

# ***NOAA Arctic Strategic Plan Development***

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# The Arctic: Challenge, Opportunity

**Interest in the Arctic:**

**Law of the Sea**

**Extended Continental Shelf**

**Sea ice decreasing...**

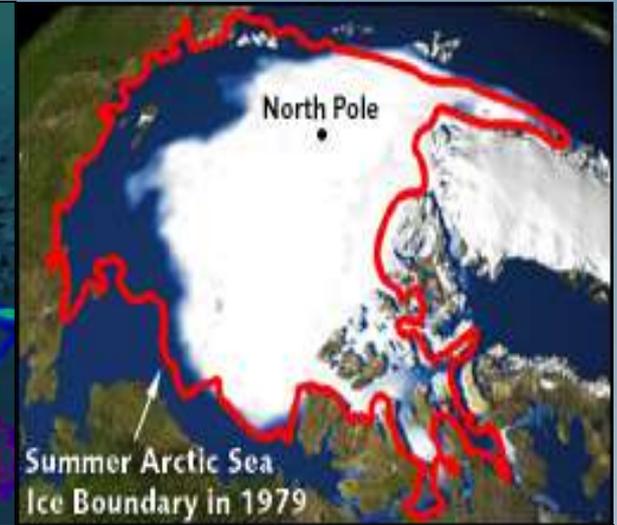
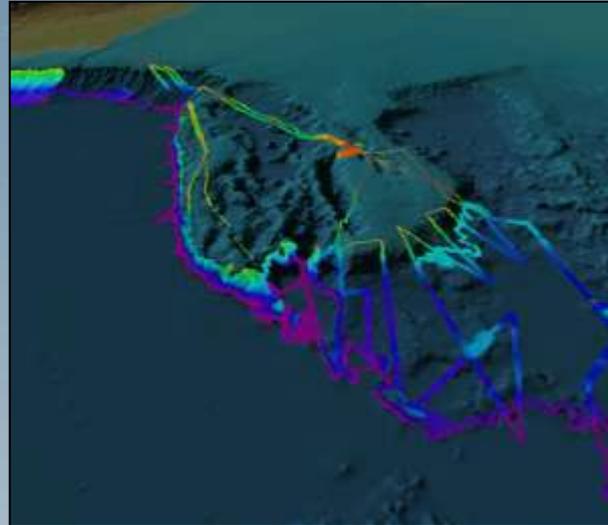
**Coastal communities at risk**

**Resource extraction**

**Navigation**

**Marine resource protections, regulations**

**Security**



# The Arctic: Current Efforts

**2009 Healy Cruise with Canada for ECS mapping**

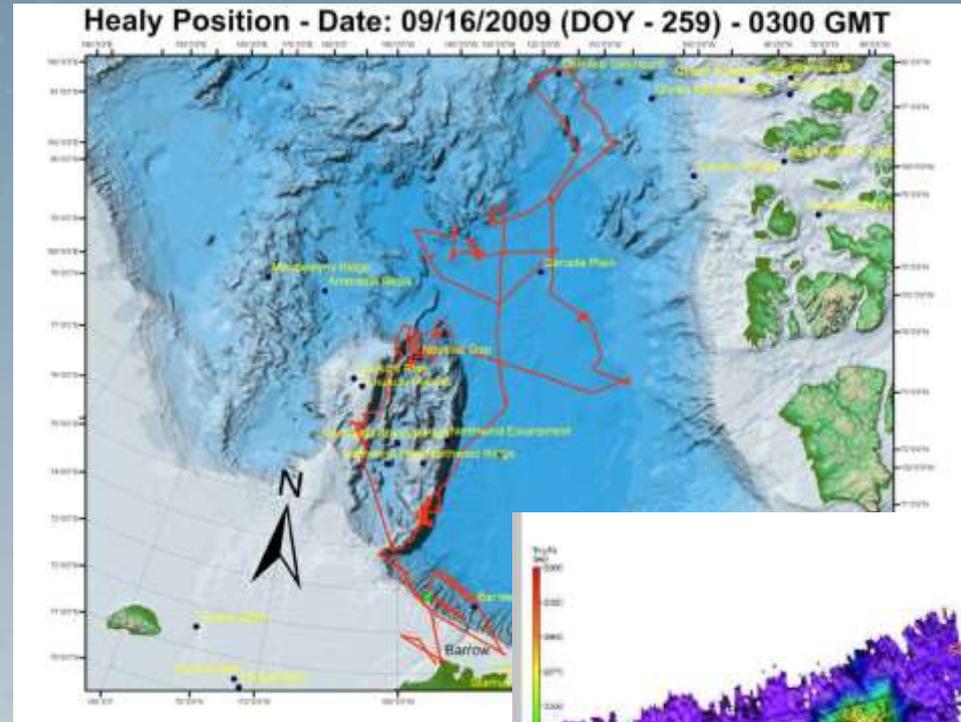
- Armstrong/Mayer
- Mapping/Seismic
- Seamount discovery

