



March 11, 2025 | 10:30 am
Virtual Workshop

Introduction to Creating and Sharing Maps Using ArcGIS Online

u.mcmaster.ca/scds-events



Data Analysis
Support Hub

 **Sherman
Centre**
for Digital Scholarship

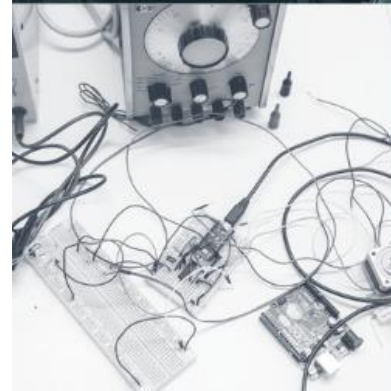
Library

McMaster
University 

Introduction to Creating and Sharing Maps using ArcGIS Online

Christine Homuth, Spatial Information Specialist

March 11, 2025





Land Acknowledgement

McMaster University is located on the traditional Territories of the Mississauga and Haudenosaunee Nations, and within the lands protected by the “Dish With One Spoon” wampum agreement.

[CARE Principles for Indigenous Data Governance](#)

[First Nations Principles of OCAP](#)

Code of Conduct

The Sherman Centre and the McMaster University Library are committed to fostering a supportive and inclusive environment for its presenters and participants.

As a participant in this session, you agree to support and help cultivate an experience that is collaborative, respectful, and inclusive, as well as free of harassment, discrimination, and oppression. We reserve the right to remove participants who exhibit harassing, malicious, or persistently disruptive behaviour.

Please refer to our code of conduct webpage for more information: <https://scds.ca/code-of-conduct/>

Certificate Programs

The Sherman Centre for Digital Scholarship Certificate of Attendance

The Sherman Centre's certificate program recognizes attendance at our workshops. It complements degree training, supports the development of critical competencies in data analysis, research data management, and digital scholarship, and formalizes core skills fostered by our workshops.

Participants are invited to attend seven workshops and receive a certificate of attendance. To verify your participation in today's workshop, we will provide a code and additional instructions at the end of the session.

You can learn more about the certificate program at [**scds.ca/certificate-program**](https://scds.ca/certificate-program)

The Canadian Certificate for Digital Humanities

This workshop is also eligible for the Canadian Certificate for Digital Humanities. To learn more about the certificate, visit [**ccdhhn.ca**](https://ccdhhn.ca). You can also contact local liaison Alexis-Carlota Cochrane at [**scds@mcmaster.ca**](mailto:scds@mcmaster.ca)

Learning Objectives

By the end of this workshop, you should be able to:

- Explain Geographic Information Systems (GIS) concepts and identify potential applications for GIS.
- Locate sources of geospatial data.
- Apply the skills learned to author a simple map using ArcGIS Online.

