

# 2021–2026 Strategic Vision

As of September 20, 2022



PROVIDING DATA AND INFORMATION FOR DECISION MAKING

2021-2026 AOOS Strategic Vision Adopted by AOOS Board September 2021; Updated September 2022



### **Mission and Purpose**

The Alaska Ocean Observing System (AOOS) works collaboratively to identify and fill gaps in ocean and coastal information and provide accurate and reliable data, applications, and services for decision making.

AOOS is one of 11 federal, regional, and private-sector partnerships, or Regional Associations (RAs) that are part of the national Integrated Ocean Observing System (IOOS), covering the entire U.S. Exclusive Economic Zone (EEZ) and working to collect, deliver, and use ocean data and information to improve maritime safety, enhance the economy, and protect our environment. Easier and better access to ocean and coastal information is improving our ability to understand and predict coastal events such as storms, wave heights, sea level fluctuations, and ecosystem change. Ocean information improves maritime domain awareness that benefits all aspects of Alaska's blue economy businesses such as commercial fishing, aquaculture, marine transportation, subsistence uses, and coastal resilience planning.

The 2021-2026 Strategic Vision describes the observing priorities and anticipated observing asset build-out plans developed through AOOS' engagement—and that of our partners—with coastal communities, private industry, state and federal agencies, Tribes, and others throughout Alaska over the past decade.

The 5-year vision document was adopted by the AOOS board in September 2021 and used to develop the AOOS cooperative agreement with the National Oceanic and Atmospheric Administration (NOAA), the program's major source of funding. It is considered a "living document" with annual review and updates. This plan also takes into account the potential for additional funding sources, including the Infrastructure Investment and Jobs Act.

#### **Indigenous Land and Water Acknowledgement**

AOOS recognizes that we work throughout the ancestral and unceded territory and waters of the Indigenous Peoples of Alaska. Our office is located within Dena'ina elnena, the traditional land and waters of the Dena'ina Athabascan, but our work spans the entire state of Alaska. We owe gratitude to the Indigenous Peoples of Alaska for their continued care and stewardship of the land and waters on which we live, observe, and work.

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The first mission deployment for the Ecosystem based approach to Alaska fisheries management glider out of Valdez, Alaska January 2021.

## **Stakeholder Engagement**

Stakeholder Concerns Information and Products Needed

Observations

Data Management, Integration, and Analysis

OUTCOMES: Meeting Societal Goals

AOOS is stakeholder driven and science based. Our stakeholders and users include:

- Coastal communities facing new challenges from impacts of climate change;
- Indigenous subsistence users concerned with food security;
- Mariners and fishermen making decisions that affect their livelihoods and safety;
- Search and rescue operations planning effective strategies to save lives;
- Scientists studying Alaska's ocean ecosystems;
- Coastal security operations ensuring the safety of Alaska's ports and waters;
- Resource managers seeking ways to use and sustain resources for the future;
- Educators seeking to convey the complexity and connectedness of Alaska's oceans; and
- All those who use Alaska's oceans and coasts for their livelihoods, subsistence use, or recreation.

#### **AOOS Stakeholder Engagement Process**

AOOS relies on a variety of avenues to engage stakeholders and solicit recommendations and input, including:

- Communication pathways and forums of partner organizations and programs;
- Topic-specific groups of experts and partners;
- Regionally focused meetings with key stakeholders and rightsholders;
- Ongoing activities including presentations, scoping groups, user surveys, and the feedback tab found on every AOOS Data Portal page.

This feedback allows AOOS to both identify gaps in ocean and coastal information and enhance AOOS applications, products, and services.

A formal Stakeholder Engagement Policy was adopted by the AOOS Board in November 2015 and is included in the AOOS Operating Procedures.

THIS IS A LIVING DOCUMENT AND WE ENCOURAGE USERS TO REACH OUT TO US WITH THEIR NEEDS AND HELP US IDENTIFY AND REFINE PRIORITIES.

#### Contact

Sheyna Wisdom, AOOS Executive Director, wisdom@aoos.org.

