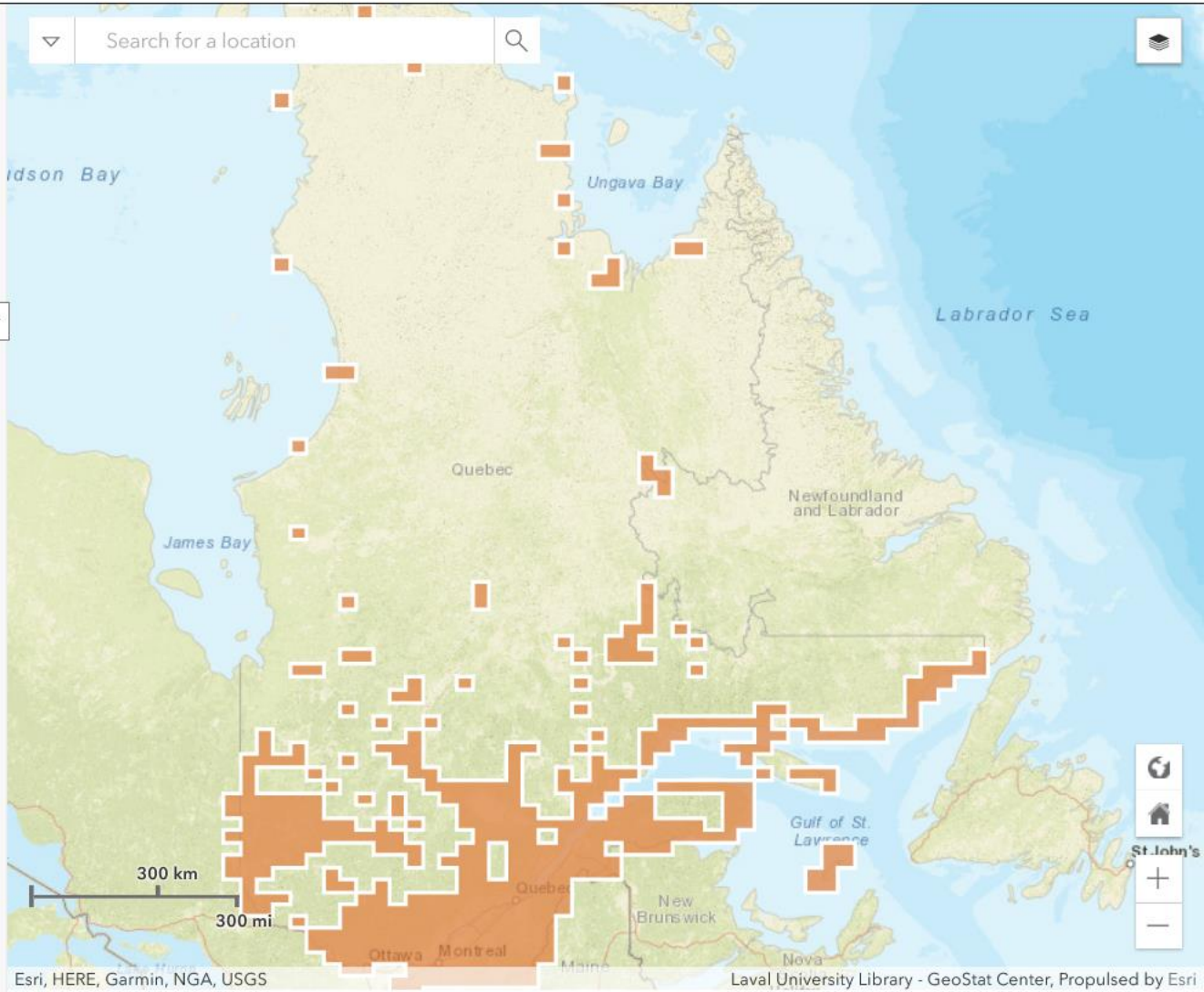
▱ Lot polygon
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▱ Lot polygon
▱ Bird colony
⊥ Hydro - rivières (FLC -
⊥ Réseau routier (FLC - 2
▱ White-tailed deer
⊥ Lot line
▱ Formalized lots
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⊥ Formalized boundarie
▱ Waterfowl
▱ Heronry
▱ Bird colony
▱ Muskrat habitat
▱ Waterfowl
▱ Muskrat habitat
▱ Heronry
▱ White-tailed deer

|◁ ◁ 1 2

Select an area

Lot polygon ✖

Ressource description Join us Data Quality Guide, Codebook, etc. Reference system and spatial information Metadata Distribution

Reference information

French title *   Polygone de lot

English title   Lot polygon

Alternate title (French) / Alternate title (English)

Collection title   Banque de données cadastrales du Québec - 2018

Date type *   Publication

Date *   2018-08-15

Abstract *   Polygones représentant les lots de la Banque de données cadastrales du Québec en date du 31 août 2018.
Les polygones de lots sont liés à des tables d'attributs (via le champs no_lot). Ces attributs sont les suivants :
- la municipalité;
- le(s) propriétaire(s);
- le numéro du titre de propriété;
- les concordances avec les anciens lots.
- les plans superficiaires (si présent pour le lot).|Polygons representing lots in the Banque de données cadastrales du Québec, Québec's cadastral database, dated August 31, 2018.
The lot polygons are linked to attribute tables (via the no_lot field). These attributes are as follows:
- the municipality;
- the owner(s);
- the property title number;
- correlations with former lots.
- superficiary plans (if present for the lot).

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Search (metadata)

cadastral

2010   2019

❌ Reset years

Data type

Geometry type

Subjects

Topics

Collections

Producers

Geospatial data   Aerial photographs

🔽 **Results 1 to 25 of 48 filtered**

Sort by : Popularity

Lot polygon

Lot polygon
Lot polygon
Bird colony
Hydro - rivières (FLC - 2011)
Réseau routier (FLC - 2011)
Lot line
Formalized boundaries
Waterfowl
Bird colony
Waterfowl
AD (FLC - 2016)
Hydro - rivières (FLC - 2016)
Prov & Terr (FLC - 2016)
RAR (FLC - 2016)
SR (FLC - 2016)
RE (FLC - 2016)
SRU (FLC - 2016)

|◄   ◄   1   2   ►   ►|

Search for a location

Select an area   ⬇ Extract

0.3 km

0.3 mi

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Search (metadata)

cadastral

2008   2019

✗ Reset years

Data type

Geometry type

Subjects

Topics

Collections

Lot polygon

Author :   Québec (Province). Ministère des
                   Ressources naturelles et de la Faune
                   (13)
Collection :   Banque de données cadastrales du
                   Québec - 2018 (2)
Subjects :   lots (4), Cadastres (6)
Year :   2018 (2)

Geospatial   Aerial
data   photographs

Search for a location

▽ Results 1 to 25 of 55 filtered

Sort by : Popularity ▾

Lot polygon   📄 ⛶ 👁 ⬇
                                            Add layer to basket

☐ Lot polygon
☐ Lot polygon
☐ Bird colony
⊥ Hydro - rivières (FLC - 2011)
⊥ Réseau routier (FLC - 2011)
☐ White-tailed deer
⊥ Lot line
☐ Formalized lots
☐ Formalized boundaries
☐ Waterfowl
☐ Heronry
☐ Bird colony
☐ Muskrat habitat
☐ Waterfowl
☐ Muskrat habitat
☐ Heronry
☐ White-tailed deer