GIS

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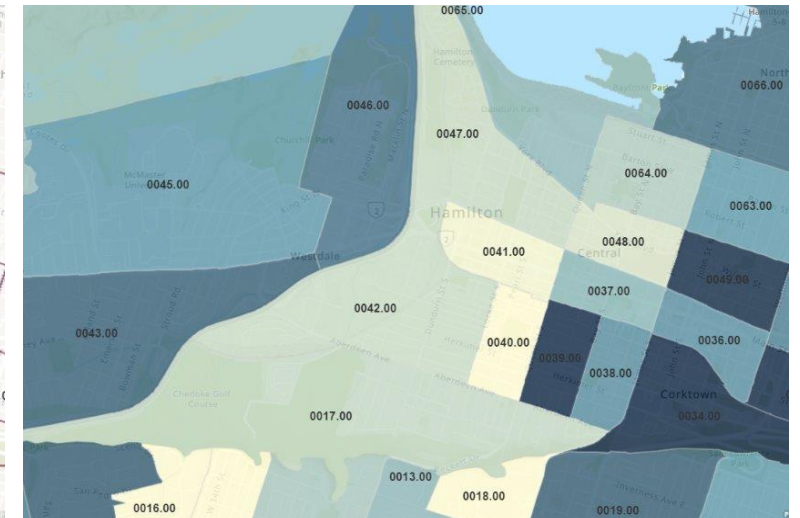
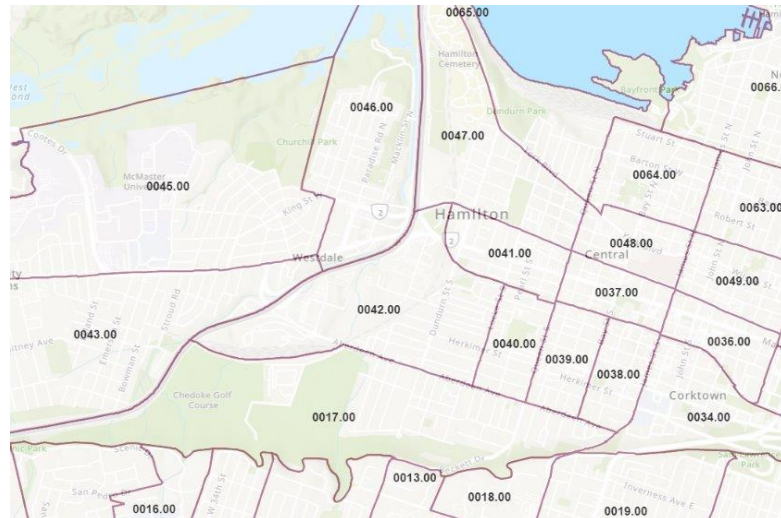
Library



GIS

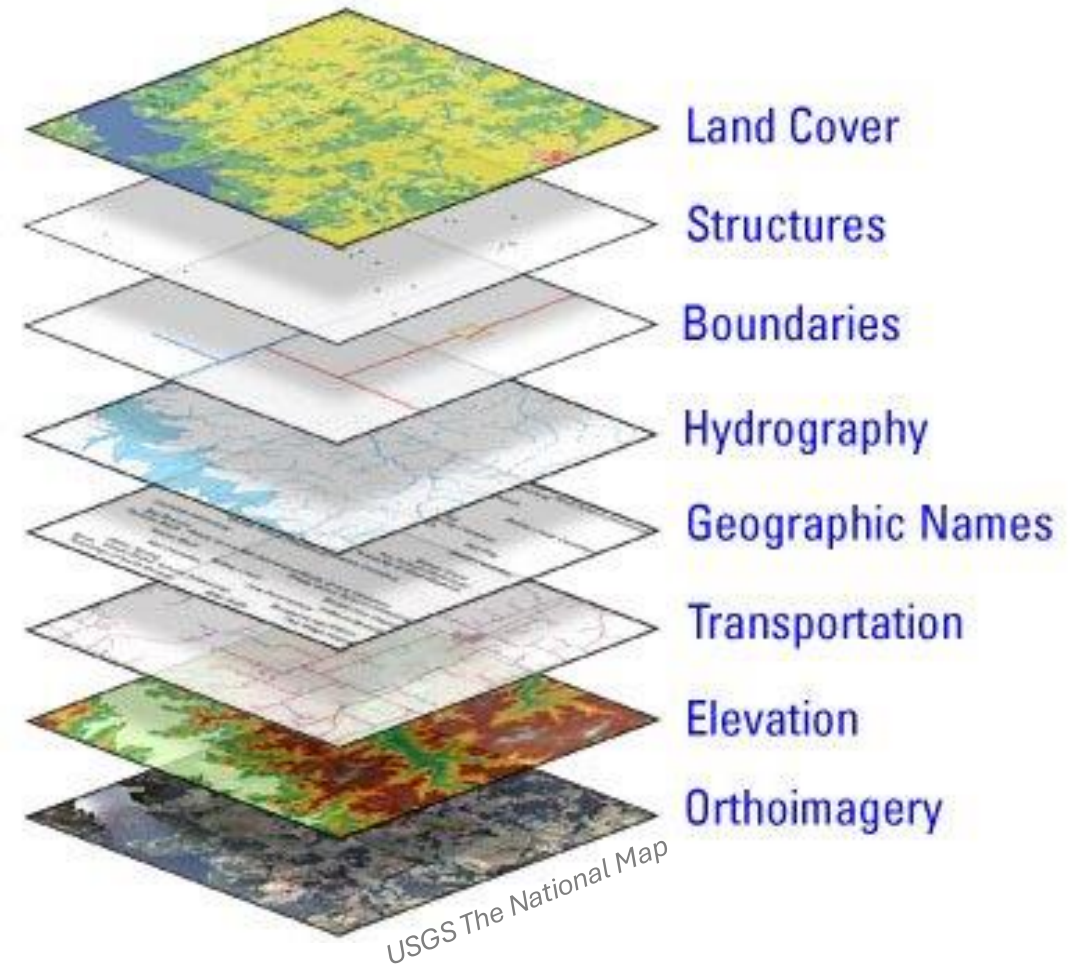
- Geographic Information Systems
- “Computer-based tools used to store, visualize, analyze, and interpret geographic data” (CDC)
- “Connects data to a map, integrating location data (where things are) with all types of descriptive information” (Esri)

