



Welcome to the Second Annual Ocean Day!

2022 Alaska Coastal & Ocean Mapping Summit

Welcome to Ocean Day!

November 17th, 2022

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Logistics

Time Management

We aim to stay to the agenda as much as possible to allow attendees to join at specific times of interest. The full agenda is located in the attached documents in your GoToWebinar menu pane to the right.

Questions and Discussion

- To facilitate transparent attendee interaction, all attendees will join as Panelists.
- Please enter your questions and comments in the Chat box for all to see.



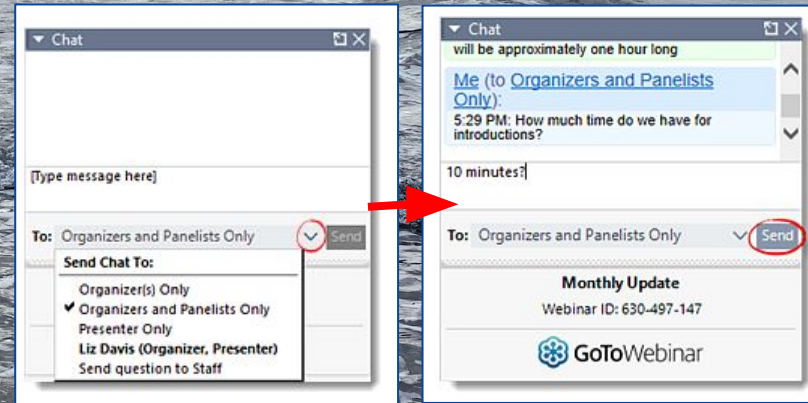
Attendee Rules

- Mute yourself
- Turn off your camera

Issues with the
GoToWebinar platform?

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Agenda

- 9:00-9:50** **Welcome and Keynote Address**
- 9:55-10:55** **Panel #1: Mapping Updates**
- 11:05-12:00** **Panel #2: Vessels of Opportunity**
- 12:30-1:45** **Panel #3: Data, Products, and Processing**
- 1:55-2:55** **Panel #4: Collaboration and Planning**
- 2:55-3:00** **Closing Remarks**

All times are in
Alaska Time

Closeout Survey

Your feedback matters!

When you leave this webinar, you will be prompted to answer a few questions about your experience.

Please let us know how we can improve.

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3 Icebreaker Questions



1 Welcome and Keynote Question

Results will be
shared before the
break



Opening Remarks

Congresswoman Mary Peltola, U.S. House of Representatives (AK At-Large)

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Welcome

RDML Benjamin K. Evans – NOAA Office of Coast Survey

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Keynote: Modern Hydrography in the Canadian Arctic

Chris Marshall – Canadian Hydrographic Service, Fisheries and Oceans Canada

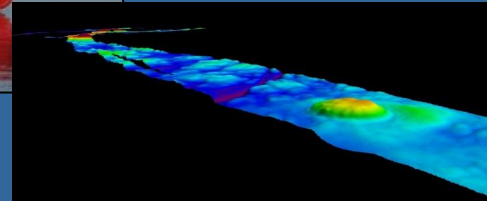
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Canadian Hydrographic Service

Chris Marshall
Regional Director – Canadian Hydrographic Service
CHS, Ontario, Prairie and Arctic Region

Modern Hydrography in the Canadian Arctic CHS approach to mapping the Arctic



Alaska Coastal and Ocean
Mapping Summit



Canadian Hydrographic Service

Outline for today:

- Context and challenge of working in the Canadian Arctic
- CHS strategy
- New investments – Renewal of the Ocean Protection Plan
- Crowd Source and Community Hydrography



