

Geospatial Data Extraction

- Data extraction guide

Welcome to the geospatial data extraction tool!

This slide deck will guide you through all options available and hopefully help you find what you are looking for.

The purpose of this application is to provide tailored geospatial dataset based on your needs. Here are the basic steps to extract data:

1. Select which data product to clip
2. Find and select the clipping area
3. Fill the extraction form and submit it
4. Receive email and download your package

Select data to be extracted

Overlay reference layers

Find a location

Name or Postal FSA (K1A) or NTS Find

Instructions: Map Navigation

Basemap and reference overlay are not included in the extraction package.

Want more info, click here !

CanVec

Elevation CanVec contains more than 60 topographic features organized into 8 themes: Transport Features, Administrative Features, Hydro Features, Land Features, Manmade Features, Elevation Features, Resource Management Features and Toponymic Features.

Automated This multiscale product originates from the best available geospatial data sources covering Canadian Territory. It offers quality topographic information in vector format complying with international geomatics standards. The document CanVec_Code in the Data Resources section shows the list of entities and the scales at which they are available.

Select clipping area CanVec can be used in Web Map Services (WMS) and geographic information systems (GIS) applications and used to produce thematic maps. Because of its many attributes, CanVec allows for extensive spatial analysis.

Select options and submit job

Job status

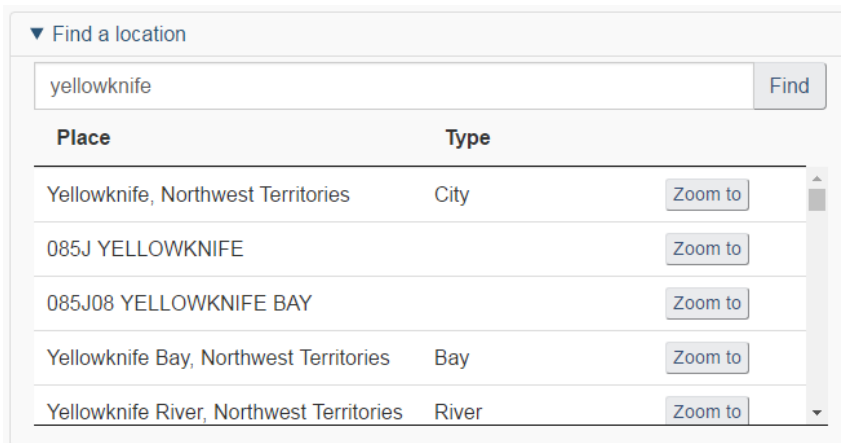
1000 km 1000 mi 125.24502, 47.03580

This section lists all data products available for a dynamic data extraction process. If you hover your mouse over the link you will see a description of the data product.

When you click on a link, the interface will switch to the *Select clipping area* section while a data extraction form is built to be presented to you in the *Select options and submit job* section.

** Note that some data products (like *Automatic Extraction Data*) do not cover all the Canadian territory. When you select such a product, a layer representing its availability limits will be automatically displayed on the map. You have to make sure that your clipping area overlaps that data limit layer. You will be able to adjust the opacity of this layer in the *Overlay reference layers* section.

Find your clipping area



Place	Type	
Yellowknife, Northwest Territories	City	Zoom to
085J YELLOWKNIFE		Zoom to
085J08 YELLOWKNIFE BAY		Zoom to
Yellowknife Bay, Northwest Territories	Bay	Zoom to
Yellowknife River, Northwest Territories	River	Zoom to

There are many ways to find your area of interest. One of them is the *Find a location* section.

