

GIS SERVICES AND RESOURCES

McMaster University Library

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GIS



Library's GIS Services



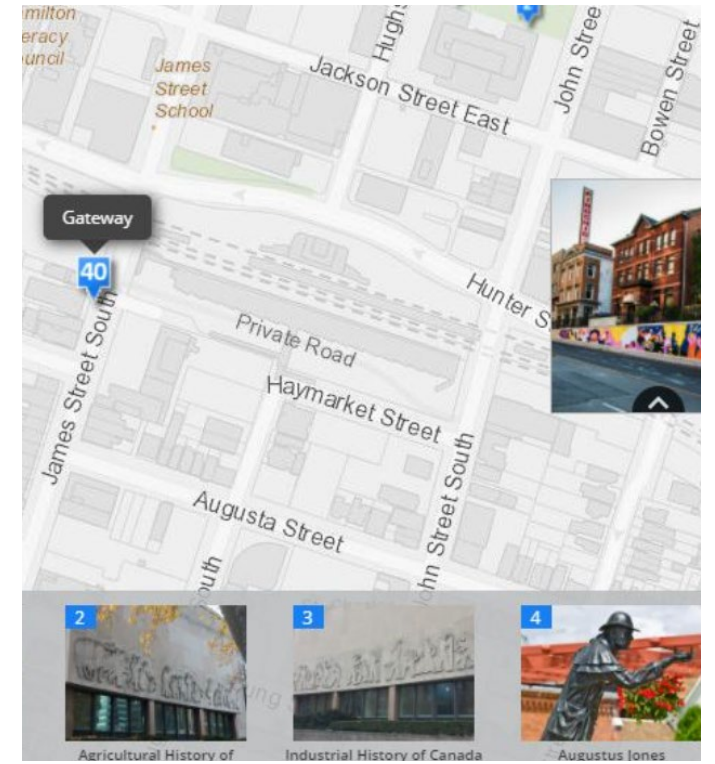
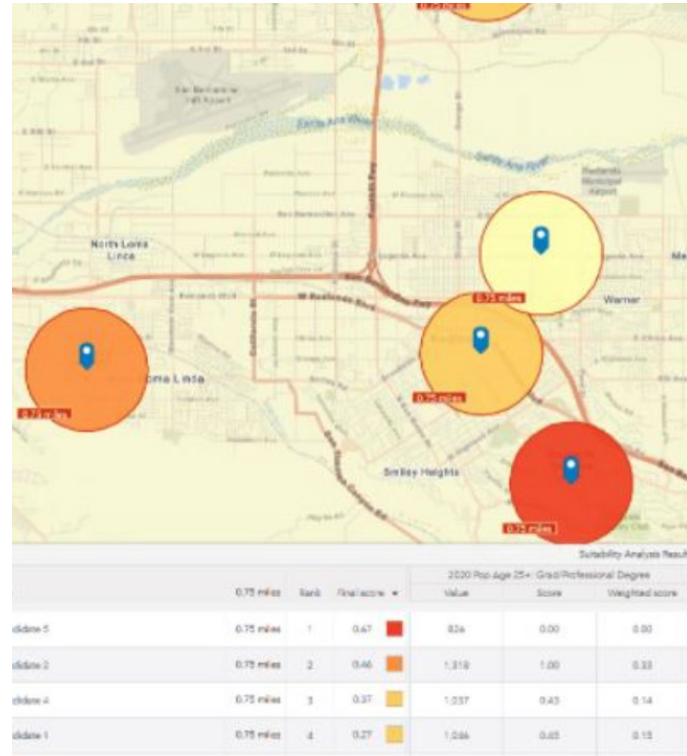
Contact & More Info

Overview



GIS

- **Geographic Information Systems**
- Digital or computer-based mapping
- Integrates hardware, software, and data for capturing, managing, analyzing and displaying all forms of **geographically referenced information** (data with a location)
- Allows us to view, understand, question, interpret, and visualize data in many ways that reveal relationships, patterns, and trends



GIS



GIS in the Library

Map Warper

Georeferencing historic maps and air photos

Web Map Indexes

<https://library.mcmaster.ca/maps/ww2/italy-ww2topos/>

Community-Engaged Research Partnerships Storymap

<http://arcg.is/1PySD1>

Collaboration with the Faculty of Social Sciences



SOFTWARE

QGIS

- One of several free and open-source software
- Functional desktop application
- Compatible with Windows, Mac, Linux operating systems
- Responsive to the user community

- See <https://www.osgeo.org/projects/> for more open-source desktop and web mapping applications

Esri / ArcGIS

Available free of charge to current students, staff, and faculty at McMaster University for education and research purposes.

