AOOS
Alaska Ocean Observing System
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Memorandum of Agreement
To Establish an Alaska Ocean Observing System (AOOS)

Section I. Parties

This Memorandum of Agreement ("MOA") is entered into by the signatories and any other entities that may become signatories to this agreement in the future (the "Parties").

Section II. Background

The Alaska Ocean Observing System (AOOS) is the interim Alaska regional association established and responsible for the development, operation and improvement of regional observing systems in Alaska's three regions: the Arctic Ocean/Chukchi and Beaufort Seas, the Bering Sea and Aleutian Islands, and the northern Gulf of Alaska, including Southeast Alaska, until such time as separate regional associations can be established for each of these regions. These regions are based on the world's Large Marine Ecosystems (LMES) as described by the World Conservation Union (IUCN), the Intergovernmental Oceanographic Commission of UNESCO, other United Nations agencies, and the U.S. National Oceanic and Atmospheric Administration (NOAA). Regional observing systems – which are networks of observations, data management and analyses - will be nested within the Integrated Ocean Observing System (IOOS). IOOS is the U.S. network that will coordinate with the Global Ocean Observing System (GOOS) and systematically acquire and disseminate data and information on past, present and future states of the oceans and the nation's Exclusive Economic Zone. IOOS is being developed under the auspices of the National Ocean Research Leadership Council through the Ocean.US Office and is being designed to meet the following needs:

- Detecting and forecasting oceanic components of climate variability;
- Facilitating safe and efficient marine operations;
- Ensuring national security;
- Managing resources for sustainable use;
- Preserving and restoring healthy marine ecosystems;
- Mitigating natural hazards; and
- Ensuring public health.

Section III. Findings

- There is a need for more rapid detection and timely prediction of a broad spectrum of ocean/climate conditions.
- There are impacts on society as a result of changes in these conditions.
- Priorities for detecting and predicting changes in the marine and coastal ecosystems vary among regions in the United States.
- Regional associations, responsible for the development and operation of regional observing systems, provide the most effective means for identifying users and user needs and developing the products for those users.
- Due to Alaska's extensive coast line and variety of user groups and needs, three regional associations will ultimately need to be formed, although some functions may be addressed statewide.

Section IV. Purpose

This MOA outlines the initial functions and responsibilities agreed to by the participating parties to establish a regional ocean observation association known as AOOS (Alaska Ocean Observing System), which will serve as the first Alaska member of the National Federation of Regional Associations of Coastal Ocean Observing Systems. The association will serve as the Alaska regional node for integrating coastal and ocean observing activities. Alaska's oceans are among the most productive ecosystems in existence and the Nation's greatest natural resources. There must be a concerted effort and commitment to maintain, monitor, and protect the long-term sustainability and health of these ecosystems, their habitats and resources. This can be accomplished, in part, through collaborative, coordinated efforts by the Parties to this MOA, each of which has an interest in the coasts and oceans of Alaska. This MOA will provide a framework for the Parties to work cooperatively to more effectively accomplish their individual and common missions and enhance broad user access to ocean knowledge, data, tools, and products.

Section V. Definitions

a. **Regional Observing System. A system that links the needs of users to measurements of the coastal oceans on regional or subregional scales.** The integrated Alaska Ocean Observing System will be a heterogeneous, distributed system of linked elements, with organizational structures and interfaces developed where common good is identified. AOOS will be the regional point for relating Alaska ocean observing system elements to the national Integrated Ocean Observing System (IOOS) and the international Global Ocean Observing System (GOOS). In appropriate cases, AOOS will establish, fund, and provide for the operation of components of the observing system whose functionality cuts across the roles and interests of the individual participating entities. Examples might include network links, master databases and indexes, or

collaborative tools and services. The system will be a virtual system, consisting of the physical links, servers, and other elements that contribute to the overall purpose of AOOS, regardless of their ownership or operational responsibility. The system will comprise five main activities:

- Operational and routine ocean observations;
- Long-term research operations;
- Technology development to support the AOOS objectives;
- A web-based "commons" for access to models, algorithms, numerical techniques, etc. to foster improved predictions by the users; and
- Data and information products such as nowcasts, forecasts and maps to meet user needs.