**NOAA aboard CGC Spar Arctic Deployment 2009**

- Kodiak to Little Diomede
- Nautical Chart, Coast Pilot, Marine Wx assessments

**NOAA, Naval Oceanographic Office meeting 9/2009**

- Joint surveys in Bering Strait summer 2010



# The Arctic: Challenge, Opportunity

## **Challenge:**

**Critical environmental, economic, and national security issues are emerging**

## **The Nation needs:**

**Science-based information and baselines necessary for understanding and evaluating climate change and its impacts**

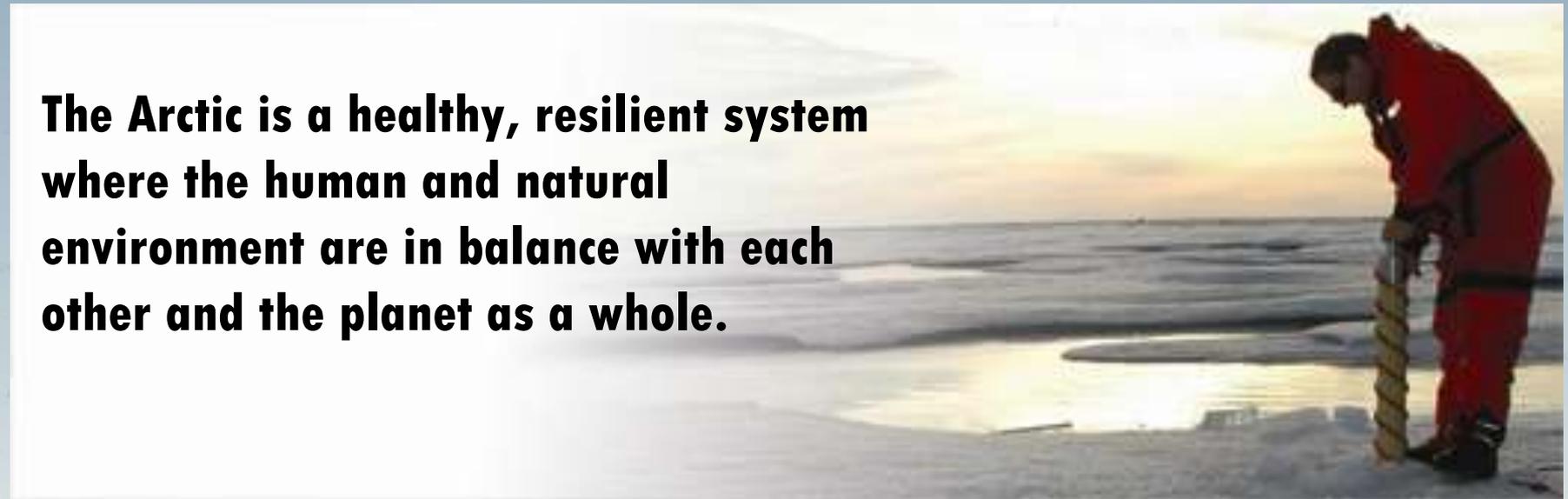
**Expansion of critical NOAA services in the Arctic region**



# The Arctic: NOAA Mission, Vision

**NOAA protects life and property, conserves and sustainably manages natural resources, and enhances the economy through science, service and stewardship in the Arctic.**

