Ontario
Quarterly Newsletter
January 2008
LAND INFORMATION ONTARIO

INSIDE THIS ISSUE...

NEW DATA IN THE WAREHOUSE

New data was added to these existing packages:

Enhanced Flow Direction Grid – Provincial

Southern Ontario Land Resource Information System (2000-2002)

MOST REQUESTED DATA SETS

Water Polygon Segment
Water Line Segment
Wetland Unit
MNR Road Segment
Contour Line
ANSI
Lot Fabric Improved
Cottage Residential Site
Railway
Trail Segment

Coordinator's Update

By Raphael Sussman

Welcome back! We hope that you had a great winter break and that the New Year will bring only good things to you and yours. As always, we appreciate newsletter feedback and encourage contributions and suggestions, about LIO or any of our communications. Contributions for consideration in an upcoming issue should be sent to Favelle Maschke at favelle.maschke@ontario.ca.

In our Technology update, you will note that there have been a number of changes implemented and planned to LIO's technical infrastructure. Data loading to the raster warehouse is continuing and a significant upgrade to our data subscription system is scheduled for mid-January, which will result in improved performance.

We are also pleased to announce that a new Ontario Parcel Master Agreement was signed in December, extending the maintenance on the Ontario Parcel until April 2012. This will be good news for all users of the Ontario Parcel, whether they receive their regular updates from Teranet, MPAC, or MNR.

The LIO partnership arrangement for the collection of ortho-photography in Eastern Ontario, called Digital Raster Acquisition Project for the East (DRAPE) is now looking for participants. The more partners we have, the lower the overall project cost will be for everyone. If you are interested, please give us a call before we finalize the geographic boundaries for this initiative.

This issue's feature article describes the Web Feature Service (WFS) pilot project undertaken by GeoConnections Canada. This project involved most of Canada's provinces and territories, including Land Information Ontario. As the largest experiment of its kind in the world, this project examined the true potential of using standardized geospatial Web Services to perform day-to-day geospatial work through the Internet.

Raphael Sussman

Did you know...

LIO supports over 300 organizations to share and catalogue geospatial data within Ontario, across Canada and all over the world.

Ontario Parcel Report

By Carla Jordan-Cooke

It has been five years since the Ontario Parcel Master Agreement was collectively signed by Teranet Enterprises Inc., the Municipal Property Assessment Corporation (MPAC), and the Ministry of Natural Resources (MNR). The Ontario Parcel database is a standardized, integrated representation of assessment, ownership and Crown parcel mapping for land use and business planning, assessment, taxation, and land registration.

A recent survey from our list users indicated the value of the Ontario Parcel. As a result, MNR has taken up the option to extend the maintenance on the Ontario Parcel until April 2012. The new agreement allows licensed users to print and distribute secured Ontario Parcel PDFs (portable document format) in addition to paper maps. The PDF's are strictly limited to view and print, with no editing allowances.

To date, there are 58 Ontario Parcel licensed users signed with MNR, including ministries, conservation authorities and municipalities and other list users.

Ontario Parcel data is critical to many aspects of future planning. Parcel data is used to determine sensitive boundaries, protect our drinking water and assist in highway planning, to name a few. For example, Ontario Parcel data:

- is used to verify information such as tenure and boundary data,
- locates properties,
- improves the accuracy of existing data layers,
- determines boundaries (i.e. Provincial Parks and Conservation Reserves) for planning purposes,
- manages electoral boundaries and addresses,
- identifies neighbouring parcels along highway corridors (useful for highway expansion and maintenance purposes).

In addition, Property Identification Numbers (PIN) can be used in conjunction with Teranet's GeoWarehouse™ to provide additional information (such as a landowner's name). Ontario Parcel data also links the assessment layer to MPAC information to determine owner contact information.

Did you know… Ontario Parcel data assists in the development of Source Water Protection Plans?

Source Water Protection is a program which protects major drinking water sources through the development of source protection plans in many watersheds across Ontario. Conservation Authorities and municipalities have the legislated lead to develop Source Water Protection Plans. The Ontario Parcel geometry data is being used to create the plans by locating water-related features, such as wells, where other positional data is missing or inadequate.