0051.00	409	4,225
0052.00	334	3,881
0053.00	220	3,070
0054.00	211	2,670
0055.00	287	2,989
0056.00	312	3,260
0057.00	276	3,022
0058.00	201	2,545
0059.00	260	3,062
0060.00	195	2,691
0044.00	305	3,917



Geospatial Data

- Vector and raster data models used to represent the real world
- Spatial or geographic component
- Multiple datasets are stacked or layered
- Tabular data can also be "joined" to spatial data and displayed on a map
- Not restricted to the outdoors or the Earth's surface

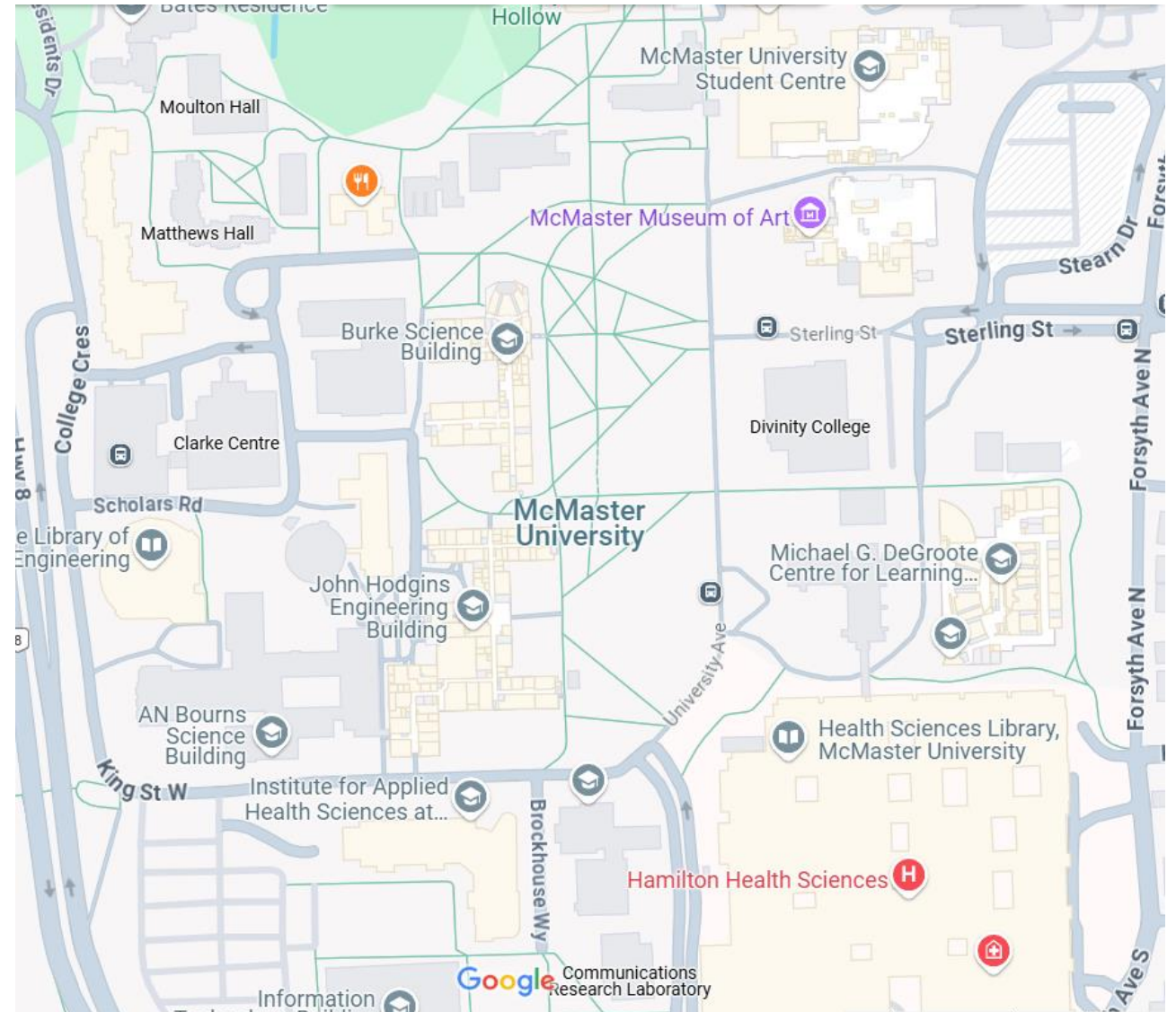


Vector Data

Points, lines, and polygons

- **Points** – x,y locations
- **Lines** – linear features (connected x,y locations)
- **Polygons** – closed figures or areas (multiple connected x,y locations forming a closed figure)
- Good for representing *clearly defined objects*

Example – Google Maps (google.ca/maps) view of McMaster campus.

