

WELCOME

Arctic ERMA® -
Canada/International

February 12 & 13, 2013



Coastal Response Research Center

Arctic ERMA® - Canada/International

February 12 & 13, 2013

Nancy E. Kinner
Coastal Response Research Center
University of New Hampshire



Coastal Response Research Center

Logistics

- Fire Exits
- Restrooms
- Dining: breakfasts, lunches & snacks
- Logistical questions see Kathy Mandsager or me



Thank You

- Thank you for warm welcome
- Thank you to the Joint Secretariat - Inuvialuit Settlement
 - Norm Snow
 - Jennifer Lam
 - Chris Harrison
- Thank you to National Oceanic and Atmospheric Administration (NOAA)
 - Amy Merten



**THANK YOU
Participants!**



Coastal Response Research Center

Coastal Response Research Center (CRRC)

- Partnership between NOAA's Office of Response and Restoration and the University of New Hampshire
- Since 2004
 - UNH Co-Director - Nancy Kinner
 - NOAA Co-Director - Amy Merten



Overall CRRC Mission

- Conduct and oversee basic and applied research and outreach on spill response and restoration
- Transform research results into practice
- Serve as hub for oil spill R&D
- Facilitate workshops bringing together **ALL STAKEHOLDERS** to discuss spill issues and concerns



Arctic Marine Shipping Assessment (AMSA 2009)

- Less and less ice
- Increased shipping activity
- Increased drilling activity
- More activity/traffic = Higher risk of accidents
- Recommendation= Prepare for accidents
 - Oil spills
 - Prepare at national, state and local levels



Workshop Background

- **March 2008** - CRRC hosted workshop *“Opening the Arctic Seas: Envisioning Disaster & Framing Solutions”*
 - Goal: To identify key strategies, action items, and research needs that will improve the ability of Arctic Nations and communities to prepare for, and respond to, marine incidents in the Arctic.
- **April 2010** - CRRC hosted workshop in Anchorage *“NRDA in Arctic Waters: The Dialogue Begins”*
 - Goal: initiate dialogue to identify data gaps for resources at risk from oil spill needed for NRDA
- **April 2011** - CRRC hosted workshop in Anchorage *“Arctic ERMA®”*
 - ERMA = web-based software provides information & tools to support planning, response and restoration decision-making
 - Goal: Gather data sets etc to make ERMA more useful
- **May & Nov 2012** - CRRC hosted workshops in Kotzebue and Barrow
 - Goal: Get local input into ERMA



Arctic ERMA® - Canada/International Workshop

Delta Edmonton Centre Suite Hotel
Edmonton, Alberta

February 12-13, 2013

AGENDA

TUESDAY, FEB 12

8:30 AM Registration

9:00 AM Welcome and Overview of Meeting

Nancy E. Kinner, *UNH Director, Coastal Response Research Center (CRR)*
Amy A. Merten, *Chief, Spatial Data Branch of NOAA's Office of Response and Restoration (ORR);
Co-Director, CRR; and EPPR Working Group Co-Lead*
Norm Snow, *Joint Secretariat, Inuvialuit Settlement Region & EPPR Working Group*

9:20 AM Introductions of Participants

9:45 AM Background of ERMA® Initiative and Expansion with the Arctic
Amy Merten

10:15 AM Descriptions and Demonstration of Arctic ERMA®
Kari Sheets & Zachary Winters-Staszak, *NOAA ORR Spatial Data Team*

10:30 AM Break

10:45 AM Overview of Breakout Groups Approach
Nancy Kinner

Scenario Overview (10 minutes each):

Scenario A – explore data needs associated with mass search & rescue (cruise ship)
Scenario B – explore data needs associated with search & rescue and pollution in sensitive area (Devon Island)
Scenario C – explore data needed in Arctic ERMA with burning offshore drill rig
Scenario D – explore data needs associated with large (25,000 bbl+) spill in open water (Beaufort Sea)

Questions for each Scenario:

- If this incident happened today, what information and data would you need to start responding?
- How could Arctic ERMA® be used in the response to this scenario to improve the response?
- What data are needed?
- If not, where do these data currently reside?
- What data sets do not yet exist, but are needed?
- What are the output requirements and/or functionalities of these data?
- Are there any access restrictions to these?
- Prioritize these data needs
- What tools are needed in ERMA®?



TUESDAY, FEB 12, CONT'D

Address the following for each scenario:

- Infrastructure, Commercial, & Industrial Uses of Data
- Human Dimensions (Social/Cultural/Subsistence/Recreational Uses)
- Physical and Chemical Parameters of the Environment (e.g., weather, ice, contaminants)
- Biological: Marine Mammals and Birds
- Biological: Fish and Invertebrates
- Response and Logistics (e.g., equipment, gear, human resources (personnel), photos)
- Habitat Info (land, shoreline, bathymetry)
- Navigation and Communication

12:15 PM Lunch

1:15 PM Breakout Session I

3:30 PM Plenary Reports on Response

4:45 PM Adjourn

WEDNESDAY, FEB 13

9:00 AM Review / Recalibrate

9:15 AM Breakout Session II

11:45 AM Lunch

12:45 AM Breakout Session III

2:00 PM Plenary Session on Arctic ERMA® Uses, Tools and Data Needs

3:30 PM Wrap-Up

4:00 PM Adjourn



Scenarios / Incidents



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Incident A: Cruise Ship

The M/V A, with 250 passengers and 140 crew on board, runs aground while exiting a fjord in the Northwest Passage in the Arctic Sound between Bathurst Inlet and Coronation Gulf in mid-September. Progressive flooding makes the ship unstable, and all must abandon ship. Some passengers and crew were injured in the grounding, requiring special medical attention. (Ship length 150m, Beam 19m, Draft 5m)

Primary Objective: Explore data needs associated with mass Search and Rescue (SAR) and salvage in a situation where self-rescue or quick rescue by a maritime “good Sam” is unlikely.



