



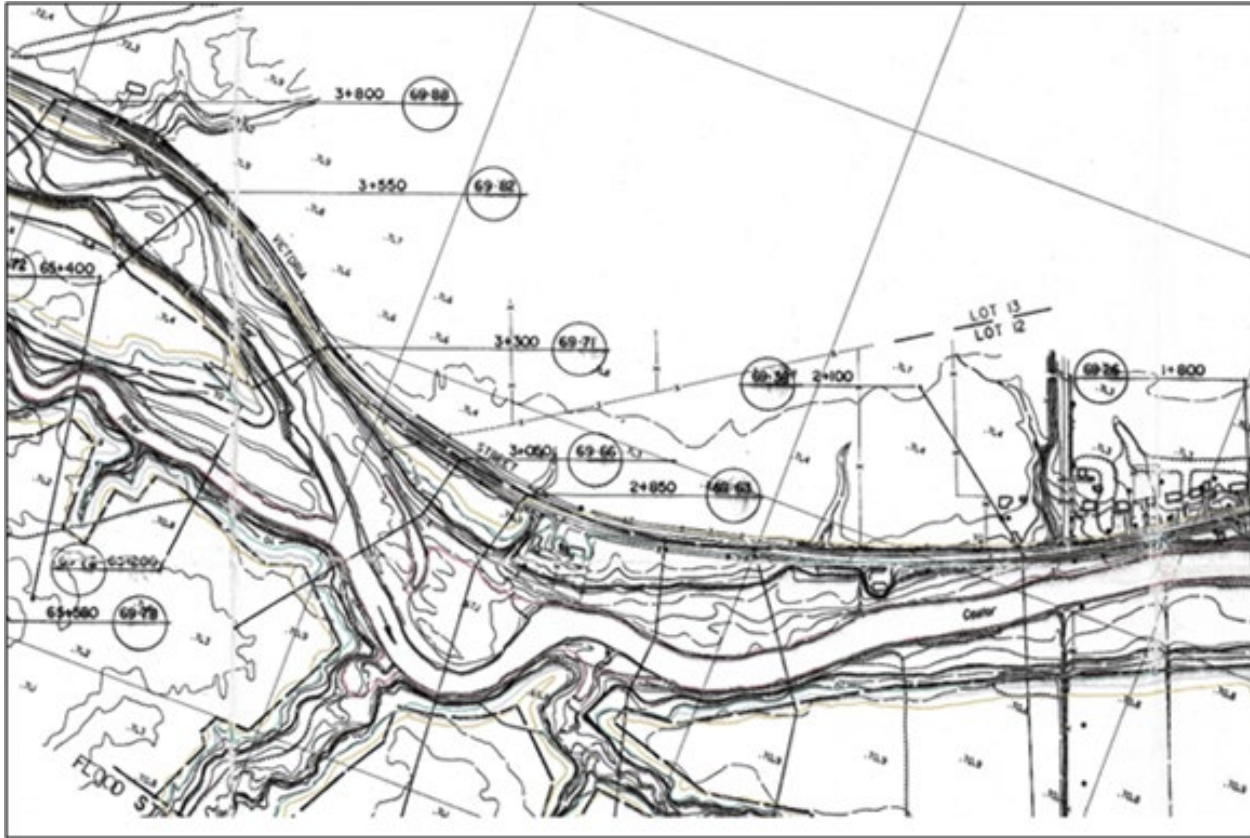
# Building Successful Partnerships

October 18, 2022

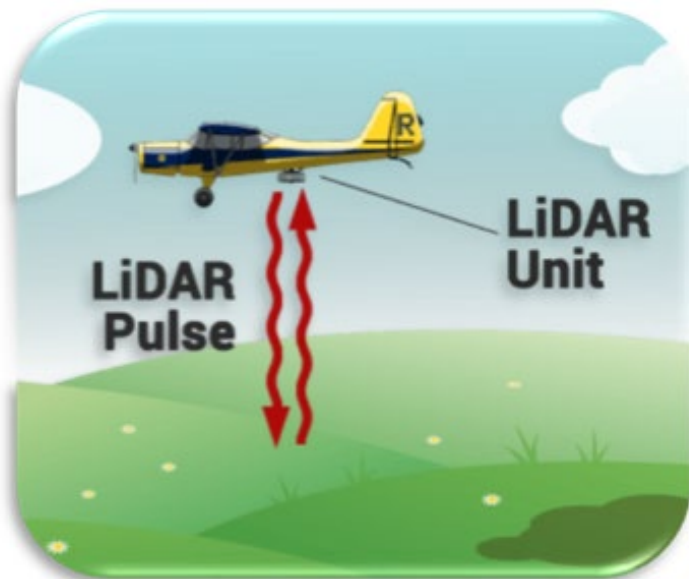




## 1980s Floodplain Maps



- Accurate, cost-effective elevation data available for entire SNC jurisdiction.

