


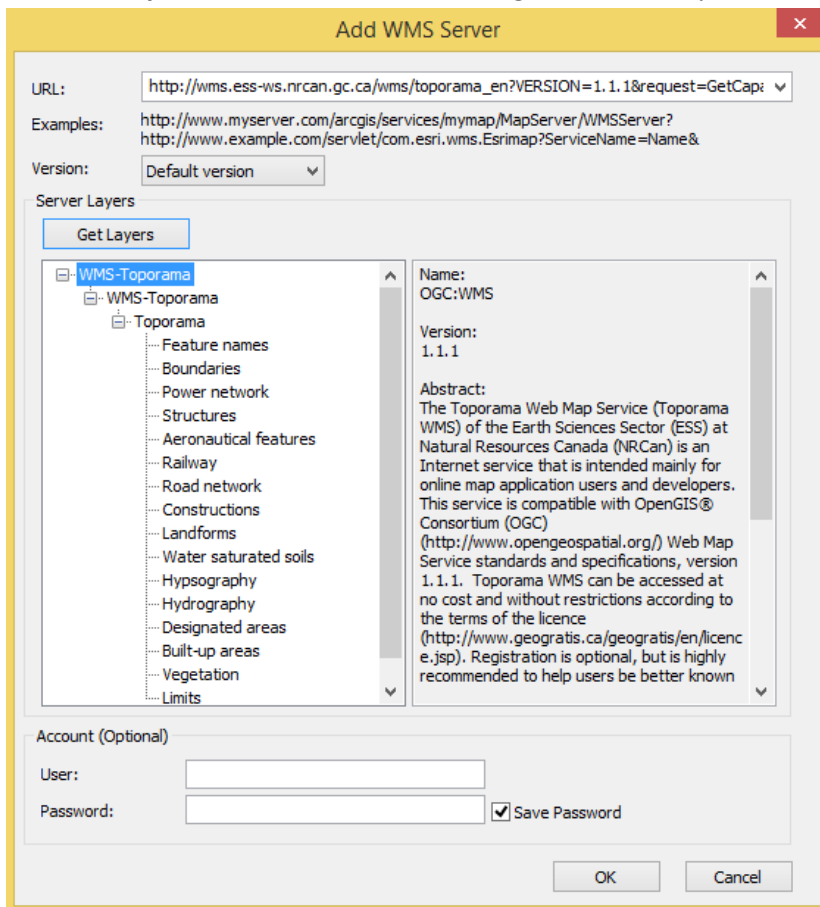
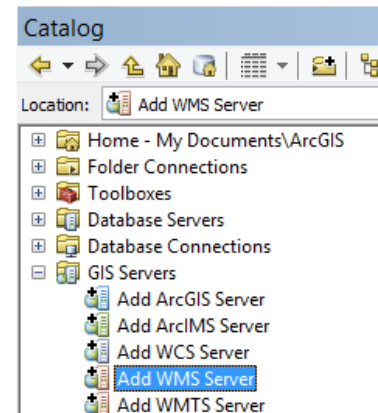
Using Web Mapping Services for Data Access


Many data sources are available through GIS Servers. These instructions outline the required steps for connecting to a web mapping service (WMS) using Natural Resources Canada's Toporama Map service as an example.

Finding a Web Mapping Service (WMS)

When searching for GIS data you may come across resources listed as WMS (web map services). A link will be provided but what do you do with it?

1. Copy the WMS link from the web browser (for this example copy http://wms.ess-ws.nrcan.gc.ca/wms/toporama_en?VERSION=1.1.1&request=GetCapabilities&service=wms)
Toporama (Canadian topographic themes 1:50k – 1:250k)
2. Run ArcMap and open the Catalog window , if necessary.
3. Double-click the **GIS Servers** connections and double-click **Add WMS Server**.
4. Paste the URL in the first box. HINT: hit Ctrl-V on the keyboard.
5. Click **Get Layers** to connect and see a listing of available layers.