⏮ ◀ 1 2 3 ▶ ⏭

Select an area   ⬇ Extract

Montréal   Longueuil

aré   sault

2 km

2 mi

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Search (metadata)

cadastral

2008   2019

✖ Reset years

Data type

Geometry type

Subjects

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Producers

Geospatial data   Aerial photographs

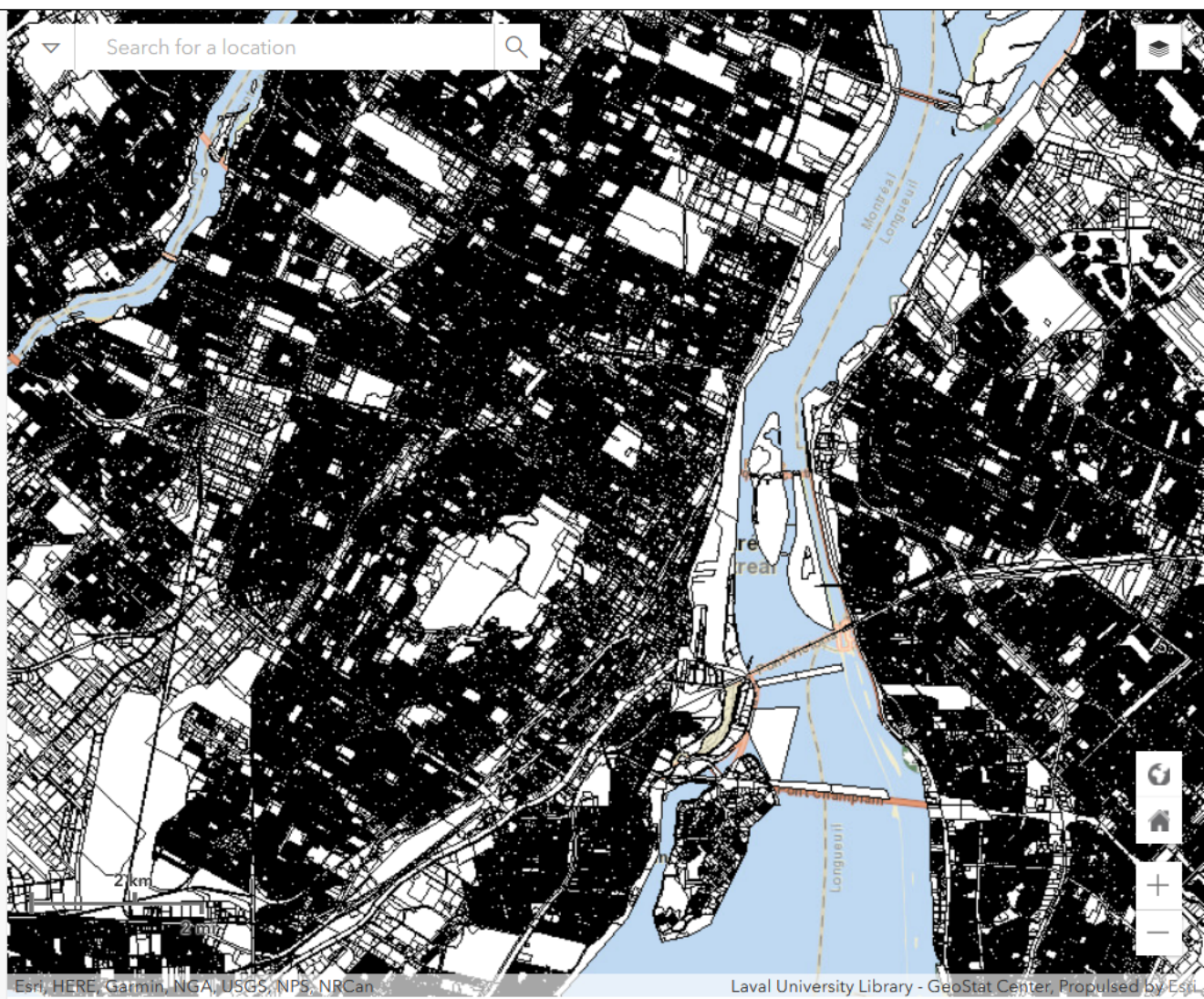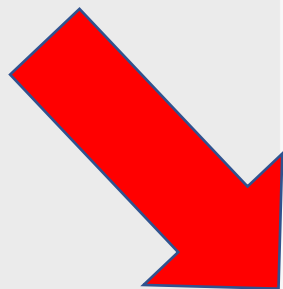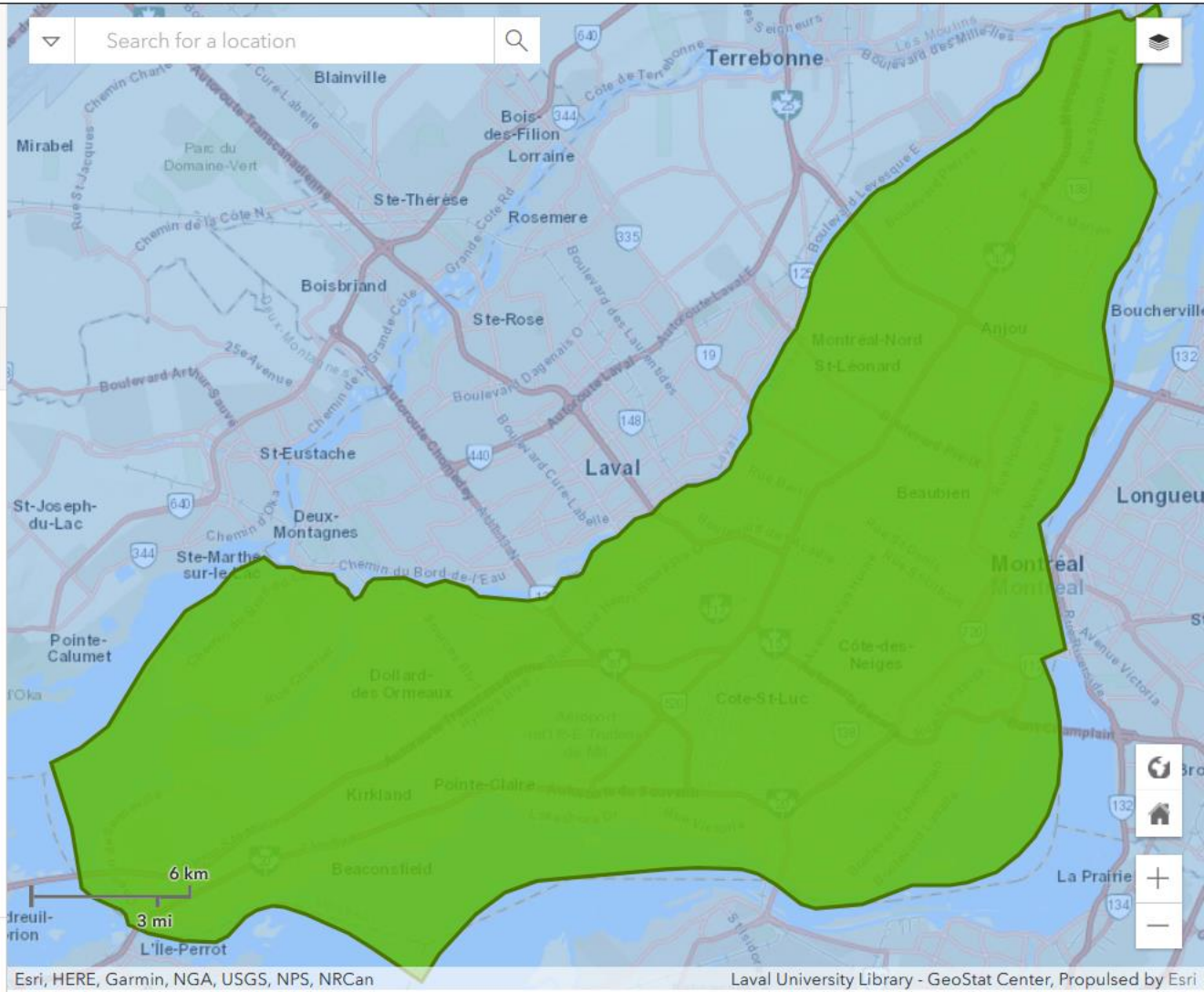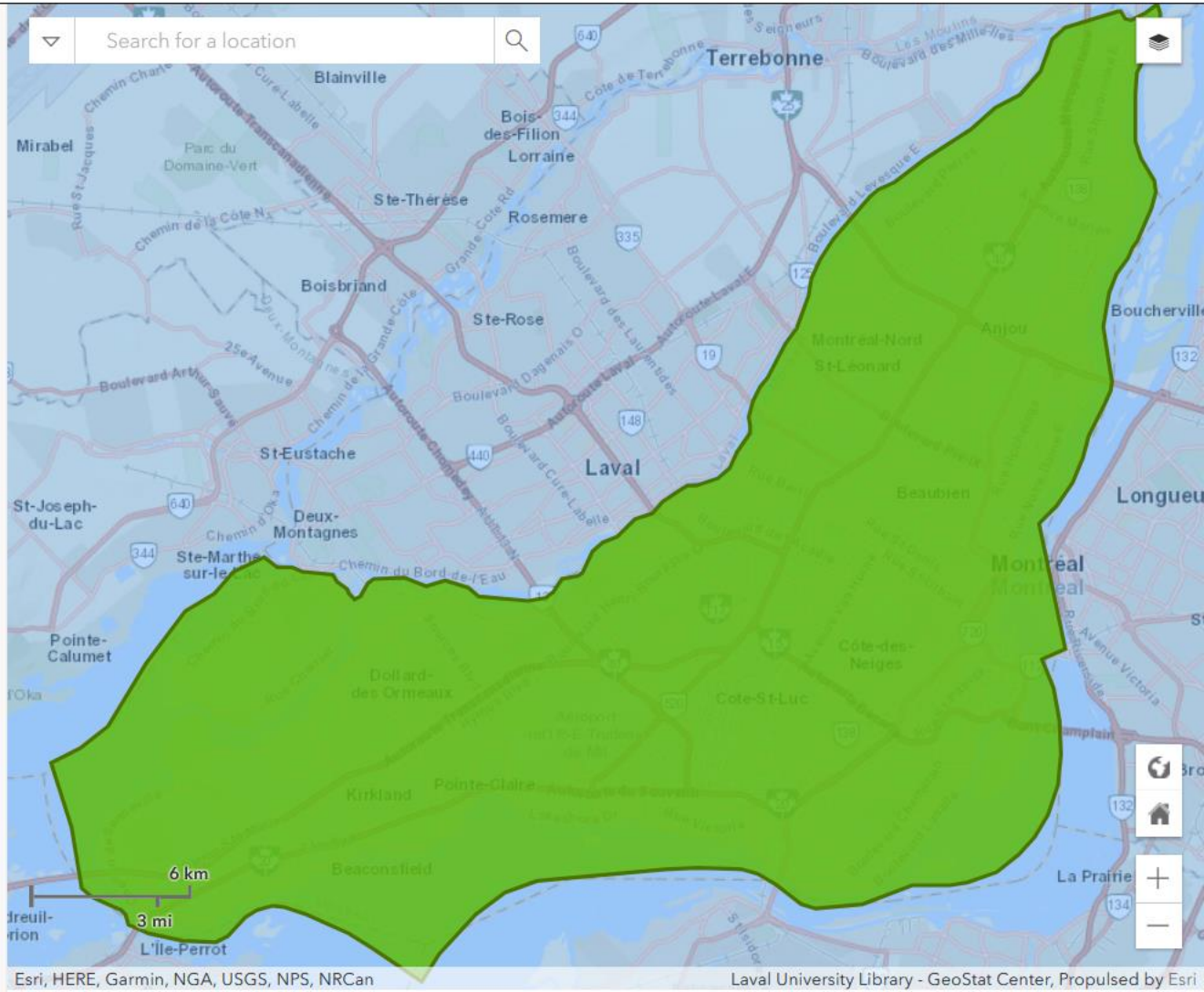▼ Results 1 to 25 of 55 filtered