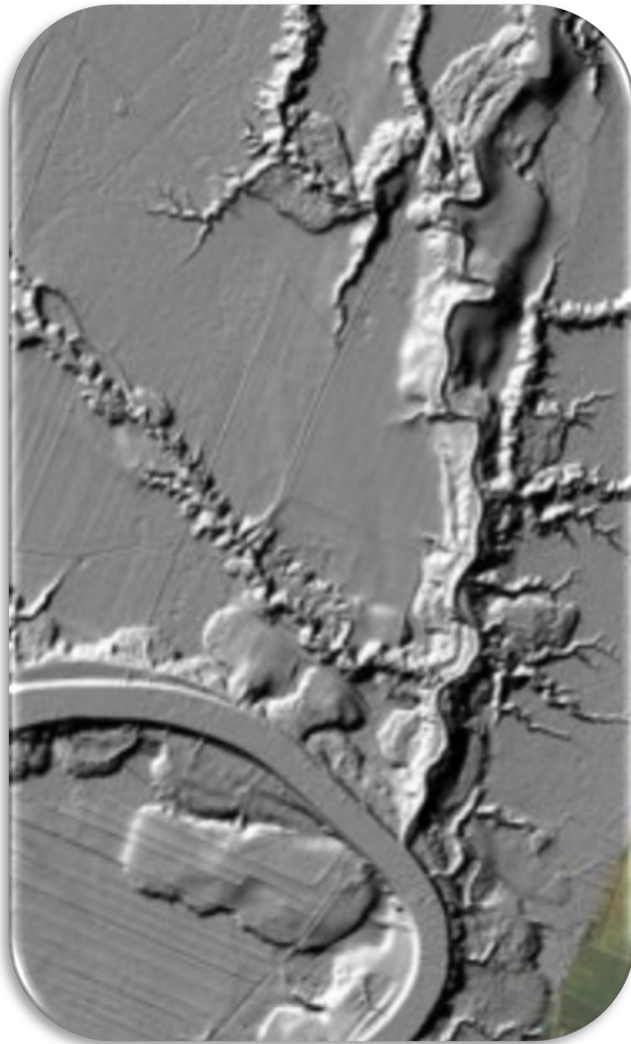


- “LiDAR” stands for **L**ight **D**etection and **R**anging which is a remote sensing method
- A pulsed laser on the underside of an airplane measures variable distances to the Earth