AOOS will integrate and coordinate assigned elements within these five areas. Further, AOOS will foster and integrate linkages among the many other partner elements in these areas.

b. **Functioning Bodies.** The following bodies are established by this MOA:

(1) AOOS Governance Committee. The Governance Committee will be composed of the heads of federal and state agencies, academic and research institutions, and private entities (or their designees) that are both party to this Agreement and who provide personnel or resources to the AOOS office. The Governance Committee will provide policy guidance, ensure sustained support by the Parties, and approve implementing documents. The Committee shall elect a chair when AOOS is activated. The first chair shall serve through the second September 30 following activation of AOOS; thereafter, the chair shall serve for a two-year term. Decisions shall be by majority vote of those members present.

(2) AOOS Office. The AOOS Office will function as the official representative of AOOS and initially establish and have cognizance over the components of an ocean observation and prediction system. It will initially have a Director and a modest administrative/support staff, as appropriate. Other partners may be represented at appropriate times. The Office will initially be co-located with the North Pacific Research Board in Anchorage, Alaska.

(3) AOOS Director. Initially, the Director of the AOOS Office will be an employee of the University of Alaska.

(4) AOOS Data Management and Communications Committee. The DMAC Committee will oversee development of the data management and communications component of AOOS and ensure its alignment with the IOOS DMAC Plan. The DMAC Committee will be appointed by the AOOS Governance Committee.

(5) AOOS User Committees. Once potential users and stakeholders for AOOS have been identified, User Committees will be established to ensure that AOOS is developed with user benefits in mind. User Committee members will be appointed by the AOOS Governance Committee and reflect the broad spectrum of users and stakeholders interested in the products of ocean observing systems. Committees may be developed on a sub-regional basis.

(6) AOOS Implementation Committees/Work Groups. At some point, an AOOS Implementation Committee or multiple committees or work groups may be established to aid the technical and scientific development of AOOS. These committees and work groups would be composed of experts in the various fields of ocean observing systems such as biological, physical and chemical oceanography, fish and shellfish, seabirds, marine mammals, atmospheric science, remote sensing, fisheries technology, and aquaculture and mariculture. Members would be appointed by the Governance Committee. In the interim, scientific and technical advice will be sought from the scientific advisory panels of other related organizations such as the North Pacific Research Board and the Gulf Ecosystem Monitoring Program, and through the use of targeted workshops.

c. Geographic scope. Initially, the geographic scope of AOOS will include the waters and Exclusive Economic Zone surrounding the coast of the state of Alaska. Given the vast extent of Alaska's coastline however, over time AOOS will ultimately become three separate regional associations: roughly the Arctic, Bering Sea, and Gulf of Alaska, although some functions may still be provided statewide.

Section VI. Functions & Responsibilities

This undertaking requires active participation of the involved parties in promoting collaboration between agencies and in ensuring compatibility and interoperability. The Governance Committee parties will support the AOOS Office by 1) designating representative(s), as needed, and/or 2) providing adequate funding support to the Office. Costs for operating the Office are intended to be shared among the Governance Committee members at levels commensurate with their involvement and with the availability of federal ocean observing funds slated for this purpose. Each Party will be responsible for supporting its staff detailed to the AOOS Office. Transfer of funds or personnel for this effort will be made pursuant to other appropriate authorities, agreements, or by amendment to this agreement.

The AOOS Office will:

1) Develop and maintain a document outlining the long-range vision of an integrated ocean observation and prediction system for Alaska. This document will serve as the strategic plan for the system.
2) Serve as the Alaska regional node to coordinate AOOS activities with IOOS, Ocean.US and the National Federation of Regional Associations of Coastal Ocean Observing Systems, as well as other federal and non-federal partners.
3) Monitor and support the work of the DMAC, Implementation and User Committees and Work Groups.
4) Report regularly to the Governance Committee for guidance. Provide an annual assessment of the observing system status, products and planned directions including results of external reviews, as appropriate.
5) Recommend enhancements to existing systems, new projects, need for research and development, and identification of system components suitable to transition from research to operations.
6) Carry out all other tasks as directed by the Governance Committee.

