

INSTITUTE OF PRAIRIE AND INDIGENOUS ARCHAEOLOGY



# Additional techniques for detecting unmarked

### graves

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# Aerial-based remote sensing

#### Aerial-based remote sensing

- Satellite imagery
- Aerial photos
- Aerial Lidar
- Drone (UAV) mounted sensors
  - Imagery
  - Lidar
  - Multispectral camera



Drone Imagery of an early 20th Century cemetery at Bingwi Neyaashi Anishinaabek First Nation (Sand Point FN), Lake Nipigon, Ontario (courtesy of Scott Hamilton with permission of BNA FN).

Drone Imagery



# Multispectral imagery





### Lidar

### Aerial methods: pros and cons

#### **Benefits:**

- Quick
- Cover large areas
- Indicates areas of interest
- Can "see" through ground cover

Limitations

- Not as proven to find burials
- Dependent on land history



# Other ground-based remote sensing

#### Ground-based remote sensing

- Magnetic approaches
  - Magnetic gradiometery
  - Magnetic susceptibility
- Conductivity/Resistivity

### Magnetic Techniques: Gradiometry



### Magnetic Techniques: Susceptibility



#### Resistivity/Conductivity



Resistivity/Conductivity Measures differences in how electric current can travel through the ground



Ground-based method: pros and cons

#### Benefits

- Looks below the surface
- May work in areas where GPR does not
- Capacity to layer different methods

Challenges

- Takes time very slow
- Locating graves requires specific knowledge
- Techniques less proven than GPR for grave detection

### Pathways

Community- based work	Survivor wellbeing supports	Archival Research	Community Survivor Knowledge
Database Development	Area Mapping	Subsurface Remote Sensing	Communication of Results
	Memorialization	Possible Forensic Work	

https://canadianarchaeology.com/caa/resources-indigenous-communities-considering-investigating-unmarked-graves