

Surveyor General Report 2023





Table of contents

Message from the Surveyor General	3
Shifting geodetic datums	4
Crown Survey Records reach digital milestone	6
Harnessing Artificial Intelligence for legal descriptions	7
Crown Lands Survey Unit	8
Survey records for new audiences	10
Our records	11
Support to Ministry of Indigenous Affairs	12
Parcel Mapping and Georeferencing Unit	13
Ontario Parcel and Crown Land Tenure	16
Ontario Geographic Names Board	14

Message from the Surveyor General

In 2023 the Office of the Surveyor General (OSG) continued to focus on modernization of the work that will help us respond to emerging priorities and the increased demands placed on the team. Business process mapping exercises have revealed opportunities for us to better serve our clients by adopting new technologies and techniques.

However, as we modernize, we reflect on the value and historical importance of work done in the past. This was especially evident while digitizing records within our collections. Lands and opinion files provide valuable insight into decisions made in the past and are an invaluable research resource in our office. Making these files available digitally is challenging due to the variety of content but once completed, this information will be available to OSG staff anywhere they have an internet connection reducing decision-making timeframes and creating workflow efficiencies.

Our ongoing strategic review of the roles and responsibilities of the Office of the Surveyor General has identified ways to improve the services we provide within government and to the public for Ontario's vast Crown lands. We've also conducted targeted user research to better understand our mandated roles and whether the services we provide are meeting users' needs. This important research will help us to identify areas of improvement and potential new service offerings.

I continue to marvel at the wide range of services and expertise provided to both the public and the Ontario Public Service by the team of dedicated professionals within the Office of the Surveyor General. Their ability to solve complex problems, collaborate across ministries, and innovate is demonstrated daily. I invite you to read the report to learn more about our team, their incredible work, and the impact it has on the lives of Ontarians.

Sincerely,

W. Bruce Clark

BSc, OLS, OLIP



Shifting geodetic datums

After more than 2 decades, Ontario will update its official horizontal and vertical datums in 2024. Official geodetic datums are set through Government of Ontario standards and are mandatory for all ministries and agencies. They are strongly recommended for municipalities and other private sector organizations. It is important to note that organizations that partner with a ministry on a geomatics project will be required to work in the new official datums.

Here are the revised Government of Ontario IT (GO-IT) standards:

GO-IT Standard 541TES describes the official horizontal datum for Ontario which is NAD83 Canadian Spatial Reference System (NAD83-CSRS) – NAD83 Original (NAD83-ORIG) will be phased out over the next 5 years.

GO-IT Standard 542TES describes the official transformation tools for Ontario and includes the National Transformation version 2 (NTv2) horizontal transformation solution and the Height Transfer suite of software and tools.

GO-IT Standard 543TES points to the Ontario Global Navigation Satellite Systems (GNSS) /GPS Specification for Geodetic Control Surveys (2023). This is a modern 3D specification that replaces the 2D version. The standard describes how to add to the reference networks of Ontario simultaneously in 3D using modern GNSS technology.

GO-IT Standard 544TES describes the first official vertical datum for Ontario, Canadian Geodetic Vertical Datum 2013 (CGVD2013). This standard replaces the vertical datum from 1928 and allows for the accurate, efficient, and cost-effective use of GNSS/GPS technology to support vertical and 3D positioning in Ontario. CGVD28 will be phased out over the next 5 years.

The revised and new geodetic datums for Ontario will become official when the GO-IT Standards are approved and published in 2024.

The Geodetic Team of Morgan Goadsby, Hassan Ibrahim, Rob Hamer and Mike Bar led the development of the new standards and will continue to support and promote the adoption of the new datums to Ontario ministries, other levels of government, and non-government organizations throughout 2024.

Questions?

Contact us at geodesy@ontario.ca.

Crown survey records collection reaches digital milestone

We received funding through a ministry modernization initiative to support our efforts to transform Ontario's Crown survey records into a fully digital collection. In 2023, 5 new records series were digitized. With these latest additions, all major records have been digitized - a significant milestone for a collection that dates to the late 1700s.

