



An Interoperable Geospatial Portal for Agriculture: “Map Your Farm”

Today’s farmers work within a complex regulatory framework and require access to data from many different government agencies.

Location of groundwater aquifers, fill/flood zones, wetlands, and soils..., these are all examples of types of data that are important to the agricultural specialist who is responsible for the stewardship of the land, through best practises, conformity with government regulations, and supported by incentive programs. But the collection and mapping of these data are the responsibility of several different government organizations: the municipality, the conservation authority, the province and the federal government.

The County of Oxford has created an internet mapping application that integrates these datasets from the appropriate sources, and provides dynamic maps with the ability to overlay the layers of data. This application, “Map Your Farm” is available to farmers, agricultural consultants, government organizations, academics, and others at www.maps.county.oxford.on.ca/mapyourfarm

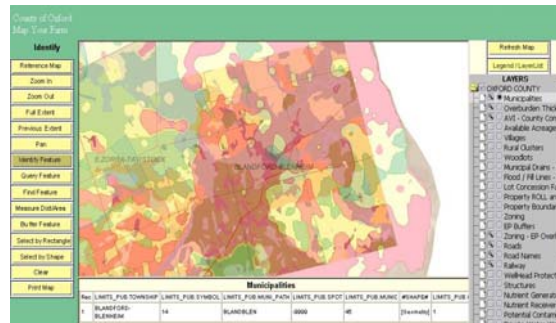
In order to offer this internet portal, the County previously needed to acquire digital geospatial datasets from Conservation Authorities, provincial ministries and federal government departments. This acquisition of data was time-consuming, as it required negotiation of data licenses with each organization, transfer of data sets, and on-going provisions to ensure that updates to the data are provided to the County to maintain currency of information.

Through an innovative project funded by GeoConnections, the County of Oxford, together with a private sector partner, ESRI Canada, and several government sector organizations have adopted standards in geospatial web service interoperability, endorsed by the Canadian Geospatial Data Infrastructure (CGDI). The project has resulted in the re-engineering of the Map Your Farm application to support Web Map Services (WMS) and Web Feature Services (WFS). It has also supported the creation of WFS and WMS services by project partners to host data that was previously hosted at Oxford County.

Now, while Oxford County’s “Map Your Farm” remains the window into this data, many of the datasets are hosted by other government organizations, and offered through their own web map services.

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The result is that farmers and others can easily view and print maps of their properties, using information available by web map services hosted by many different government organizations.



Oxford County's "Map Your Farm" is the window into this data, published to the web by each custodial organization.

The conservation authorities' data will be hosted by the **Grand River Conservation Authority (GRCA)** and the **Upper Thames River Conservation Authority (UTRCA)**. This allows each CA to update the data and the supporting documentation that describes the data (metadata), according to their own schedules. When such updates are made, the Map Your Farm application is ensured of displaying the most current data. This gives each organization complete control over the data offered, including the symbolization and attribution of the data.

The Province of Ontario, through **Land Information Ontario (LIO)**, provides mapping services in both WFS and WMS formats hosting a large number of spatial datasets. For example, Land Information Ontario hosts the "soils" dataset that has been produced and maintained by the **Ontario Ministry of Agriculture and Food (OMAF)**.

The federal government, through **Agriculture and Agri-Food Canada (AAFC)**, host WFS and WMS services to provide agricultural data, including Canada Lands Inventory data.

ESRI Canada has created the administrative framework tools in order for the County of Oxford to maintain the application. This includes tools to allow County staff to identify the map services that will be offered in the portal, to handle components such as legends posted by remote map services, and to access metadata from data provider sites.

The Canadian Geospatial Data Infrastructure (CGDI) is the technology, standards, framework data and policies necessary to harmonize all of Canada's geospatial data bases, and make them accessible on the internet. CGDI is facilitated by **GeoConnections**.