**LiDAR generates accurate cost-effective topography**



# Municipal uses for Lidar



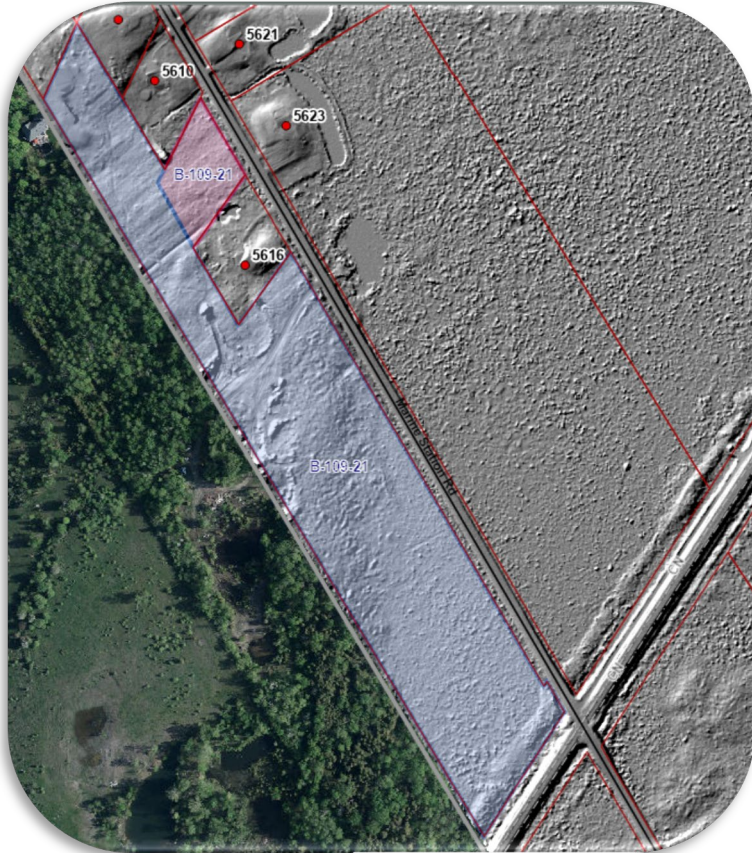
- Needed to sell municipal staff on benefits of joining the partnership
- Preliminary evaluation of projects/proposals
- Providing topographic information when a survey is not required
- Municipal drain work
- Point-in-time picture of lot grading



- Benefits for CAOs and EDOs
  - Municipality selling land in Industrial Park
  - No topographic survey available
  - LiDAR can shorten due diligence process by providing site elevations to potential purchasers
  - Helped secure agreement of purchase and sale for major warehouse/distribution centre



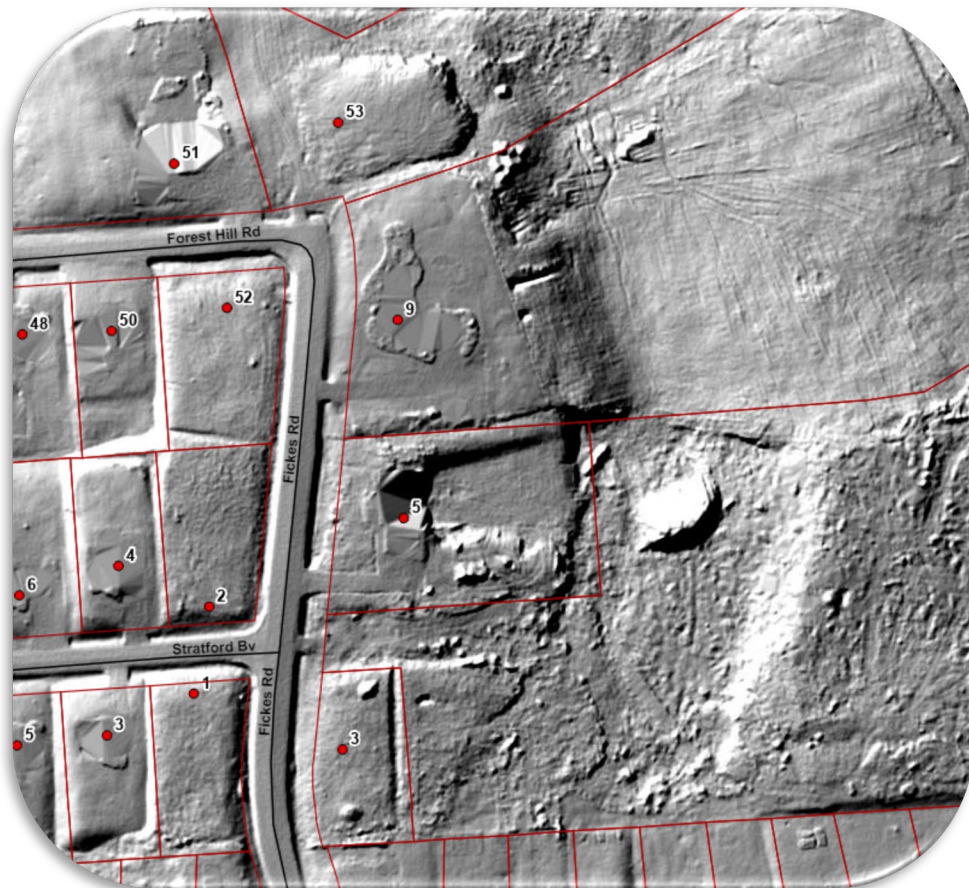
# How Municipalities use LiDAR



- Land division/Drainage issues
  - Complaints regarding drainage (with eventual appeal)
  - LiDAR can provide a preliminary evaluation of existing conditions, proposals for drainage improvements, and review large properties
  - Especially helps to inform decision making in winter