**The Arctic is a healthy, resilient system where the human and natural environment are in balance with each other and the planet as a whole.**



# The Arctic: 6 Theme Areas

- Climate Science and Services
- Coastal Community Hazard Resilience
- Weather and Water Services
- Marine Transportation and Homeland Security
- Marine Ecosystems and Resource Management
- Arctic Governance and International Cooperation



# The Arctic: Coastal Community Hazard Resilience

## Requirements:

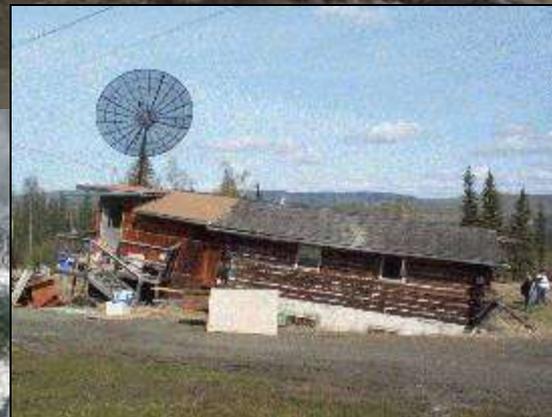
- Accurate GIS-based tools for near/long term climate change impacts to inform mitigation strategies for western/North Slope AK coastal communities – Coastal Zone Mgmt Act

## Role for NOAA:

- Analysis tools/mitigation expertise for storm surge/flooding/erosion/sea level change, human health, Integrated Ocean and Coastal Mapping (IOCM) data acquisition strategies and foundational geospatial infrastructure.

# Trends in Arctic/Alaska

- Erosion, permafrost thaw, fires, river flow



# The Arctic: Marine Transportation and Homeland Security

## Requirements:

- Coast Guard, Navy strengthening Arctic presence for security and maritime domain awareness, search/rescue, rapid response
- Marine Transportation System users need updated geospatial data to navigate major transit routes, harbors of refuge
- Daily to Seasonal Sea Ice forecasts critical

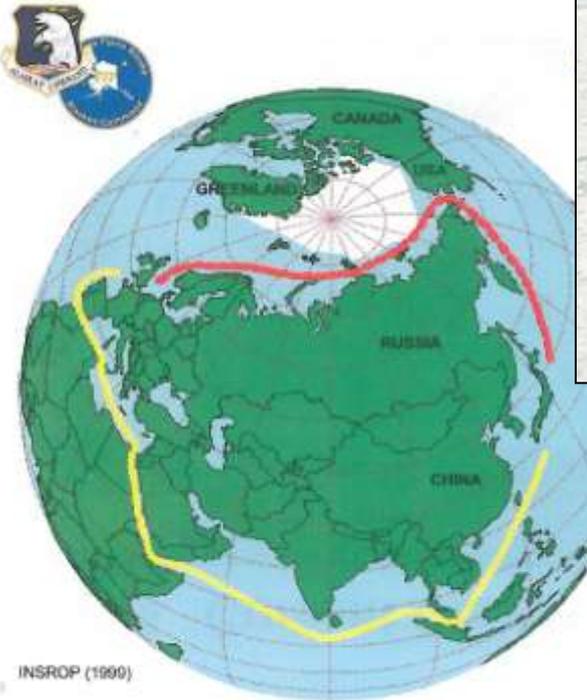
## Role for NOAA:

- Provide foundational geospatial infrastructure, IOCM data acquisition strategies, National Ice Center and NWS sea ice forecasts
- HazMat response capabilities, oil in ice R&D