For more information on the Ontario Parcel, please contact me at carla.jordan-cooke@ontario.ca

Welcome New OGDE Members

University of Minnesota Duluth
Natural Resources Research Institute
Township of Madawaska Valley
Township of Bonnechere Valley
Town of Kirkland Lake
Township of Greater Madawaska
Town of Petawawa
Wikwemikong Unceded Indian Reserve No 26
Townships of Head, Clara & Maria
United Chiefs and Councils of Manitoulin
Township of Admaston/Bromley
Township of Springwater
Town of Arnprior
Ministry of Economic Development and Trade
Town of Grimsby
Manitoulin Planning Board
Township of Brundenell, Lyndoch and Raglan
Town of Saugeen Shores
OnTrace Agrifood Traceability Inc.

Click here for a complete membership listing

Technology Report

By Greg Bay and Bruce Wurtele

The previous quarter has been busy on the technology front. One of the main initiatives for the development team has been the final testing and coordination of the next version of the Land Information Data Subscription service (LIDS). This upgrade is a major release, focusing on performance improvements (data extracts will be significantly faster) and a redesign of the packaged products ordering interface. Significant enhancements within our security and publishing systems are also included with this implementation. The LIDS 2.3 upgrade was successfully launched January 12, 2008.

Data loading continues for our Imagery Web Map Service with most products to be loaded by the end of January. A revised schedule is available upon request. We also have a number of activities in progress to improve the performance of our Web Map Services, both from the infrastructure and the application perspective. Other activities include the testing of our improvements made to the GeoCoder.

Lastly, a strategic review of the LIO application portfolio is underway. This review will evaluate business needs and lay the groundwork for improvements to the functionality, performance, and integration of LIO applications. This application review will also include the support of new services.

As a first step to this multi-year project the team will be soliciting input from clients, evaluating application architecture options, and laying out a roadmap for the renewal of the application portfolio. Following this, we will move towards a new application suite through a number of redevelopment projects.
For more information contact Andrea Bonner at andrea.bonner@ontario.ca.

For more information on these or any other activities, please contact greg.bay@ontario.ca or bruce.wurtele@ontario.ca.

Ontario Trail Network

By Carol-Anne Albertson

In October, 2005, the Ministry of Health Promotion (MHP) established the Ontario Trails Strategy. This five year plan was created for the management, promotion and use of trails, toward a healthier and more prosperous Ontario.

To support the objectives of the Ontario Trails Strategy, Land Information Ontario has agreed to facilitate the collection and collation of trail information across Ontario into a consolidated spatial database called the Ontario Trail Network (OTN). Since the OTN will include mandatory and optional attributes describing trails across the province, Land Information Ontario has been working with Trail users and managers to define the data standards, collection methods, and long-term data maintenance approaches for trail data.

If your organization is involved in trails in any way, we encourage you to help us capture data in digital form, and share, update, and maintain the OTN by entering into the Ontario Trail Network Agreement.

The Ontario Trail Network data will be accessible to members of the Ontario Geospatial Data Exchange as well as to the public through the Ministry of Natural Resources Base Data Unrestricted Use Licence.

For more information contact: Carol Anne Albertson at (705) 755-2175 or email: carolanne.albertson@ontario.ca

❖ View the Ontario Trail Network Agreement

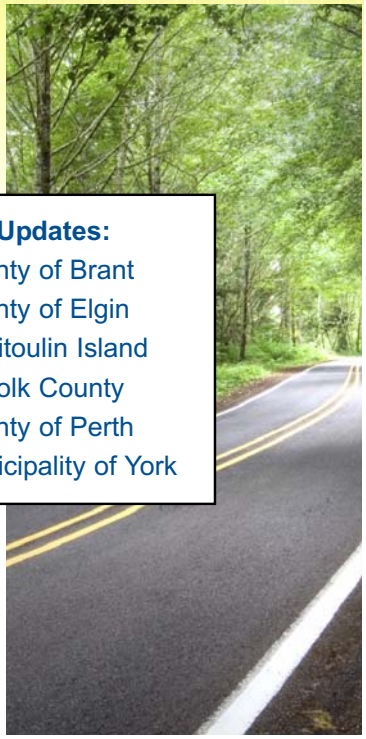
Related Links:

- Ontario Trail Network Fact Sheet
- Ontario Trail Network Agreement Summary
- Ontario Trail Network website
- Ontario Geospatial Data Exchange Agreement

Ontario Road Network

By Carol-Anne Albertson

The Ontario Road Network (ORN) is continually updating and improving its data. Recent updates to the ORN LRS and segmented data sets include new and improved geometry and new and revised street names and address ranges. In addition, 407 Express Toll Route (ETR) overhead gantry points have been updated in the ORN LRS.



ORN Updates:
- County of Brant
- County of Elgin
- Manitoulin Island
- Norfolk County
- County of Perth
- Municipality of York

The ORN is available through the Ontario LIO Warehouse as either a Linear Reference System (LRS) or a segmented data set. The segmented version of the ORN is derived from the original LRS data set and is suitable for routing and context mapping. The segmented data set currently provides attributes such as street names, alternate street names, address ranges, road class, and direction of traffic flow.

The ORN geometry is currently available through the National Road Network (NRN) GeoBase Portal. The ORN will be providing updates to geometry as well as street names and addresses to the GeoBase Portal in 2008.

We have completed our evaluation of the ORN Linear Referencing System and are in the process of meeting with our ministry partners to ensure that ORN data continues to meet business needs. Through database remodeling the LRS will be more efficient for navigation and application functionality. It is expected that the ORN LRS will move to this new data model in the summer of 2008.

For more information regarding the Ontario Road Network, contact carolanne.albertson@ontario.ca

Feature Data Set - Provincial Bore Hole

The Provincial Borehole database is currently being loaded into the Warehouse. Borehole data records provide information about individual boreholes, such as who drilled it, why it was drilled and various characteristics at different depths down the hole. Historically, different types of borehole databases have been maintained separately, even those under the control of the province.

This new database will combine borehole data into a common format from different business areas such as water wells, geological, geotechnical, transportation and scientific work. This data will come from various sources across the provincial government and, from its partners and stakeholders.

The combined database is used to understand the makeup of the earth below the surface, especially factors related to groundwater, such as aquifers. This is of special importance to the Source Water Protection program, which is one of the first users of this integrated dataset.

Developed by Water Resources Information Program, the Borehole database was designed and initiated in consultation with a range of interest groups and stakeholders with key support from MNR and the Ontario Geological Survey, MNDM. For more information contact wrip@ontario.ca

Digital Imagery

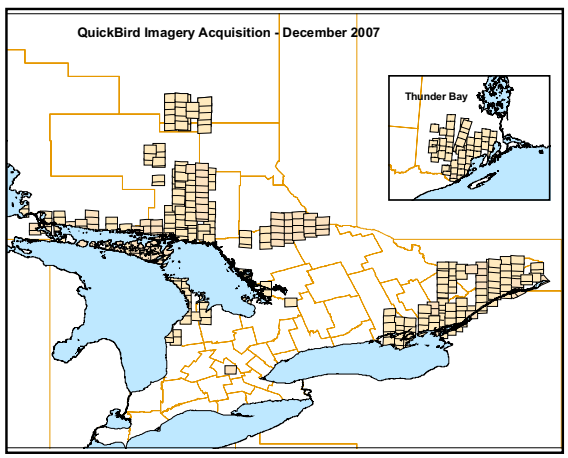
By Mike Robertson

Looking back, 2007 was an exciting and challenging year for Ontario imagery. Key successes include the establishment of funding partnerships that provided the ability to acquire high resolution imagery at a very low cost. Imagery acquisition requires extensive planning due to contracts, legal agreements, data standards and storage requirements. The need for high resolution imagery has allowed both public and private sector organizations to collaborate on projects providing benefits to Ontarians in regards to health, safety, environment, municipal planning and infrastructure development.

We are fortunate to have a strong team of partners, and we would like to thank everyone involved in the coordination and planning of our Imagery Projects.

QuickBird Acquisition

As QuickBird satellite imagery comes in, we have been working hard with our providers to "fill in the gaps" where cloud cover and haze has been an issue. Data is currently being processed for partner distribution. For details, see the map below.