Access:

- Library workstations
<https://library.mcmaster.ca/services/computers-software>
- Esri Education Institution Agreement
[ArcGIS Software Request Form](#)

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

Esri / ArcGIS

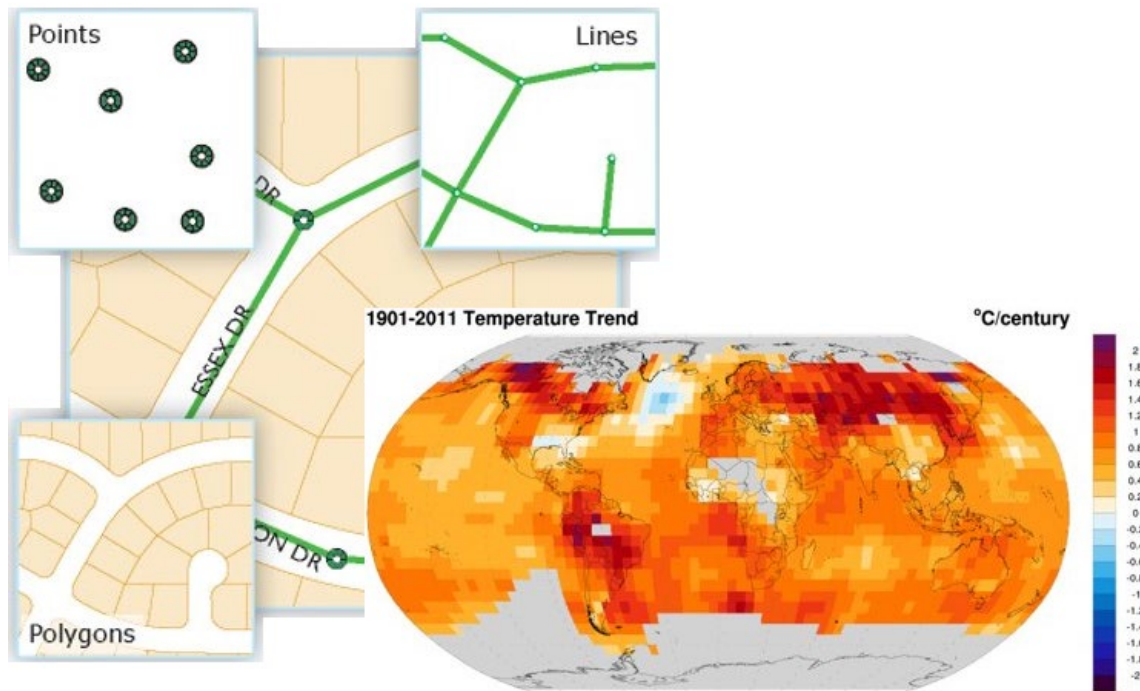
Products (incomplete list):

- Desktop – ArcGIS Pro
- Specialized – Business Analyst Online; Community Analyst Online
- Web-based – ArcGIS Online
- App development – Experience Builder; Storymaps; ArcGIS Hub

GEOSPATIAL DATA

Geospatial Data

- Vector and raster data models used to represent the real world
- Multiple datasets are stacked or layered
- Tabular data can also be "joined" to spatial data and displayed on a map





Where can I get data?

