



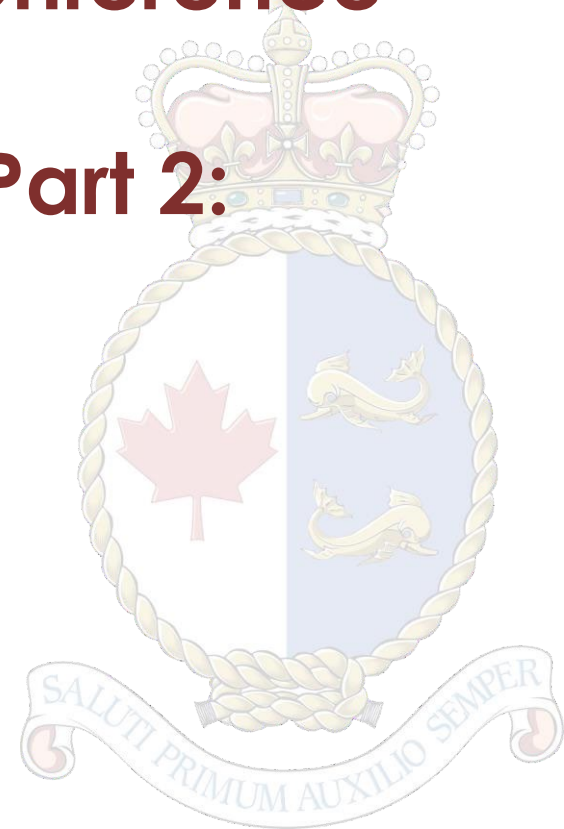
24th B.C. Tugboat Industry Conference

Evolution of the Industry Part 2: Going Forward!

Canadian Coast Guard

**Nicola Mancey, Regional
Director of Navigational
Programs**

May 2022



Overview

- 60th Anniversary
 - Introduction to Regional Management Board
 - General Overview
 - OPP Radar Project
 - Connected Coast
 - Emergency Towing
 - Incident Management
-



Assistant Commissioner – Derek Moss



CCG Western, Regional Management Board



Mission: Our services support government priorities and economic prosperity and contribute to the safety, accessibility and security of Canadian waters.

PREVENTION: We build and maintain safe waterways through aids to navigation, marine communications, traffic management and ice breaking. These programs promote the safe and efficient movement of vessel traffic, preventing accidents and ensuring a safe place for marine commerce and recreation

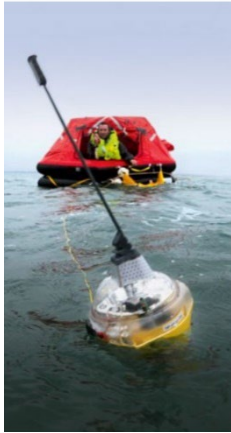
RESPONSE: Through highly trained crews and readily available assets we protect mariners and the marine environment by responding to incidents quickly and efficiently



Prevention

- CCG Radio
- Vessel Traffic Management
- Radar & VHF coverage
- Aids to Navigation
- Lighthouses
- Hydrography
- Ice Breaking
- Building Community Incident Readiness
- Fisheries Management
- Ocean Science
- Whale Monitoring
- Maritime Security Detection/Assessment





Response

- MTCS CCG Radio
- JRCC Search & Rescue
- Environmental Response
- Vessels of Concern
- Incident Command
- Fisheries Enforcement
- Marine Security Ops
- CCG Fleet assets
- Response Organizations
- Community Responders





OPP 1 Radar Project



Background

OBJECTIVE

- Support multiple Government mandates through the Oceans Protection Plan (OPP) initiative(s)
- Increase radar coverage to improve vessel traffic capabilities, search and rescue, environmental response posture, domain awareness, and support for other Government departments

SCOPE

- Construct six new shore-based radar sites to be *operational by March 2022*
 - *Note – OPP project delivery has been extended due to the pandemic*



Sites Identified

Six New OPP Radar Sites:

- Mount Gil (Existing Site)
- Calvert Island – Safety Mountain (Existing Site, New location)
- Cape Lazo (Existing Facility)
- Telegraph Cove (New Site)
- Seymour Narrows (New Site)
- Denny Island (New Site)



Challenges

REMOTE LOCATIONS

- All sites are isolated, most are helicopter access only
- Transportation and logistics are complex and expensive

WEATHER

- Prince Rupert is Canada's wettest city:
 - 2590mm annual precipitation on average
 - 240 days per year receive precipitation

LIMITED WORKING SEASON

- Snowfall on the mountains and limited daylight restricts lengthy, suitable construction periods

SUPPLY CHAIN

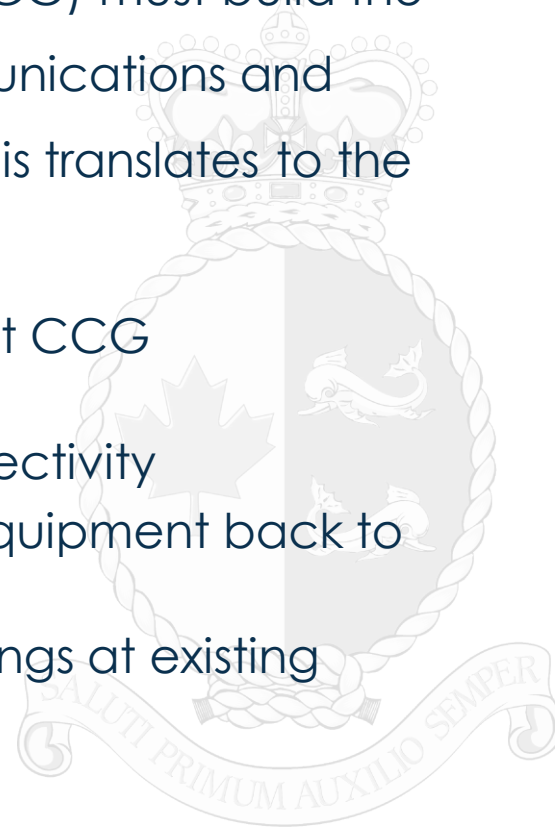
- Materials, labour and specialized equipment (Heavy lift helicopters)



Parallel Projects Required

The OPP Radar Project is about more than just six new radars. To facilitate the new service, Canadian Coast Guard (CCG) must build the supporting architecture to provide the Marine Communications and Traffic Services (MCTS) centers with the information. This translates to the following:

- Accelerated infrastructure investments at adjacent CCG communications sites
- Improvements to CCG Operational Network connectivity
- Additional supporting sites to connect the radar equipment back to MCTS
- New power generation systems, towers, and buildings at existing CCG sites