You can search for the following features:

- Street addresses
- Street names
- Streets intersection
- Place names such as towns, villages, municipalities, parks
- Natural geographical features such as lakes, islands, rivers, mountains
- Postal codes (FSA code only - first three characters)
- Map numbers from the National Topographic System (NTS)

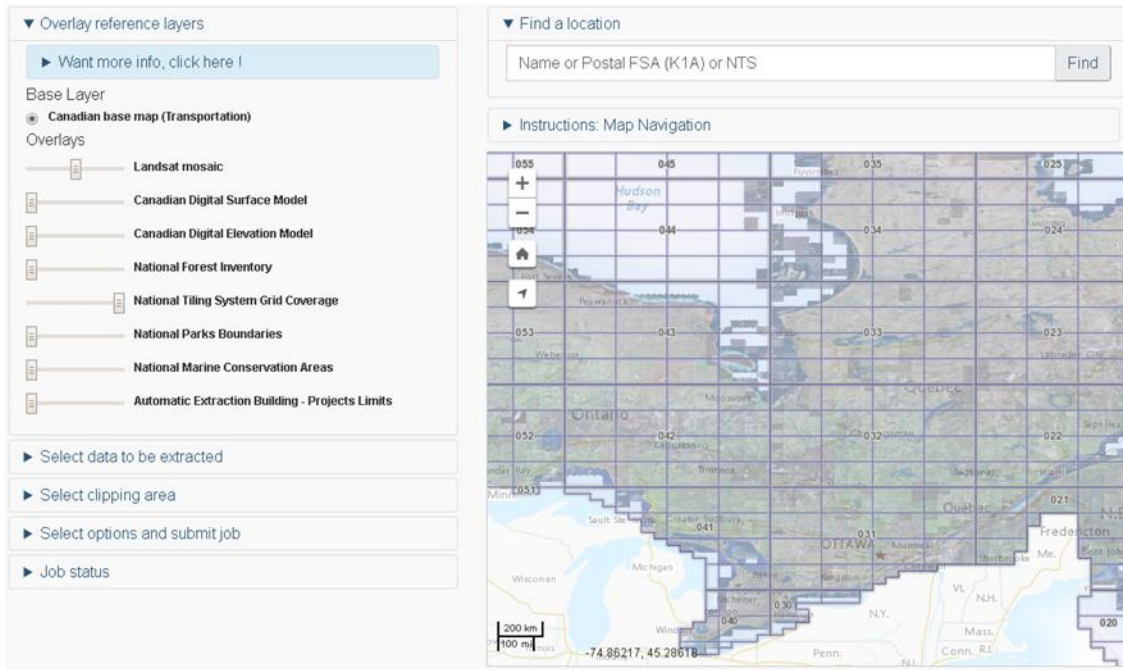
In the following example, a search for yellowknife was made. The results are presented in a table underneath the search box. Each result has a "Zoom to" button. When pressed, the map extent will be updated to show the selected area.

Another way to find your area of interest is to simply zoom in, zoom out and pan the map.

Overlay reference layer(s)

The overlay reference layers are there to provide contextual information to help you localize your clipping area and / or better delineate it.

All overlays are transparent at first. Moving the slider from left to right will increase the opacity of the overlay until it reaches a 100%.



Select your clipping area

Once you have found your area of interest you need to select the clipping area. The clipping area is defined by a series of geographic coordinates that make up a bounding box or a polygon.

Four options are available to help you select the clipping area that best suits your need.

- Current Map Extent
- Predefined Clipping Area
- Custom Clipping Area
- Area from a Shapefile

The fifth option lets you remove your current selection.

► Overlay reference layers

► Select data to be extracted

▼ Select clipping area

► Want more info, click here !

Current Map Extent

Predefined Clipping Area

Custom Clipping Area

Area from a Shapefile

Remove selected area

OK

► Select options and submit job

► Job status

Select your clipping area - Current Map Extent

▼ Select clipping area

► Want more info, click here !