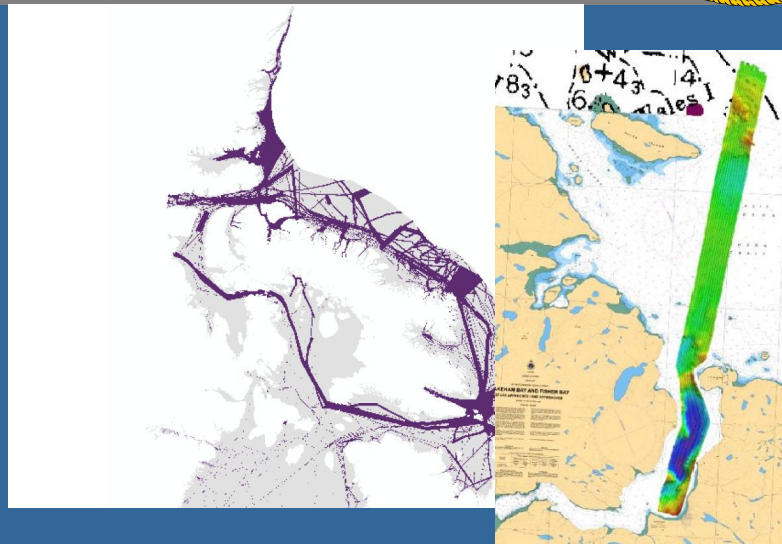
Akademik Ioffe sailing through loose ice in Paradise Bay. (Photo: Baron Reznik/Flickr)



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Challenge and context:

- The Canadian Arctic is enormous
- ~162,000 Km of coastline
- Just over 3.5 Million Km²
- 36,000 islands in the Archipelago
- Remote and extreme climate
- Short operational “window” each summer and early fall
- Extent of sea ice continues to decline, while volume of shipping and economic activity is increasing.

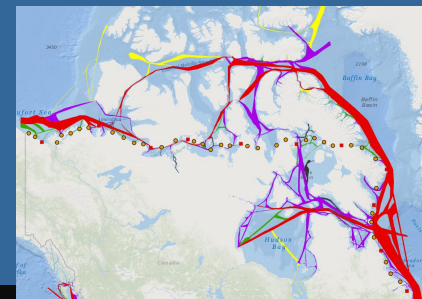
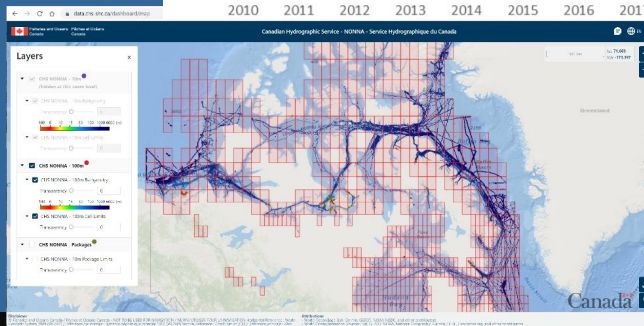
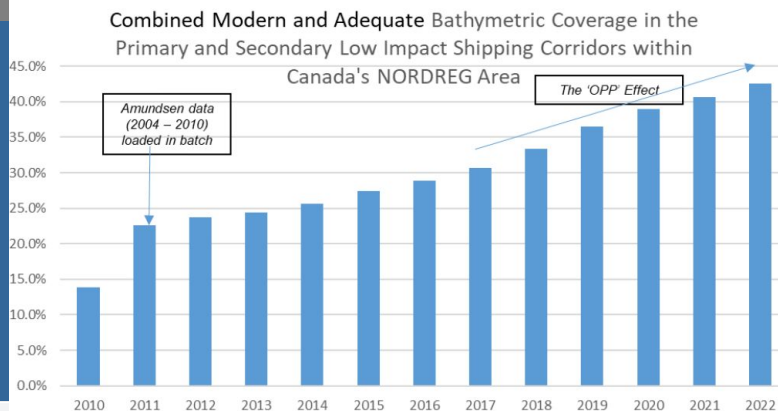