### Governance

The AOOS Board is composed of the heads of federal and state agencies, Alaska Native organizations including Tribes, academic and research institutions, and private entities (or their designees) that support the mission of AOOS and are party to the Memorandum of Agreement. The Board provides policy guidance, ensures sustained support for programs, and approves spending plans, external grant awards, and implementing documents.

The Alaska SeaLife Center, an incorporated nonprofit, is the fiscal sponsor for AOOS, and performs legal, financial, and administrative functions on its behalf.



## **Strategic Priorities**

AOOS will continue to advance Alaska ocean information with new areas of emphasis based on input from data and product users and evolving regional priorities.

#### **Standing Goals**

- Increase access to existing coastal and ocean data;
- Package information and data to meet the needs of all users;
- Increase observing and forecasting capacity throughout the U.S. EEZ;
- Coordinate with private sector; local, state, and federal agencies; Tribes, and research entities to aid these efforts.

#### **New Priorities and Emphasis**

- Sustain existing observations and activities;
- Support new observational build-out in harmful algal blooms, ocean acidification, and ocean sound;
- Focus on product and service development, and shifting new technologies into operational status;
- Renew commitment to engagement networks and outreach with increased focus on diversity, equity, and inclusion and participation of local workforces.



Bowhead whale hunters.

### **Focus Areas**

The AOOS Board directs activities around four programmatic focus areas, which are consistent with the key focus areas of the national IOOS Program.



**COASTAL HAZARDS AND INUNDATION** 



### ECOSYSTEMS, FISHERIES, AND CLIMATE TRENDS



WATER QUALITY, WITH EMPHASIS ON HARMFUL ALGAL BLOOMS AND OCEAN ACIDIFICATION



## **Statewide Data Management**

The goal of the AOOS Data Assembly Center (DAC) and Data Management subsystem is to acquire, archive, and share marine data and information products to meet the needs of Alaska stakeholders and the national IOOS program. The subsystem is governed according to the AOOS Data Assembly Center and Data Management Subsystem Plan. This plan is updated every five years, to maintain Regional Coastal Ocean System (RCOS) certification status with NOAA. For purposes of these regulations, the term "certification" means the granting by NOAA of status to a non-federal entity as a participating RCOS of the System authorized by section 12304 of the ICOOS Act.

#### Regional Ocean Data Sharing Initiative

AOOS receives funds through a national Regional Ocean Data Sharing Initiative (RODSI) to increase access to ocean and coastal data and information products. Funds are used to support a data coordinator, as well as new products in the Bering Strait region, including the Bering Science reports, the Bering Sea Data Portal, and dashboard, and transboundary emergency response tool for the Bering



A screenshot of one of the three regional Mariner's Dashboards (Prince William Sound, Cook Inlet, and Kodiak) found on the AOOS website.

Strait using both U.S. and Russia data. Additional funding from the 2021 Investment in Infrastructure and Jobs Act is now allowing expansion to other products throughout the state including rescue of important historical data, development of a Mariner's Dashboard (see screen grab above), and other regional dashboards, and supporting community-led projects such as Skipper Science, Sea Ice for Walrus Outlook visualizations, and the Alaska Arctic Observatory and Knowledge Hub (AAOKH).



Real Time Information for Marine Conditions

#### **Data Management Services**

AOOS contracts with Axiom Data Science (Axiom) to provide data management for AOOS with the goal of increasing the accessibility, reuse, and impact of scientific data. Axiom has developed advanced cyberinfrastructure to support observing systems and large-scale research programs using data management systems, intuitive web-based data portals, and scalable solutions for handling highvolume, heterogeneous scientific and engineering data. This cyberinfrastructure was first used operationally in 2009 to function as the DAC system provider for AOOS. Today this cyberinfrastructure has expanded to support a spectrum of federal, university, and non-governmental organization (NGO) partners operating in oceanographic, atmospheric, ecological, renewable energy, and human use disciplines.

## **Statewide Products & Services**

The AOOS Ocean Data Explorer (ODE) Portal contains scientific and management information including real time sensor feeds, operational oceanographic and atmospheric models, satellite observations, and GIS (geographic information system) data sets that describe the biological, chemical, and physical characteristics of Alaska and its surrounding waters. The ODE offers many new updated features that build upon the existing data system, including:

- Data comparison and interactive charting functions
- Advanced data analytics, including climatologies and anomalies
- Station and source level metadata pages
- Shareable custom data views
- Data download capability in many formats
- Cloud and high performance computing services



A screen shot showing real time and historical data access from over 2,000 stations statewide.



