GIS Services and Resources

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Sherman Centre for Digital Scholarship

McMaster University Library

Geographic Information Systems (GIS)

- "Computer-based tools used to store, visualize, analyze, and interpret geographic data" (CDC)
  - Geographic data – data that contains the location of features

- GIS "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
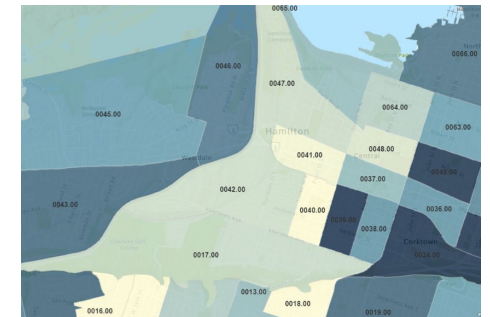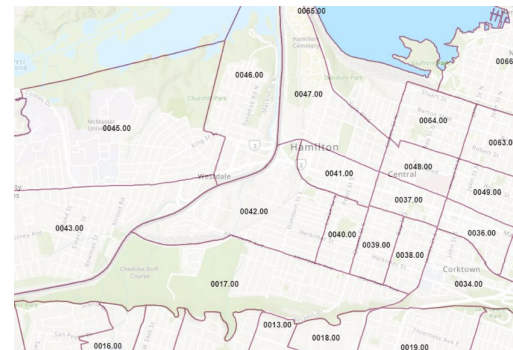
GIS Services
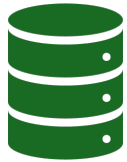
Software   Data   Support   Resource
s

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
- Download and documentation - https://qgis.org/en/site/

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

Software - ArcGIS

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

- More information:
  - Guide - ArcGIS Software at McMaster University
    - https://arcgis-mcmaster.hub.arcgis.com/

- Access:
  - Library workstations
  - ArcGIS Software Request Form
    - https://library.mcmaster.ca/services/gis

Software - ArcGIS

- Products (incomplete list):
    - o Desktop – ArcGIS Pro
    - o Specialized – Business Analyst Online
    - o Web-based – ArcGIS Online
    - o App development – Experience Builder; Storymaps; ArcGIS Hub
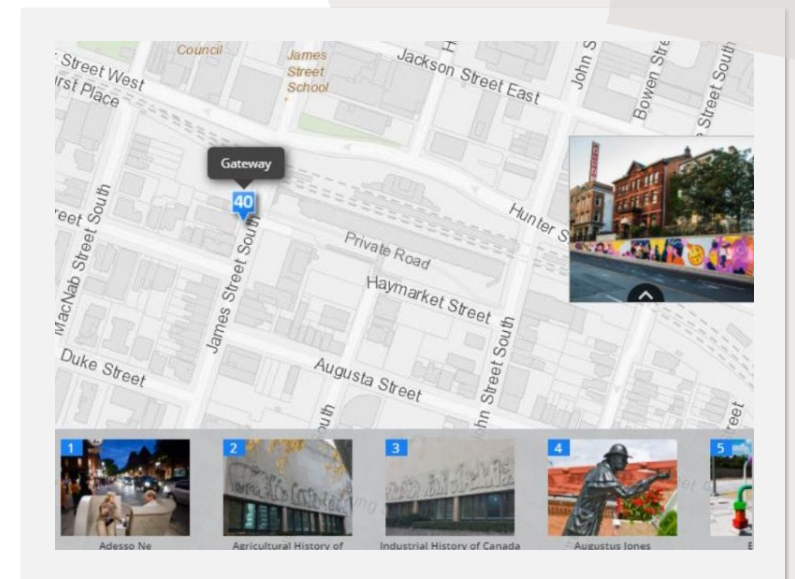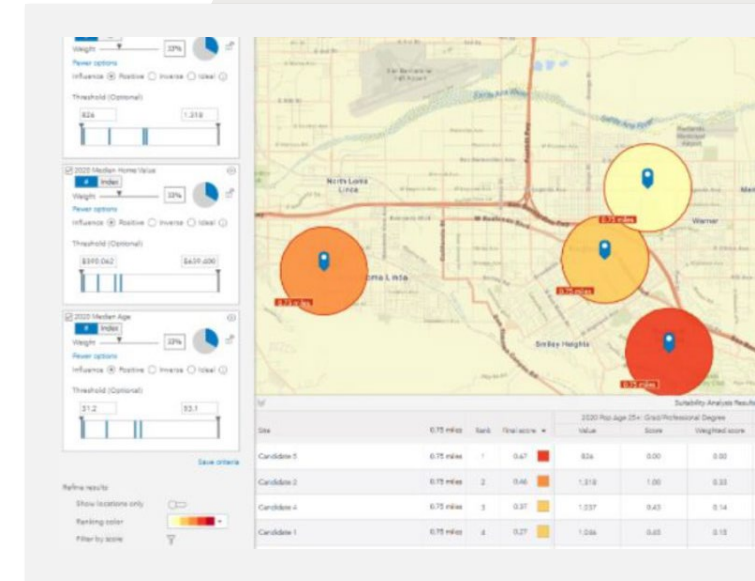
Data