Sort by : Popularity

Lot polygon

Lot polygon
Lot polygon
Bird colony
Hydro - rivières (FLC - 2011)
Réseau routier (FLC - 2011)
White-tailed deer
Lot line
Formalized lots
Formalized boundaries
Waterfowl
Heronry
Bird colony
Muskrat habitat
Waterfowl
Muskrat habitat
Heronry
White-tailed deer

|◀ ◀ 1 2 3 ▶ ▶|

Predefined zone   ⬇ Extract

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![McGill logo] McGill   Geoindex

Martin Chandler   Menu ›   (?)   Français

Search (metadata)

cadastral

2008   2019

✖ Reset years

Data type

Geometry type

Subjects

Topics

Collections

Producers

Geospatial data   ⬤—   Aerial photographs

▼ Results 1 to 25 of 56 filtered

Sort by : Popularity

Lot polygon

Select a predefined area   ✖

▽ Montréal   ✕ 🔍

Add an area   Close

Search for a location   🔍

Terrebonne
Blainville
Bois-des-Filion
Lorraine
Mirabel
Parc du Domaine-Vert
Ste-Thérèse
Rosemere
Boisbriand
Ste-Rose
Montréal-Nord
St-Léonard
Anjou
Boucherville
St-Eustache
Laval
Longueu
St-Joseph-du-Lac
Deux-Montagnes
Montréal
Ste-Marthe-sur-le
Pointe-Calumet
Dollard-des-Ormeaux
Côte-des-Neiges
Côte-St-Luc
Kirkland
Pointe-Claire
6 km
Beaconsfield
La Prairie
3 mi
dreuil-rion
L'Île-Perrot