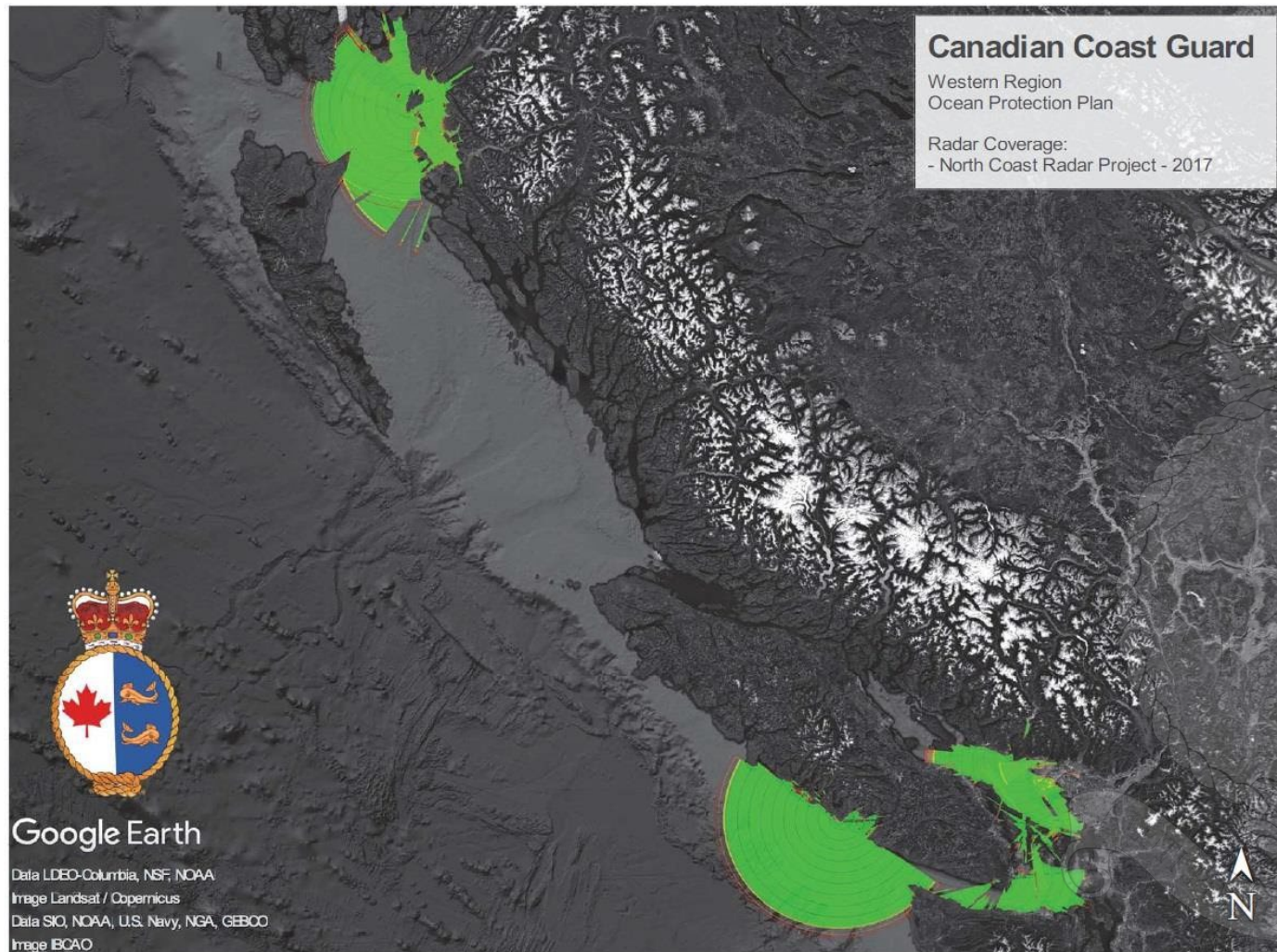
OPP Radar Project

SCOPE SUMMARY

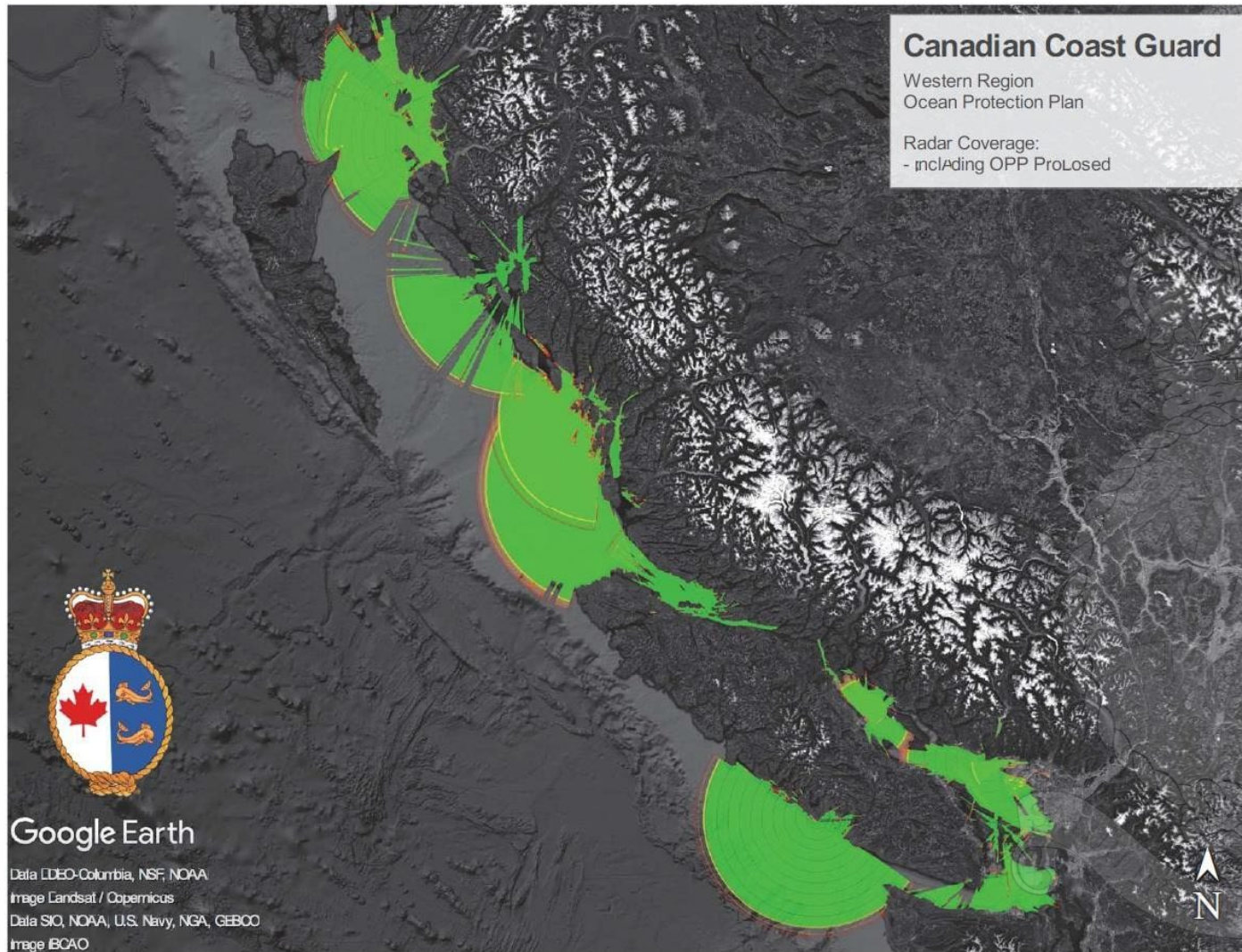
- 4 new sites to establishment
- 5 new buildings – full fit-up (power, electrical, etc...)
- 9 new towers
- 3 tower upgrades
- 2 power system upgrades



Existing Radar Coverage



Radar Coverage at Project Completion



Mount Gil (Existing Site)

Timeline:

June 2019: New tower installed

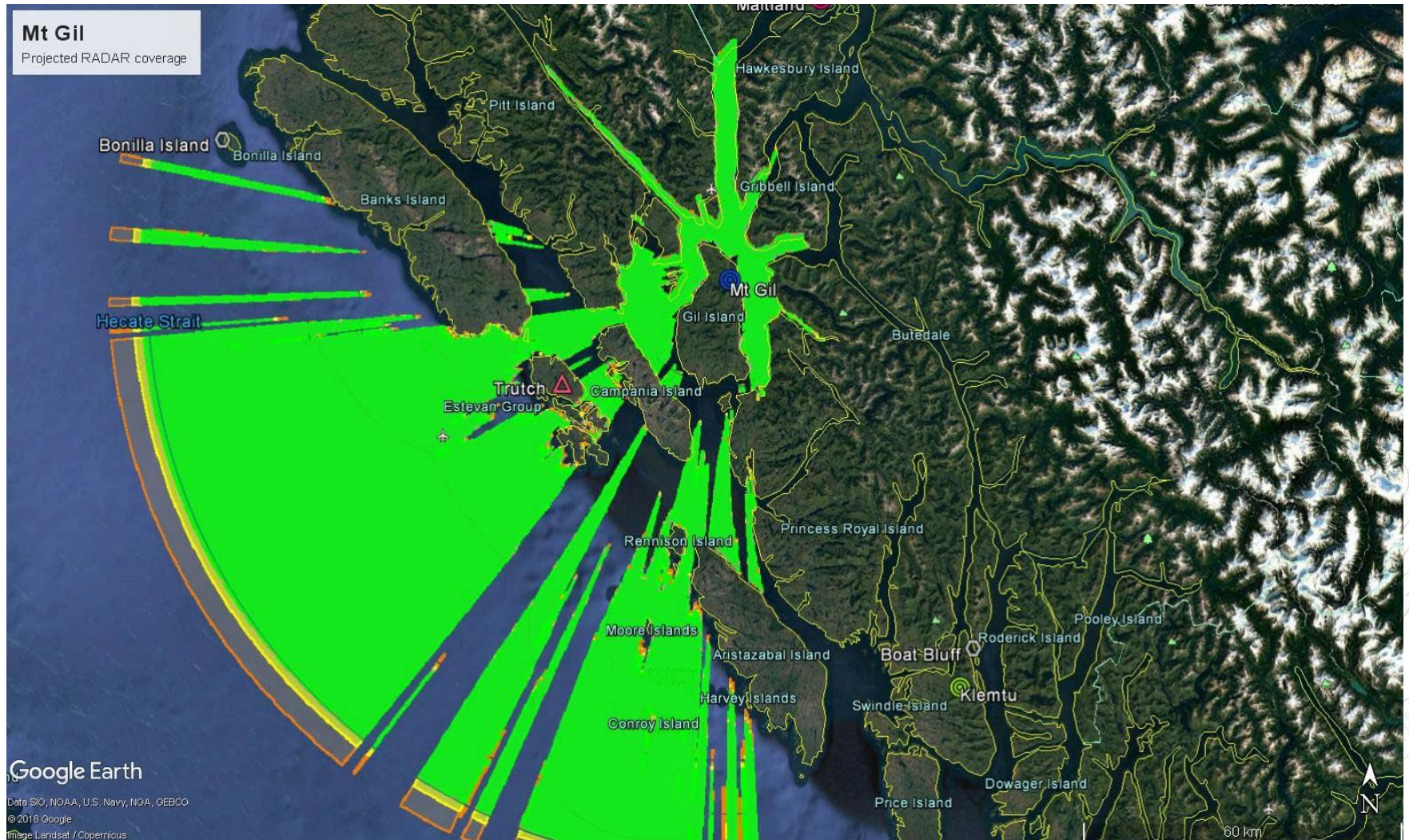
Fall 2020: Microwave Radio equipment install, commission new radios and antennas, and install new building foundations

Summer 2021: Install new building and power generation systems

Fall 2021: Radar install



Mount Gil – Projected Radar Coverage



Calvert Island (Existing Site, New Location) Safety Mountain

Timeline:

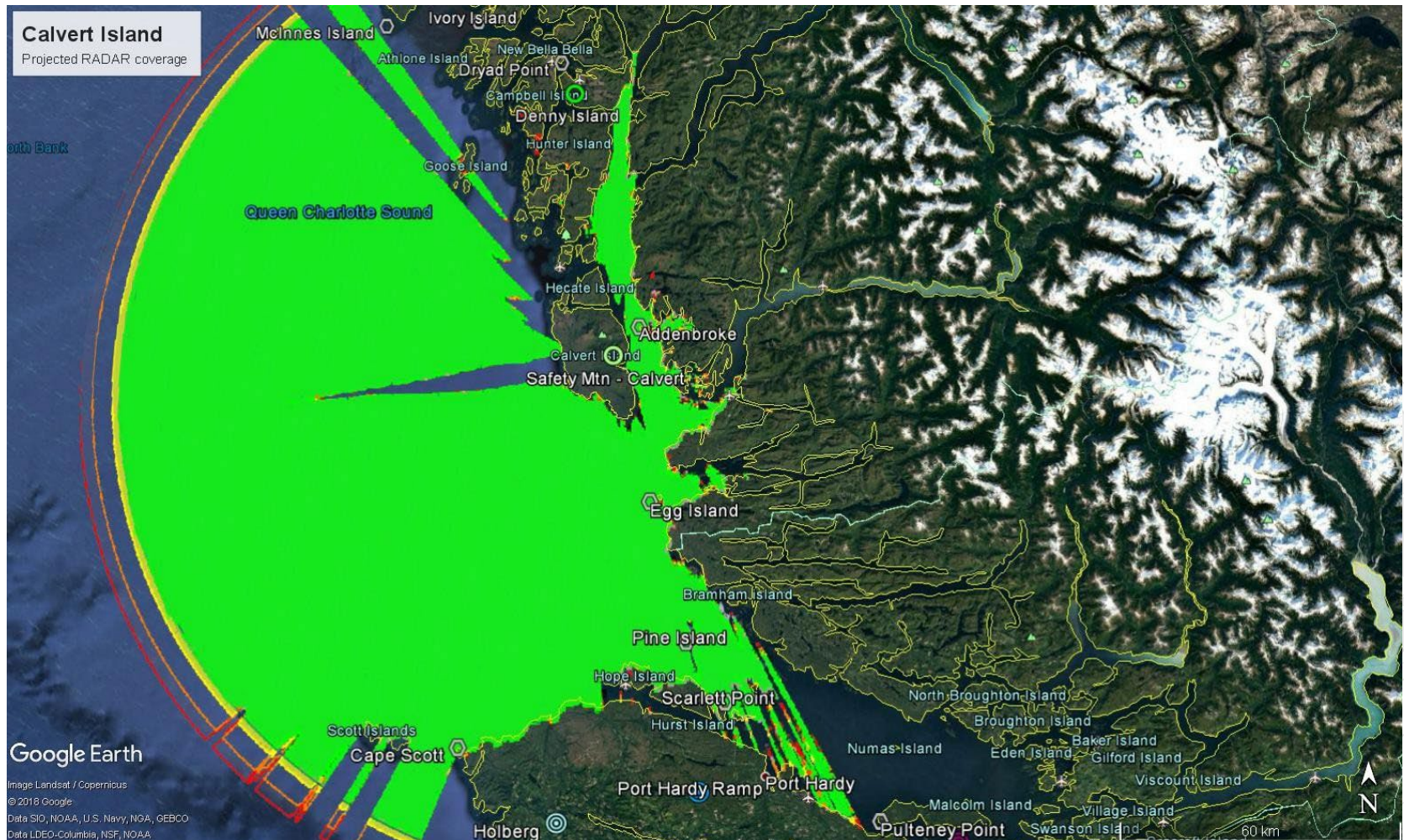
Summer 2020: Site clearing and scrubbing

Spring 2022: Civil works, tower and building foundation installations

Spring 2023: Building installations, Radar equipment installation and site commissioning



