

03

Institutional Control and The Future of Cluff



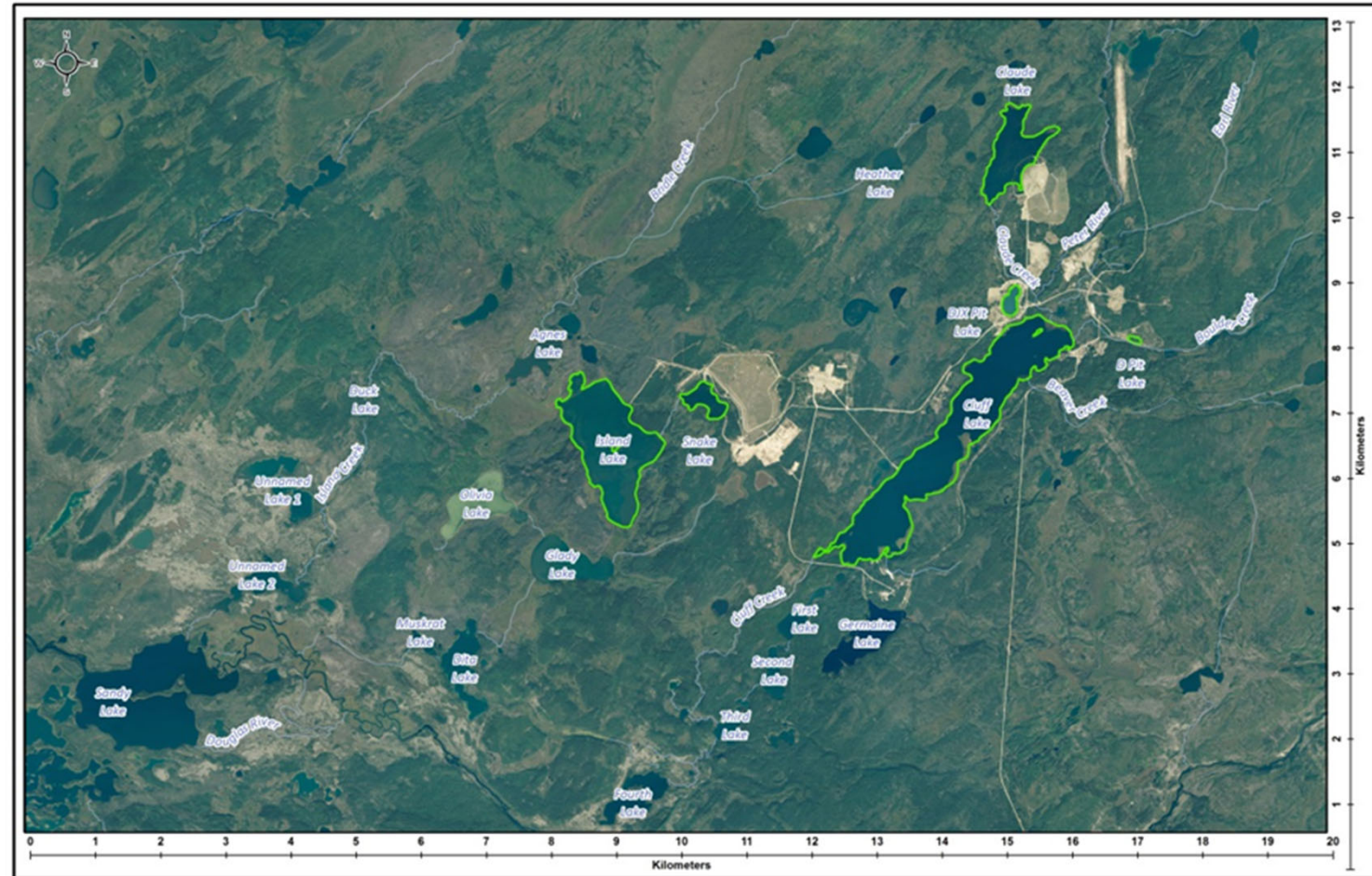
Project Site Status

- **Decommissioning is complete and objectives are met**
 - Removed, minimized & controlled potential sources of contamination
 - Surface water quality objectives are met
- **Site is well understood**
- **Physically and chemically stable under passive care**
 - Safe, stable and self-sustaining landscape
- **Unrestricted access**
- **Public safety at site is comparable to other wilderness areas**
- **Site is available and safe for traditional land use**



Surface Water Quality

Lakes impacted by mining activities meet decommissioning surface water quality objectives now and long-term