Digital Orthophotography Projects: Simcoe/Muskoka/Dufferin

We are looking forward to the completion of the leaf-off imagery Digital Elevation Model information in County of Simcoe, District of Muskoka and a portion of the County of Dufferin during the spring of 2008. Due to an early leaf – out last spring, this project was not completed in 2007. The imagery in these regions should be available later in the year.

Forest Resource Inventory

Data from the Forest Resource Inventory project features trees in full leaf. Funded by the Forestry Future Trust Fund, this unique imagery will identify forest stands and help update Forest Management Plans across the province.

MNR is currently working on an access policy for the forestry data. Due to the timing of the contract, weather conditions and aircraft availability, not all areas were captured. Those areas will be top priority this coming season. Acquired forestry data will not be ready for distribution until the summer of 2008, as there is some additional processing and quality control work to be done prior to distribution. More information will be provided once it is available.

Digital Raster Acquisition Project for the East

One of LIO's newest projects is the Digital Raster Acquisition Project for the East (DRAPE). This project is in the process of posting a Request for Proposal (RFP) to acquire 20 cm true colour digital Orthophotography for a broad area in eastern Ontario. After the proposals are reviewed, costs and associated funding requirements will be determined.

Organizations are also being asked to express their interest in acquiring eastern Ontario digital elevation data. Elevation data will be included as a requirement in the RFP.

Decisions on the extent and products will be determined by the partners and amount of funding being put forward by the partnership. We are looking for more participants for this project, and encourage your involvement. For more information on DRAPE, view this presentation link:

❖ **Imagery Projects in Eastern Ontario**

Other Imagery Projects and Opportunities

SWOOP II

Planning for SWOOP II is underway, and will involve the original partner organizations that expressed an interest in getting existing imagery updated in 2009. SWOOP II will be a major imagery project in southern Ontario and we will need to build partnerships and funding.

Organizations who may be interested in participating in imagery projects are encouraged to contact Mike Robertson at mike.robertson@ontario.ca for more details.

Pulling it all together….
Groundbreaking GIS Collaboration through Web Services

By Terry Fisher, GeoConnections

At a highly anticipated Web cast held on November 30, 2007, a government-industry team demonstrated the integration of geographic information, linking remote data sets in real time to perform actual work. The once elusive quest for data integration has now become a reality, paving the way for future innovation.

As the largest project of its kind in the world, Canada once again shone as a leader in the Geographic Information Systems field. This project created so much interest that LISAsoft, one of the participating private sector partners, hosted a special repeat Web cast for Australia and New Zealand to deliver a presentation in their time zone.

Access to current, standardized geospatial data is vital in every day life and decision making. Correct data is even more important in emergency situations. For example, current data is critical for evacuation plans in the event of an industrial accident involving toxic material, natural disasters and security.

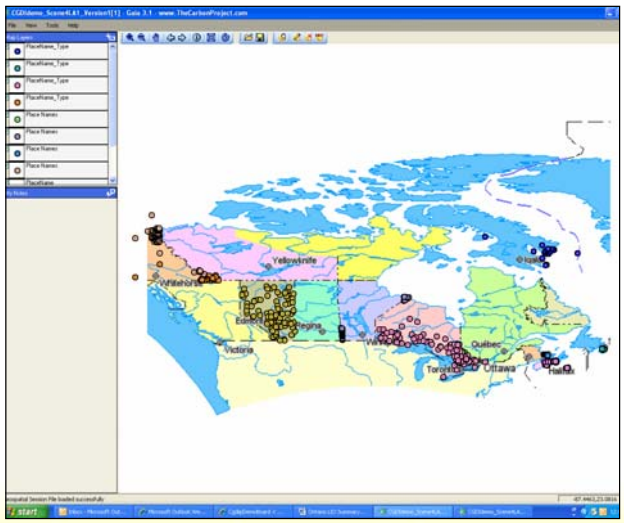
With the aim to improve access to data and services, the Canadian government partnered with provinces, territories, educational institutions, organizations and the private sector to develop the Canadian Geospatial Data Infrastructure (CGDI). The CGDI is the collection of technology, standards, access systems and protocols to increase the use and sharing of location-based (or "geospatial") information and technologies online. The CGDI actively encourages the use of standards established by the Open Geospatial Consortium (OGC).