Esri, HERE, Garmin, NGA, USGS, NPS, NRCan

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Search (metadata)

cadastral

2008　2019

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Data type

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Topics

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Producers

Geospatial data　　Aerial photographs

▼ Results 1 to 25 of 56 filtered

Sort by : Popularity

Lot polygon

Lot polygon
Lot polygon
Bird colony
Hydro - rivières (FLC - 2011)
Réseau routier (FLC - 2011)
White-tailed deer
Lot line
Formalized lots
Formalized surveys
Formalized boundaries
Waterfowl
Heronry
Bird colony
Muskrat habitat
Waterfowl
Muskrat habitat

1　2　3

Select an area　　⬇ Extract

Information　✕

No layers were selected for extraction (🛒)

Search for a location

Terrebonne
Blainville
Mirabel
Bois-des-Filion
Lorraine
Ste-Thérèse
Rosemere
Ste-Rose
Boisbriand
Laval
St-Eustache
St-Joseph-du-Lac
Deux-Montagnes
Ste-Marthe-sur-le
Pointe-Calumet
L'Île-Perrot
La Prairie
Longueu
Montreal
Boucherville

6 km
3 mi

Esri, HERE, Garmin, NGA, USGS, NPS, NRCan

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Search (metadata)   Geospatial   Aerial   Search for a location
                                     data   photographs

cadastral

2008

Term of use   ✕

Reset years

                          Licensing information ✔   **MRNF** ✖   **Information**   ✕

Data type   Ces données sont fournies pour les fins ex...   ...ées à d'autres fins:

Geometry type   • Contraintes d'accès : Être membre de la communauté universitaire.   You must read each of the licence agreements before you can proceed with data extraction.

Subjects   • Contraintes d'utilisation: Pour des fins d'enseignement et de recherche.

Topics

Collections   **End date** *   2020-11-14   📅

Producers   The default format for extracted vector data is
                          ESRI Shape   ▼

                          and the default projection is
                          MTM Zone 8 NAD83 (EPSG:32188)   ▼

                          Start extraction   Advanced settings

                          ⟨ ⟨ 1   2   3   ⟩ ⟩

                                Select an area   Extract

                                                                            Esri, HERE, Garmin, NGA, USGS, NPS, NRCan   Laval University Library - GeoStat Center. Propulsed by Esri

                                                                                                        © 2018 Geoindex | Terms of use | Privacy

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![McGill logo] McGill   Geoindex

Martin Chandler   Menu >   (?)   Français

Search (metadata)

cadastral

2008   2019

✕ Reset years

Data type

Geometry type

Subjects

Topics

Collections

Producers

Geospatial data   ⬭   Aerial photographs

▼ Results 1 to 25 of 56 filtered

Sort by : Pop

Information   ✕

Your request was sent. Please consult the section 'My Profile - My Extractions' to see the progress status.
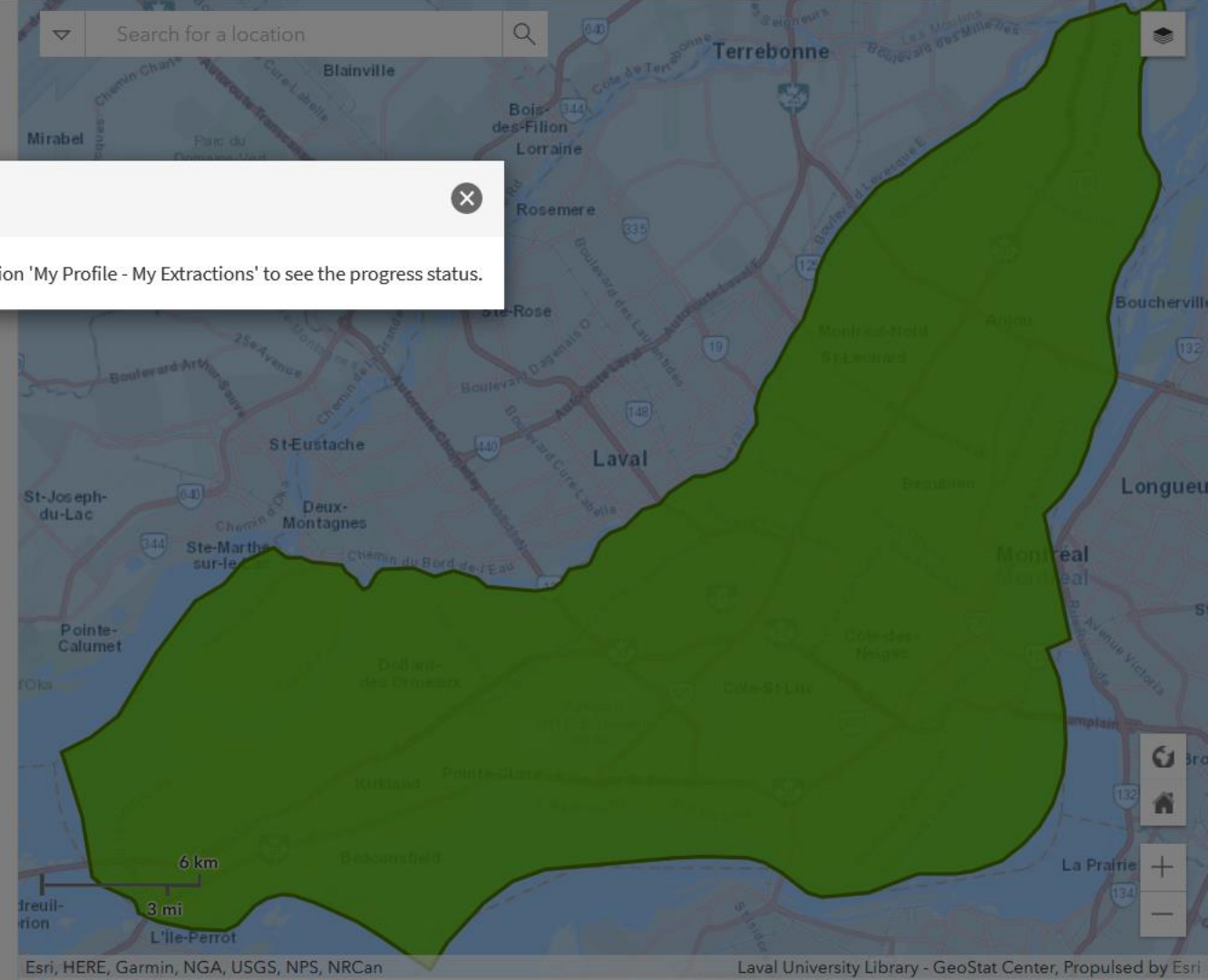
⬭ Lot polys

⬭ Lot polyg

⬭ Lot polygon

⬭ Bird colony

⊥ Hydro - rivières (FLC - 2011)

⊥ Réseau routier (FLC - 2011)