Calvert Island – Projected Radar Coverage



Cape Lazo (Existing Facility)

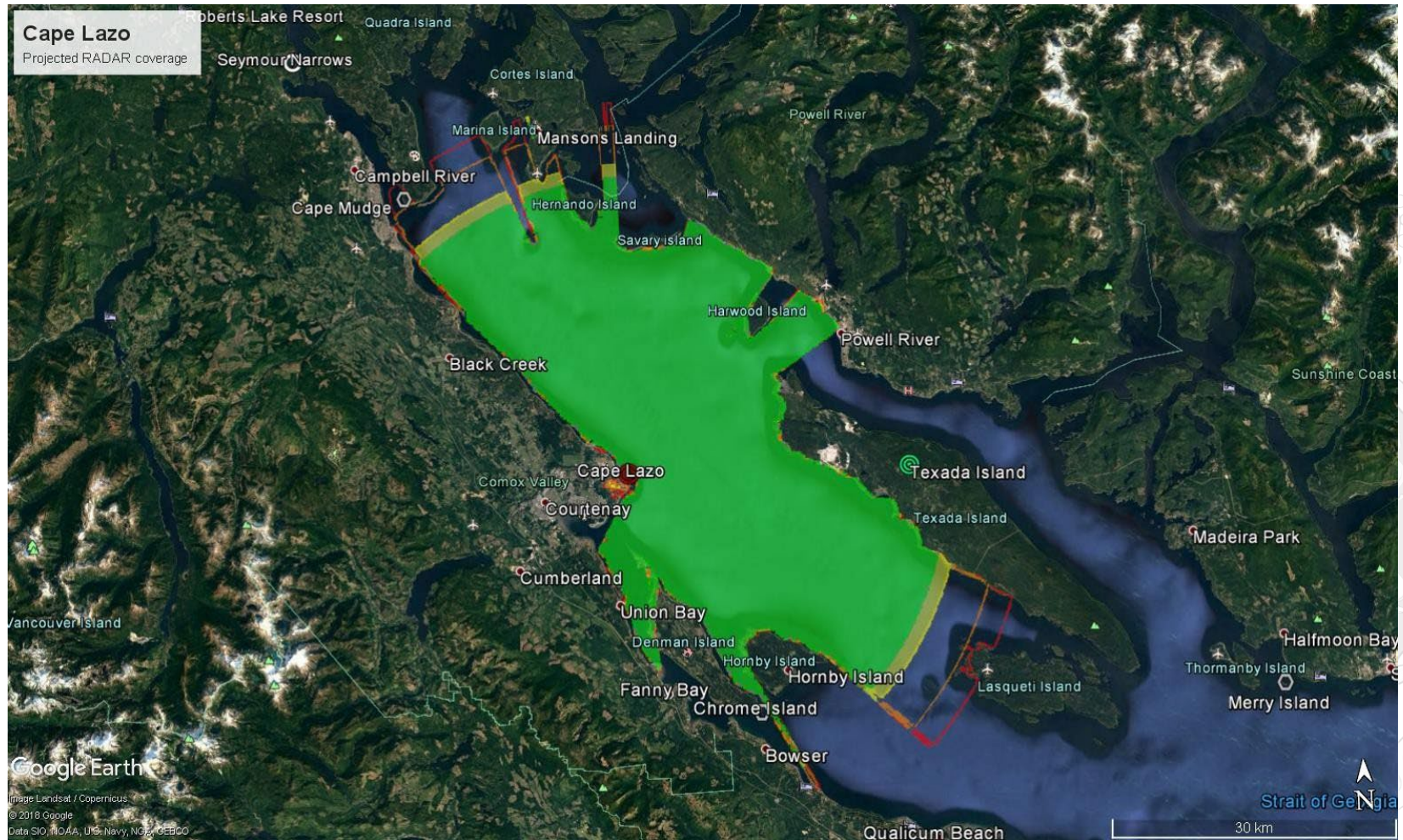
Timeline:

Summer 2020: Tower installation, and microwave radios/antenna installation

Fall 2021: Radar install



Cape Lazo – Projected Radar Coverage



Telegraph Cove (New Site)

Timeline:

Fall 2019: Site clearing

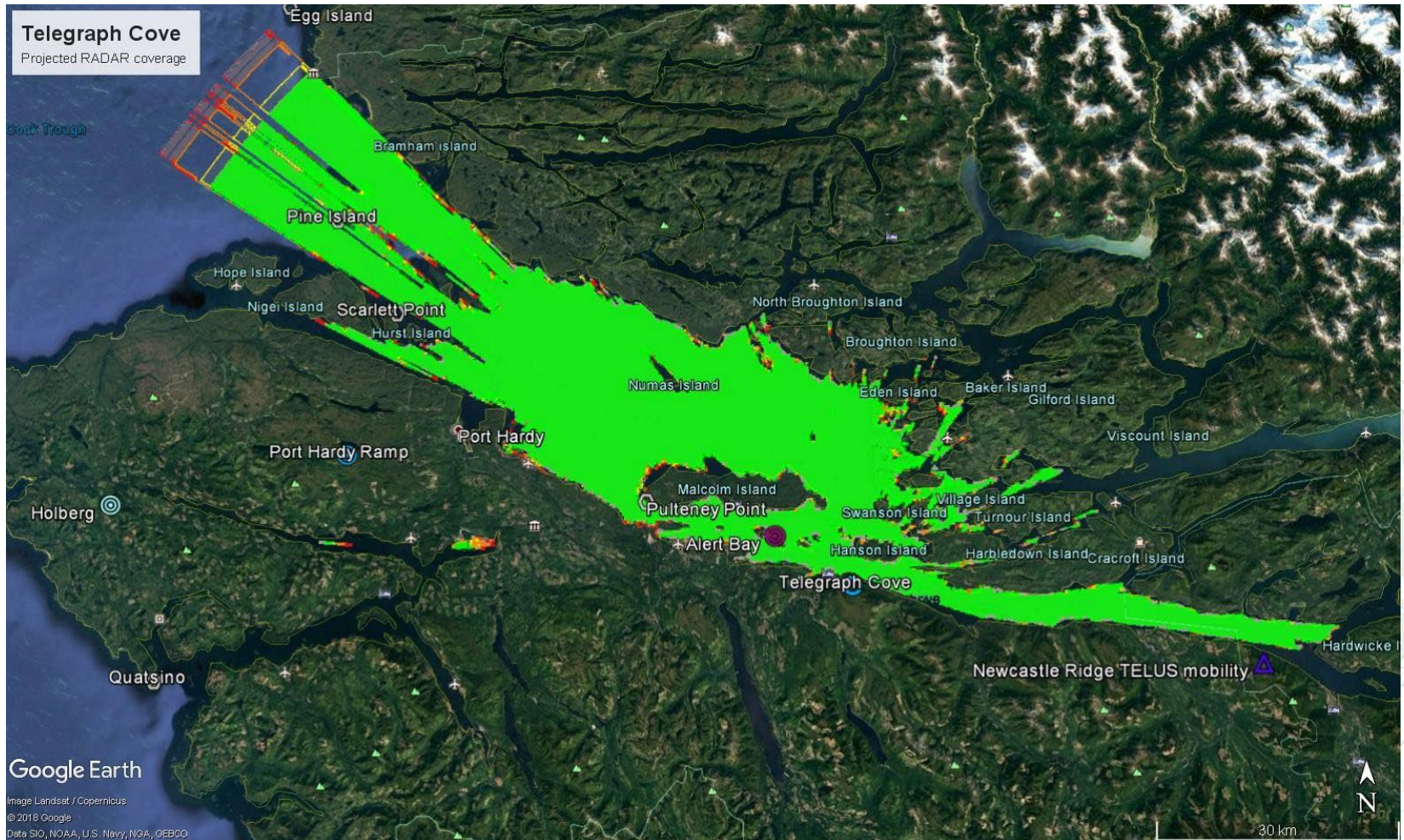
Summer 2021: Tower and building foundation completion