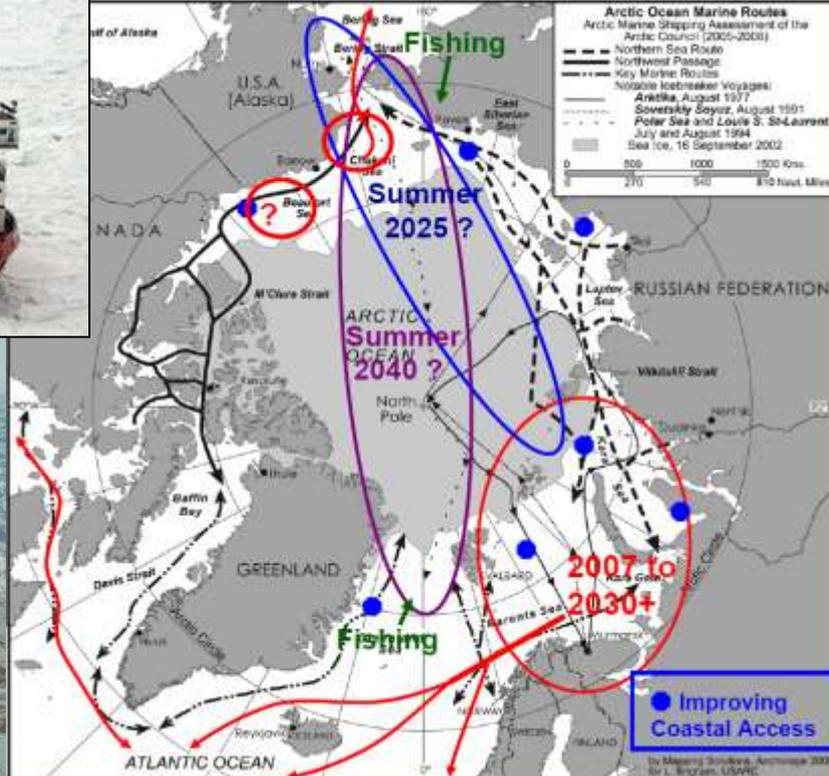
# Trends in Arctic/Alaska

## Expanding Marine Transportation

- Arctic Shipping Routes
- Great Circle Routes



INSROP (1999)