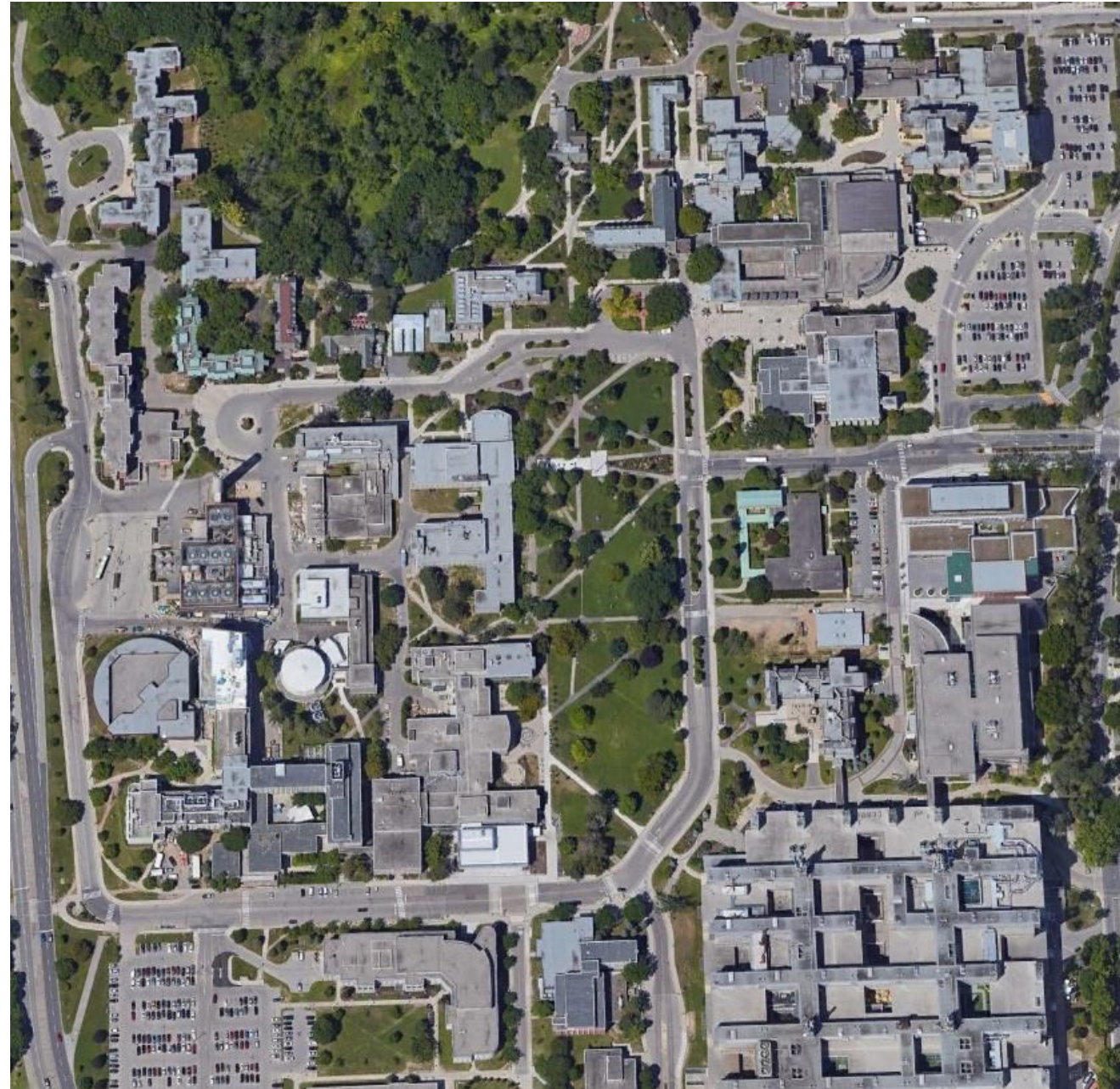


Raster Data

Grid of cells

- Number assigned to each cell or pixel that represents the data
- **Categorical** – land use, e.g.
- **Continuous** – temperature, e.g.
- Good for representing *continuously changing* attributes

Example – satellite image of McMaster campus (Google Earth)



McMaster University

- [Scholars GeoPortal](#)
- [McMaster University Libraries](#)
- Contact us!

Online Data Portals

- Open data portals
 - [Open Hamilton](#)
 - [Ontario GeoHub](#)
 - [Open Canada](#)
- ArcGIS Online and Living Atlas
- Online data providers
 - Thematic
 - Imagery
- ...

Geospatial Data Sources

- Surveys, statistics, data tables
- Fieldwork
- Remote sensing/imagery
- Shapefiles
- Scanned and georeferenced maps
- Digitizing

GIS Software

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Library



GIS Software

- Many, MANY types of software
- Different tools for different purposes
 - Full-featured vs. specialized
 - Open-source vs. commercial
 - User-friendly vs. technical
- Web-based vs. desktop

ArcGIS

Education Institutional License

- Eligibility:

- **Current** students, staff, and faculty
- **McMaster** coursework and research purposes

- **Cannot** be used for consulting, roles external to McMaster (e.g. Co-op positions), or other uses resulting in personal or commercial gains.



ArcGIS Account Types

- **Organizational account** - full functionality, available while affiliated with McMaster
- **Public account** - limited functionality, permanent account

<https://www.esri.com/en-us/arcgis/products/create-account>

Account type	Description	More information
ArcGIS organizational account	<p>An ArcGIS organizational account allows you to see the organization's customized view of the website, and gives you access to the organization's authoritative data and other geospatial content that you can use to create maps, scenes, apps, and other geospatial content. You can also share and collaborate with other members of your organization, participate in groups, and save your work.</p> <p>With an organizational account, you have access to your organization and ArcGIS apps.</p>	<p>Depending on how you were invited or added to the organization and your organization's security settings, you can sign in to an ArcGIS organizational account using an ArcGIS login, a SAML login, an OpenID Connect login, or a social login (such as Facebook and Google). Your administrator can also enable Esri access on your account, which gives you access to Esri web resources.</p>
ArcGIS public account	<p>An ArcGIS public account is a free account designed for personal, noncommercial use. With a public account, you can create, store, and manage geospatial content, share content, and access content shared by Esri and GIS users around the world.</p> <p>With a public account, you have access to the ArcGIS Online website (with limits on use), My Esri, Esri Community, and other Esri web resources.</p>	<p>You can create and sign in to an ArcGIS public account using an ArcGIS login or a social login (such as Facebook and Google). You can also use your public account to create an organizational account if you're invited to join an organization. The public account becomes an organizational account and all your content moves to the organization.</p>