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CHS Strategy

- Prioritize modern survey and chart production on Proposed Low Impact Shipping Corridors – Risk based approach that considers existing and future commercial traffic, shallowest depths and narrow channels, along with community requirements (Sealift).
- As of April 2022, CHS have surveyed or mapped **42.6%** of the primary and secondary corridors
- However only **15.8%** of Canada's Arctic waters are mapped.
- All of this data can be viewed and downloaded at: <https://data.chs-shc.ca/dashboard/map> (10 m resolution bathy data service)



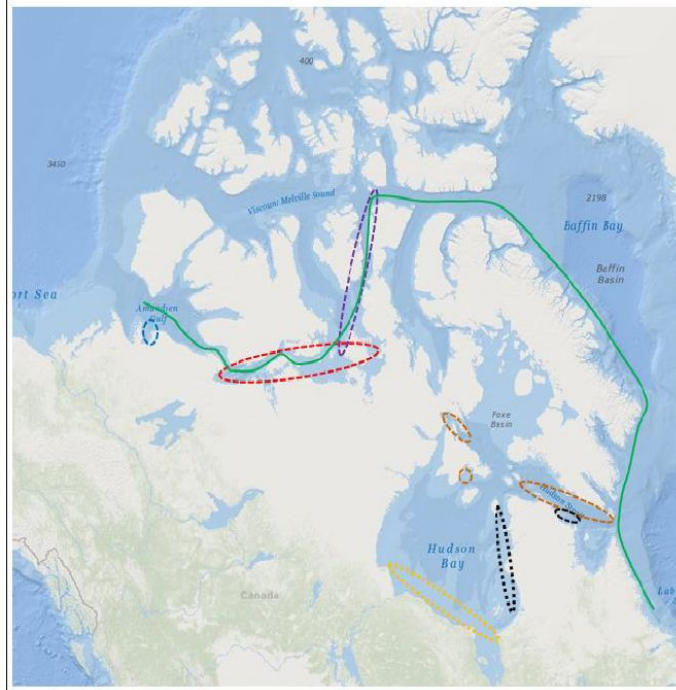


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All about capacity

- DFO-CCG Icebreakers equipped with multibeam sonar systems;
- Hydrographic Survey Supply Arrangement (Contracted) bathymetric surveys;
- Collaboration within DFO Science and other organisations on chartered platforms;
- Trusted Sources for Trans-Arctic bathymetry (e.g. Amundsen Science); and
- Collaboration with Indigenous communities for crowd sourced bathymetry.





2022 OPP Surveys from Canadian Coast Guard Icebreaker Fleet and Chartered Vessels

CCGS *Louis S. St. Laurent*



CCGS *Sir Wilfrid Laurier*



CCGS *Des Groseillers*



CCGS *Henry Larsen*



F/V *Frosti*



M/V *Polar Prince*



Contract



2022 Survey Programs



Canadian Hydrographic Service

- Norbit iWBMS portable Multi-beam Systems deployed to vessels of opportunity
- CHS850S (Kanter Marine) 8.5m Hydrographic Survey Launches- R2Sonic2022
- Uncrewed platforms- Sonar and LiDAR payloads



Force multipliers- Secondary Platforms



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- **F/V Frosti**– Darnley Bay, Western Arctic, Collaboration with DFO Science and Paulatuk Hunters and Trappers Committee.
- **M/V Polar Prince** – Hudson and James Bay, Collaboration with Students on Ice.



Trusted Sources,
Marine Scientific
Research and
Chartered Platforms



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- Inukjuaq, QC Community Research Vessel- Arqvilittit, Hudson Bay
- Rankin Inlet, NU- CCG Inshore Rescue Boat, Hudson Bay
- Arviat, NU- Community Research, Approaches to Arviat
- Grise Fjord, NU- University of Quebec



Crowd Sourced Bathymetry



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Renewal of Canada's Ocean Protection Plan

