

BENEFITS OF THE LAKE ICE SERVICE

The primary benefits of the Lake Ice Service are:

- Improved lake ice information for specific lakes in the Nunavik region providing a better understanding of how the changing climate is impacting Arctic char fisheries; and
- Increased availability of relevant and up-to-date environmental information to better plan hunting expeditions across Arctic Char fishing zones.

Additional anticipated improvements to the service include a travel safety product which will integrate Traditional Ecological Knowledge (TEK) information with EO data to provide advisory information about the safety of traditional travel routes.



Polar View Lake Ice Service Portal

Using Earth Observation satellites, weather data, and local environmental knowledge, to provide lake ice conditions for Nunavik.

The Lake Ice Service Portal was created by:



Makivik Corporation
www.makivik.org



Hatfield Consultants
www.hatfieldgroup.com



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WHAT IS THE LAKE ICE SERVICE?

The Polar View Lake Ice Service provides Lake Ice Status information to the Nunavik Research Centre of Makivik Corporation as well as to Inuit communities throughout the Nunavik region of Northern Quebec, Canada.

This service supports research activities and provides information about the condition of key lakes in important over-wintering areas for Arctic char; a vital resource for the people of the region.

WHAT IS POLAR VIEW?

The Lake Ice Service is part of a larger initiative called Polar View; an international program offering integrated monitoring and forecasting services in the Polar Regions.

Polar View uses satellite earth observation (EO) data to support improved decision-making, planning and adaptation to climate change. Polar View services include monitoring lake ice, river ice, and ice-edge, providing enhanced sea ice information, snow maps and glacier and iceberg monitoring data.



The timing of freeze-up and break-up of lake ice is important information in relation to the movements of the fish that over-winter in the coastal lakes of the region.

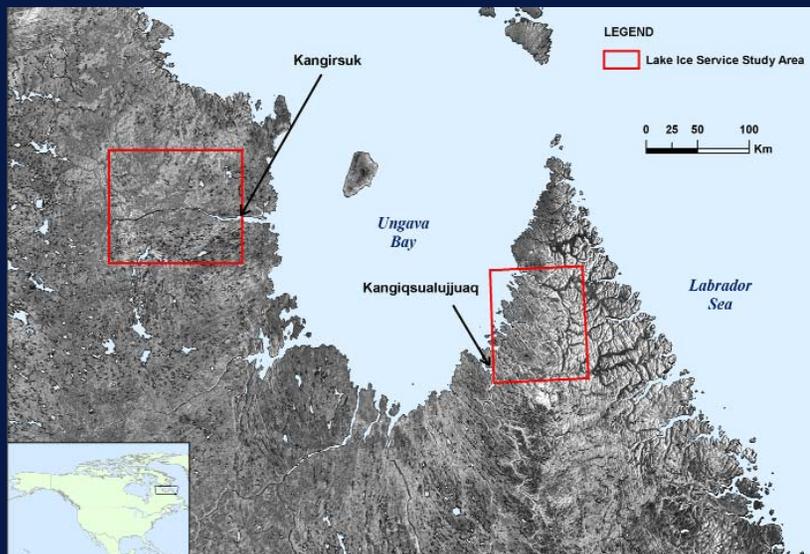
HOW DOES THE LAKE ICE SERVICE WORK?

1. Earth Observation satellites capture images of the earth using RADAR technology.
2. The satellite images are then processed and analyzed by technicians (using a set of automated routines to prepare them for interpretation).
3. An image analyst with experience in lake ice interpretation locates each lake within the satellite images and assesses the lake status based on the following criteria:
 - Lake Ice Presence
 - Lake Ice Thickness
 - Days Frozen
4. The values from this assessment are recorded and entered into a database, which automatically updates the Lake Ice Service Portal.

WHAT OTHER INFORMATION IS PROVIDED BY THE LAKE ICE SERVICE?

In addition to satellite images, the Lake Ice Service Portal integrates a number of other information sources to provide the following supporting information:

- temperature and weather at the time of each satellite image capture from local weather stations;
- current and archived hourly temperatures;
- other weather data, including: humidity, wind direction and wind gusts; and
- Environment Canada 5-day weather forecasts.



Area Covered by the Lake Ice Service

The service is currently in place in the communities of Kangiqsualujuaq and Kangirsuk. Future expansion plans include lakes and Arctic char systems throughout Nunavik.

How to Use the Lake Ice Service Portal

To find out if a particular lake is currently included in the lake ice service, visit the Lake Ice Service Portal and a) click on one of the study area boxes in the Ungava Bay window or b) select the Payne River or George River tab.

<http://www.nunavik.lakeice.ca>