6. Click OK.
7. There is a new connection available under GIS Servers in ArcCatalog.  [WMS-Toporama on wms.ess-ws.nrcan.gc.ca](http://wms.ess-ws.nrcan.gc.ca)
8. Click the plus sign to expand the available folders and layer services.
9. You can drag a single layer onto the map or add all layers by dragging a directory. Drag the Toporama directory to the map.

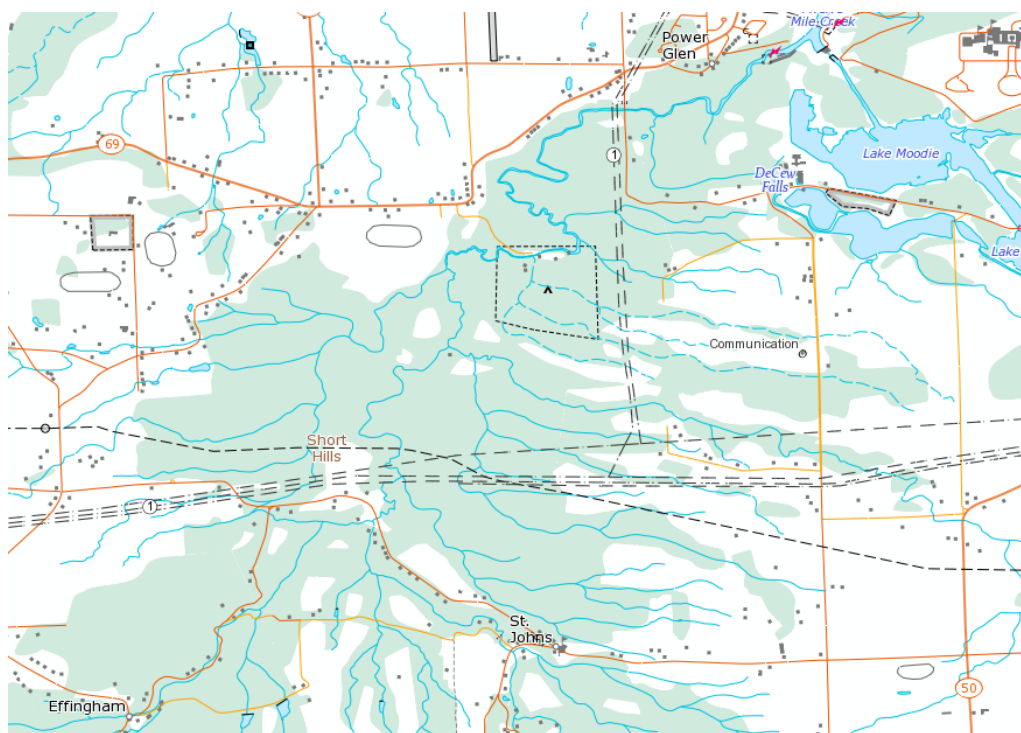
NOTE: Depending on the WMS, layers may have visibility restrictions based on scale. Others may have layers turned off in the initial view. Zoom and pan to explore.

NOTE: If prompted with a warning about the Geographic Coordinate System, click OK.

Access to data layers hosted on a GIS Server such as described here requires an internet connection. Although you can save a map document with the server data visible, you will have to re-establish the network connection the next time you open the map.

Most public web mapping services also offer the raw data files. Email maplib@brocku.ca for assistance.

Below is a sample of the Toporama data layers zoomed to the Short Hills area near Brock.



Some of our favourite servers are:

Toporama (Canadian topographic themes 1:50k – 1:250k) http://wms.ess-ws.nrcan.gc.ca/wms/toporama_en

GeoBase (National Scale 1:1million – 1:5 million) http://ows.geobase.ca/wms/geobase_en

Canada Base Map (CBM) <http://geogratis.gc.ca/maps/CBMT?service=wms&version=1.1.1&request=GetCapabilities>

Niagara Peninsula Conservation Authority Large Scale Water Resources (1:2k – 1:5k)
<http://gis.npca.ca/WaterResources/wms>

Land Information Ontario: <https://www.javacoeapp.lrc.gov.on.ca/geonetwork/srv/en/main.home> (click Public Web Services from the left menu)

ArcGIS Online Imagery Services <http://imagery.arcgisonline.com/arcgis/services>