Complete List *

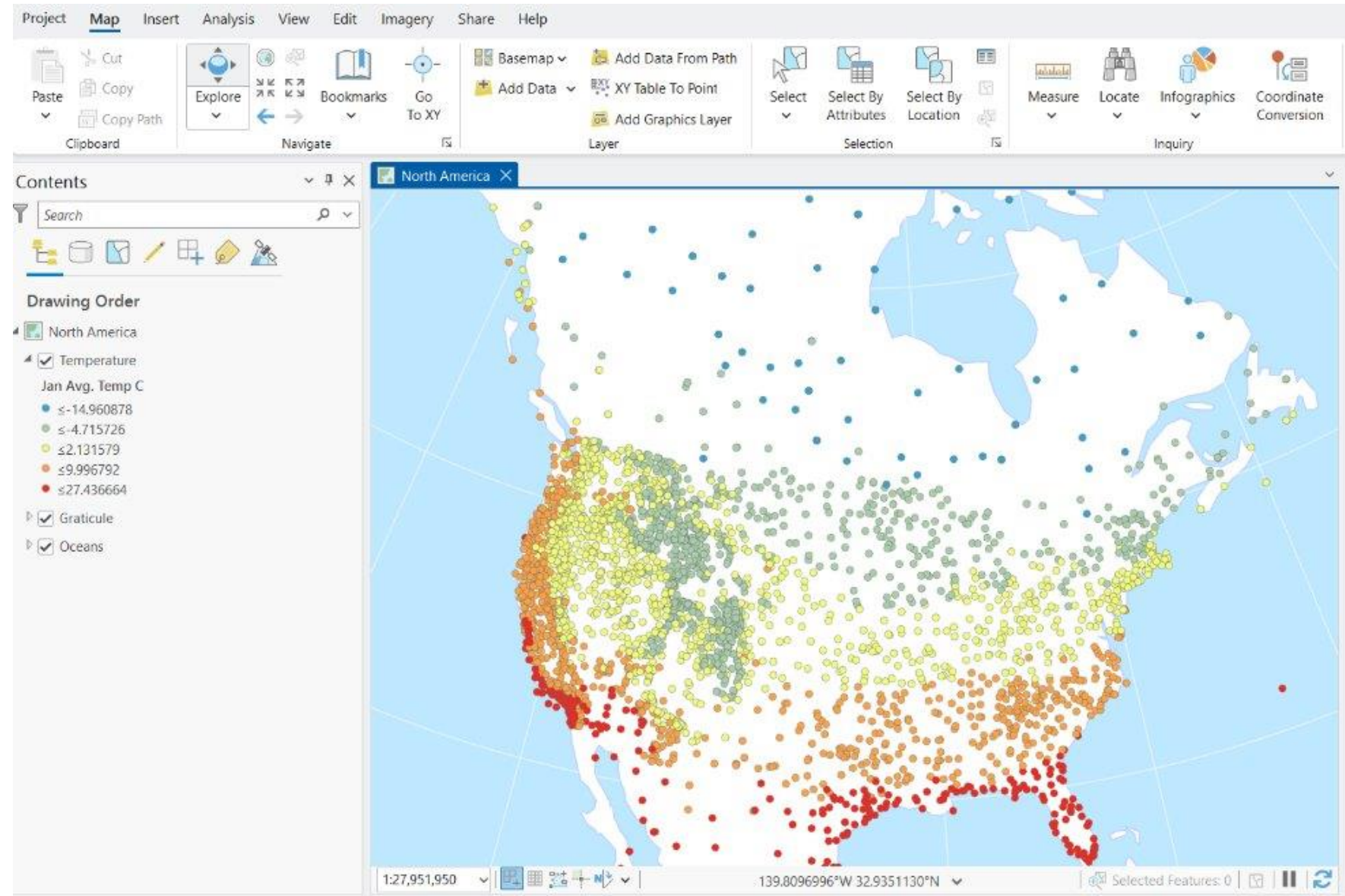
<https://arcgis-mcmaster.hub.arcgis.com/>