- 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

Land Cover
Structures
Boundaries
Hydrography
Geographic Name
Transportation
Elevation
Orthoimagery

The National Map
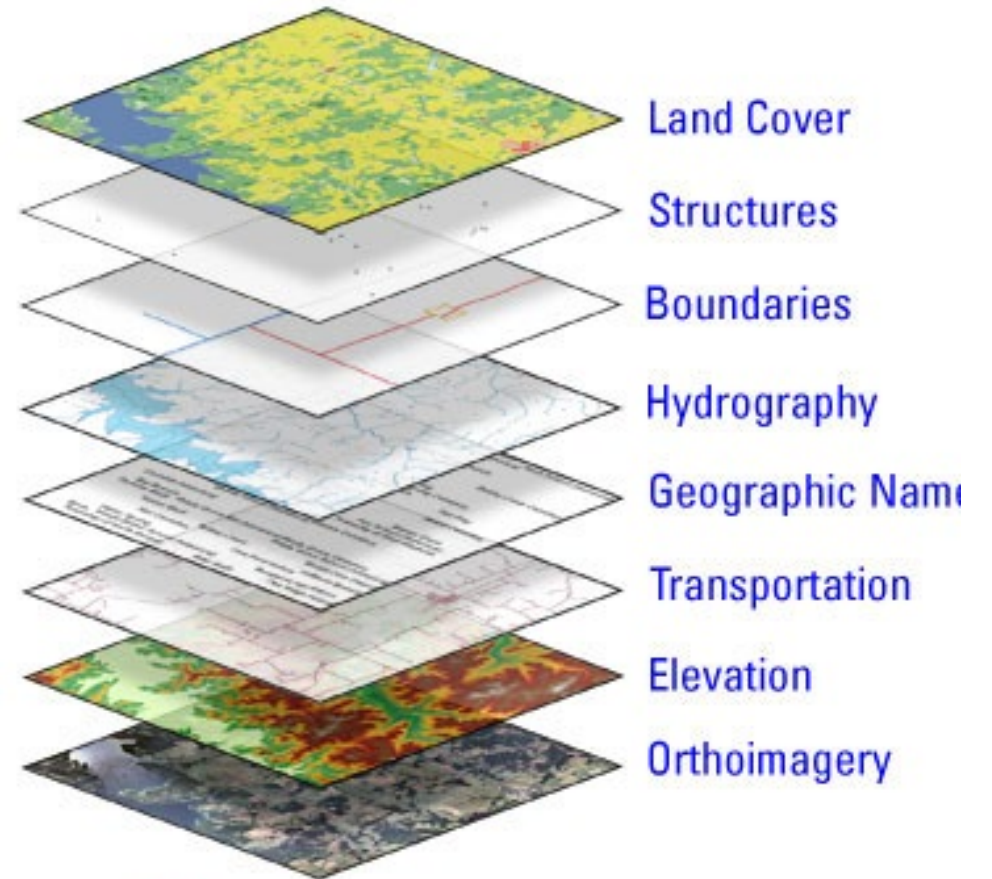
Data - Sources
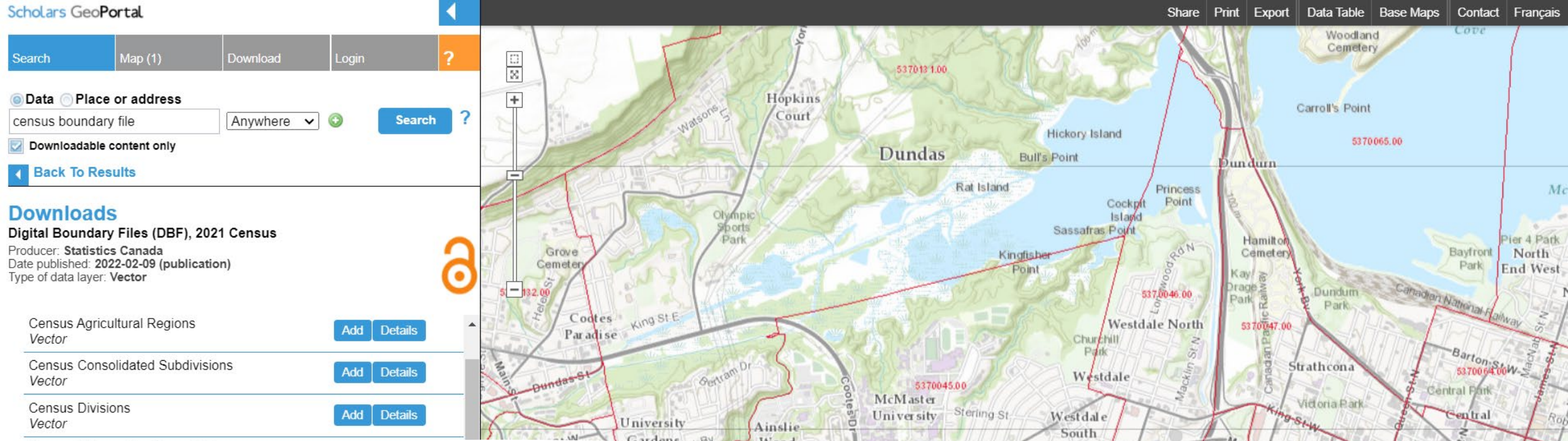
- McMaster University Library - https://library.mcmaster.ca/collections/geospatial-data

