Environmental Response Management Application

Amy Merten, Michele Jacobi, Kari Sheets, Celeste Leroux, Zach Winters-Staszak
NOAA’s Office of Response and Restoration

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Presentation Outline

• What is the Environmental Response Management Application (ERMA)?
  – Purpose, design, and example data sets
  – Recent roles

• Arctic Activities and Partnerships
  – Incorporating Arctic Communities’ Data
  – Canadian Partnerships and Activities
  – Arctic Council’s Emergency Prevention, Preparedness and Response Working Group

• Upcoming Plans
Environmental Response Management Application (ERMA®)

Functions

- Web-based mapping tool
- Analyze and visualize environmental information
- Prepare for, respond to, assess impacts from hazardous incidents or conditions
- Increases communication, coordination, and efficiency

Website

- Arctic: https://www.erna.unh.edu/arctic
Environmental Response Management Application (ERMA)
Geopolitical boundaries
Geographic Response Plans

Eschscholtz Bay/Buckland River, NWA-N18

Aerial photography of this area is unavailable at this time, but may be included as it becomes available.

June 28, 2011

DRAFT This tactic map is a working draft being used to develop a Geographic Response Strategy at this location. The tactics represented here have not been approved by the Subarea Committee and should not be considered final. If you have questions or comments please contact us by email at contact@nukaresearch.com.
National Ice Center: Ice Extent Feeds
National Weather Service: Ice Concentration
Incident: Exercise Only
Subsistence and Traditional Knowledge in ERMA

A series of communications:

1) Anchorage, 2011 – Major stakeholder workshop
2) Northwest Arctic Borough, 2012 – All 11 Villages Participated
3) North Slope Borough (Barrow, AK), 2012 – All 8 Villages Participated
4) University of Alaska Fairbanks, 2013 (Wainwright/Barrow)
5) Inuvialuit Region (Edmonton, AB), 2013
Current Activities

• Continue to work with Northern Communities to incorporate traditional knowledge

• EPPR Progress
  • Workshop in Edmonton, CA focused on Canadian data sets and Canadian scenarios
  • EPPR delegation invited. AC Spatial Data Infrastructure (SDI). Will be sharing data and metadata between ERMA and SDI, where appropriate.
  • AC Aviation Transportation Infrastructure Initiative AMATII.
  • DoD/NASA/NOAA Arctic Collaborative Environment

• NOAA/Environment Canada Project under a Memorandum of Understanding

• Stand Alone Arctic ERMA available

• Supported Kulluk Grounding and CANUSLANT Drill (Jun 2013)
Edmonton Workshop
Feb 12-13, 2013 · Edmonton, AB

Goals

• Bring together data providers/users to improve oil spill preparedness; identify data sources/priorities for Arctic ERMA; improve joint preparedness and response strategies in the Arctic

Scenarios

• Mass Search and Rescue (SAR), SAR/pollution in a sensitive area, burning offshore rig, large spill in open water (Beaufort Sea)

Participants

• Canadian and US organizations (government, Joint Secretariat, village elders, World Wildlife Fund, academia)
Edmonton Workshop Scenario Locations

- Large Tanker spill
- Drill Rig fire/spill
- Cruise Ship grounding
- Bulk Ore Carrier trapped in ice
Workshop Outcomes

• Better understanding of NOAA and EC capabilities, systems, data management practices, and challenges
• Long list of high priority datasets, agreed to share between Canada and the US:
  – Oceanographic/meteorological/bathymetric
  – Infrastructure
  – Shoreline characteristics/sensitivities
• Established strong working relationships– ongoing discussions on data acquisition, protection, and community involvement
• Developing work plan with EC and Joint Secretariat

Workshop Materials Available at:
http://www.crrc.unh.edu/workshops/erma_canada/index.html
New Data since Edmonton Workshop
Canadian Data (NRCan) con’t
Alaska ShoreZone
Stand Alone Arctic ERMA

- Allows the set-up of ERMA in a command post or remote location without Internet
- Test in “Arctic Shield” Exercise – Sept 2013 onboard USCGC Healy
- Arctic Shield Objectives:
  - Search above and below an ice flow, detect spilled oil, produce data to be used to plot the safest course to the spilled oil, deploy a brushed skimmer to recover the spilled oil and monitor the recovery operation (above and below the ice) to ensure complete recovery.
  - Evaluate use of UAS, UAV, Skimmer deployments, ROV, Ruttar Radar System, and ERMA.
Next Steps for Arctic ERMA

• Continue finding mechanisms for working with the Arctic Communities
• Developing best practices for data sharing with partners
  – Data sharing agreements and data management
  – Continue to test sharing of data among Canadian, and Shell mapping systems, as well as ACE, AOOS
• Incorporate AMATII data
• Perform Test case with AC Spatial Data Infrastructure (SDI) connections
  – Work toward a polar view
• Test Stand-Alone Arctic ERMA (Sept 2013)
Arctic ERMA Team

• NOAA:
  – Michele Jacobi
  – George Graettinger
  – Amy Merten
  – Mark Miller
  – Ben Shorr
  – Kari Sheets

• Genwest Systems:
  – Jill Bodnar
  – JB Huyett
  – Zach Winters-Staszak
  – Hayley Pickus

• I.M. Systems Group
  – Matt Dorsey
  – Laura Johnson
  – Jay Coady

• Development Team:
  – University of New Hampshire:
    • Nancy Kinner
    • Phillip Collins
    • Robert St. Lawrence
    • Kurt Schwehr
  – Allison Bailey, Sound GIS
  – Aaron Racicot, Z-Pulley
  – Chander Ganesan, OTG
Arctic ERMA Committee

Federal
NOAA
USCG HQ, Sector Anchorage, D17
DOI (BSEE, FWS, USGS)
US Arctic Research Commission

Industry
Shell
Alaska Clean Seas
ConocoPhillips

State of Alaska
Alaska DNR
Alaska DEC
Alaska DFG

Local
North Slope Borough
Northwest Arctic Borough
Kaktovik
North Slope Science Initiative
Cook Inlet Regional Citizens Advisory Council
Oil Spill Recovery Institute

Academia
University of New Hampshire
University of Alaska Fairbanks
University of Alaska Anchorage
Alaska Ocean Observing System

International
Environment Canada
Joint Secretariat
Arctic Council – EPPR Working Group
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Amy Merten, Ph.D., Spatial Data Branch Chief
amy.merten@noaa.gov

Web: http://response.restoration.noaa.gov/arctic

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