⬭ White-tailed deer

⊥ Lot line

⬭ Formalized lots

⊥ Formalized surveys

⬭ Formalized boundaries

⬭ Waterfowl

⬭ Heronry

⬭ Bird colony

⬭ Muskrat habitat

⬭ Waterfowl

⬭ Muskrat habitat

⊥ Heronry

|◄   ◄   1   2   3   ►   ►|

Select an area   ⬇ Extract

Terrebonne

Blainville

Mirabel   Parc du   Bois-des-Filion   Lorraine

Rosemere

Ste-Rose

Laval

St-Eustache

St-Joseph-du-Lac

Deux-Montagnes

Ste-Marthe-sur-le

Pointe-Calumet

Longueu

La Prairie

6 km

3 mi

L'Ile-Perrot

Esri, HERE, Garmin, NGA, USGS, NPS, NRCan

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McGill Geoindex

Martin Chandler   Menu ⌄   ?   Français

Search (metadata)

cadastral ⊗ 🔍

2008   2019

❌ Reset years

Data type ⌄

Geometry type ⌄

Subjects ⌄

Topics ⌄

Collections ⌄

Producers ⌄

Geospatial data ⚪ Aerial photographs

▽ Search for a location
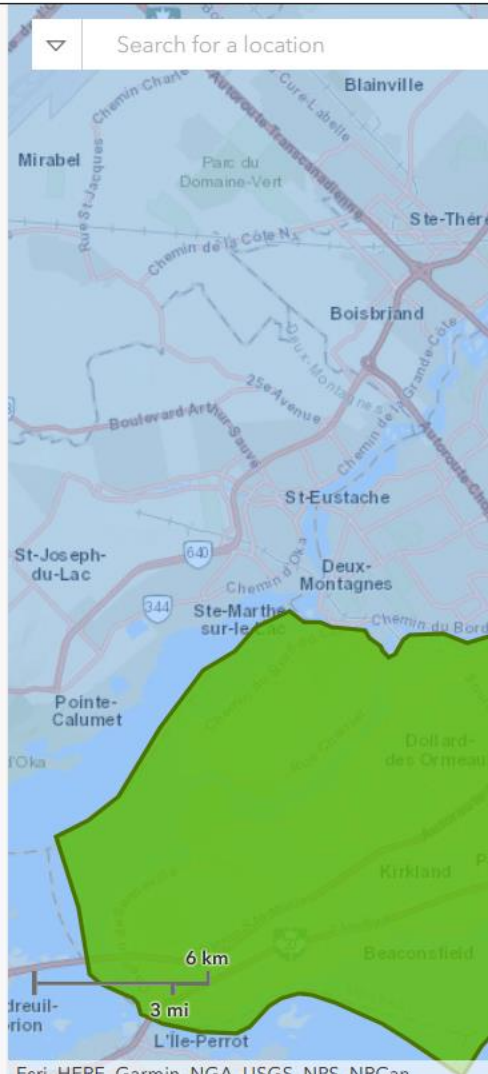
Content management ›

My profile ⌄

　My preferences

　My sessions

　My extractions

　My zones

Save ›

Management ›

List of all layers

Sign out

▼ Results 1 to 25 of 56 filtered

Sort by : Popularity ⌄

Lot polygon

⬚ Lot polygon
⬚ Lot polygon
⬚ Bird colony
⊥ Hydro - rivières (FLC - 2011)
⊥ Réseau routier (FLC - 2011)
⬚ White-tailed deer
⊥ Lot line
⬚ Formalized lots
⊥ Formalized surveys
⬚ Formalized boundaries
⬚ Waterfowl
⬚ Heronry
⬚ Bird colony
⬚ Muskrat habitat
⬚ Waterfowl
⬚ Muskrat habitat
　Heronry

|◁ ◁ 1 2 3 ▷ ▷|

Select an area   ⬇ Extract

6 km
3 mi

Esri, HERE, Garmin, NGA, USGS, NPS, NRCan

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https://geoapp.bibl.ulaval.ca/Profil/ExtractionList

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https://geoapp.bibl.ulaval.ca/Profil/ExtractionList 80%

McGill Geoindex   Martin Chandler   Menu ›   ?   Français

⏻ Quit

My extractions

Your extraction will be saved for: **730** days.

Search text

List of layers		Status		Date ↓		Hour	Link		Size		Action
mrnf_cadastre_polylot_2018_poly		In Progress		2020-08-26		17:01:03					
cdse_2017_csang_s_poly		Completed		2020-01-09		12:15:49					
cdse_2017_csang_s_poly		Failed		2020-01-08		11:16:54					
mrnf_cadastre_polylot_2015_poly		Completed		2020-01-06		16:13:09					
mrnf_cadastre_polylot_2015_poly		Failed		2020-01-06		16:07:55					
aq_routes_2017_l_arc		Completed		2019-09-03		15:46:22					

Things to think about when making a map

- Who is your audience?

- What is your map saying to that audience?

- What is your map not saying to that audience?

- What might be getting in the way of understanding?

Distribution of Perching Birds

Number of Species
- 1
- 2–5
- 6–10
- 11–15
- 15–36
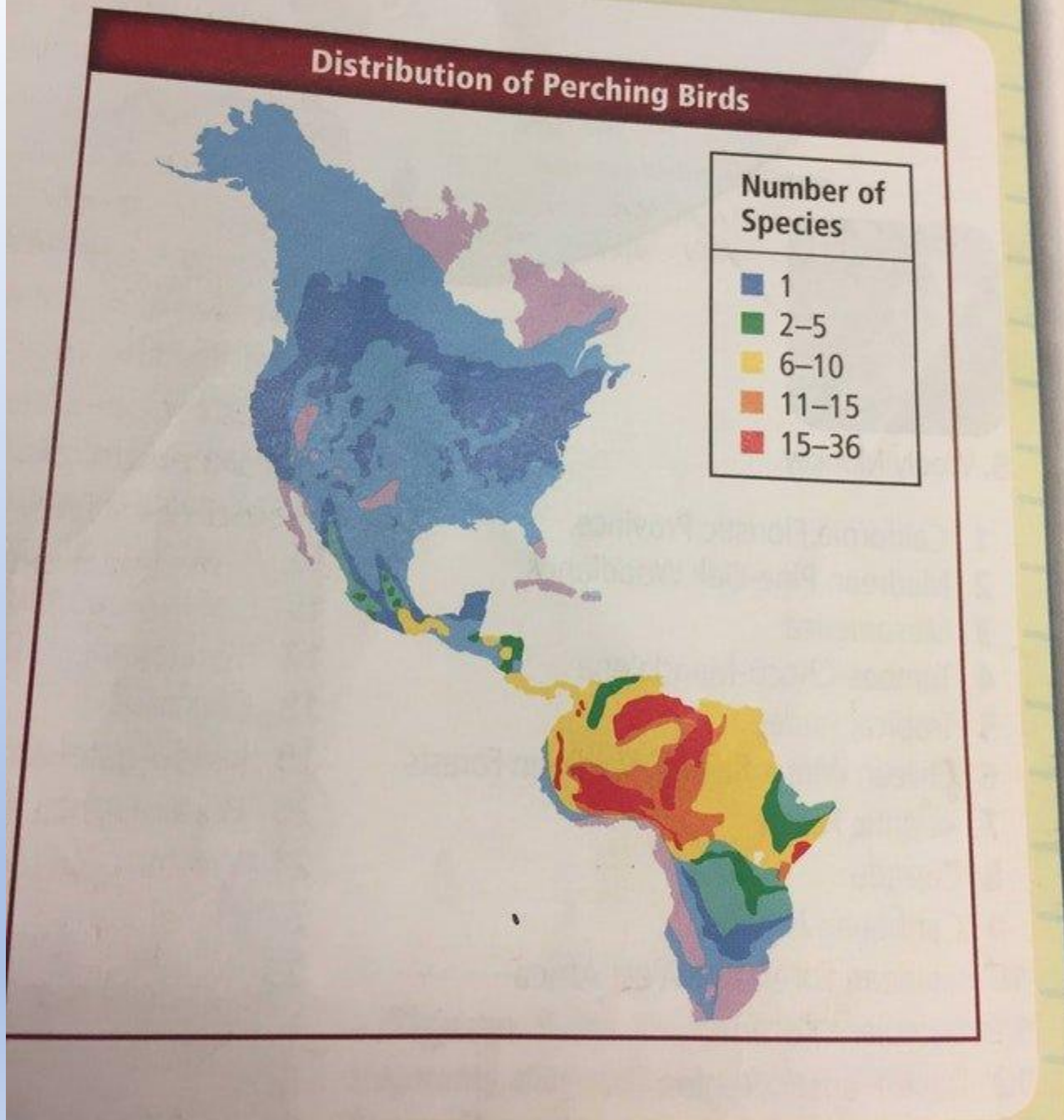
- Here's a map. From a textbook. A Biology textbook.
- Please take a moment to appreciate everything about this map.