We added nearly
60,000 historic mining claim records

to our digital collection

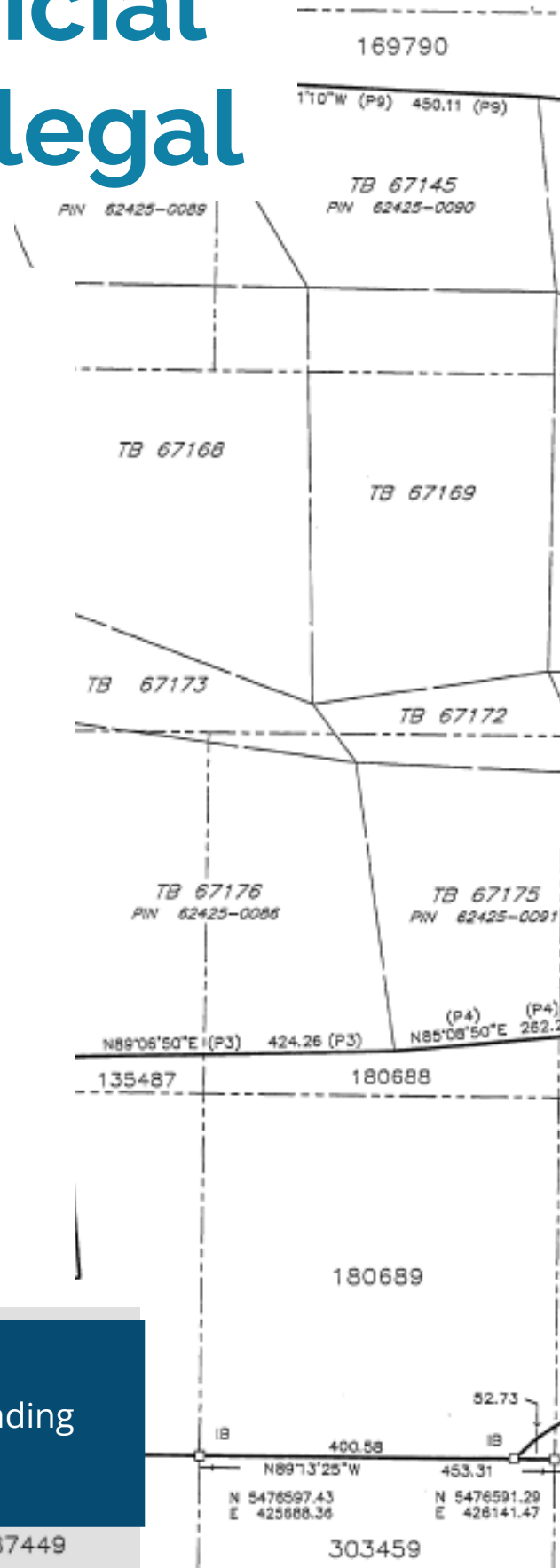
Harnessing Artificial Intelligence for legal descriptions

We're building a Legal Description Aggregation Tool to help streamline the process for creating the legal descriptions for mining claim surveys.

The tool uses Geographic Information System (GIS), Python scripting language, and artificial intelligence (AI) text recognition technology to automatically extract geographic, mining claim, and other geographic data. The tool then parses this information, lags potential errors, and writes a properly formatted preliminary legal description. A survey technician can then review the preliminary legal description, address any errors, and adjust the description as necessary.

We are still developing and testing the tool but expect it will increase quality assurance and free up hours of work allowing our team to focus on other survey services.

Daniel Carbone and Drew Gertridge are leading this exciting work.



Crown Land Surveys Unit

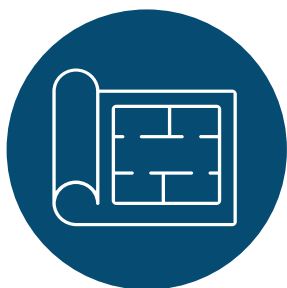


The Crown Land Surveys Unit in the Office of the Surveyor General assists MNR, other ministries, private sector surveyors, and the public with survey inquiries and requests for information. This often involves providing technical advice concerning a survey or project related to water boundaries or road ownership.



Over 1000 requests for Crown records

Distributed over 8,000 records.



Over 200 Crown land plans

Provided professional opinions and advice on over 150 requests.



Supported 21 First Nations

Provided survey support to 21 First Nations communities through Ministry of Indigenous Affairs, Natural Resources Canada and MNR districts.