*subject to change

ARCGIS PRO ADVANCED			
Included Licenses: <ul style="list-style-type: none">• 3D Analyst• Aviation Airports• Aviation Charting• Bathymetry• Business Analyst• Data Interoperability• Data Reviewer• Defense Mapping• Geostatistical Analyst• Image Analyst		Add-on Licenses: <ul style="list-style-type: none">• ArcGIS Business Analyst Web and Mobile Apps• ArcGIS Community Analyst• ArcGIS Drone2Map• ArcGIS GeoPlanner• ArcGIS Insights• ArcGIS Location Sharing• ArcGIS Urban Suite	
Applications			
Essential Apps: <ul style="list-style-type: none">• ArcGIS App Studio• ArcGIS Dashboards• ArcGIS Experience Builder• ArcGIS Hub• ArcGIS Instant Apps• ArcGIS Maps for Adobe Creative Cloud• ArcGIS StoryMaps• ArcGIS Web App Builder• Configurable Apps• Map Viewer• Scene Viewer	Field Apps: <ul style="list-style-type: none">• ArcGIS Collector• ArcGIS Field Maps• ArcGIS Quick Capture• ArcGIS Survey 123• ArcGIS Workforce Office Apps: <ul style="list-style-type: none">• ArcGIS Connectors for Power Automate• ArcGIS for Excel• ArcGIS for Power BI• ArcGIS for SharePoint• ArcGIS for Teams	Other Apps: <ul style="list-style-type: none">• ArcGIS City Engine• ArcGIS Data Pipelines• ArcGIS Flight• ArcGIS Field Maps Designer• ArcGIS Notebooks• ArcGIS Quick Capture Web Designer• ArcGIS Web Editor	Capabilities: <ul style="list-style-type: none">• ArcGIS GeoBIM• ArcGIS Image Analysis• ArcGIS Image Hosting ArcGIS Runtime: <ul style="list-style-type: none">• ArcGIS Runtime Advanced
ARCGIS ENTERPRISE ADVANCED			
Included applications: <ul style="list-style-type: none">• ArcGIS Pro Advanced• Essential Apps• Field Apps• Office Apps Included extensions: <ul style="list-style-type: none">• ArcGIS Advanced Editing• ArcGIS GeoBIM		Add-on applications: <ul style="list-style-type: none">• ArcGIS Drone2Map• ArcGIS Excalibur• ArcGIS Insights• ArcGIS Mission Manager	