# How Municipalities use LiDAR

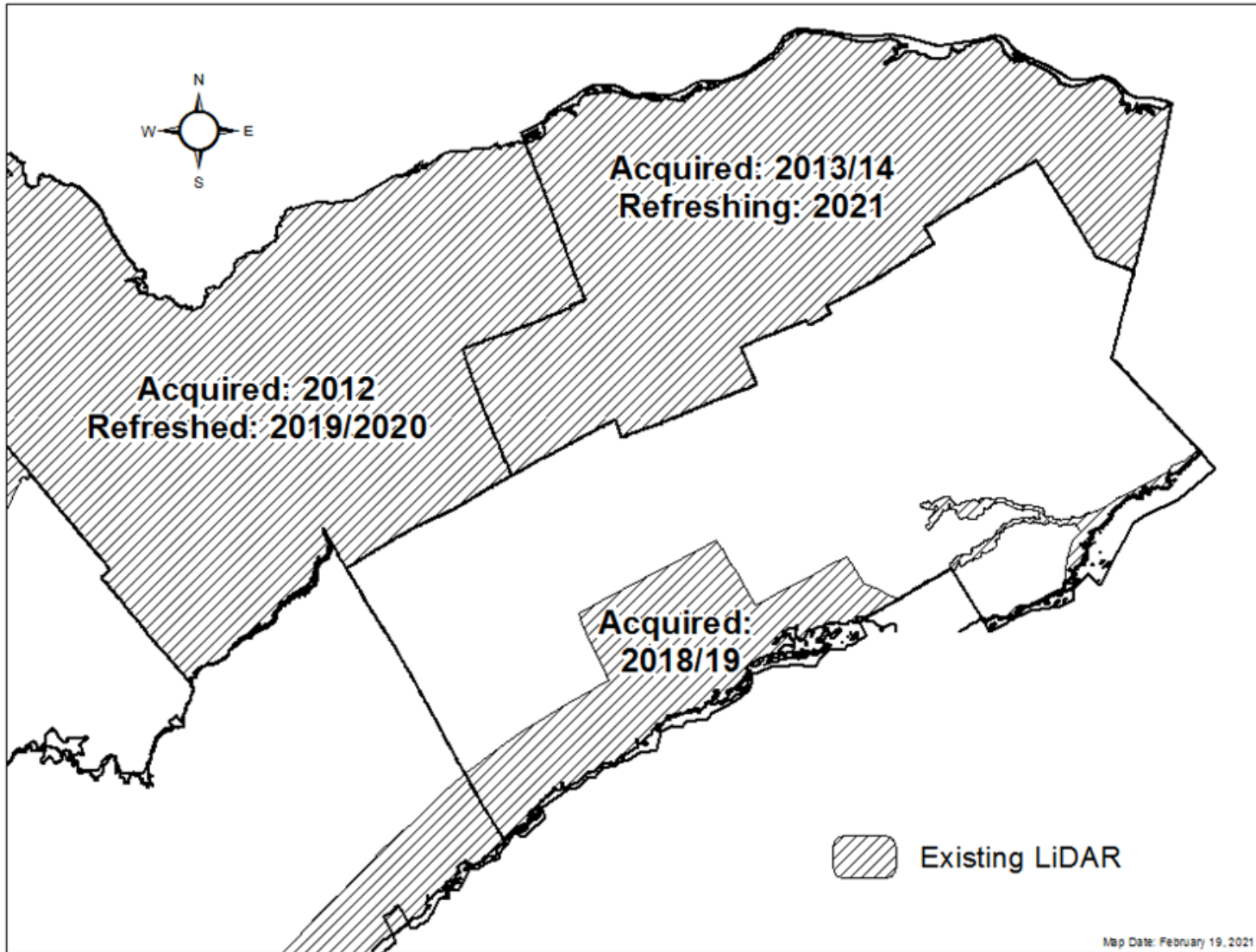


- Public Works/Building
  - Excellent way to evaluate projects before going on-site
  - LiDAR can help to provide a large scale look at drainage patterns within the subdivision
  - Grading plans can be overlaid to identify major inconsistencies