The main objective of the CGDI Interoperability Pilot (IP) project was to test Web Feature Services in a real situation. These advances enable decision-makers, researchers, and other users of location-based data and technologies to find, share and use these geospatial resources online quickly and easily. A secondary objective was to develop a collaborative technical network with CGDI partners to advance the development of the CGDI.

The CGDI IP project, led by GeoConnections, included public sector and private sector participants. Land Information Ontario (LIO) was one of the organizations that helped develop the scope, objectives and implementation plan for the CGDI IP project. In addition, LIO contributed data to the project.

Public sector participants came from Natural Resources Canada, Statistics Canada, Environment Canada, Elections Canada and government organizations in Newfoundland and Labrador, Nova Scotia, Ontario, Quebec, Saskatchewan, Alberta and British Columbia.

Private sector participants came from Open Geospatial Consortium, Inc.® (OGC) (Wayland, MA.,United States), CubeWerx (Gatineau, Quebec), LISAsoft Pty. Ltd. (Sydney, Australia), The Carbon Project (Burlington, MA., United States), Sunertek (Rimouski, Quebec) and Galdos Systems Inc. (Vancouver, British Columbia). Continued next page...



Above: The CGDI IP project demonstrates to an International audience 100 place names accessed in real time over the Internet from several provincial and territorial servers.

Continued from page 6

How it came together…

The CGDI IP project made three types of GeoBase data available from a single point of contact, using WFS. This data was accessible from their individual remote locations at the provinces or territories. The data sets included geographic names, the national roads network and administrative boundaries.

The Web Feature Service showcased many use case scenarios, such as the access and download of closest-to-source data; real-time transactional updates of provincial databases; and information access to support an emergency response situation.

The CGDI IP project clearly demonstrated that Web Feature Services (WFS) created to OGC standards will now work in real situations. Now that the technology has been proven, the next step will be to move from a pilot environment to a production-level implementation. The project also succeeded in building a collaborative team of CGDI partners to advance its development.

For more information on the CGDI IP Project visit the GeoConnections Website: www.geoconnections.org

Land Information Ontario is a proud participant of the CGDI IP project. For more information on LIO, please visit our website: www.lio.on.ca

Behind the Scenes…

Six Reasons to call our LIO Support Line

Land Information Ontario provides general and technical support to members of the Ontario Geospatial Data Exchange (Data Exchange).

Software Support: LIO Support offers assistance for all Land Information Ontario computer applications. If you are experiencing technical difficulties, LIO Support will investigate and work towards a resolution.

Metadata Support: LIO provides free tools to capture geospatial digital assets and publish metadata to the online metadata search catalogue. If data is not available through a LIO Warehouse metadata search, LIO Support will attempt to locate and provide the data to you.

Data Access: Members of the Data Exchange are given access to the LIO Warehouse through an account registered in the Land Information Data Subscription Service (LIDS). As new datasets become available, LIO Support ensures that Data Exchange members have access to new products within the Data Exchange. LIO also provides access to authorized datasets through web services.

Data Sharing: LIO Support encourages the exchange of data between member organizations. This exchange can take place through the LIO Warehouse in the form of structured data which conforms to the LIO Warehouse data model or packaged products. If the data is not available through the LIO Warehouse, LIO Support will act as a liaison between member organizations to fulfill data requests.

Data Security: Land Information Data Subscription Service (LIDS) accounts are set up with basic access privileges to unclassified data. LIO Support works with the Information Owner to confirm and protect the level of access through restricted privilege sets. Access to sensitive data is managed by the LIO Support network.

Data Use: LIO Support responds to inquires regarding the terms and conditions in data agreements or licenses. Data distributed from the LIO Warehouse is supported by the LIO Support team. If you suspect that there is an issue, LIO Support will investigate and work towards a resolution.

LIO Support can be reached within business working hours at (705) 755-1878 or by email at lio@ontario.ca.