OR&R'S ARCTIC ENVIRONMENTAL MANAGEMENT RESPONSE APPLICATION

The goal of OR&R's Arctic Environmental Management Response Application is to provide information and tools to support decision making for oil spills in Arctic and sub-arctic waters.

The potential for oil spills in Arctic waters is expected to increase with predicted environmental shifts associated with climate change. A decrease in ice cover will increase ship traffic, though (at least over the near-term) ice hazards will remain high. Melting permafrost in areas supporting pipelines or oil exploration infrastructure, and an increase in oil and gas exploration and development will also increase spill risk, putting further pressures on Arctic habitat, species, and coastal communities that depend on healthy natural resources. For these reasons, proactive response to prevent, plan for, and mitigate future losses is an emerging priority for NOAA.

NOAA is developing a geospatial decision-support tool (the Environmental Management Response Application [ERMA®]) to prepare for Arctic oil spill response, assessment, and restoration. The first steps in developing the tool are to identify priority decisions, applications, and users; and then to work with decision makers and stakeholders to identify key data and information needs. The tool will combine product output from NOAA sources as well as data sets agreed upon by stakeholders. To ensure that the tool meets identified needs, final development of the tool will include interactive training and discussions to obtain feedback on content and usability.

Priority user groups include response planners, natural resource trustees, and coastal community managers. During the recent Deepwater Horizon spill, the ERMA tool was used as the Common Operational Picture to determine sensitive areas for protection and cleanup, and by natural resource trustee agencies to identify habitats that received the most severe oiling. ERMA was also used as a primary tool for communicating information to the Public. Relevant information for an Arctic ERMA could include data to provide context for potential oil releases, oil infrastructure and transportation locations, navigation and hazards data, locations of response equipment and infrastructure, habitat and resources information, and human use/economic data.