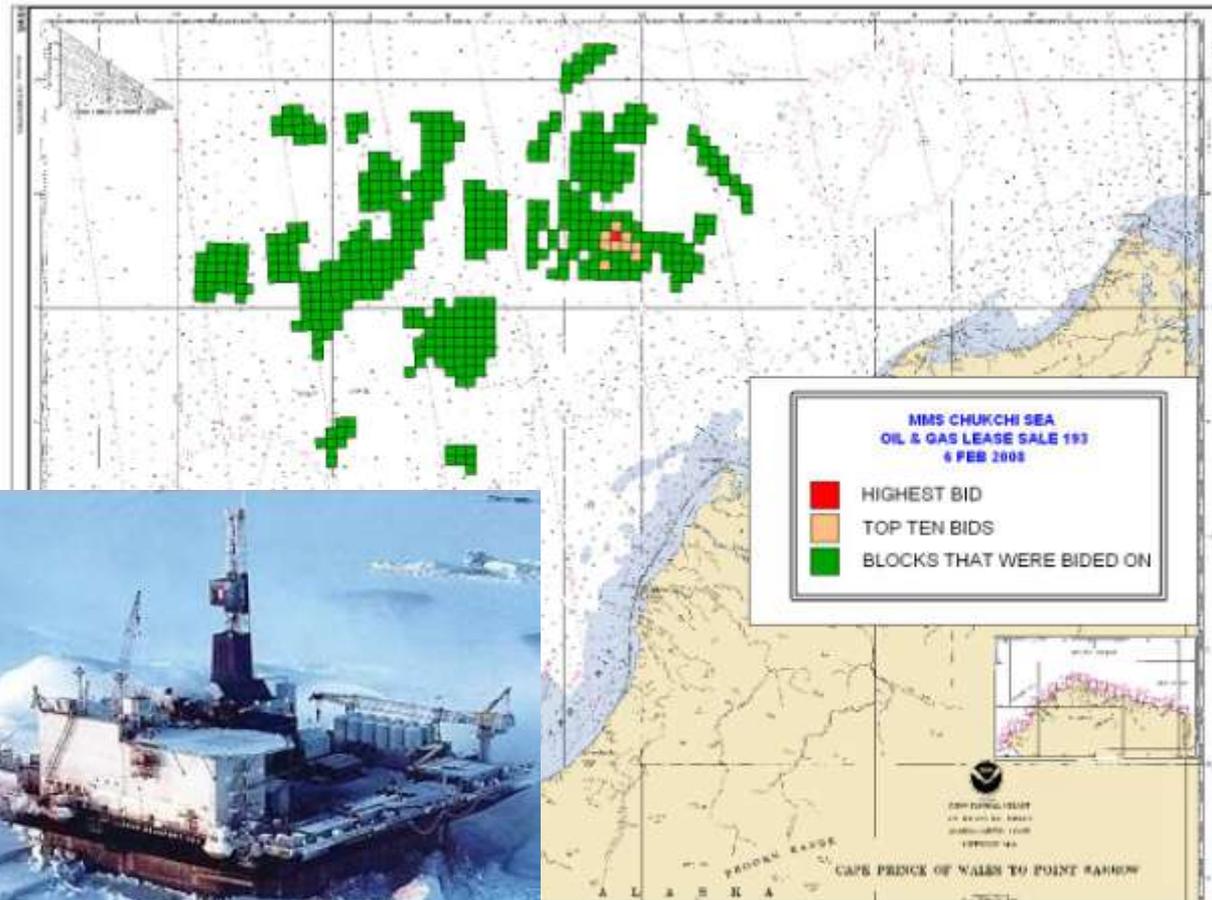


Improving Coastal Access

By Mapping Solutions, November 2009  
By L. Bryan USAPC

# Trends in Arctic/Alaska

- Increasing Oil & Gas Exploration

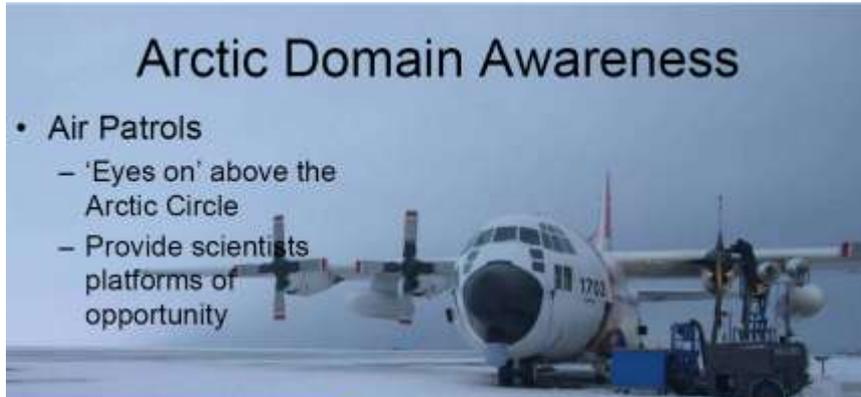


# Trends in Arctic/Alaska

- Expanded Military and Coast Guard Operations

## Arctic Domain Awareness

- Air Patrols
  - ‘Eyes on’ above the Arctic Circle
  - Provide scientists platforms of opportunity



