

SEARCH: Study of Environmental Arctic Change

Scientific Understanding to Help Society Respond to a Rapidly Changing Arctic

Helen Wiggins, Arctic Research Consortium of the U.S. (ARCUS); on behalf of the SEARCH Science Steering Committee

What is SEARCH?

SEARCH is a U.S. interdisciplinary and multi-agency program. The aim of SEARCH is to provide a foundation of arctic change science through collaboration with the research community, stakeholders, and funding agencies.



- ❖ **Multi-agency sponsorship:** National Science Foundation (NSF), National Oceanic and Atmospheric Administration (NOAA), National Aeronautics and Space Administration (NASA), Department of Defense, Department of Energy, Department of the Interior, Smithsonian Institution, and the U.S. Department of Agriculture.

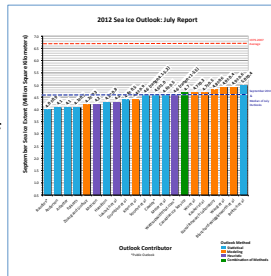
❖ **New Five-Year Strategic Goals**

- Improve Understanding, Advance Prediction, and Explore Consequences of Changing Arctic Sea Ice
- Document and Understand How Degradation of Near-Surface Permafrost Will Affect Arctic and Global Systems
- Improve Predictions of Future Land-ice Loss and Impacts on Sea Level
- Analyze Societal and Policy Implications of Arctic Environmental Change
- And cross-cutting activities, including the Arctic Observing Network

Activity Highlight: Sea Ice Outlook & Sea Ice for Walrus Outlook

Sea Ice Outlook

- ❖ **Overview:** The SEARCH Sea Ice Outlook provides online monthly reports during the summer that synthesize different projections of the arctic sea ice minimum, at both pan-arctic and regional scales.
- ❖ **2012 Season:**
 - Over 20 U.S. and international groups provided projections of the 2012 sea ice minimum, using a variety of data sources and methods.
 - The September arctic sea ice extent was the lowest in the satellite record—3.6 million square kilometers.
 - A post-season report discusses this year's sea ice season and meteorology, outlook methods, and lessons learned.
- ❖ **Funding:** The Outlook is supported by NSF and NOAA, and through volunteer efforts by research community participants.
- ❖ **Website:** <http://www.arcus.org/search/seaiceoutlook>



Sea Ice for Walrus Outlook

- ❖ **Overview:** A resource for Alaska Native subsistence hunters, coastal communities, and others interested in sea ice and walrus. Launched in 2010.
- ❖ **Report Content:** Weekly online reports during walrus hunting season (April-June) provide information on sea ice conditions relevant to walrus in the Northern Bering Sea and southern Chukchi Sea regions of Alaska. Reports include:
 - Current ice conditions.
 - 5- and 10-day outlook of wind conditions.
 - Up-to-date satellite imagery.
 - Observations of ice development from Alaska Native hunters and other sea-ice experts.
- ❖ **Partners:** Forecasters and researchers at NOAA, the National Weather Service, and the University of Alaska; the Arctic Research Consortium of the U.S. (with funding from NSF); the Eskimo Walrus Commission; and Alaska Native sea-ice and walrus experts.
- ❖ **Website:** <http://www.arcus.org/search/siwo>



www.arcus.org/SEARCH

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