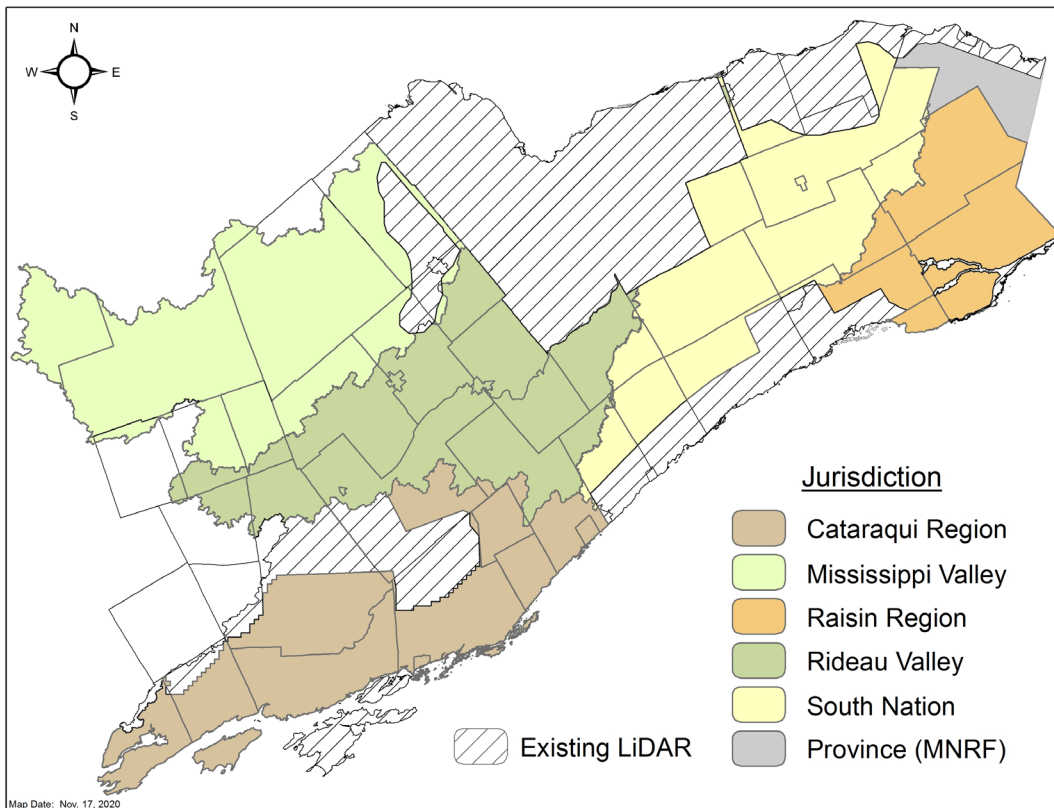
# Existing LiDAR Coverage as of 2020



**Cost of LiDAR reduces as coverage increases**



# Areas With No Current LiDAR Coverage

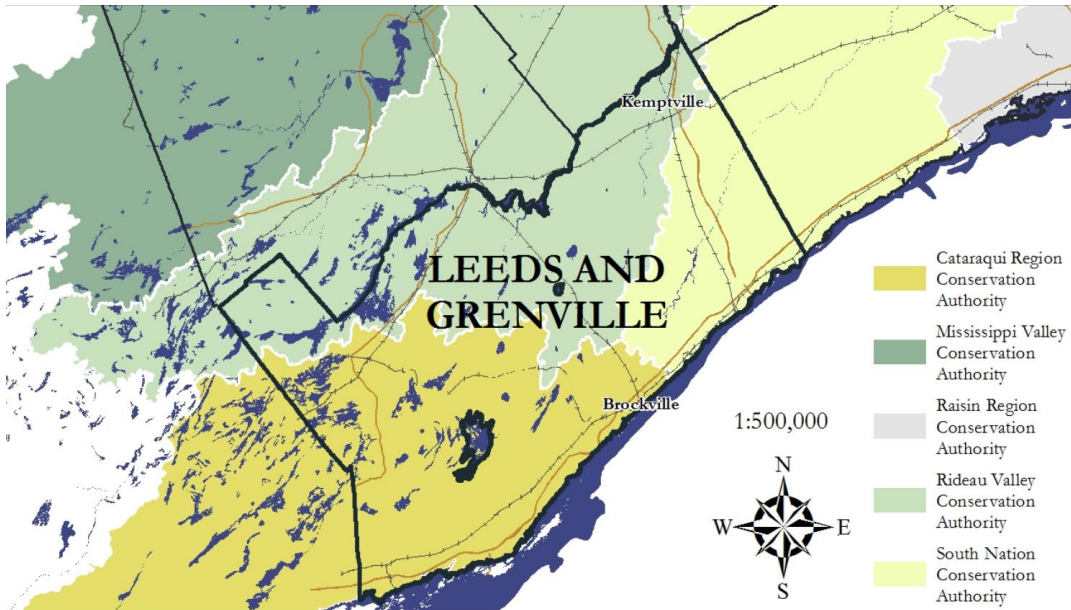


Counties	Area (km <sup>2</sup> )
L&G	2,876
UCPR	1,257
SDG/Cornwall	2,711
Frontenac	2,310
Kingston	477
Lanark	2,810
Lennox & Addington	2,154
Renfrew	37
<b>Total Area</b>	<b>14,632</b>

**Total Project Cost: \$780,615 plus HST**

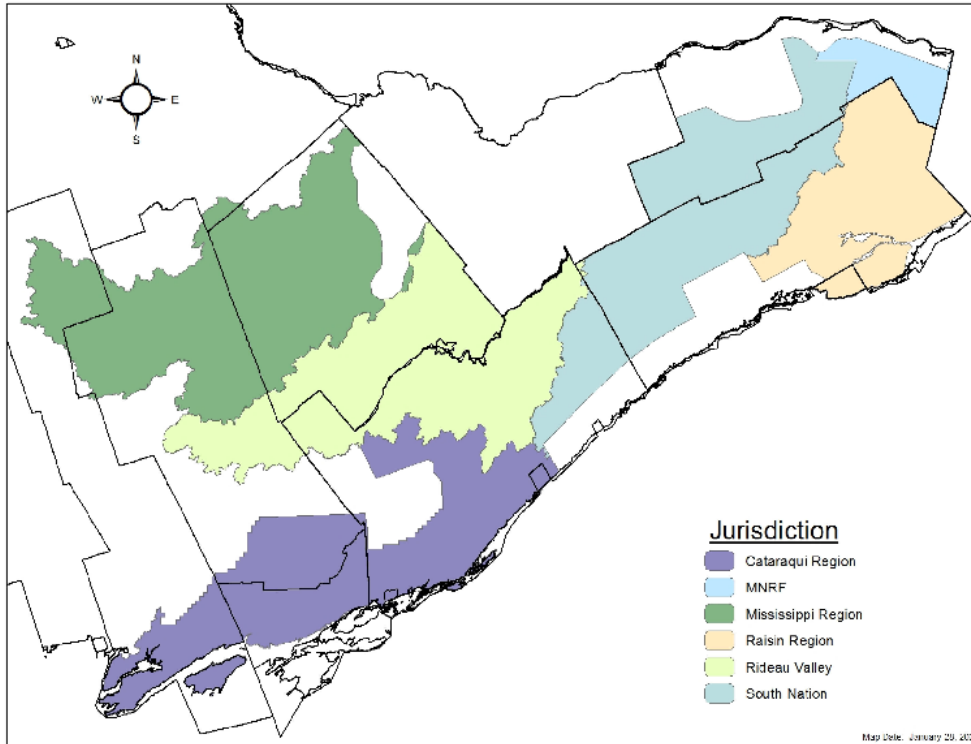


# Setting up the Partnership



- Meetings started in September 2020
- Multiple partner meetings and council presentations
- 1 CA Partnership Agreement
- 14 Multi-party agreements between municipalities and their CA(s)

**Final partnership established in May 2021**



Eastern Ontario LiDAR Acquisition Project

- 1 Lead: South Nation Conservation
- 5 neighboring Conservation Authorities
- 7 Counties
- 42 Municipalities
- Total Partners: 55