A timeseries chart showing current conditions and seasonal statistics for real time ocean conditions.



The ODE allows users to quickly compare ocean data across numerous parameters and sources.

## **Engagement Networks**

AOOS serves a major role as a convener and facilitator of Alaska information and data sharing at regional, national, and international levels.

#### www.aoos.org

The AOOS website is our primary tool for increasing awareness of ocean and coastal issues in Alaska and partner agency missions, and for engaging with stakeholders and responding to their needs for ocean and coastal observations and information products. Links to AOOS programs, project pages, networks, and regional and project specific data portals and products can be found here.



Alaska Ocean Acidification Network aoan.aoos.org

The mission of the Alaska Ocean Acidification Network (AOAN) is to engage with scientists and stakeholders to expand the understanding of ocean acidification (OA) processes and consequences in Alaska, as well as potential adaptation strategies. The network was established in 2016 and is coordinated by AOOS. The network objectives are to:

- Provide relevant information to, and hear from, the fishing and aquaculture industries, policy makers, Tribes, coastal communities, and the general public regarding OA.
- Work with scientists and stakeholder communities to identify knowledge gaps and information needs, and recommend regional priorities for monitoring, research & modeling in both the natural and social sciences.
- Share best practices for monitoring as well as promote the development of synthesis materials, and devise strategies to ensure funding is available to support these efforts
- Promote data sharing and act as a resource hub for OA information in Alaska for researchers, stakeholders, and the general public, leveraging the AOOS data portal as needed.



#### Alaska Harmful Algal Bloom Network ahab.aoos.org

The Alaska Harmful Algal Bloom Network (AHAB) was formed in 2017 to provide a statewide approach to harmful algal bloom (HAB) awareness, research, monitoring, and response in Alaska. AHAB coordinates a diverse group of coastal stakeholders to address human and wildlife health risks from toxic algal blooms. AOOS houses the AHAB Network Coordinator and engages in the AHAB Network through funding secured from the National Harmful Algal Bloom Observing Network (NHABON).

The network objectives are to:

- Reduce health risks to humans from HABs
- Identify information needs, data gaps, and emerging HAB threats
- Support expanding and enhancing statewide HAB, wildlife, and shellfish monitoring
- Improve effectiveness of and coordination for HAB event response
- Support development of HAB event forecasting capabilities
- Improve HAB education and outreach to coastal Alaskans
- Unify and build on existing regional HAB networks in Alaska
- Facilitate a safe supply of seafood

### 2021-2026 AOOS Strategic Vision



#### **Alaska Water Level Watch**

legacy.aoos.org/alaska-water-level-watch/

The Alaska Water Level Watch (AWLW) is a collaborative group working to improve the quality, coverage, and accessibility to water level observations in Alaska's coastal zone using innovative technologies and collaborative partnerships. Water level data has many applications that contribute to safe navigation; storm modeling and mapping; tsunami warnings, watches, and advisories; incident response; search and rescue operations; tidal datums; sea level trends; storm trends; and much more.

The AWLW works with state and federal agencies, local governing entities, non-profits, private businesses, and communities. The network objectives are to:

- Enable the effective and efficient sharing of information
- Foster leveraging of available resources
- Provide improved services to mutual customers
- Assist with identifying and prioritizing actions to fill water level monitoring gaps
- Promote advancement of water level sensing technologies for use in Alaska's coastal waters



#### Alaska Marine Policy Forum aoos.org/alaska-issues-2/alaska-marine-policy-forum/

The Alaska Marine Policy Forum is a bimonthly teleconference providing marine policy updates for Alaskans. The forum is jointly hosted by Alaska Sea Grant and AOOS and has been operating since 2015. Every two months Alaska state and federal legislators and their staff, marine science and policy professionals, seafood and fishing industry, academics, nonprofits, and others provide updates on events and marine policies, funding, and regulations at the state, regional, and national level. Meeting summaries are available at the above website.