Institutional Control Program

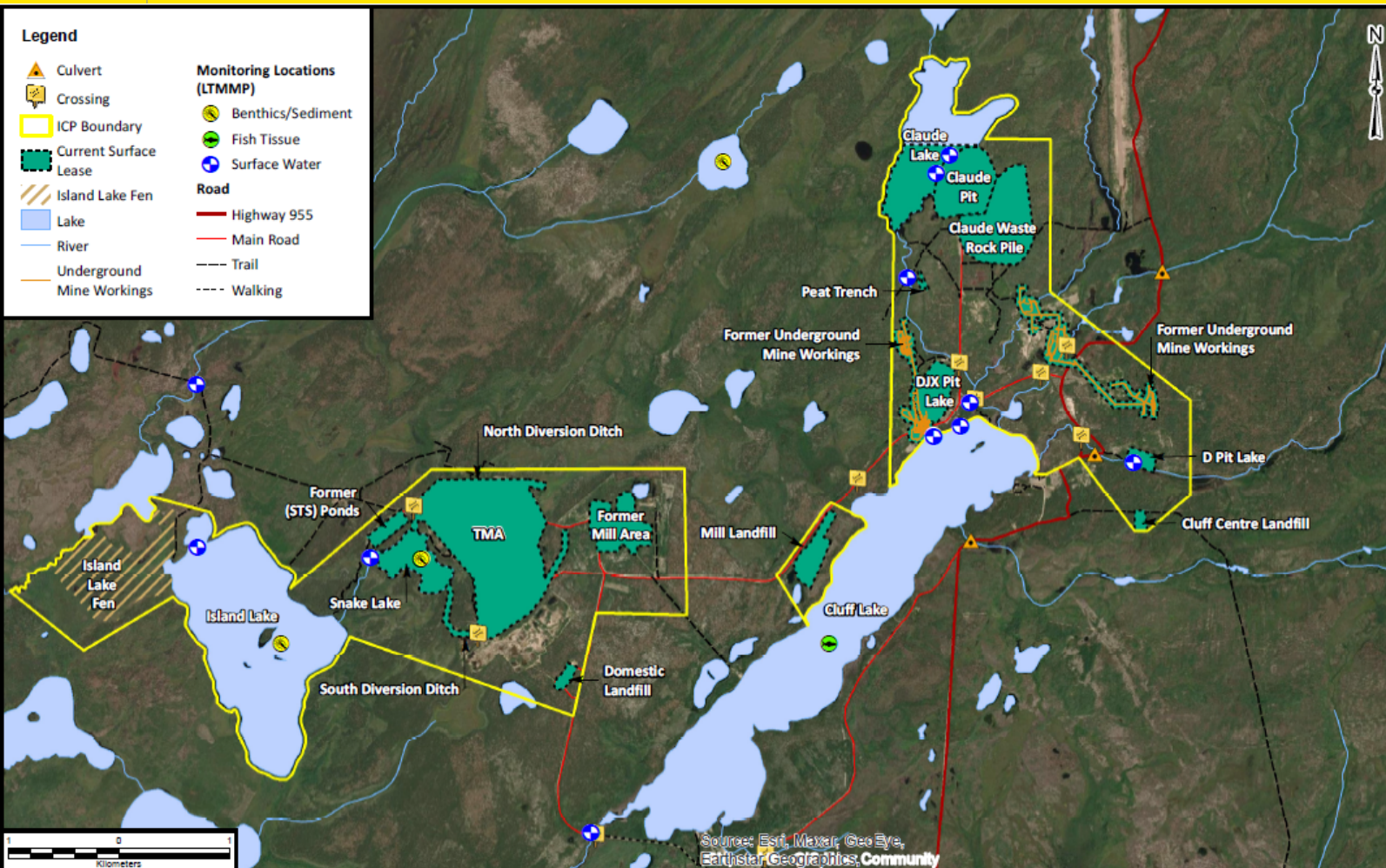
● Transfer to Provincial Institutional Control Program

- Established by legislation
- Allows for the **transfer** of a decommissioned site, or portions of, back to the **Province** (as land owner)
- Ensures that the government has **adequate funds**
 - Long-term monitoring and maintenance
 - Worse case failure event
 - Unforeseen event



Orano Sites are **not abandoned**

Land Use Recommendations



No restrictions on the use of water or consumption of fish at or near the Cluff Lake site

Recommended that the Province restrict full time residency on the areas of site being transferred into Institutional Control

Orano has recommended residency restrictions to protect these areas from disturbance.

Long-term Monitoring & Maintenance Plan

- **Monitoring measures COPCs in the environment to:**
 - Confirm level of risk and ERA predictions
 - Demonstrate compliance with surface water objectives
- **Surface Water Monitoring**
 - Verifies the effectiveness of the decommissioning in controlling contaminant transfer to the receiving environment
 - utilized to determine if risks to VECs remain within predictions
- **Geotechnical Inspections**
 - Ensure site is physically safe
 - Monitor for low likelihood accidents and malfunctions
 - Monitor for indications of site use



04

Summary



Overall Lessons Learned

- **Start with the end in mind; mining is a temporary use of the land**
- **Environmental assessment is a planning tool**
- **Have an actionable decommissioning plan during operations**
- **Decommission during operational period**
- **Continuous on- site presence is costly**
- **Working in a jurisdiction with an institutional control framework in place is enviable**
- **Maintain corporate knowledge**
- **Embrace your intervenors**



In Closing....

Cluff Lake is safe and stable

The IC Program, was designed in collaboration with the CNSC to meet provincial, national and international obligations for the oversight of decommissioned radioactive waste.



Thank you!

Cluff Lake Then & Now on YouTube

Cluff Lake Then and Now (2023) - YouTube





orano

Giving nuclear energy its full value