Incident B: Devon Island

The Bulk Ore Carrier B becomes trapped in the ice in the Parry Channel near Cape Liddon on Devon Island while attempting a late season (November/December) crossing of the Arctic from the Beaufort Sea to Baffin Bay enroute to the Barrow Sea. Ice damages the rudder and/or prop shaft, making it unable to maneuver. The vessel's hull is initially undamaged, but at risk (vessel is sub-standard with questionable integrity even in the best of conditions) if forced to winter over. It carries lead zinc ore, approximately 2,000 m³ (12,500 bbls) of heavy fuel oil, and 25 crew members.

Primary Objective: Explore the data needs associated with a potential SAR/pollution incident In the Parry Channel.



Incident C: Drill Rig

Due to a combination of operator error and faulty equipment on a Production Platform (concrete, bottom-founded), oil is vented through the flare boom and set on fire. Most oil is discharged into the sea where it is extinguished but some burning oil drips back down along the boom and ignites a fire on deck causing an explosion and injuries. 50-100 bbls are spilled. The platform is located in 70 meters of water in Mackenzie Bay, Beaufort Sea near the US-Canadian boundary north of Alaska during mid-May under broken-ice conditions.

Primary Objective: Explore the data needed in Arctic ERMA associated with fire fighting, evacuation, search and rescue, small oil spill response, and salvage of the platform.



Incident D: Large Spill in Beaufort Sea

In near-zero visibility conditions, the tanker D maneuvers to avoid research vessel E in the ice free Beaufort Sea to the west of Prince Patrick Island. The last minute maneuver is not entirely successful, a collision occurs with damage to both vessels. The tanker releases ~ 4,000 m³ (25,000 bbls) of cargo (multiple tanks) ~48 hr into the incident. The tanker should be towed to a Port-of-Refuge to avoid sinking; the R/V sinks.

Primary Objective: Explore data needs associated with a large oil spill in the open waters of the Beaufort Sea.



Breakout Group Questions

- If this incident happened today, how would we respond?
- How could Arctic ERMA be used in the response to this scenario to improve the response?
- What data are needed for the response?
- Are these data in Arctic ERMA already?
- If not, where do these data currently reside?
- What data sets do not yet exist, but are needed?
- What are the output requirements and/or functionalities of these data?
- Are there any access restrictions to these data sets?
- Prioritize these data needs
- What tools are needed in ERMA?



Address the Following for Each Scenario (as applicable)

- Infrastructure, Commercial, & Industrial Uses of Data
- Human Dimensions (Social/Cultural/Subsistence/Recreational Uses)
- Physical and Chemical Parameters of the Environment (e.g., weather, ice, contaminants)
- Biological: Marine Mammals and Birds
- Biological: Fish and Invertebrates
- Response and Logistics (e.g., equipment, gear, human resources (personnel), photos)
- Habitat Info (land, shoreline, bathymetry)
- Navigation and Communication



Workshop Outcomes

- Improved Arctic ERMA[®] expanded to Canadian Arctic
- Data collected and information from discussions will be forwarded to NOAA for appropriate implementation into Arctic ERMA
- Public accessibility to this tool



Workshop Aspirations

- We will listen to and hear one another's input
- We will respect each other's views on Arctic ERMA[®]
- We will have faith that we can identify the available datasets and collect the new data needed
- All views will be documented and reflected in workshop report
- Workshop will provide benefit to all parties



Facilitation Pledge

- I will recognize and encourage everyone to speak
- I will discourage side conversations
- I commit to:
 - Being engaged in meeting
 - Keeping us on task and time
 - Being neutral, fair, kind, and faithful to the process
- **Stop me if I am not doing this!**



Participant Introductions

- Name
- Affiliation
- Community/organization representation
- What is your interest for this workshop?





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Breakout Group Assignments

Scenario A Cruise Ship	Scenario B Devon Island
Group Lead: Chris Harrison	Group Lead: Jennifer Lam
<i>Recorder: Celeste Leroux</i>	<i>Recorder: Zach Winters-Staszak</i>
Vernon Amos Tanya Bryant Callie DeWeese Dianne Draper Maeva Gauthier Nancy Hemsath Michele Jacobi Anthony Pouw	Joe Casas Ian Denness Marc Hudon Sonia Laforest Josée Lamoureux Tara Paull Nelson Perry Gary Stern



Breakout Group Assignments

Scenario C Drill Rig	Scenario D Large Oil Spill in Open Water
Group Lead: Kari Sheets	Group Lead: Norm Snow
<i>Recorder: Charlie Watkins</i>	<i>Recorder: Heather Ballestero</i>
Evan Birchard Bradley Carpenter David Dickins Don Forbes Molly McCammon Gina Wade	Robyn Angliss Dan Behm Jason Duffe Ed Hudson Stephane Leblanc Amy Merten Nelson Ruben Dan Slavik