### Alaska Marine Ecosystem Network

A project website is under development

The Alaska Marine Ecosystem (AME) Network is the newest network facilitated by AOOS, established in 2022 with a mission to facilitate coordination of marine ecosystem monitoring activities in the waters around Alaska. The network objectives are to:

- Facilitate the coordination of research and monitoring activities of marine ecosystems around Alaska
- Identify stakeholders of ecosystem research efforts, including Tribes and stakeholders in human use activities (e.g., shipping, subsistence, transport, infrastructure, energy development, and fisheries)
- Provide a hub for connecting relevant marine ecosystem activities and stakeholders
- Streamline data collection and processing tools to promote the development of integrative data products among network participants
- Enhance communication among stakeholders (coastal community residents, co-management organizations, K-12+ educators, local/state/federal resource managers, scientists, private industry, and Tribes)
- Support, compile, and disseminate data products synthesized across research and monitoring programs
- Identify and raise awareness of information needs and knowledge/monitoring gaps
- Strive towards a better understanding of the marine environment and the connectivity between regions (regional, national and, international issues)

## **AOOS Observing Assets**

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Given Alaska's immense geographic scope and the paucity of existing, agency-supported observations, the AOOS Board has chosen largely to sustain and augment existing observation programs, contribute to observing consortia, and fill in key observation gaps with new assets as additional and sustainable funding becomes more readily available. The majority of observing assets shown on this map are co-funded with AOOS partners. Priorities for new funding are identified in FY 2021-26 Observing Asset Build-Out Plans that are periodically updated.



### 2021-2026 AOOS Strategic Vision



## **Marine Operations**



The Gulf of Alaska Ocean Acidification (GAKOA) buoy near Seward, Alaska.

**Five-Year Goal:** To improve safety at sea for maritime, aviation, and coastal operators, and emergency responders using real time data, information products, and decision support tools; and to ensure consistency with and support for national plans and guidance documents including the 2009 National Operational Wave Observation Plan and the 2015 Plan to Meet the Nation's Needs for Surface Current Mapping. **Objectives:** AOOS will: (1) sustain existing assets and increase new weather and sea-state observations; (2) promote new observations to improve regional forecasts; and (3) share data and model and forecast products through the AOOS Data Portals to support related decision support tools.

**Associated AOOS Build-Out Plans 2021-2026:** Weather Stations (AIS & Other); Wave Observing; Surface Current Radars

### **Observing assets and activities**

- Sustain existing critical real time weather and climatological observations at 8 SNOTEL (Snowpack Telemetry) stations in Prince William Sound and Cook Inlet;
- Sustain and expand as funding allows the network of 40 plus existing AOOS-supported, co-located weather sensors at Automatic Identification System (AIS) vessel tracking stations, providing localized weather information directly to mariners through the AIS and to the National Weather Service (NWS);
- Sustain critical wave buoys with real time wave and sea state data for navigation safety in Cook Inlet, Port of Nome, and Bristol Bay if feasible, and expand to other regions using new portable and lower-cost wave observing technology;
- Map surface currents in real time using high frequency radars (HFRs) in the Chukchi and western Beaufort Seas, the Bering Strait, Cook Inlet, and other key transportation choke points to support search and rescue models; oil spill trajectory models and response; HAB tracking and forecasting; water quality monitoring; and safer port and harbor navigation;
- Support data management needs and operations and maintenance of sea ice radar network (when operational) in the western Beaufort and northern Chukchi Seas;
- Sustain and increase support for the Alaska webcam operations to aid mariners, harbormasters, aviators, and weather forecasters with visual domain awareness imagery;
- Respond to emerging needs.



Example display of surface currents, real time weather, and Shorezone coastal imagery available in the BSTIRT.

### Products and Services

#### **Develop New or Improved:**

- Oil spill risk assessments for the Beaufort Sea, Cook Inlet, and Prince William Sound
- Particle trajectory tools for oil spill response planning
- Observations and capabilities for Cook Inlet Operational Forecast System (CIOFS)
- Bering Strait Transboundary Incident Response Tool (BSTIRT)
- Commercial and recreational sea-state boating applications (e.g., Mariners Dashboard)

#### Sustain Existing:

- Annual Maritime Activity (AIS) Reports
- Shorezone maps and visualizations
- Cook Inlet Response Tool
- Historical Sea Ice Atlas
- Real time visualization tools

AIS weather station installation at Portland Island near Juneau, Alaska. Left to right: Nick Hatch and Collin Wigfield-Gorka.