ArcGIS Pro

Professional Desktop GIS Software



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Library



ArcGIS Online

Web-based mapping application

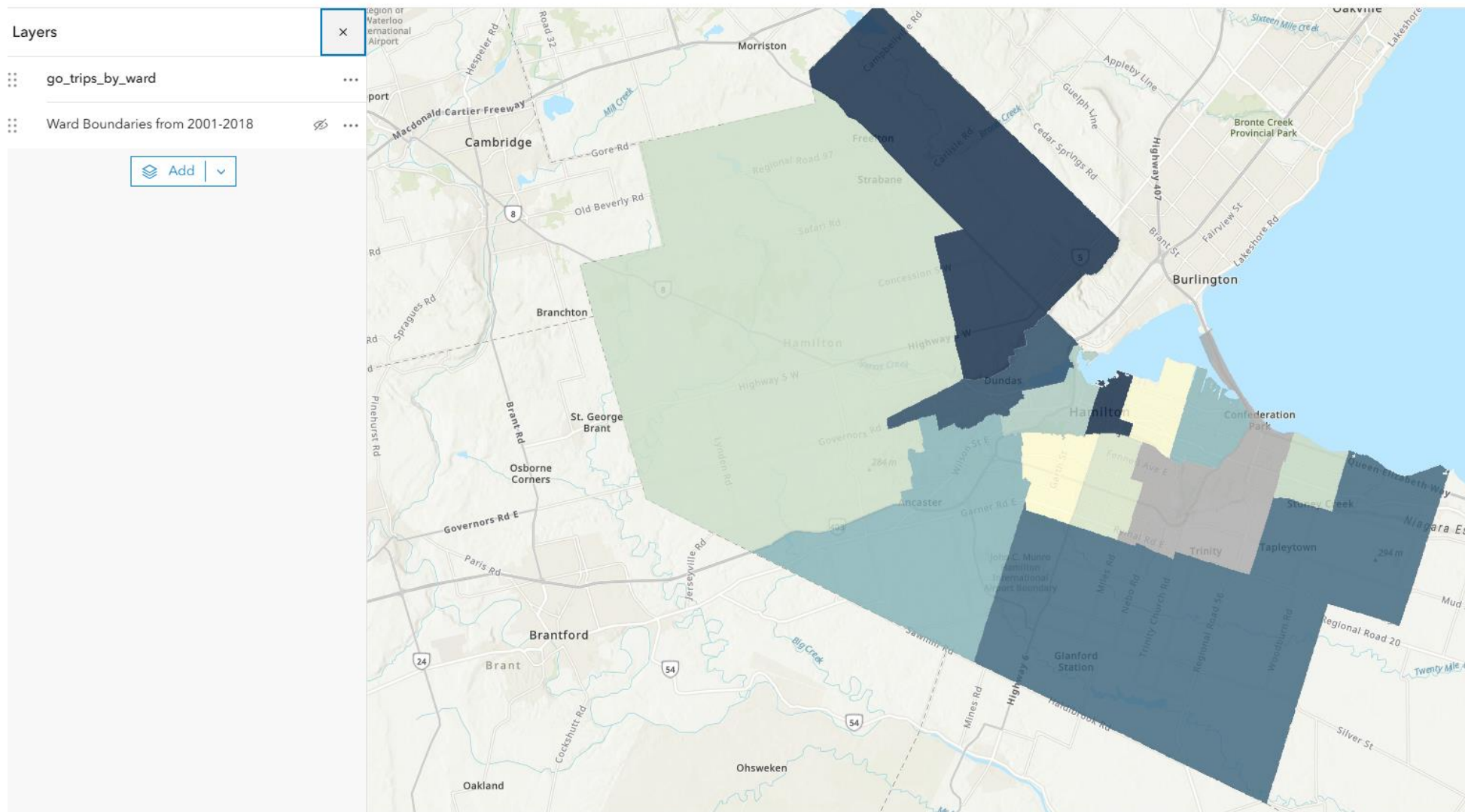
GO Train Trips by Ward 

Layers

go_trips_by_ward

Ward Boundaries from 2001-2018

 Add 



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AppStudio



ArcGIS Online



StoryMaps



Business Analyst



Dashboards



Developer
Documentation



Experience Builder



Field Maps
Designer



Hub



Instant Apps



Living Atlas



Map Viewer



Map Viewer Classic



Maps for Adobe
Creative Cloud



Scene Viewer



Survey123



Data Pipelines



ArcGIS Excalibur
(beta)



Community Analyst



Insights



GeoPlanner

Web Applications

No programming required

ArcGIS Resources

Esri Academy - <https://www.esri.com/training/>

Esri Canada Webinars - <https://www.esri.ca/en-ca/news-events/events/webinars/overview>

Learn ArcGIS Tutorial Gallery - <https://learn.arcgis.com/en/gallery/>

Massive Open Online Courses (MOOC) - <https://www.esri.com/training/mooc/>

Workshop

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Workshop

Map, analyze, and create a web application of Cholera cases in London, England.

- Create map in ArcGIS Online
- Print map
- Instant App
- StoryMaps

Learn ArcGIS Tutorial Gallery

<https://learn.arcgis.com/en/projects/map-a-historic-cholera-outbreak/>

Tell us what you think | Verify your attendance

Provide feedback on this session and verify your participation at
u.mcmaster.ca/post-event

This session's verification code:
maps

GIS Services

Send GIS Services an Email:

libgis@mcmaster.ca

Schedule a Consultation:

<https://libcal.mcmaster.ca/appointments/gis>

SCDS Links

Send SCDS an Email:

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Subscribe to our Newsletter:

<https://u.mcmaster.ca/sign-up>

GIS Services Website:

<https://library.mcmaster.ca/services/gis>

Register for a Workshop:

<https://u.mcmaster.ca/scds-workshops>

Schedule a Consultation:

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