Fall 2020: Building and power generation civil works installation. Microwave radio and antenna installations

Summer 2022: Building and Radar installations



Telegraph Cove – Projected Radar Coverage



Seymour Narrows (New Site)

Timeline:

Dec 2020: Tower installation and civil works

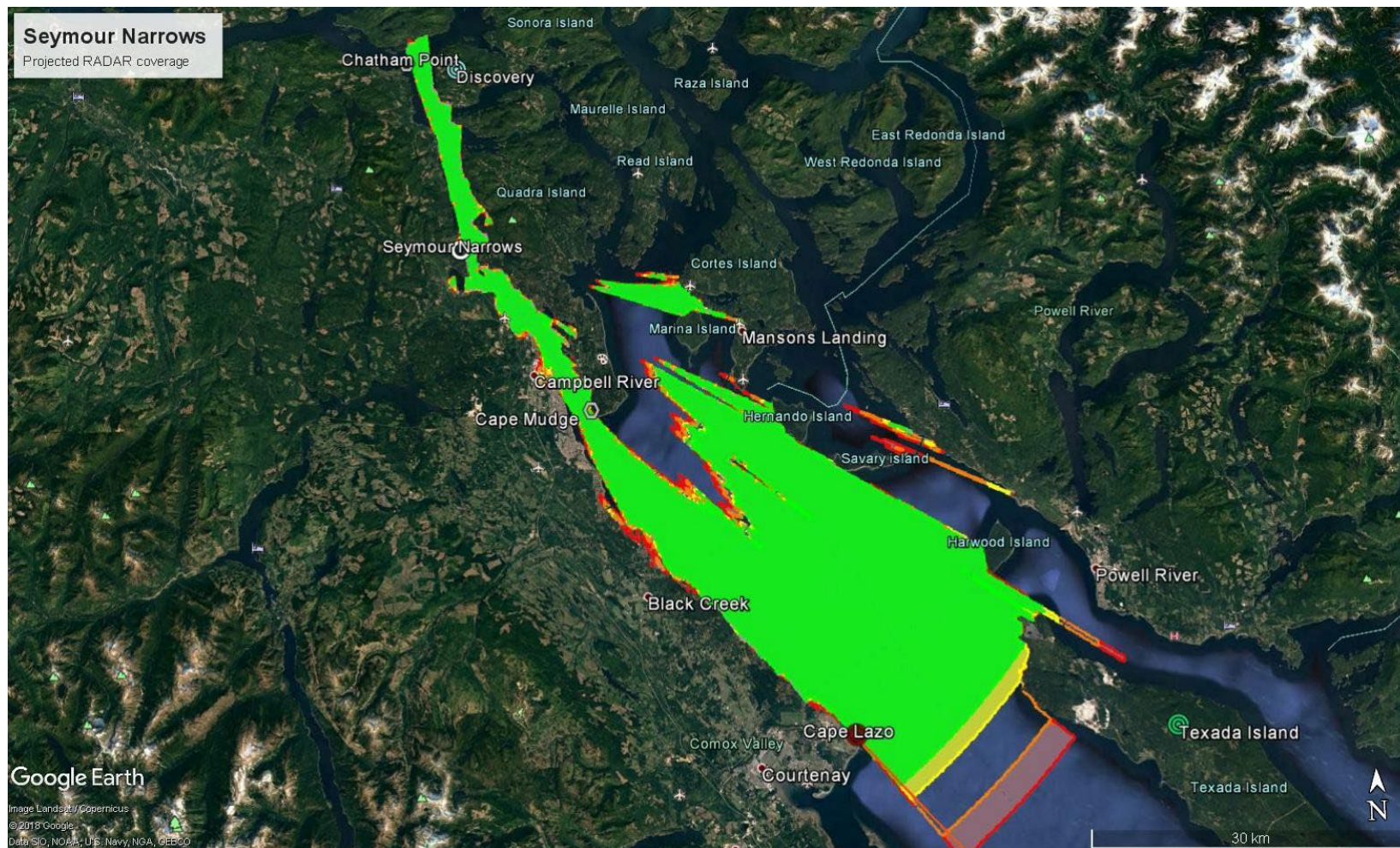
Summer/Fall 2021: Building construction and fit-up

Fall/Winter 2021: Radio and antenna equipment installation

Jan/Feb 2022: Radar install



Seymour Narrows – Projected Radar Coverage



Denny Island (New Site)

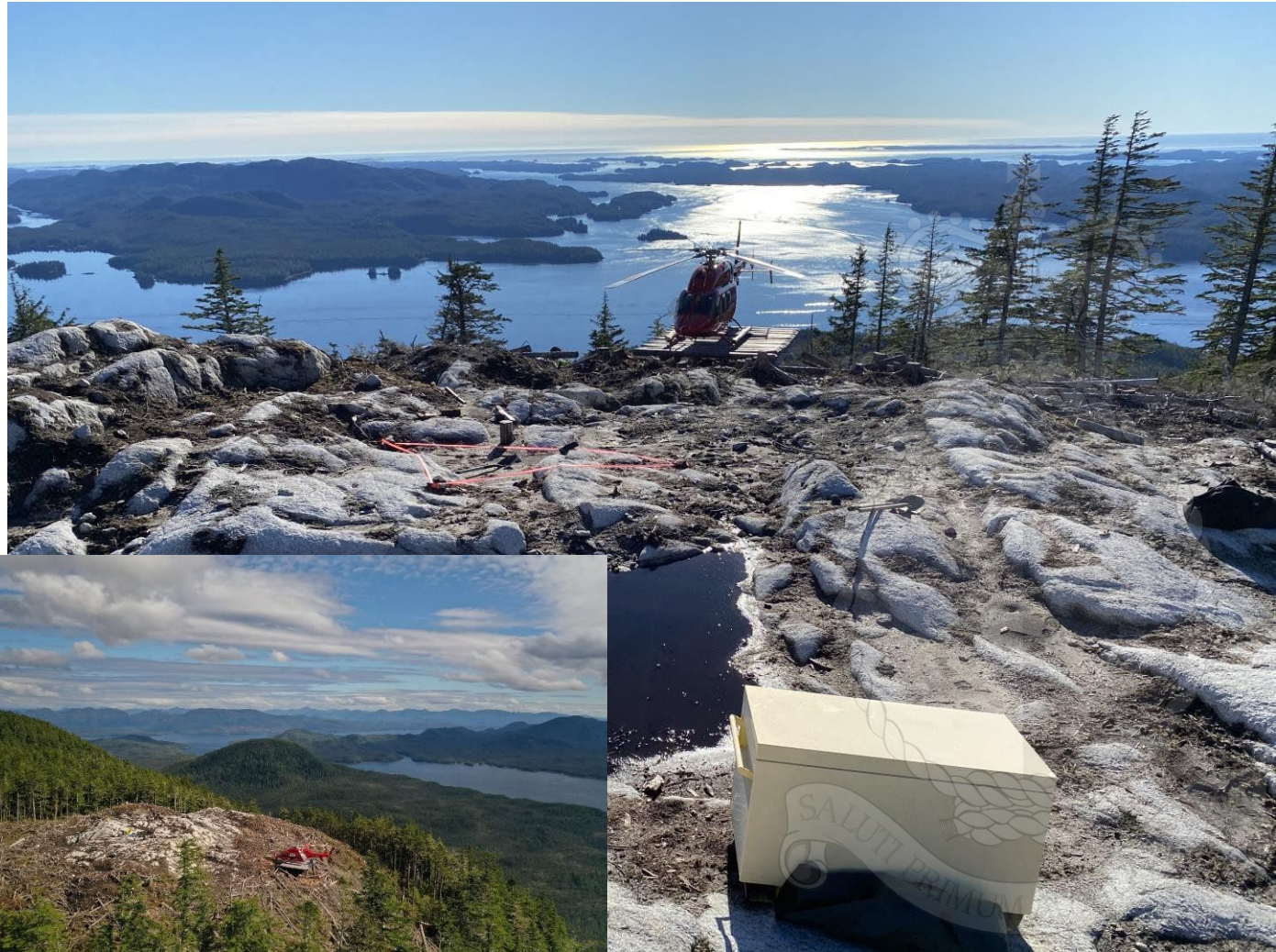
Timeline:

Spring 2021: Site clearing and layout

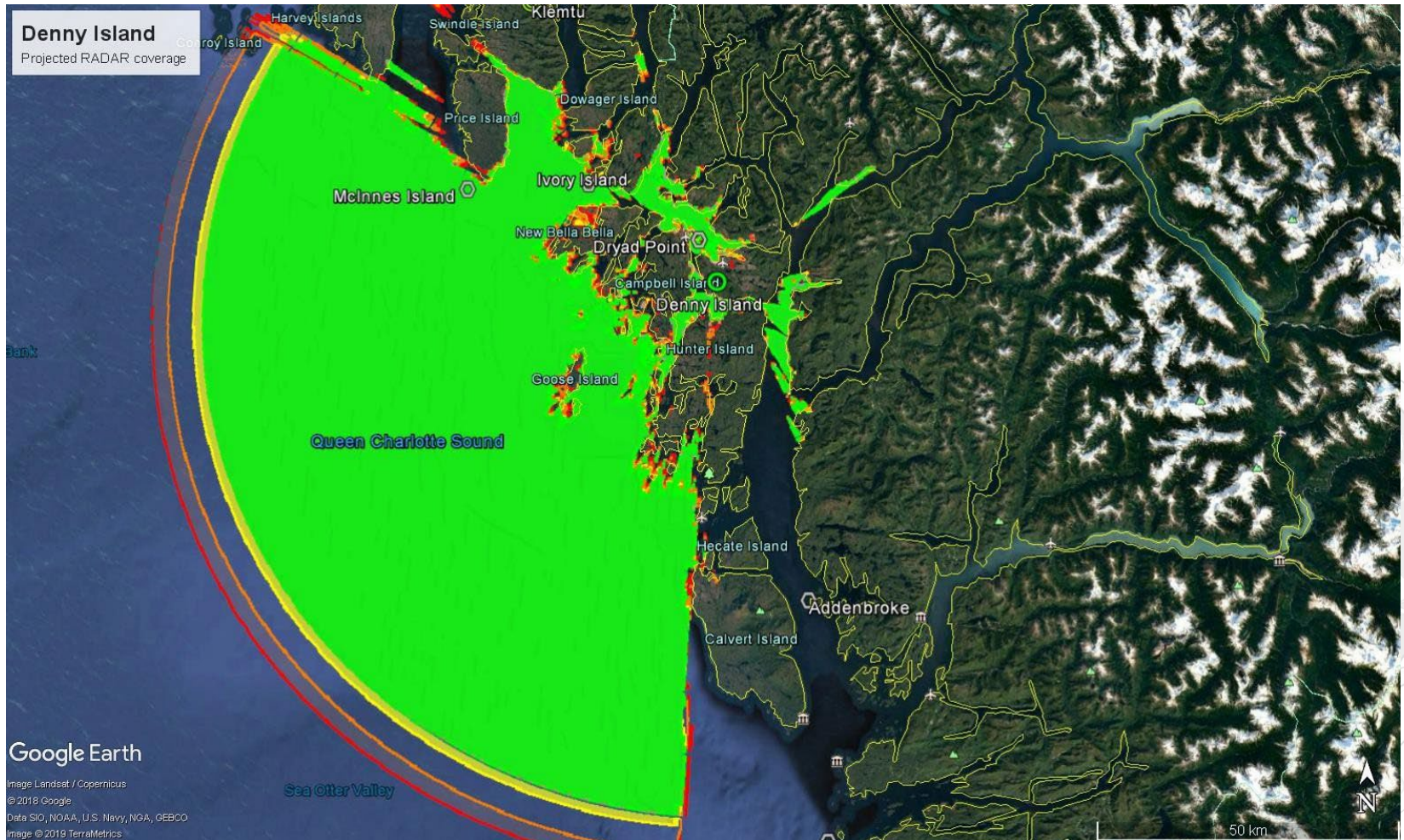
Spring 2022: Civil works and foundation installations, tower erection

Summer 2022: Building installations (slinging). Building fit-up and commissioning

Fall 2022: Microwave radio equipment install in racks and Radar install



Denny Island – Proposed Radar Coverage



Highlights

Significant collaboration with partners and stakeholders

- First Nations consultation and engagement
- Extensive work with Provincial authorities and enablers
- Feedback and data collected from the marine sector on areas of interest/risk
- Building relationships with Federal partners (MSOC members such as TC, CBSA, RCMP, DND, and DFO)





Connected Coast Project



May 2022



Project Overview

CONNECTED COAST PROJECT

- Place subsea fibre-optic cable along the BC coast from Prince Rupert, to Haida Gwaii, south to Vancouver, and around Vancouver Island
- Bring high-speed internet to 139 rural and remote coastal communities, including 48 Indigenous communities representing 44 First Nations

Project Overview (continued)

PARTNERSHIP IMPLEMENTATION

- CityWest
- Strathcona Regional District

FUNDING

- \$45.4 Million
- Government of Canada
 - Connect to Innovate Program (CTI)
 - Indigenous Services Canada
- Province of BC



Benefits for CCG

- Opportunity to bring high-speed internet to staffed remote CCG sites → Lifeboat Stations and Light Stations – 8 sites currently underway
- Ability to further harden CCG Operational Network
- Increased situational awareness through expanded tracking tools and cameras in remote locations
- Additional CCG FleetNet high-speed internet access points; less dependence on shipboard satellite systems