- In August of this year, the Government of Canada announced a renewal of the Ocean Protection Plan.
- Significant investment for the CHS to improve Hydrographic Services in the Arctic - **\$84M over 9 years (CAD)**
- 2022 is the first year of this funding
- OPP2 will provide ongoing funds for Arctic Hydrography (~\$3.9M/year)



The Honourable Joyce Murray, Minister of Fisheries, Oceans and the Canadian Coast Guard visited Rankin Inlet Nunavut Wednesday August 10 2022 to announce funding to improve charting in Arctic waters. Minister Murray met with the DFO's Regional Director General Gabe Nirlungnayuq, and Regional Director of the Canadian Hydrographic Service Chris Marshall (pictured). New funding under the Oceans Protection Plan will expand charting of Canadian Arctic waters and boost the Canadian Coast Guard's response capabilities in the North.

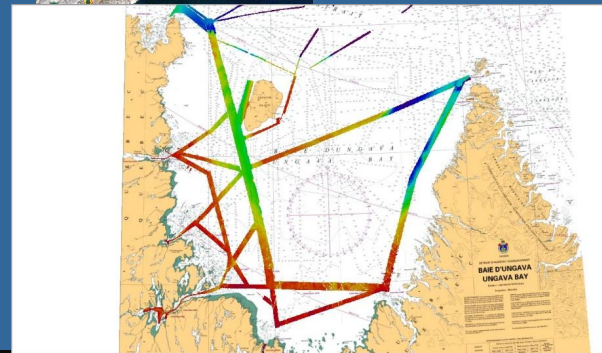
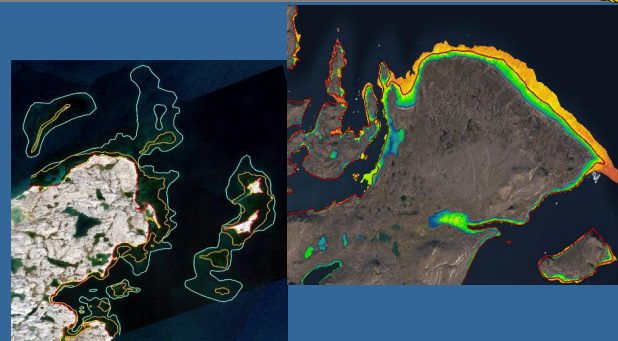


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OPP2 – Highlights of what CHS will deliver

Significant investment, building upon work CHS achieved over the past 5 years OPP1

- **Accelerate bathymetric data collection.** Maximize existing CCG survey assets, contract to private sector, and funding for a dedicated survey vessel. Leverage new technologies (USV, UAV etc.)
- **Dedicated Arctic Data Integration and Chart Production Team** – Incremental funding, focused effort.
- **Develop and test new services** to communicate risk of Arctic navigation. Better information in dynamic and remote regions.
- **Implement a Community Hydrography program** for Canada's Coastal Communities





Canadian Hydrographic Service

Looking ahead – The next 5 years

Some emerging trends that will support our work in the Arctic

- Existing and newly created **Marine Protected Areas** – Desire for baseline data including bathymetry
- Maximize assessment and use of **Crowd Source** and **Trusted Source** contributions.
- Implementation of the **community hydrography program** – Funding model and data management approaches.
- Leverage international collaboration – IHO's Arctic Regional Hydrographic Commission
- Growing interest in **Arctic sovereignty** in current geo-political context.



Thank you!
Merci!



For further information & questions please contact:

Chris Marshall

Chris.marshall@dfo-mpo.gc.ca

<http://www.charts.gc.ca/>





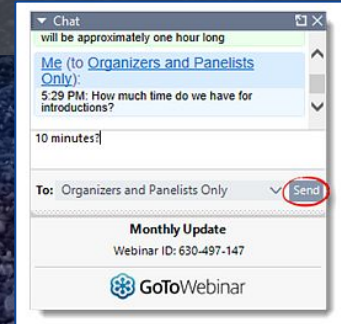
End of Presentation

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Poll Results

BREAK TIME

Back at 9:55am AKST



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