Our team of Crown Survey Technologists is behind most of this work:

Jacob Parnell, Rachel Dyson,
Alexander Gawlina,
Samy Hanna and
Thomas Guilbeault

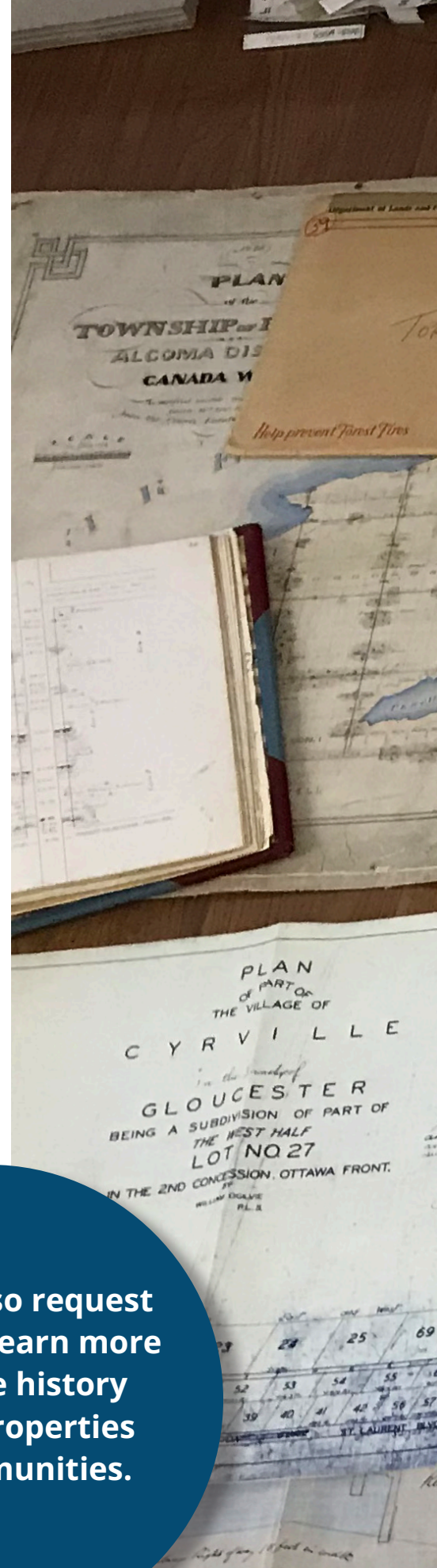
Survey records for new audiences

Professionals in other fields are now requesting documents that were once exclusively used for surveying evidence. We're seeing an increase in requests from archaeology firms for survey plans and notes that provide evidence of human settlement such as graveyards, churches, historical roads and portages established by Indigenous Peoples.

Landscape features that have changed over time can provide clues and insight into areas of historical and cultural value. For example, the precise detail found in early survey records can help pinpoint the location of former cabins and campsites. Original Indigenous names for landmarks captured in surveyors' notes may reference the historic use of a water body.

This historical information can then be incorporated into archaeological assessments required for land development, environmental assessments and other land use activities.

Citizens also request records to learn more about the history of their properties and communities.





Our records

In 2023, we created new Records and Information Management Officer positions, to reflect our focus on modernizing how we collect, use, store and preserve survey information. Our current initiatives underway include preparing for e-plans, streamlining survey review processes, exploring digital submissions, assisting with records digitization and investing in self-serve access to records online.

Lisa Casselman and Jenn Watt are our new Records and Information Management Officers offering support, guidance, and leadership in modernizing our records management.



Support to Ministry of Indigenous Affairs

Our office provided survey support to the Ministry of Indigenous Affairs on 35 active files including eight different land claims in various stages.

In addition, the survey team supported Treaty 3 flooding claims by:

- verifying utilities and shapefiles
- providing input on boundary matters for settlement agreements
- confirming limits of the Ministry of Environment, Conservation, and Parks' regulated lands
- Senior Crown Land Surveyors Michael Matthews and Dave Kovacs, as well as Crown Surveyors Roger Grose and Jennifer Humber, support this important work.



Parcel Mapping and Georeferencing Unit

The Parcel Mapping and Georeferencing Unit is responsible for maintaining multiple layers of data including provincial boundaries, geographic townships and lots.

The team works closely with ministries of Municipal Affairs and Housing, Mines, Environment, Conservation and Parks, Agriculture, Food and Rural Affairs, and Ministry of Indigenous Affairs to make sure data layers are accurate and current.