- McMaster University Library
 - <https://library.mcmaster.ca/collections/geospatial-data>
- Scholars GeoPortal
 - <http://geo.scholarsportal.info/>
- City of Hamilton
 - <http://open.hamilton.ca/>
- Ontario GeoHub
 - <https://geohub.lio.gov.on.ca/>
- Canada's Open Government Portal
 - <https://open.canada.ca/en/open-data>

McMaster University Library

<https://library.mcmaster.ca/maps/geospatial/>

- Local geospatial data
- Restricted data that can't be made available online
- Links to other data portals and open data
- Example datasets
 - City of Hamilton parcel/land use data, tree inventory, licensed data not available through open data portal
 - Teranet Ontario parcel boundaries
 - Large imagery datasets
- Data Request Form

Greater Toronto and Hamilton Area (GTHA) Boundary	Ontario Ministry of Natural Resources	2012	
Hamilton Digital Orthophotos	City of Hamilton, Information Technology Services, GIS Services.	Select years between 1999 and 2014	
Hamilton Parcel/Land Use Data	Teranet Inc. and The City of Hamilton, Dept. of Planning and Economic Development.	Select years between 2009 and 2018	
Hamilton Street Railway (HSR) Bus Routes	City of Hamilton	2007 -	
Hamilton Tree Inventory	City of Hamilton, Ontario	2009 / 2016	
Hamilton Vector Data Set	City of Hamilton, Information Technology Services, GIS Services.	2003 - 2018	
Ontario Parcel Boundaries	Teranet Inc.	2009 - 2016	

The screenshot displays the Scholars GeoPortal interface. On the left, there are search filters: 'Data' and 'Place or address' radio buttons, a search input field with 'Anywhere' selected, a 'Search' button, and a 'Downloadable content only' checkbox. Below these are 'Back To Results' and 'Browse by...' sections. The 'Subject category' section lists various categories with their respective counts, such as 'Census and administrative boundaries (249)'. The 'Keywords' section is also visible. On the right, a map of Canada is shown with various geographical features labeled, including 'Gulf of Alaska', 'Vancouver', 'Seattle', 'Mackenzie', 'Great Bear Lake', 'Great Slave Lake', 'Hudson Bay', 'Davis Strait', 'Lake Winnipeg', 'Lake Superior', and 'Missouri'. The map is overlaid with a grid and has zoom controls on the left side.

Scholars GeoPortal

geo.scholarsportal.info

- Ontario Council of University Libraries (OCUL) service
- Access to open and restricted* geospatial data for Ontario and Canada
- Search, view, download, share, and export (PDF, JPG, e.g.) capabilities
- Login for off-campus access

* *Restricted = McMaster community for teaching and research purposes*

Open Data Portals

Open Hamilton (City of Hamilton)

<https://open.hamilton.ca/>

Ontario GeoHub (Province of Ontario)

<https://geohub.lio.gov.on.ca/>

Open Data and Open Maps
(Government of Canada)

