



# BACKYARD BUOYS

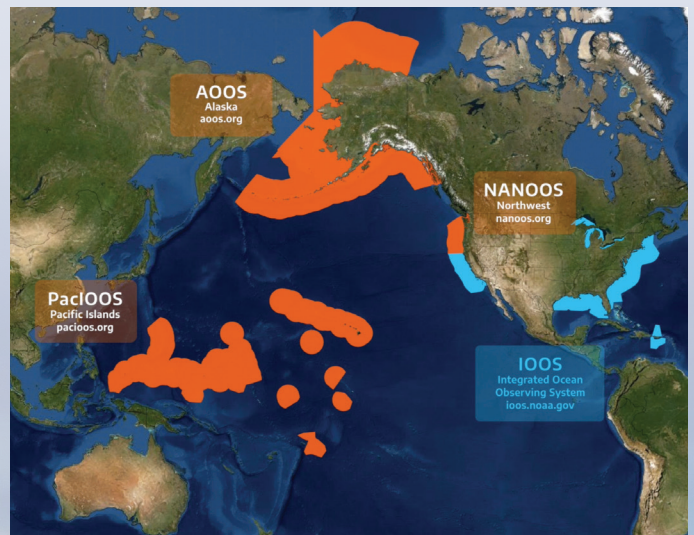
## OVERVIEW

The Backyard Buoys project empowers Indigenous and other coastal communities to collect and use real-time wave data to support maritime activities, food security, and coastal hazard protection. This project is funded by the National Science Foundation (NSF) Convergence Accelerator program.

## PARTNERS

Backyard Buoys brings together geographically, academically, institutionally, and culturally diverse groups of partners:

- **Alaska:** Alaska Ocean Observing System (AOOS), Alaska Eskimo Whaling Commission (AEWC), Alaska Department of Natural Resources, Alaska Native Science & Engineering Program (ANSEP), and Weston Solutions.
- **Pacific Northwest:** Northwest Association of Networked Ocean Observing Systems (NANOOS), Quileute Tribe, Quinault Indian Nation, Western Washington University.
- **Pacific Islands:** Pacific Islands Ocean Observing System (PacIOOS), Marshall Islands Conservation Society, National Park of American Samoa, Hawai'i Sea Grant, Conservation International Hawai'i.
- **Sofar Ocean Technologies**



Three U.S. Integrated Ocean Observing System (IOOS) Regional Associations partner in the Backyard Buoys project: AOOS, NANOOS, and PacIOOS.

A buoy deployed in Cape Lisburne measures waves near Point Hope, Alaska.

*"We were able to look at the waves nearshore, but could use the buoy data at 5 and 10 miles from shore to know if it was safe to go out," reported AEWC Chair and Wainwright Whaling Captain, John Hopson, Jr.*



## CO-DESIGN PROCESS IN ALASKA

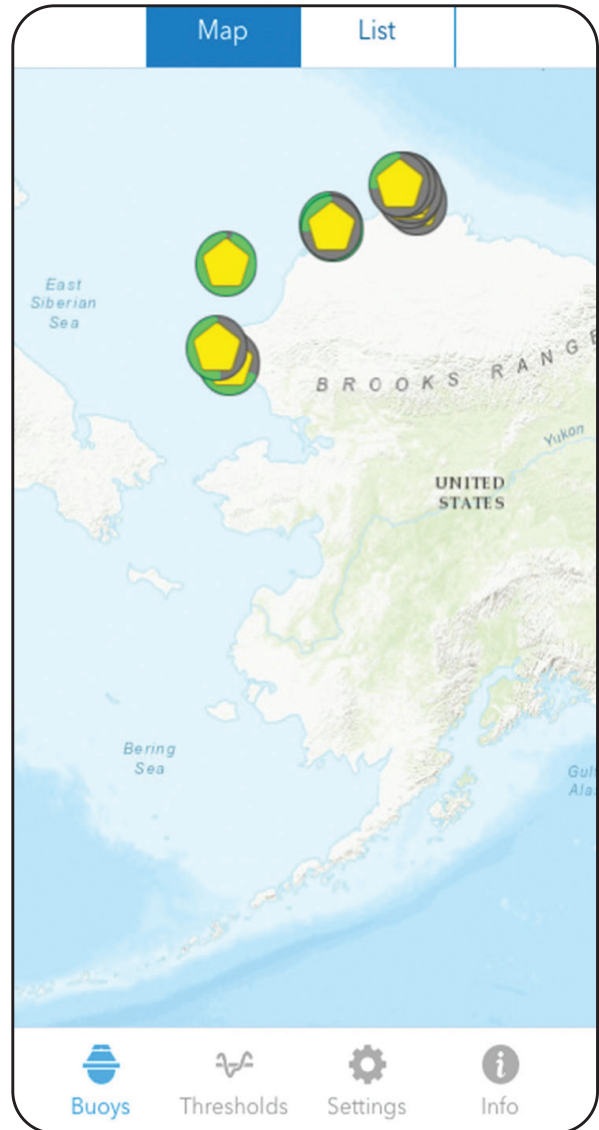
The AEWC played a central role in proposal development, project design, and execution. Backyard Buoys provides funding for workshops and travel for Whaling Captains Association members, stipends and fuel reimbursement for village facilitators, and contracts with UIC Science for program management. Monthly virtual meetings allow pan-regional working groups to discuss lessons learned. In-person meetings in Utqiagvik and Honolulu fostered connections between all partners.

## ALASKA HIGHLIGHTS

In 2023, AEWC and UIC Science deployed and recovered buoys during the open water months near Point Hope, Wainwright, and Utqiagvik. Educational outreach efforts included participation in the ANSEP Middle School Academy in Juneau and the BARC Science Fair in Utqiagvik. In 2024, 30 buoys will be available for deployment in Diomedes, Point Hope, Wainwright, Utqiagvik, Kaktovik, Savoonga, and Gambell.

## WEBSITE AND SMARTPHONE APP

Follow Backyard Buoys stories at [backyardbuoys.org](https://backyardbuoys.org) and on social media. A prototype app allows anyone to access buoy data on their smartphone.



Screenshot of Backyard Buoys prototype app.



Jenny Evans, Lesley Hopson, and Isabel Elavgak from the Alaska Eskimo Whaling Commission hold a Sofar wave buoy.



Link to prototype app that shows real-time buoy data.



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