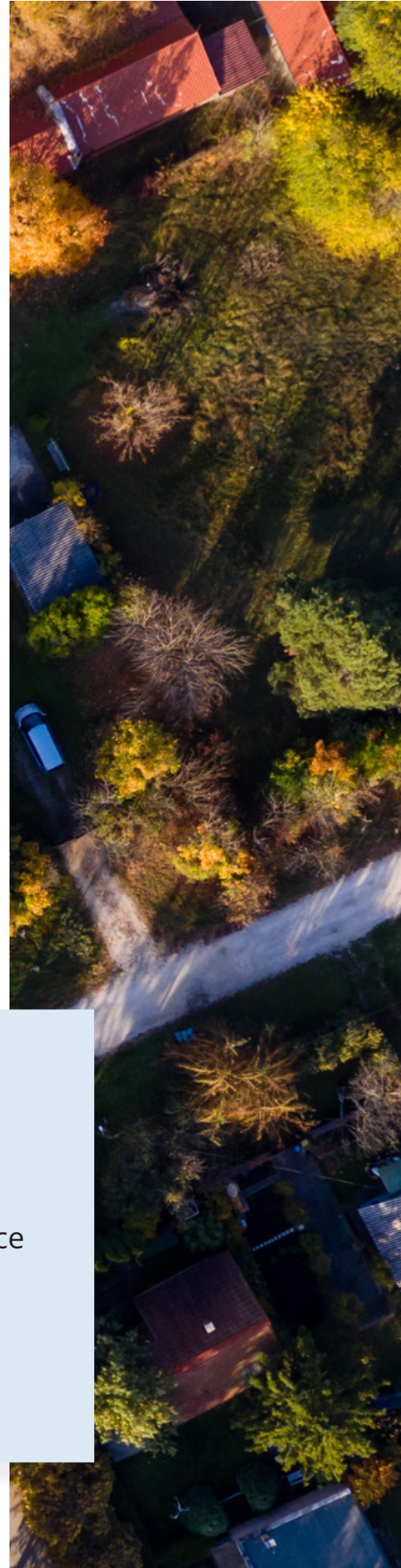
With 20 projects and 25 operational activities, Project Managers Karen Hoover, Taylor Wilkinson and Ouvry Roberts ensure we are meeting deadlines and commitments while planning upcoming work and prioritizing our resources. Their work supports strategic planning, procurement, research and development, descriptive mapping, data maintenance and much more.

Ontario Parcel and Crown Land Tenure

Crown Parcel Specialists Donna Gertridge, Audrey Parr, and Drew Gertridge work with Teranet and the Municipal Property Assessment Corporation (MPAC) to ensure Ontario Parcel data products are maintained.

In 2023, this small but mighty team made the following changes to Ontario Parcel data:

- edited over 14,000 land tenure features
- sent over 600 requests for Ontario Parcel maintenance to MPAC, resulting in over 2,100 units of change to Crown parcel features





We're also developing data management plans for seven tenure data sets. This work will support future projects to modernize how we manage tabular and spatial databases for digital historical plans and documents.

The Land and Resources Data team creates detailed descriptive maps and regulation plans to support government priorities. This work compiles important geographic and spatial information for parks, conservation reserves, land claims, and Treaty Land Entitlements.

In addition to this work, Land and Resource Data Support Officers Steven Groulx, Daniel Carbone, Nicholas Kaluzny, and Mike Vanderdoelen are standardizing and streamlining the mapping process with new templates and symbology.

Ontario Geographic Names Board



- The Ontario Geographic Names Board (the Board) manages and defines over 220,000 geographical names of places and geographic features in Ontario. In 2023, the board considered 31 name cases.
- We asked Indigenous communities, municipalities, local organizations, and citizens to provide feedback on name proposals. This important feedback captures the thoughts and opinions of people who have a close personal connection to the geographic features. We reviewed all feedback, which is critical to the naming recommendations the board makes to the Minister of Natural Resources and Forestry.
- We scanned over 3,000 annotated historical maps which are now easily accessible to staff digitally. The remainder of our hard-copy records will be scanned in 2024 to preserve these important historic records and ensure they are accessible in the future.
- We welcomed Elizabeth Miller to our team as the new permanent Provincial Geographic Names Specialist



In 2023, the geographic names team of Jennifer McMurray, Morgan Goadsby, Elizabeth Miller and Andrew Carnegie:

- participated in the Geographical Names Board of Canada Annual General Meeting
- promoted the questionnaires through the ministry's social media channels and encouraged citizens to provide feedback
- maintained the database of 60,000 official geographic names for official mapping

