



FY2009: Regional Integrated Ocean Observing System Development

NOAA continued a merit-based funding process in 2009 to enhance regional coastal ocean observing systems (RCOOSs) and achieve three long-term outcomes: establishing coordinated regional observing and data management infrastructures, developing applications and products for regional stakeholders, and crafting regional and national data management and communications protocols. In addition, regional associations received planning grant awards designed to assist them in stakeholder engagement, education and outreach, and long-range planning activities.

ALASKA REGION

The Alaska Region includes the entire state of Alaska. The 2009 RCOOS award to this region is \$1,000,000. The 2009 Regional Association Planning Grant award to this region is \$399,969.

Project Title:

Alaska Regional Coastal and Ocean Observing System 2008-2010

Recipient/ Lead Principal Investigator:

Seward Association for the Advancement of Marine Science on behalf of the Alaska Ocean Observing System/
Molly McCammon (mccammon@aoos.org)

Cost:

Funded: FY 2008 (Year 1 RCOOS) - \$1,000,000
FY 2009 (Year 2 RCOOS) - \$1,000,000
Proposed (subject to available funds): Year 3 - \$3,499,918

Performance:

The Alaska Ocean Observing System (AOOS) is focused on four key issues: climate change and its impacts, sustainability of fisheries and marine ecosystems, mitigation of natural hazards, especially coastal erosion, and safety of marine operations and health of coastal communities. Priorities in FY09 include continued development of the Prince William Sound (PWS) Ocean Observing System pilot project that collects observations for use by stakeholders and develops and tests forecast models as a demonstration of an end-to-end observing system in Alaska. The high-resolution wind, wave, and ocean current forecast products provide improved marine safety for recreational and commercial vessel operators and enhance the security to oil tanker traffic in PWS, and will ultimately be expanded to the northern Gulf of Alaska. In addition, AOOS will work to establish its data and web portal as the regional coastal and ocean information system for Alaska, furthering statewide capacity in data management, modeling, and product visualization.

(over)



Project Highlights:

Year 1

- PWS Demonstration: Additional telemetered moorings deployed to improve ocean observations and model forecasts; boat surveys conducted to calibrate ocean forecast model; first iteration of forecast models tested during major field experiment: July 19 – August 3, 2009
- Data Management: Data portal, data acquisition, archiving, and access expanded. Alaska Marine Information System (AMIS) developed as major data management tool
- Education and Outreach: Engaged stakeholders and customers with focus groups and workshops; revamped AOOS website; collaborated with new Centers for Ocean Sciences Education Excellence (COSEE) Alaska on education and outreach products

Year 2

- Review results of PWS Demo. Identify and develop suite of forecast models for weather, waves, and currents to expand PWS demo system to Cook Inlet/Kenai coast; plan design for Arctic nearshore observing systems
- Data management: Finish AMIS design and begin implementation
- Education and Outreach: Develop and implement key themes and messages, public awareness campaign; use PWS Demo results for educational products

Year 3 Plans (contingent on funding)

- PWS Demonstration: Maintain operational components of PWS observing system
- Data Management: Expand remote sensing capacity; create operational center for regional forecast models
- Southeast Alaska Ocean Circulation Model: Analyze past model data to complete ocean circulation model in Southeast Alaska; deploy two moorings in the southeast to validate models
- Harbor Observing Network Prototype: Test Harbornet prototype in remote Arctic location
- Expand PWS Demo to Cook Inlet/Kenai Coast: Deploy additional telemetered weather stations required to improve weather observations and forecasts in Cook Inlet/Kenai coast; deploy additional telemetered moorings required to improve ocean observations in Cook Inlet/Kenai coast; deploy High Frequency Radar
- Bering Sea/Aleutians Ocean Circulation Models: Deploy four moorings across Amukta Pass; analyze data and incorporate into models
- Passive Acoustic Monitoring in Bering Sea: Deploy three autonomous recorders in eastern Bering Sea; analyze data; prepare paper on findings; develop comprehensive ambient noise monitoring program
- Arctic Monitoring: Develop nearshore climatology with sea ice and fastice atlas; develop nearshore observation system for ice-free season; continue sea ice radar program in Barrow; add additional sea ice radars; improve sea ice forecasts with sea ice thickness measurements
- Education and Outreach: Develop K-12 education guide and products, including educator workshops; hold ocean observing virtual field trip; continue to engage stakeholders and customers with focus groups and workshops

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