## Intake 6 National Disaster Mitigation Program Funding Denied



# LiDAR Cost Comparison



Project	Acquisition Area (km <sup>2</sup> )	~Cost
St. Lawrence River Hazard Mapping Project (2018/2019)	798.4	\$110/km <sup>2</sup>
Eastern Ontario LiDAR Acquisition Project (2021/2022)	14,632	\$57/km <sup>2</sup>

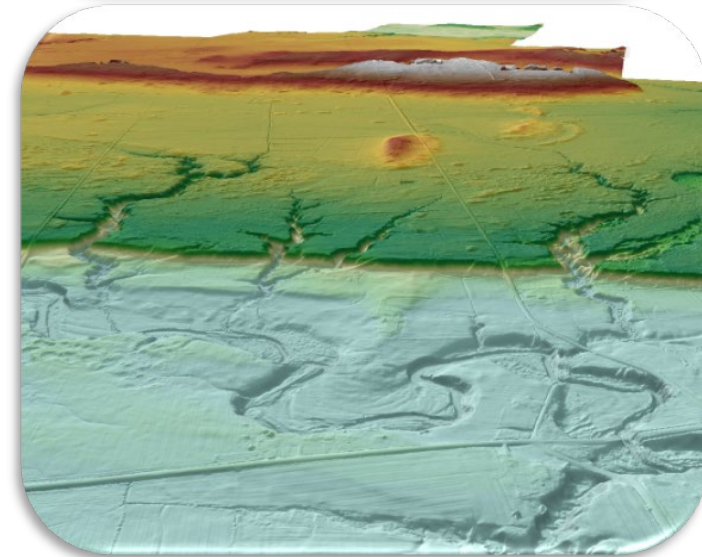
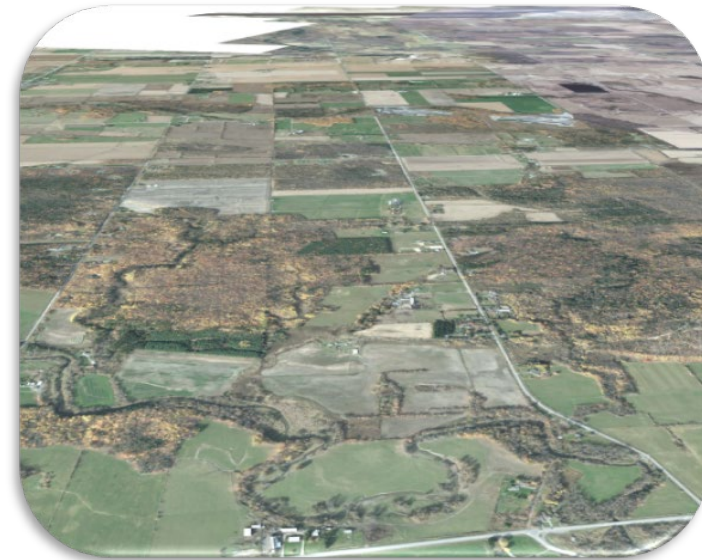


# Funding Opportunity



- Flood Hazard Identification and Mapping Program: 50% of the cost of LiDAR
- Federal Funding approved
  - Agreement between NRCan and CO
  - MOU between CO and SNC
- All municipal agreements amended to reflect updated cost-share