### **Coastal Hazards**



Infrastructure along the western Alaska coast is being significantly damaged due to coastal erosion.

**Five-Year Goals:** To improve forecasts and planning for changing storms, waves and water levels, and sea ice conditions and their impacts on coastal communities and habitats, with emphasis on storm surge, coastal erosion, and flooding events (including tsunamis); and to support the Alaska Coastal Mapping Strategy, the NOAA Center for Operational Oceanographic Products and Services (CO-OPS) National Water Level Observation Network (NWLON) gap analysis, the 2009 National Operational Wave Observation Plan, and the 2020 National Strategy for Mapping, Exploration, Characterizing the U.S. EEZ as well as localized nearshore and up-estuary mapping efforts. **Objectives:** AOOS will focus on (1) increasing water level and wave and ice observations and nearshore bathymetry and (2) providing access to data and developing related products for decision-making.

**Associated AOOS Build-Out Plans 2021-2026:** Water Level and Datum Observations; Wave Observing; and Sea Ice Observing.

#### **Observing assets and activities**

- Maintain existing AOOS funded water level stations: 2 GPS/Global Navigation Satellite Systems (GNSS) reflectometry at St. Michaels and Utgiagvik; 2 NWLON-lite stations at Naknek and Dillingham; and numerous low-cost iGage acoustic sensors and downward looking iRadars deployed on docks and bridges in remote communities, ports, and harbors;
- Implement AWLW build-out plan by installing alternative water level technologies in remote areas and working with local communities on mapping strategies and community observing to fill data gaps;
- Pilot alternative and emerging water level and wave observing technologies;
- Collect data necessary to expand on coastal flood map products;
- Pilot in at least 2 communities water level webcam monitoring systems to monitor changing coastlines and storm surge induced changes, including run-up;
- Support data management, operations and maintenance of sea ice radar network in the western Beaufort and northern Chukchi Seas when operational;
- Support Hydroball bathymetry survey trials in western Alaska, using this portable, lower-cost single beam sonar system towed behind skiffs with assistance from community observers to provide nearshore bathymetry and support Alaska Coastal Mapping Strategy and Implementation Plan;
- Increase support for wave observations needed for water level and storm surge forecasting and planning using lower-cost, portable technology;
- Respond to emerging needs.

#### **Products & Services**

#### **Develop New or Improved:**

- Enhanced AWLW Data Portal that mirrors CO-OPS's Tides Online but accommodates a wider range of water level data and related information from external partners that are critical for local planning and decision making;
- Statewide storm surge model & operational forecast validation tool;
- Oil spill risk assessment particle trajectory tool for Cook Inlet;
- Acquisition & access to nearshore bathymetry data and products;
- Transitioning of storm surge, water level, wave, and freezing spray model testbed products;
- Webcam visualizations for coastline monitoring;
- Sea ice radar maps.

#### **Sustain Existing:**

- Community flood maps
- Shoreline profile database tool
- Historical sea ice atlas
- Arctic Oil Spill Risk Assessment Tool



Color indexed elevation map for the community of Teller, Alaska, showing local infrastructure and color-coded elevations.

> A single-beam echosounder system called the HydroBall<sup>™</sup> is towed behind a small boat to make nearshore and river bathy metric surveys in western Alaska.

## **Ecosystems, Fisheries, and Climate Trends**



Alaska Native Science & Engineering Program (ANSEP) intern Nadia Barcelona working with a sleeper shark in Prince William Sound.