- 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

Data – Scholars GeoPortal

- 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

- https://geo.scholarsportal.info/

- * Restricted = McMaster community for teaching and research purposes

Data – University Library

- 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
- https://library.mcmaster.ca/maps/geospatial

Geospatial Data

Search geospatial data [All Subjects ▾]   [All Locations ▾]

Example: Hamilton Airphotos

Title ▲	Author	Year	Sample
"Make a Topographic Map" Utility	Ontario Ministry of Natural Resources and Forestry	2014	
1934 Air Photos of Niagara Region	Canada Department of Energy, Mines, and Resources	1934 - 2017	

Data – Open Data

- 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
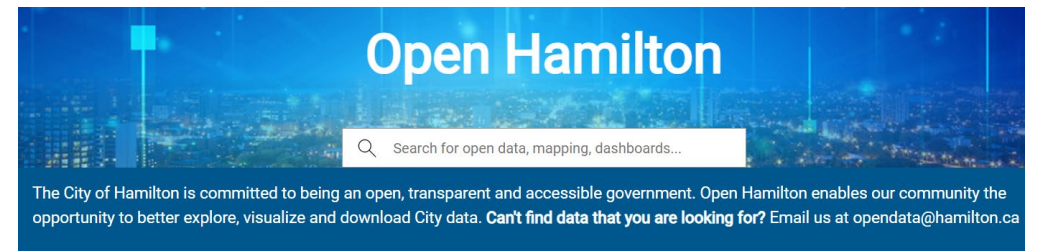
Data – Research Data

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

Support -Consultations

- Finding, processing, and analyzing geospatial data

- Learning, using, and troubleshooting GIS software

- ArcGIS account assistance (account registration, installation files, usage)

- Citing geospatial data and software

- Web mapping and using maps as digital storytelling tools

- Other questions, just ask! …

- https://libcal.mcmaster.ca/appointments/gis

Support -
Workshops and Class Sessions

- In-class instruction sessions teaching GIS and geospatial data concepts

- Workshops geared to specific programs or areas of research

- Suggestions?

- libgis@mcmaster.ca

November 22, 2023 | 10:30-11:30am
In-Person Workshop

Intro to Making and Sharing Maps with ArcGIS Pro

u.mcmaster.ca/scds-events

DASH SCDS Library McMaster University

Resources

- Library Research Guides
  - https://libguides.mcmaster.ca/
  - GIS and Geospatial Data
  - ArcGIS for Course Use

- Esri training
  - Videos, tutorials, and web courses
  - Some are freely available, others require access credentials
  - Contact libgis@mcmaster.ca to inquire about access
  - Learn ArcGIS Tutorial Gallery
    - Videos, tutorials, and tutorial series from beginner to advanced
  - Esri Training Catalog
    - Web courses (access required)

Questions?

libgis@mcmaster.ca