Maps, Terrible (TerribleMaps). "This is actually in a textbook..(Glencoe Science: Biology, Chapter 5, Section 3.) Retweet if you see it. https://t.co/k48MkRws9A". 15 Jul 2018, 17:36 UTC. Tweet

Sources on end slide

Bear Location Map, North America

- Now check out this. Thoughts?

Legend:
- Black Bear
- Grizzly Bear
- Polar Bear
- Black & Grizzly Bear
- Black & Polar Bear
- Grizzly & Polar Bear
- Black, Grizzly and Polar Bear
- No Bear Population

HUMAN
FOOTPRINT
@TJUKANOV

ORIGINATOR: VENTER, O. E. W. SANDERSON, A. MAGRACH, J. R. ALLAN, J. BEHER, K. R. JONES, H. P. POSSINGHAM, W. F. LAURANCE, P. WOOD, B. M. FEKETE, M. A. LEVY, AND J. E. WATSON
PUBLICATION DATE: 2018
LAST OF THE WILD PROJECT: VERSION 3 (LWP-3) 2009 HUMAN FOOTPRINT, 2018 RELEASE

Yeet69Lasagna. "Where on the planet we can see the human footprint and which areas are still untouched? Brighter values represent higher pressure on the environment.". Reddit, Inc. 15 Jan 2019, 09:36:53 GMT. Web. Accessed on 16 Jan 2019 from https://www.reddit.com/r/MapPorn/comments/ag93ws/where_on_the_planet_we_can_see_the_human/