**Five Year Goal:** To document and disseminate data about current and future ocean conditions; ocean and coastal ecosystem productivity and change; and climate trends, especially to aid commercial, subsistence, and recreation fisheries; protect living marine resources, and food security; and enhance the blue economy; and ensure consistency with national plans and guidance documents when available, including the National Ocean Service (NOS) and NWS National Strategy for a Sustained Network of Coastal Moorings, NOAA Ocean Noise Strategy Roadmap, Interagency Ocean Observation Committee (IOOC) Animal Telemetry Network Implementation Plan, Toward a U.S. IOOS Underwater Glider Network Plan. **Objectives:** AOOS will: (1) build upon and leverage existing programs to support an integrated network of physical, chemical, biological, and community-based ocean and coastal observations in Alaska's Large Marine Ecosystems (LME) (LMEs; Gulf of Alaska, Bering Sea/Aleutian Islands and Arctic), with a new focus on ocean sound; (2) partner with management agencies and others to help maintain long time series data collection with new sensors and consistent data collection protocols; and (3) synthesize new and existing data and ensure that data are accessible and usable for priority information products and decision support.

**Associated AOOS Build-Out Plans 2021-2026:** Ecosystems and Biophysical Moorings; Acoustic Tracking Moorings and Arrays for Soundscape; Shipboard Transects and Observations; Autonomous Glider Observations; and Ocean Acidification.

### **Observing Assets & Activities**

- Sustain ship-based water sampling across the Gulf of Alaska shelf break for biological, chemical and physical parameters along the long term "Seward Line" transect, sampled continuously since 1997 and now part of the Northern Gulf of Alaska Long Term Ecological Research (NGA LTER) program;
- Support shipboard surveys in Kachemak Bay and lower Cook Inlet to monitor seasonal and interannual variability and provide oceanographic data to describe regional dynamics and assess risks from climate change, OA, and HABs;
- Support network of moored ecosystem observatories (EOs) in Chukchi (CEO) and Bering (NOAA's M2 and M8) Seas and in Gulf of Alaska (GEO) to provide year-round biological, physical and chemical measurements throughout the water column. Add Southeast Alaska mooring as funding allows;
- Enhance other existing biophysical moorings operated by other programs such as the Arctic Marine Biodiversity Observing Network (AMBON), Distributed Biological Observatory (DBO), Bering Strait Mooring Program and the Beaufort Lagoon Ecosystems LTER, by adding new sensors such as eDNA, benthic cameras, and acoustics to monitor sound;
- Support glider surveys to monitor ocean conditions and support ecosystem assessments used by fisheries and marine mammals resource managers and researchers, including the long-term Chukchi oceanographic and marine mammal tracking glider (since 2013) and newer glider surveys in the Gulf of Alaska and Bering Sea designed to aid fisheries management;
- Support community-based monitoring initiatives, such as the Southeast Alaska Troller Observations project, the Coastal Observation and Seabird Survey Team (COASST), Indigenous Sentinels Network (ISN), AAOKH, and Skipper Science;
- Sustain long-term moored temperature and salinity observing at the Cordova NOAA Tide station and add a new station at Port of Valdez NOAA.

Tide station, to fill data gaps in nearshore salinity conditions needed to understand the influence of changing coastal freshwater inputs to Prince William Sound and the Gulf of Alaska;

- Help sustain long-term passive acoustic moorings and soundscapes at the DBO Regions 1-5 (as funding allows), to maintain the decade-long time series of passive acoustic monitoring (PAM);
- Enhance endangered North Pacific Right Whale monitoring with PAM in critical habitat as funding allows;
- Sustain long-term sentinel monitoring in Prince William Sound through the Ocean Tracking Network (OTN), supporting acoustic arrays to monitor fish, sharks, and marine mammals. Expand to Kenai Fjords as funding allows;
- Continue to support trials of emerging ecosystem sensor technologies as they evolve;
- Respond to emerging needs.

#### **Products & Services**

#### **Develop New or Improved:**

- State of Alaska's Coasts & Oceans Report
- AIS/marine mammal sensitivity maps
- Access to environmental datasets & habitat maps on AOOS data portal
- Soundscape pilot tool for Chukchi/Bering Seas
- Input into the National Marine Fisheries Service regional ecosystem assessments and indicators
- Input into National Climate Assessments
- AMBON Seascape for Chukchi Sea

#### **Sustain Existing:**

- Yukon River salmon run timing
- Shorezone maps & visualizations
- Cook Inlet Beluga Ecosystem Portal
- Animal Telemetry Network Data Assembly Center, using other funding
- COASST community observed seabird data products for Alaska with annual updates

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## Water Quality, Including HABs and OA



Harvesters wash shellfish samples to remove sediment before delivering them to the Sitka Tribe environmental research lab for saxitoxin testing.