<https://open.canada.ca/en>



Explore Open Data by Category



All data



Business & Economy



City Services



Census & Demographics



Culture & Tourism



Environment



Health & Safety



Infrastructure



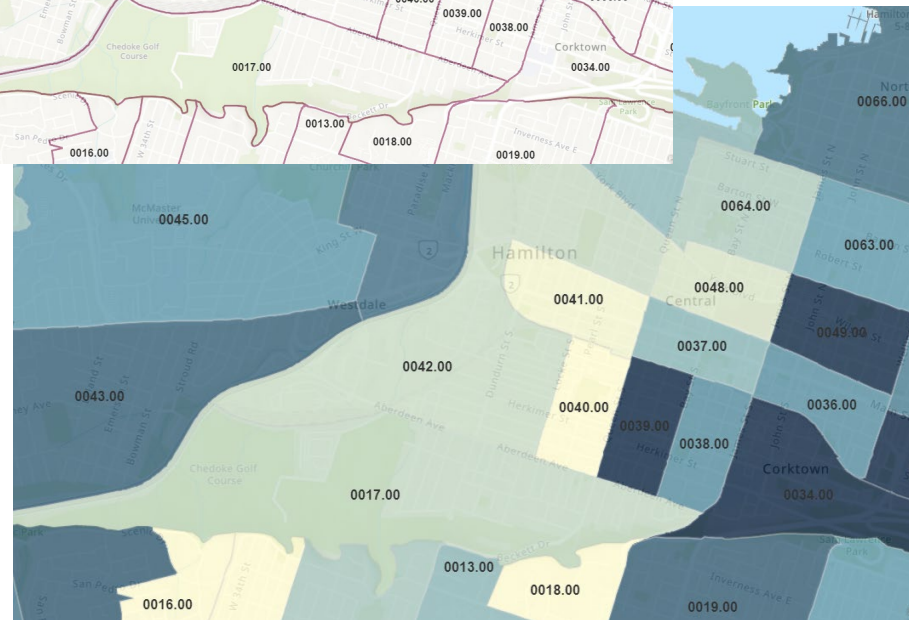
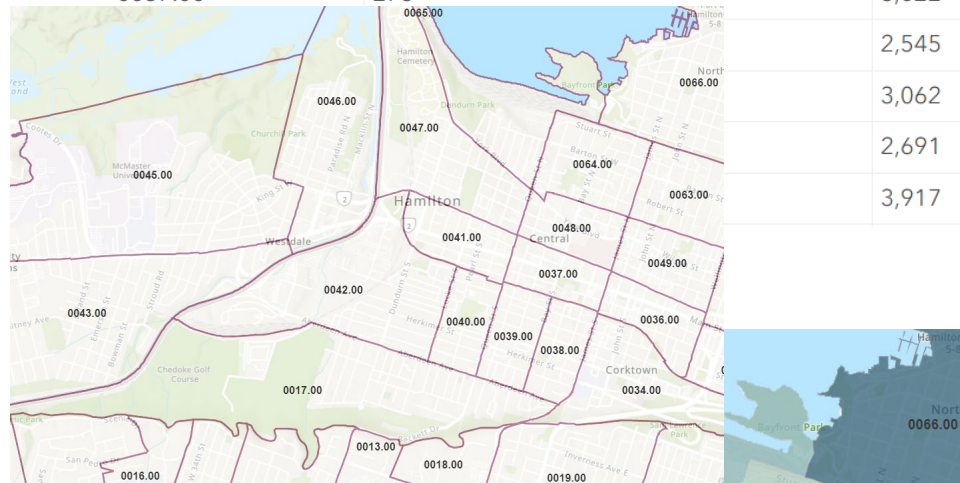
Parking & Transportation



Parks & Recreation

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

Additional Data Sources



- Research data
- Surveys
- Interviews
- Field data collection
- Dataverse / Borealis



SUPPORT AND RESOURCES

Support and Resources



CONSULTATIONS



INSTRUCTION /
WORKSHOPS



ONLINE MODULES AND
RESOURCES

Consultations

- Individual or group
- Finding and analyzing geospatial data
- Assistance with GIS software
 - ArcGIS software and licenses
 - Getting started with GIS
 - Analysis
 - Troubleshooting
 - ...



DASH

November 1 | 10:30-11:30am
Virtual Workshop

Making the Move from ArcMap to ArcGIS Pro

u.mcmaster.ca/scds-events

Instruction and Workshops

- In-class instruction sessions
- Workshops geared to specific programs or areas of research
- Sherman Centre for Digital Scholarship (SCDS) workshop
 - Data Analysis Support Hub (DASH)

<https://scds.ca/online-learning/>

SCDS
■■■■

QGIS Resources

- [LinkedIn Learning](#)
- [Tutorials](#)
- [Documentation](#)

Esri

- [Learn ArcGIS](#)
- [Webinars, conferences, and events](#)
- [Online documentation](#)

Resources



Questions?

libgis@mcmaster.ca

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

Summary of Key Resources

- McMaster University Library GIS Services
 - <https://library.mcmaster.ca/services/gis>
 - libgis@mcmaster.ca
- GIS and Geospatial Data Guide
 - <https://libguides.mcmaster.ca/GIS>
- Library Geospatial Database
 - <https://library.mcmaster.ca/maps/geospatial>
- SCDS Online Learning Catalogue
 - <https://scds.ca/searchable-online-learning/>
- Scholars GeoPortal
 - <https://geo.scholarsportal.info/>
- ArcGIS Software Request Form
 - <https://library.mcmaster.ca/services/gis>
- Learn ArcGIS
 - <https://learn.arcgis.com/en/gallery/>
- QGIS Software and Documentation
 - <https://qgis.org/en/site/>