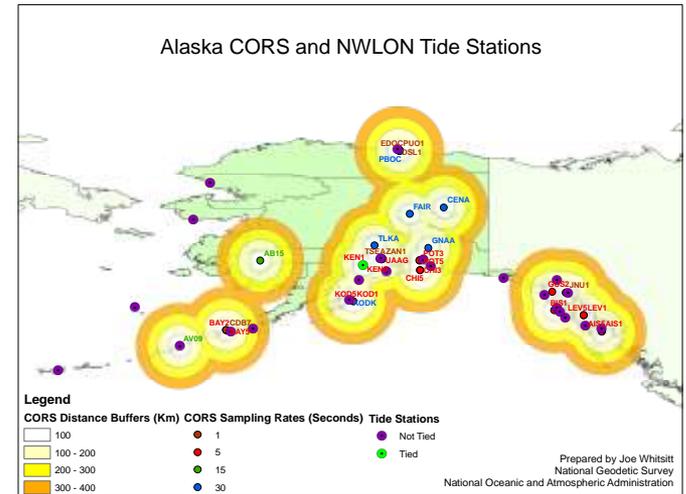
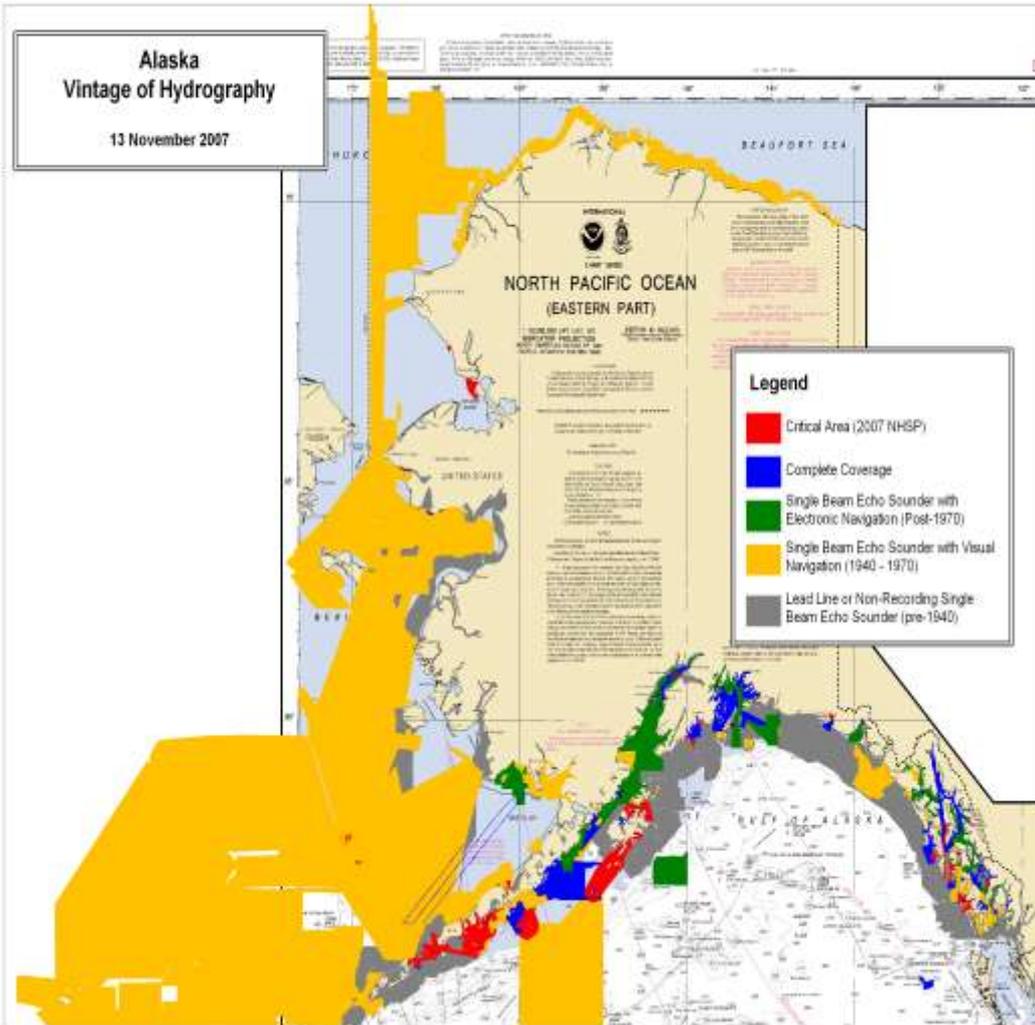
## Arctic Ops Summer '08

- Develop Arctic Domain Awareness
  - Nome C130 Deployment
- Cutter Operations
  - HEALY, POLAR SEA
- CGC SPAR Waterways Analysis & Management System
- International Search and Rescue Exercise
- Tailored Force Package Deployment
- Prudhoe Bay Maritime Security Deployment
- Coastal Community Engagement



# NOAA Data Gap Examples:

“The Charts are a Joke.” 2008 USCG SPAR Report



# The Arctic: Next Steps

- Draft Strategic Plan cleared thru NOAA
- Submit to HSRP, SAB for review
- Out for public comment
- FY12-16 Implementation Plan proposals