**Approximately 45% cost savings for the Partners**





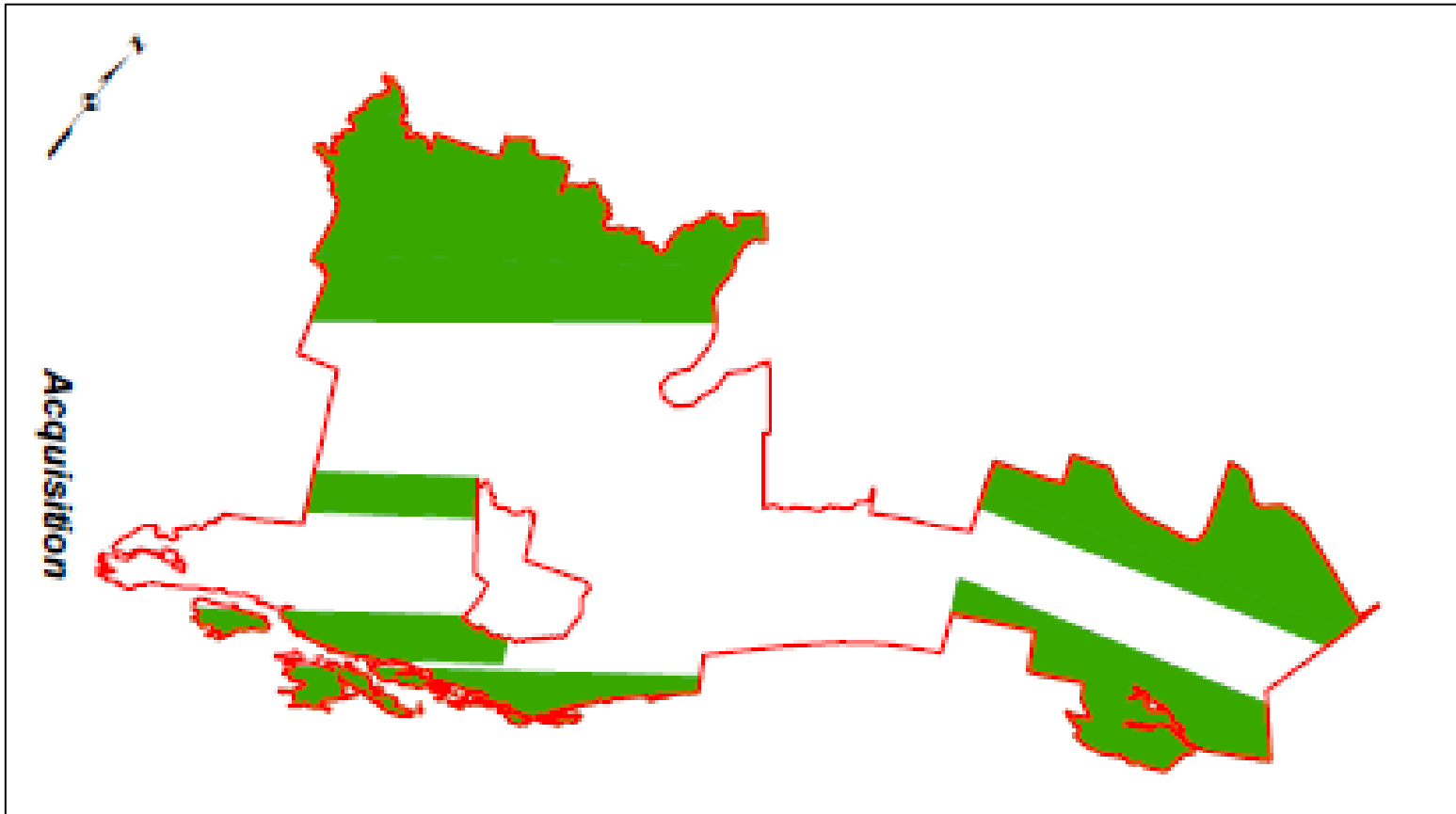
# Acquisition Update



**Acquired Fall 2021: 6,242 km<sup>2</sup>**

Remaining flown Spring 2022

Anticipated Final Data Delivery: December, 2022





# Lessons Learned



- Setting up multi-partnerships is difficult but not impossible
- Partnership needs a LEAD
- Don't assume all partners understand the product, be ready to explain/train them
- Ensure municipal/county staff buy-in before going to Council
- It takes time to draft, review and execute agreements, plan accordingly around Council/Board schedules
- Lead: a lot of time invested in guiding partners – remember to include this in the project budget
- Be ready to use your negotiation skills constantly
- Be ready for the un-expected
- Be financially prepared to carry the project cost until external funding is received



# Municipal advantages to partner with CAs



- Technical expertise and experience that many municipalities do not have in-house, at a lower cost
- Working relationships with landowners and experience with education and outreach across watershed
- Ability to leverage funding from a wide variety of partners and access delivery programs across the province
- In addition to LiDAR expansion, these factors led to SDG and neighbouring county hiring SNC to complete their Natural Heritage System
- SNC developed NHS across both counties with similar geographic landscape – focus on education and little to no public opposition
- Key factor: credibility with councils and agricultural community from previous floodplain, LiDAR and forest cover work

Our Local Environment, We're in it Together.