A Map Showing the Relative
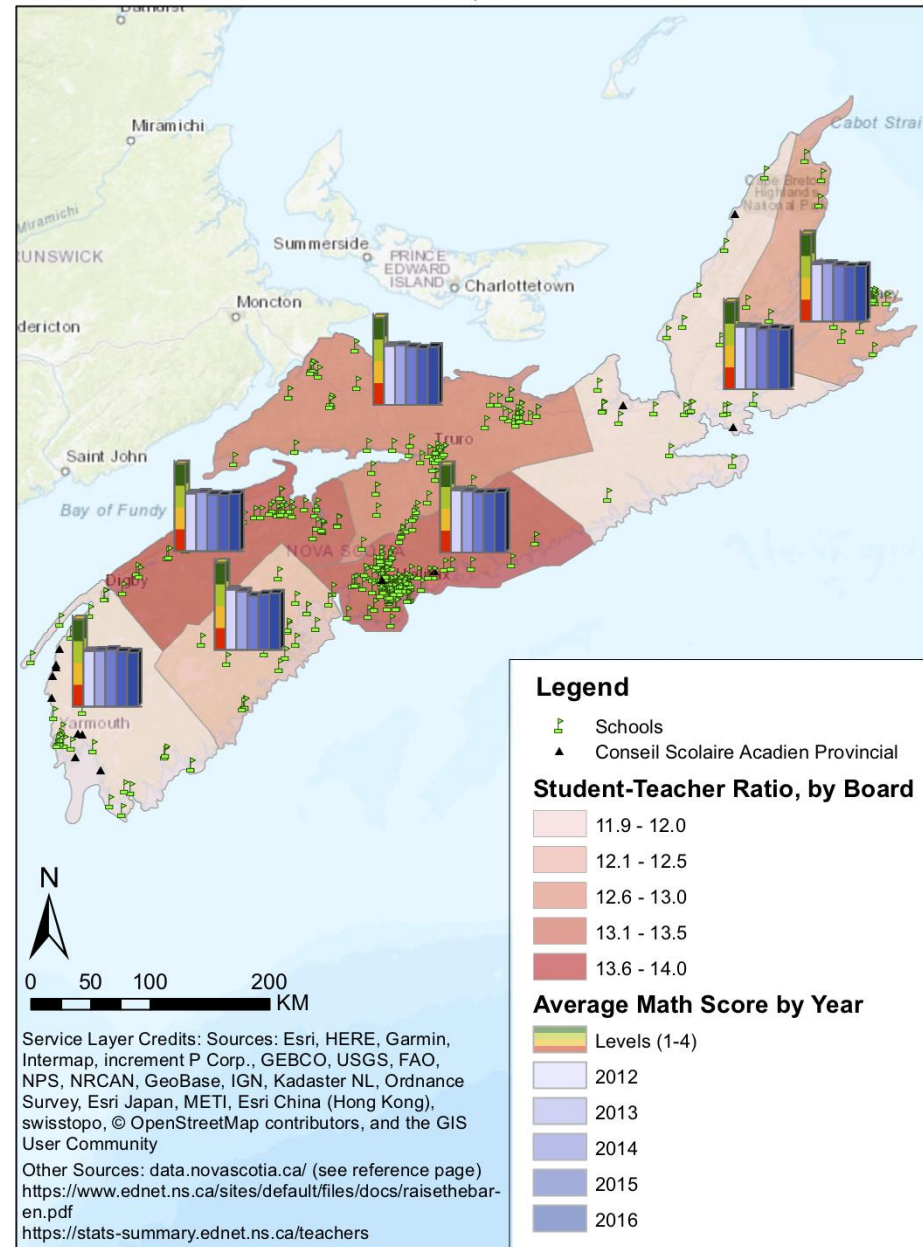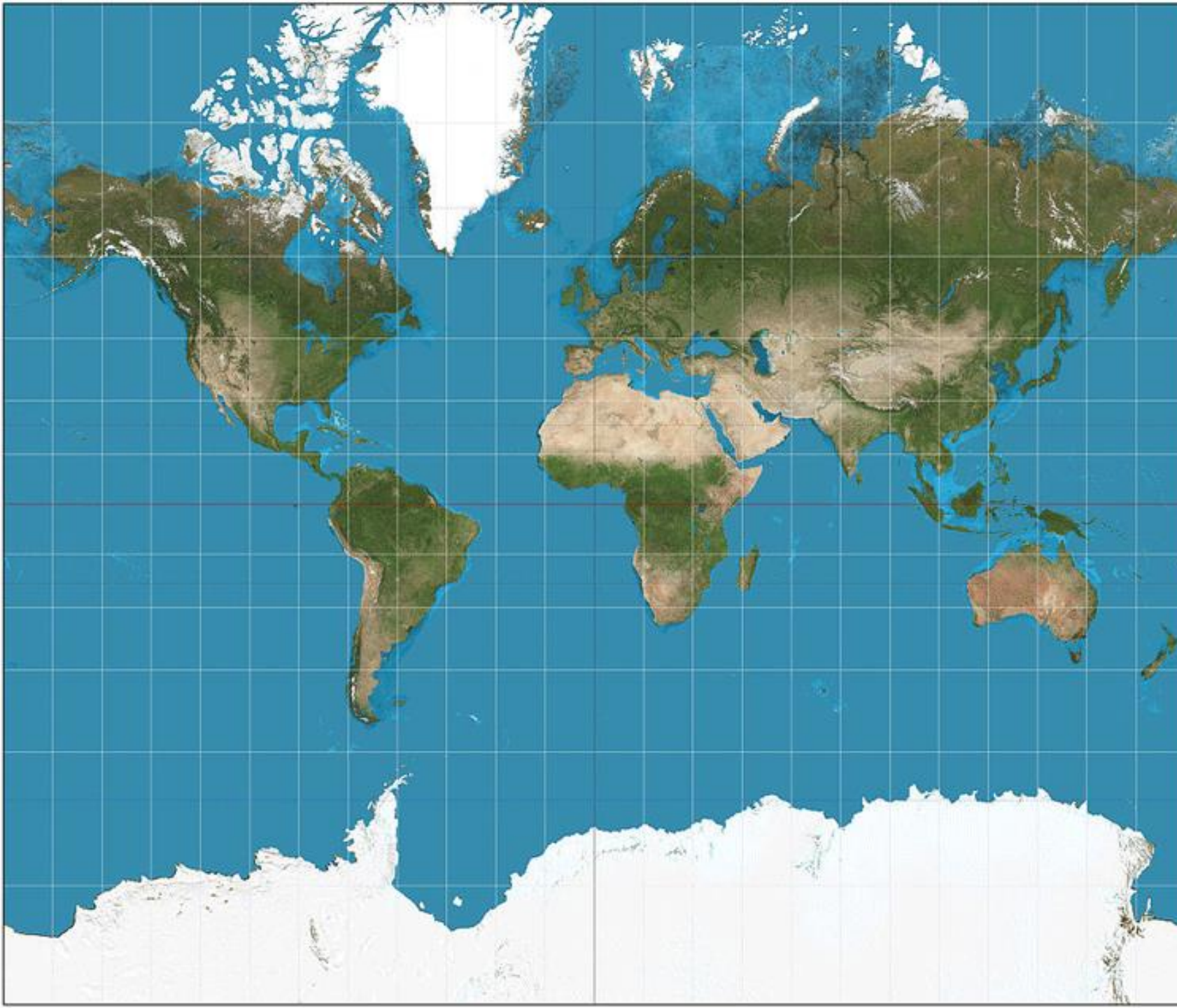Derpiness of Dogs in
St. Catharines, Ontario
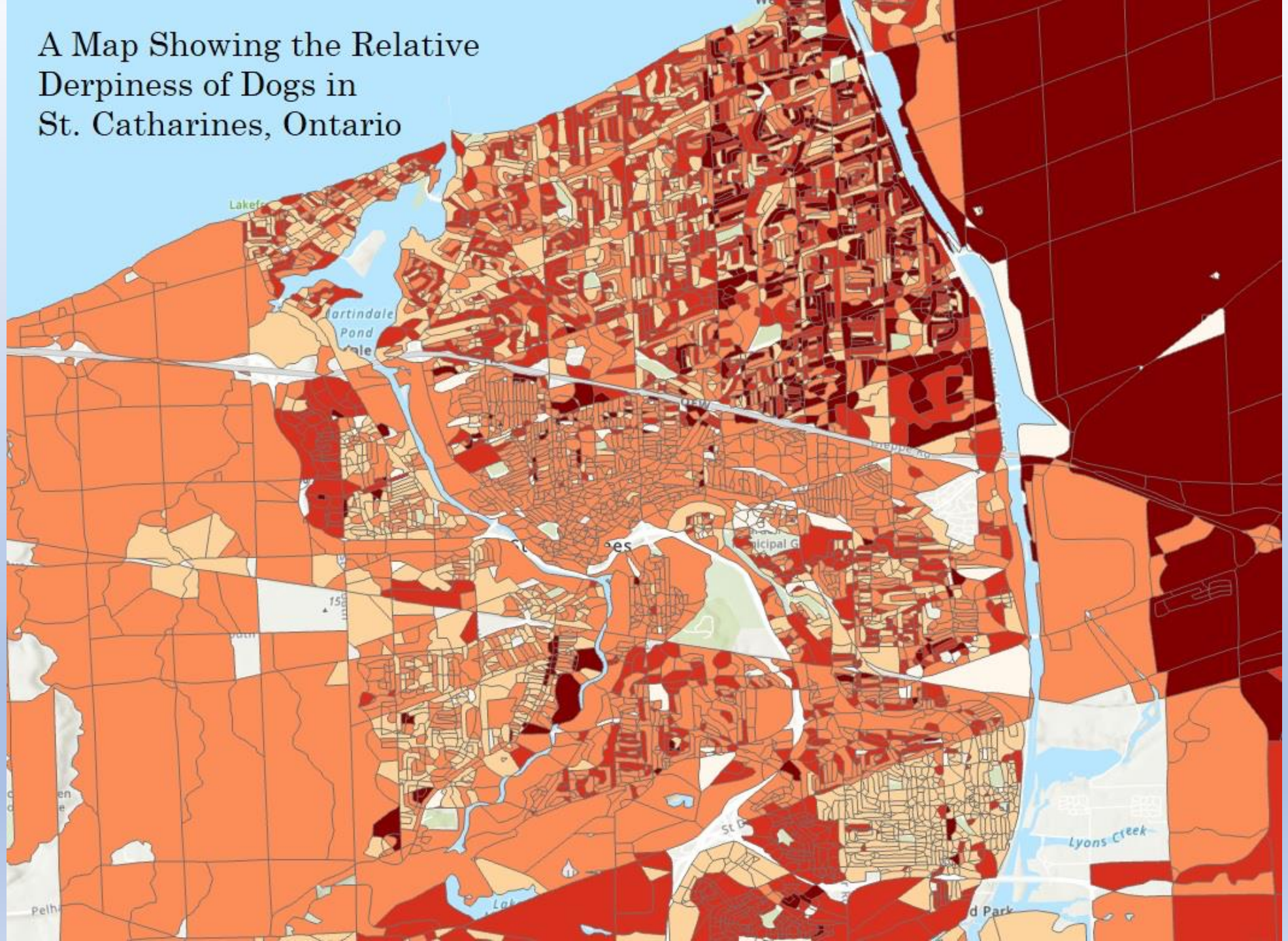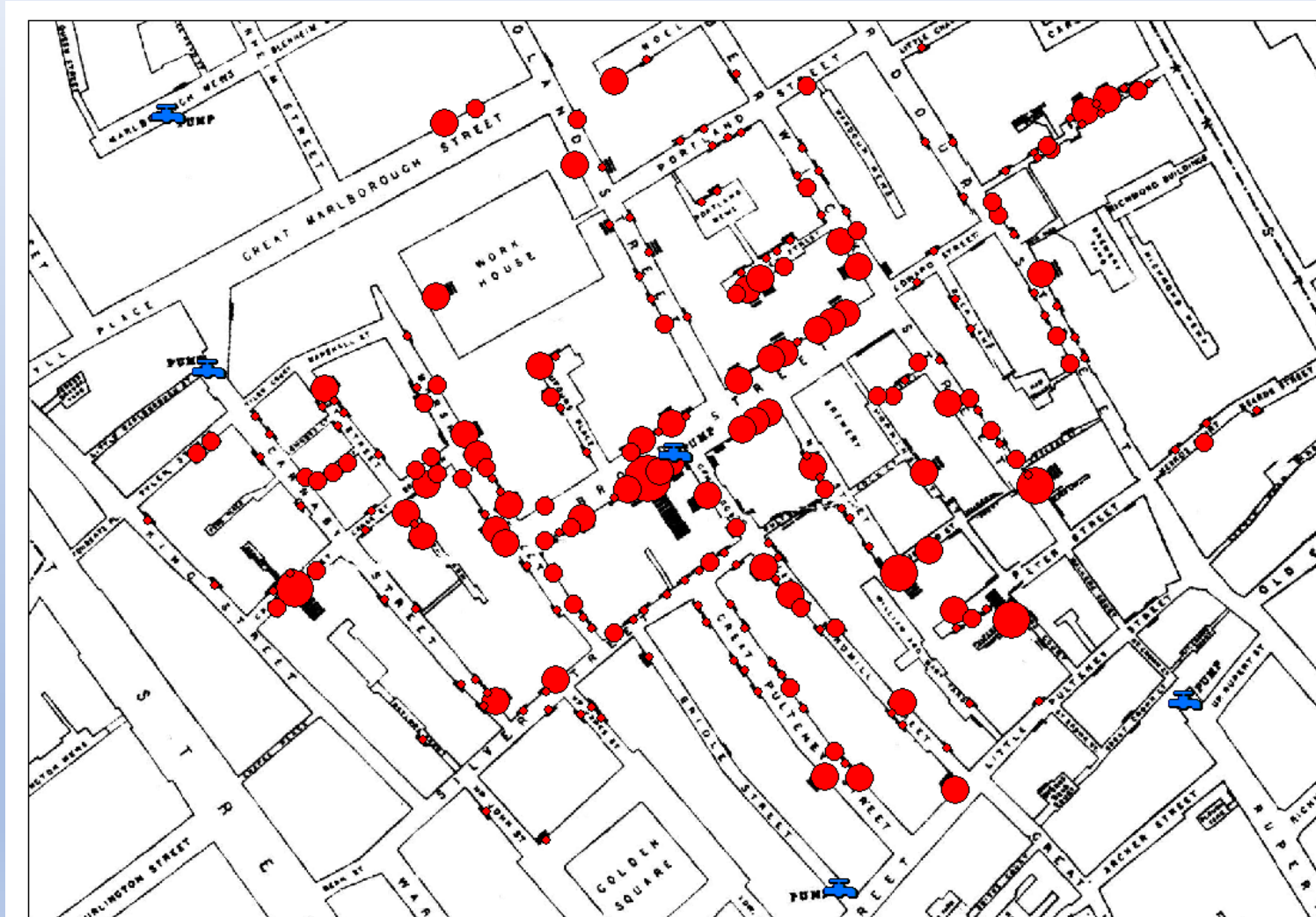
- An updated version of one of the first uses of GIS (John Snow's Cholera map, 1854, updated with current software)