Current Map Extent

Predefined Clipping Area

Custom Clipping Area

Area from a Shapefile

Remove selected area

OK

► Select options and submit job

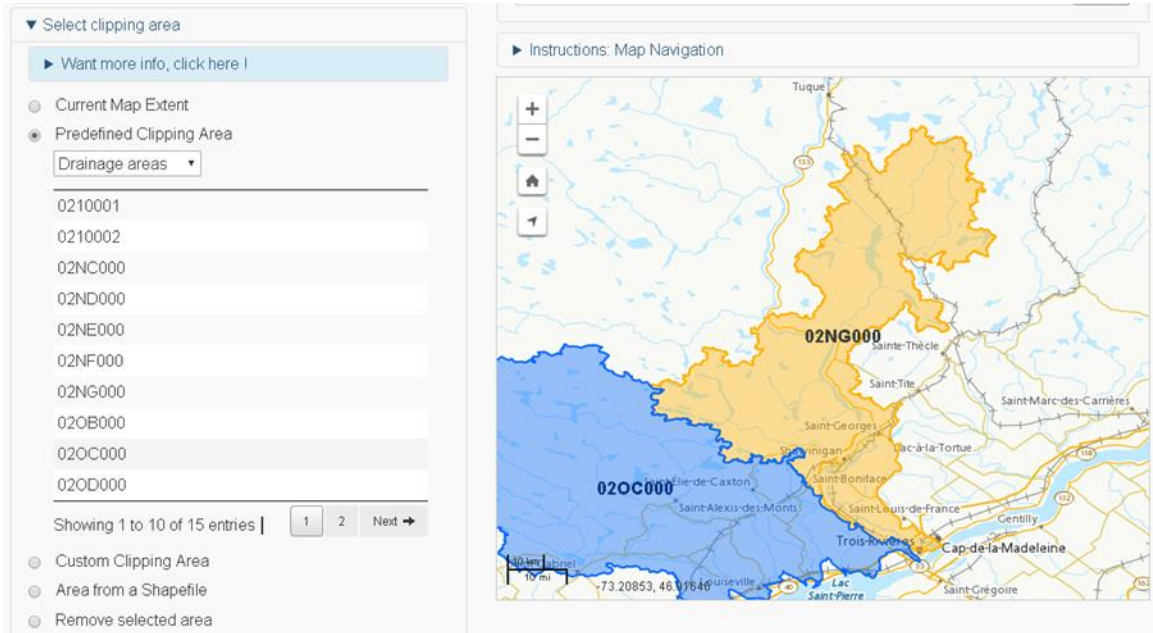
► Job status

► Instructions: Map Navigation

If you select the current map extent option an orange bounding box will cover the entire extent of the map.

For example, if you use the *Find a location* tool and search for Fogo, zoom to the town and select the current map extent your map will look like this.

Select your clipping area - Predefined Clipping Area



Predefined clipping areas are a puzzle view of the map. In other words, they each represent a different way to partition the territory.

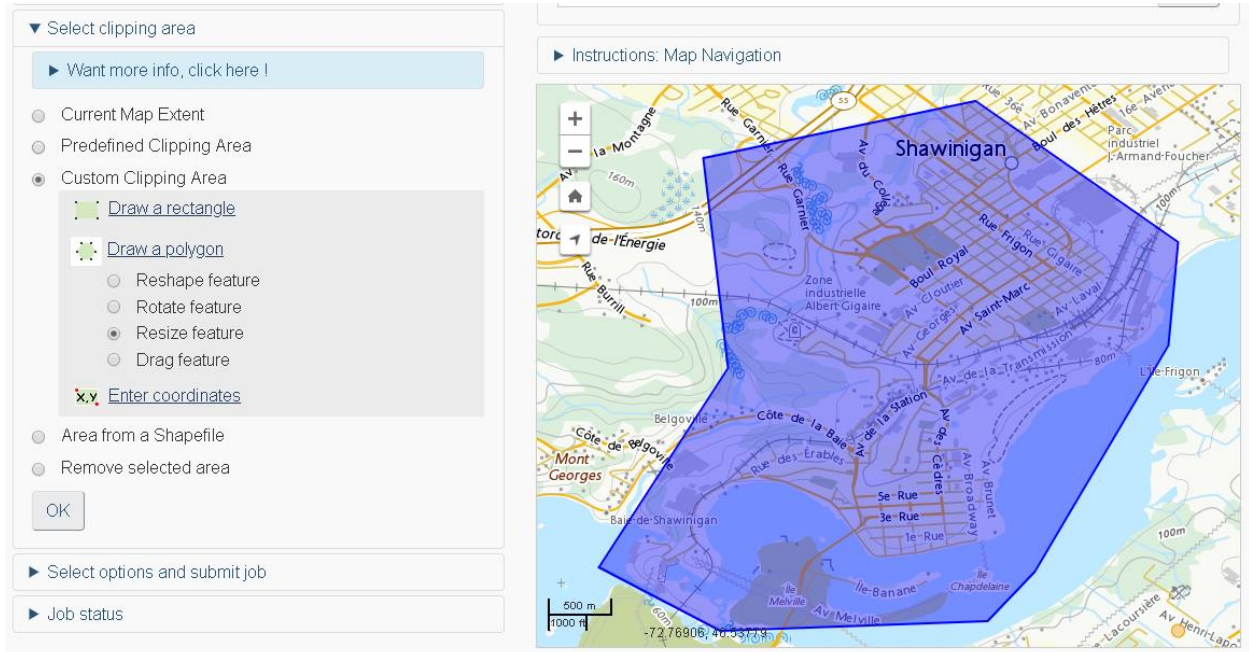
You can choose from 3 types of partition or tiling system:

16. Drainage areas
17. Landsat image footprints
18. Map sheets from the National Topographic System (NTS)

A list of tiles will be displayed under the dropdown menu. The list contains a maximum of 10 tiles that intersect the map extent. If there is more than 10 tiles that intersect the map extent you will have the possibility to page through all the results.

If you hover over the tile number with your mouse you will see a blue preview image of the tile. You can also select the tile by clicking on it and this will become your clipping area (orange).

Select your clipping area - Custom Clipping Area



Sometimes the other options are too much or not enough. With the custom clipping area tools you have complete control over the selection of the clipping area.

You can choose from 3 custom options:

19. Draw a rectangle
20. Draw a polygon
21. Enter coordinates

The first two options are similar. After selecting one of them, click on the map to start your drawing. When you are drawing a rectangle drag the mouse over the map and release the button to finish. As for the polygon, click on the map to add points that make up the polygon. Double-click to finish drawing the polygon.

Once you have completed your drawing four more options are available to modify your clipping area : reshape, rotate, resize and drag. They basically all work alike. After selecting one of them, the shape will change color and one or more orange circle will appear. Depending of the action selected click on the orange circle and reshape, rotate, resize or move the shape.

The third options will display a bounding box on the map after you enter the lower left and upper right coordinates in the form.

Select your clipping area - Area from a Shapefile

The screenshot shows a web interface with several sections:

- Select data to be extracted**: A dropdown menu.
- Select clipping area**: A dropdown menu with a blue button that says "Want more info, click here !". Below it are four radio button options:
 - Current Map Extent
 - Predefined Clipping Area
 - Custom Clipping Area
 - Area from a Shapefile** (selected)
- Area from a Shapefile** section: A light blue box with an information icon and text: "Add a zip file containing your Shapefile with all associated files (.shp, .dbf, etc.)." Below this is a "Choose File" button with the filename "test4326.zip" and a "Display on map" button.
- Remove selected area**: A radio button option.
- OK**: A button.
- Select options and submit job**: A dropdown menu.
- Job status**: A dropdown menu.

A [Shapefile](#) is a vector data exchange format. It is composed of multiple files used to describe the format, the projection, the attribute and so on.

This option only accepts Shapefile that contains polygons geometries. Your Shapefile has to be compressed in a [ZIP](#) file format before you upload the file.

First you will be asked to choose the file you wish to use as a clipping area. Once your choice is made, the file will be uploaded and validated.

A valid file means:

22. it contains one or more polygons
23. it has one of the following supported coordinate systems:
 - NAD83 UTM
 - NAD83 LAT/LON
 - NAD83 LAMBERT
24. the total calculated area is less than the maximum allowed (may vary by product)

Then the *Display on map* button will be active. By clicking on it your shape will show up on the map.

Select options and submit job

▼ Select options and submit job

► Want more info, click here !