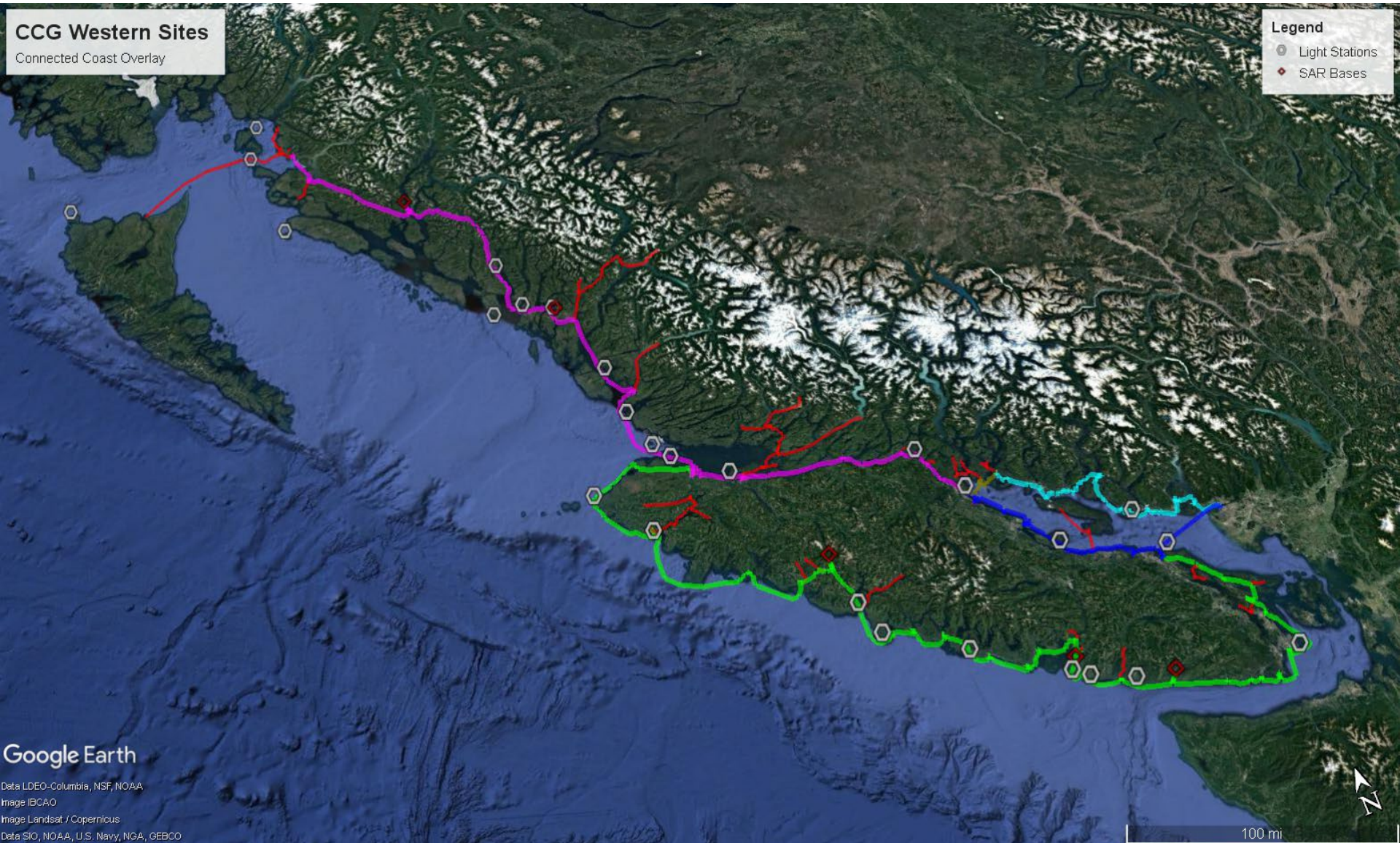
CCG Priorities

- It is not practical or economical to bring new subsea fibre to all CCG shoreline sites, therefore, prioritize:
 - Operational Facilities (Lifeboat Stations)
 - Remote Locations (no existing high-speed internet)
 - Proximity to planned fibre route (Cost)



Site Locations / Fibre Overlay

[Haida Gwaii route TBD]



Why CCG is using this opportunity

- Strengthening our network and expanding our connectivity options into remote areas of the coast
- Continued collaborations with partners
 - TC, RCMP, NRCan, ECCC, EMBC, ONC
- Project for marine communities & stakeholders
 - CCG support and involvement is important





Emergency Towing



Background – OPP origins

- In 2016, through the Oceans Protection Plan (OPP), the Government of Canada committed to providing emergency towing capacity on the West Coast.
- Under OPP, Coast Guard was implicated in 3 towing-specific projects:
 1. Upgrade all CCG vessels with Emergency Tow Kits (ETKs);
 2. Lease two emergency towing vessels stationed on Canada's West Coast;
 3. Develop the National Strategy on Emergency Towing (NSET).

To Date:

- Tow kits: 76 emergency towing kits have been purchased.
- Emergency towing vessels (ETVs): In 2018, two ETVs were leased from Atlantic Towing Limited to provide dedicated emergency towing capacity on the West Coast.
- The development of the NSET is underway and has a target completion date of Fall 2024.

National Strategy on Emergency Towing

- The Government of Canada is developing a long-term national approach for marine emergency towing - the National Strategy on Emergency Towing (NSET)
- The NSET was originally intended to be informed by qualitative needs assessments.
- Following two years of engagement with Indigenous and coastal communities and industry, it was determined that a quantitative risk assessment was needed to inform the development of the NSET and complement the work done on the needs assessment.
- Objectives of the NSET:
 - Determine what capacity is required nationally, and by region;
 - Determine how emergency towing will be funded and operated; and
 - Clarify the roles and responsibilities of emergency towing in Canadian waters.
- The NSET will be informed by:
 - Marine Navigation Risk Assessment (with focus on emergency towing);
 - Risk assessment, while national, will be performed in regional sections
 - Qualitative research and analysis;
 - Cost-benefit analysis;
 - Robust and evidence-based data analysis;
 - Lessons learned from the two ETVs;
 - Ongoing regional engagement with Indigenous communities and industry partners to reflect regional needs.

Emergency Towing

Emergency towing - Towing to prevent a disabled or damaged vessel from grounding, colliding or sinking.

- Emergency towing, when possible, can prevent or mitigate incidents, ensure crew safety, prevent spills or reduce environmental impacts of those spills.
- Recent marine incidents that drew attention to emergency towing in Canada:
 - 2014 - Simushir (cargo ship) - Lost power and drifted within 19NM of Haida Gwaii, BC
 - 2016 - Nathan E Stewart (tug) - Grounding in British Columbia directly impacting Heiltsuk First Nation
 - 2021 - Zim Kingston (cargo ship) - Loss of cargo, equipment failure and fire off the west coast of Vancouver Island, BC
 - 2022 – MSC Kim (cargo ship) – Engine failure led to drifting requiring tow near Port au Port, NL
 - 2022 - MV Comanche (bulk cargo) – Engine failure 35km south of the Avalon Peninsula, NL led to drifting requiring tow in advance of major storm



Queen Mary 2 – 2011
(Fire)



Sanko Commander – 2008
(Risk of Grounding)



Simushir – 2014
(Total Mechanical Failure)



Jesse Morgan – 2013
(Total Mechanical Failure)

Emergency Towing Vessels

As part of the OPP, CCG chartered two ETVs for deployment on the west coast: the Atlantic Eagle and Atlantic Raven.



Atlantic Eagle
Type: AHTS
Design: UT 722
Year Built: 1999
Bollard Pull: 158 mt



Atlantic Raven
Type: AHTS
Design: UT 722
Year Built: 1999
Bollard Pull: 162 mt

The Eagle and Raven have a bollard pull of 158 and 162 tonnes, respectively.

- An ETV with a bollard greater than 150 tonnes would be capable of managing 99% of the vessels off the West coast.

Primary function of ETVs: Provide towing capacity to intervene and prevent a potential grounding incident.