Math Levels Compared to Student-Teacher Ratios in Nova Scotia, 2012-2016

Legend

- ⚑ Schools
- ▲ Conseil Scolaire Acadien Provincial

Student-Teacher Ratio, by Board

- 11.9 - 12.0
- 12.1 - 12.5
- 12.6 - 13.0
- 13.1 - 13.5
- 13.6 - 14.0

Average Math Score by Year

- Levels (1-4)
- 2012
- 2013
- 2014
- 2015
- 2016

N

0   50   100   200
KM

Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

Other Sources: data.novascotia.ca/ (see reference page)
https://www.ednet.ns.ca/sites/default/files/docs/raisethebar-en.pdf
https://stats-summary.ednet.ns.ca/teachers

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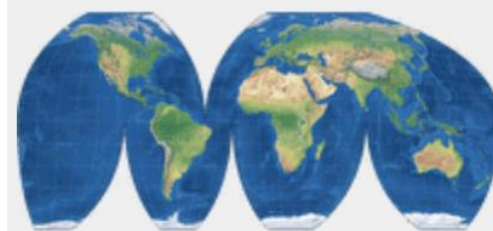|				
☐ Kharchenko-Shabanova	☐ Lagrange	☐ Lagrange (120°)	☐ Lambert Cylindrical	☑ Lambert CC
☐ Lambert Equal-Area Conic	☐ Larrivée	☐ Laskowski Tri-Optimal	☐ McBryde P3	☐ McBryde Q3
☐ McBryde S2	☐ McBryde S3	☑ McBryde S3 (i.)	☐ McBryde-Thomas #1	☐ McBryde-Thomas #2
☐ McBryde-Thomas FPP	☐ McBryde-Thomas FPQ	☐ McBryde-Thomas FPS	☐ McBryde-Th. FPQ (i.)	☐ Mercator
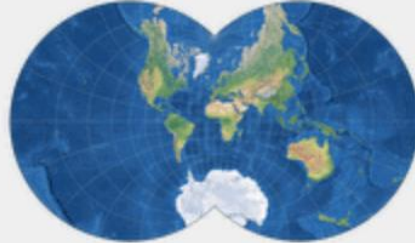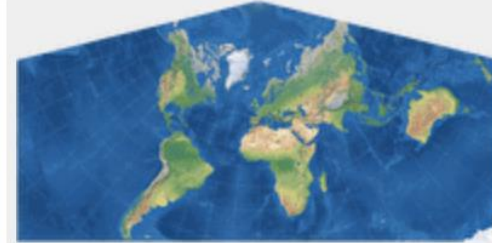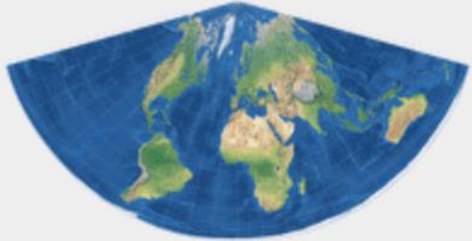
Projections

- The earth is a sphere
- Paper and screens are (usually) not spherical
- Putting a 3D thing into 2 dimensions means that something's gotta give
- Example: peel an orange. You cannot keep it circular, and see the entirety of the peel
- The same thing with the earth
- Every type of projection is trying to represent the earth on a flat surface in a different manner, and with a different purpose

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Questions?

- martin.chandler@mcgill.ca