CanVec

Data Extraction Form

* Extraction polygon coordinates in geoJson, wkt or bbox format ⓘ (required)

```
POLYGON((-73.109065526394
47.755274345679,-73.011409276394
47.755274345679,-73.011409276394
```

Maximum allowed area (km²) : 150000
Extraction zone area (km²) : 64.12

* Select one or more theme from the list ⓘ (required)

Select all / unselect all

- Lakes and rivers - Hydrographic features
- Transport networks - Transport features
- Constructions and land use - Manmade features
- Mines, energy and communication networks - Resources Management Features
- Wooded areas, saturated soils and landscape - Land Features
- Administrative Features
- Elevation features
- Map labels - Toponymic features (50K only)

* Output format choice ⓘ (required)

OGC GeoPackage ▼

* Select a coordinate system ⓘ (required)

NAD83 CSRS (EPSG:4617) ▼

* Select to clip or not the data ⓘ (required)

Yes ▼

* Select the scale of the data ⓘ (required)

1/50 000 ▼

* Email address (yourname@domain.com) ⓘ (required)

Submit

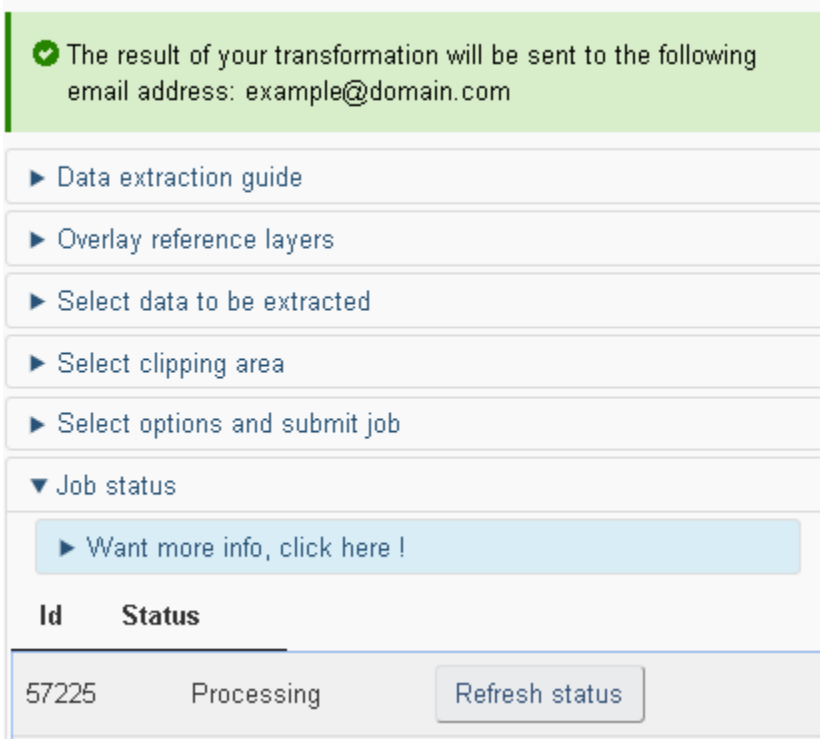
► Job status

This section is where you make choices to get the end product that best suits your need. Make sure all fields marked as required have been filled and submit your job.

After submitting your job, a message will appear on the top of the application indicating if your request was successfully submitted in a green banner as opposed to a red banner if an error occurred while transmitting the request to the processing server.

Since the data extraction process is not synchronous you will receive an email once your job is completed. The email will contain a download link to your data package and other related information on the product you extracted.

Job status



The screenshot shows a green banner with a checkmark icon and the text: "The result of your transformation will be sent to the following email address: example@domain.com". Below this are several navigation links: "Data extraction guide", "Overlay reference layers", "Select data to be extracted", "Select clipping area", and "Select options and submit job". A "Job status" section is expanded, showing a link "Want more info, click here !". Below this is a table with columns "Id" and "Status". The table contains one row with "Id" 57225 and "Status" Processing. A "Refresh status" button is located to the right of the row.

Id	Status
57225	Processing

For each job successfully submitted a new row will be added in the table. Each row contains the ID of the job, its status and a refresh button. Every time the button is clicked a request is made to the processing server to check if the status has changed. Here is a table of the different status type and a short description:

Status	Description
Submitted	The job has been received by the server but has not been added to the job queue.
Queued	The job has been added to the job queue and is waiting to be processed.
Success	The job has completed and the transformation was successful.
Processing	The job has completed, but a failure was reported while attempting to run

Status	Description
error	the transformation.
Server failure	The server could not process the job.
Processing	The job has been pulled from the job queue and is being processed.