**Five Year Goals:** To understand, document, and respond to current and future changes to the quality and productivity of Alaska's marine waters and to develop Alaska capacity for ecological forecasting; and to ensure consistency with national plans and guidance documents including the 2020 NOAA Ocean and Great Lakes Acidification Research Plan. **Objectives:** AOOS will focus on (1) supporting the AHAB and AOAN; (2) sustaining and enhancing OA and HABs monitoring; and (3) developing decision support tools for stakeholders. AOOS will continue to explore our role in marine debris, invasive species, and contaminants, although no specific activities are proposed.

### **Observing Assets & Activities**

- Support OA monitoring along the weekly 1,800mile Alaska Marine Highway System ferry route from Bellingham, WA to Skagway, AK., detecting OA seasonal cycles and "hotspots;"
- Help NOAA sustain OA moorings in the Bering Sea and Gulf of Alaska to provide continuous year-round monitoring data on ocean conditions;
- Support shore-based Burke-o-lator instruments in Seward, Sitka, Kodiak, and Ketchikan to continuously measure the carbon chemistry of incoming seawater at hatcheries and research labs;
- Support sampling programs by communities from Ketchikan to Utqiagvik, mostly tribally led, taking weekly water samples to establish nearshore baseline conditions for OA;
- Support development of the AHAB Network and statewide program of community-based sampling as part of national HABON;
- Add OA and HAB sensors and sampling packages to moorings, gliders, and shipboard systems operated by other programs as funding allows;
- Respond to emerging needs.

#### **Products & Services**

#### **Develop New or Improved:**

- HAB risk assessments and early indicator alerts
- Statewide HABs portal & tools
- Oyster data dashboards for aquaculture industry

#### Sustain existing:

- Coordination staff for both AOAN and AHAB Networks
- Statewide HABs action plan
- Mariculture siting tool
- Alaska OA and HAB Network websites
- OA State of the Science information on conditions and species response, updated annually on website



Sensors on the Alaska Marine Highway Ferry, M/V *Columbia*, track OA conditions continuously along its 1,854 mile weekly roundtrip voyage between Skagway, AK and Bellingham, WA.

## **Board Officers and Executive Committee**

The AOOS Board is composed of the heads of federal and state agencies, academic and research institutions, and private entities (or their designees) that are party to the Memorandum of Agreement. The Board provides policy guidance, ensures sustained support by the Parties, and approves implementing documents. All attempts will be made to make decisions by consensus; however, in the event of a vote, decisions shall be by majority vote of those members present.

### **Board Executive Committee Officers**

- Chair: Katrina Hoffman
- Vice-chair: Amy Holman
- Secretary: Cheryl Rosa
- Treasurer: James Kendall

#### Board

#### **State Agency**

- AK DEC: Megan Kohler
- AK DF&G: Katherine Howard
- AK DNR: John Crowther

#### **Federal Agency**

- NOAA: Amy Holman
- USCG: Phillip Thorne
- USGS: Dee Willliams
- BOEM: James Kendall

#### State/Federal

• AK Sea Grant Program: Ginny Eckert

#### **Research Entities**

- University of Alaska: Brad Moran
- NPRB: Lynn Palensky
- PWSSC/OSRI: Katrina Hoffman
- NOAA AFSC: Bob Foy
- US Arctic Research Commission: Cheryl Rosa
- AK SeaLife Center: Tara Riemer

#### Industry

- Marine Exchange of AK: Steve White
- North Pacific Fishery Management Council: Kenny Down
- Hilcorp, Alaska: Amy Peloza

#### **Environmental NGO**

World Wildlife Fund: Margaret Williams

#### Tribal

 Indigenous People's Council on Marine Mammals: Mike Miller



iGage<sup>™</sup> re-installation at Tununak, completed collaboratively by Jason Ahsenmacher (Anchorage NWS) and Jacquelyn Overbeck (AKDNR).

### 2021-2026 AOOS Strategic Vision

### Staff



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### THE EYE ON ALASKA'S COASTS AND OCEANS