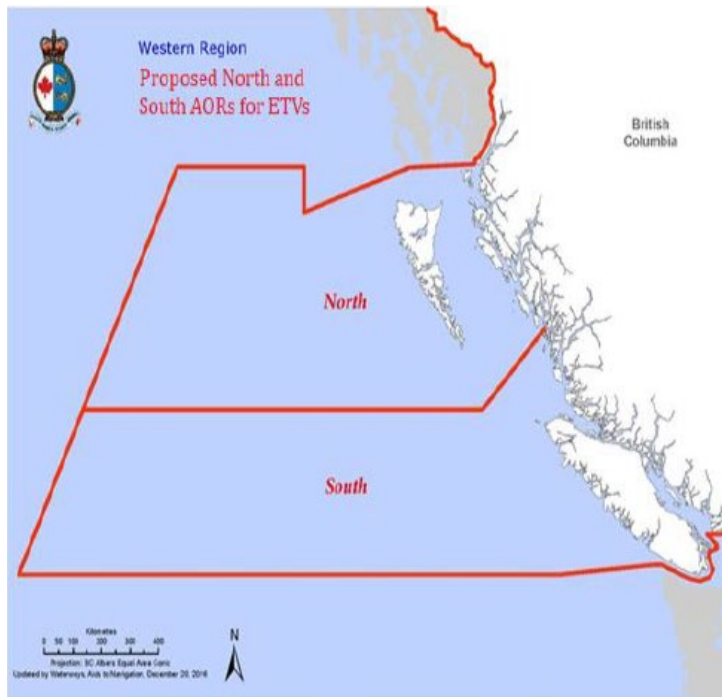
Additional functions include:

- On scene situational awareness for CCG and response partners
- Additional support for the safety of responders/crew
- Indicate and communicate CCG's Emergency Zone during an incident
- Communication link to/from field responders and incident command staff

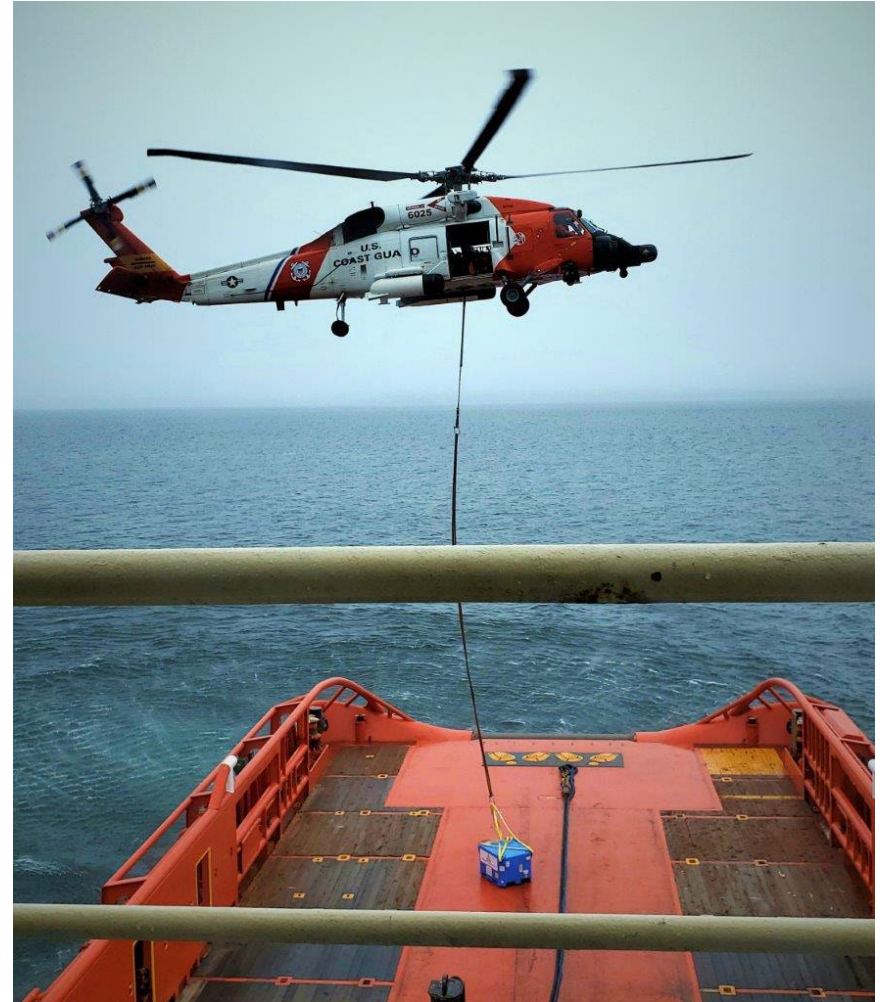


ETV Patrol Zones

- Coast Guard ETVs areas of responsibility are divided into northern and southern patrol zones of the BC coast.



Exercise Goletas – Port Hardy



ETV Contract Extension

- Two emergency towing vessels have been strategically located in the waters off British Columbia since late-2018. The original contract was in place for 3 years.
- On November 5, 2021, the Government of Canada announced a one-year contract extension for the lease of the two emergency towing vessels, the Atlantic Eagle and Atlantic Raven, stationed off the coast of British Columbia.
- The extension of this contract ensures the Canadian Coast Guard has the vessels it needs to respond to incidents involving large ships off the West Coast.
- The lease of these vessels serve as an interim measure while the National Strategy on Emergency Towing is developed.





Incident Management Directorate:

Search & Rescue Environmental Response Vessels of Concern

Update May 2022

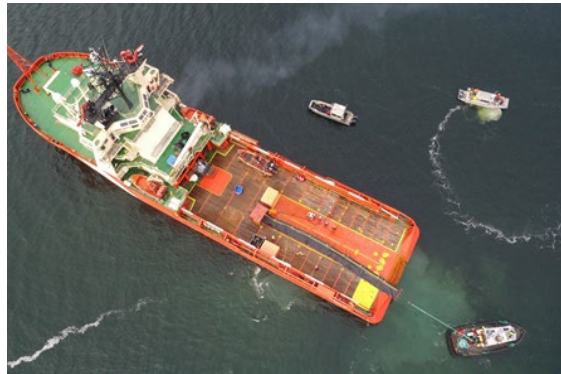


Oceans Protection Plan 1



- Increased delivery of Environmental response training to partners and First nation Communities
- Established the Coastal Nations Coast Guard Auxiliary
- Established the Indigenous Coastal Response Training
- Increased regional ER staff in response, readiness and preparedness.
- Procured new response equipment including skimmers, Boom, drones, and mobile incident command posts
- Established the Vessel of Concern Program, to address Wrecked, Abandoned and Hazardous Vessels.

Oceans Protection Plan 2



- Will provide expanded response capacity and capability to the CG for response to Hazardous and Noxious Substance
- Will provide enhanced capacity to CG Vessels of Concern program.
- Will enhance coastal community response through training, investment and collaboration.
- Supports the preparedness cycle and ongoing development of collaborative response plans
- Supports the continued work of Search and Rescue Risk Analysis

Message from SAR Superintendent

- Focus for SAR recently has been building community SAR response capacity, through training and exercises.
 - How you can help us: Tugs on the coast, great resources for SAR calls. Appreciate the professional mariners as top-shelf Vessels of Opportunity
 - Have an EPIRB and register it! If it's activated, someone is going to check.
-

Zim Kingston – The importance of Tugboats



- Tugboats provided initial and ongoing fire response during the incident.
- DND Tug Fire Brand was one of the first vessels on scene
- Maersk Offshore supply and tug vessels were contracted by shipping owner to provide fire fighting and boundary cooling
- Sea Span tugs were contracted by vessel owner for fire fighting and stand by towing
- CCG Emergency Tow vessel was on stand-by for emergency towing, enforcement of the emergency zone, and reserve fire fighting capacity



Join us for our 60th Anniversary!

Canadian Coast Guard Day

Saturday, June 11th, 2022

10 am to 3 pm

- Tour a ship
- See live rescue demonstrations
- Learn about Search and Rescue, Marine Communications, Spill Response and much, much more
- Learn about the wide range of jobs at sea and onshore
 - Events, games and prizes all day long

ALL AGES ARE WELCOME!

Located at 25 Huron Street, Victoria

Practical (closed toe) footwear is recommended



Canada 