Section VII. Information and data

To enhance communications and availability of information, the Parties agree to:

1. Provide data required to support AOOS operations, research and education efforts in accordance with applicable laws, regulations and policies of the participating entities.
2. Develop compatible data standards and quality control procedures so data are of the highest quality and compatible between participating agencies; and
3. Cooperate in jointly synthesizing the results of ongoing monitoring and research efforts undertaken by the Parties and other research entities.

Section VIII. Shared resources

To reduce costs, increase efficiency, and avoid duplication of effort, the Parties agree to expedite access to and sharing of each other's facilities and equipment, pooled inventories of costly technology development projects, and scarce human skill sets, consistent with each Party's policies and regulations.

Section IX. Joint meetings

The Parties agree to meet jointly as often as needed. These meetings will help to foster cooperation among the parties, share findings with other participatory agencies, evaluate plans and progress in implementation, and coordinate in establishing priorities for the system.

Section X. Participation of other entities and facilities

The Parties recognize that adding new participatory organizations to this MOA will better enable participatory organizations to reach shared goals. The Parties agree to:

1. Recognize and promote the participation of other organizations that may contribute to the shared interests of monitoring and research in Alaska's oceans and related watersheds; and
2. Establish a mechanism through which new participants can participate in planning for the ocean observing system.

Section XI. General provisions

1. Effective date. This MOA becomes effective upon the date of the signature of the third Party to execute it and is subject to availability of funds. This MOA may be executed in counterparts, each of which will be considered an original document.

2. Withdrawal. Any Party to this MOA may withdraw without obligation upon six months formal written notice to the other Parties.

3. Termination. This MOA shall remain in effect until it is terminated by agreement of the Parties.

4. Authority. Nothing in this MOA shall be construed to limit or modify the authority or responsibility of any participating agency.

5. Third parties. This MOA is not intended to, nor shall it, vest rights in persons or entities who are not Parties.

6. Amendment. This MOA may be amended in writing by the unanimous written agreement of the Parties.

7. Antideficiency. Nothing in this MOA shall be construed as obligating any of the Parties, their agents or employees, to expend funds in excess of that authorized by law.

8. Effect. This MOA is intended to express the good faith plans and general intentions of the parties, but does not create any legally enforceable obligations.

9. Notice. Any notice, request, order, or communication to the Parties pursuant to this MOA shall be in writing to each Party at the address that follows: 1007 W. Third Avenue, Suite 100, Anchorage, AK 99501. Or to such other addresses as any Party may designate in writing.

Accepted as affirmed by our signatures below.

Craig Dorman University of Alaska	2/12/04 Date
Clarence Pautzke North Pacific Research Board	2/17/04 Date
Gail Phillips *Exxon Valdez* Oil Spill Trustee Council	4-08-04 Date
Nancy Bird Prince William Sound Science Center Oil Spill Recovery Institute	3-10-04 Date
Tylan Schrock Alaska SeaLife Center	3/9/04 Date
Douglas DeMaster NOAA Fisheries	5 March 2004 Date
John Goll Minerals Management Service U.S. Department of the Interior	4/14/04 Date
Richard Glenn Barrow Arctic Science Consortium	2004 Date

Lawson Brigham
Arctic Research Commission

3/19/2004
Date

Terry Thompson
Kachemak Bay Research Reserve

Date

William Seitz
USGS
U.S. Department of the Interior

3/18/04
Date

John Calder
NOAA Office of Arctic Programs

Feb 19, 2004
Date

Brian Allee
AK Sea Grant Program

10/1/04
Date

Denis Wiesenburg
Dean, School of Fisheries & Ocean Sciences.
UAF

10/22/04
Date

James Partain
NOAA/NWS

11/23/04
Date

DENBY S. LLOYD
ALASKA DEPT. OF FISH AND GAME

16 July 07
Date

Larry Hartig
Alaska Dept. of Environmental Conservation

July 18th 2007
Date

Richard Glenn
Barrow Arctic Science Consortium

Date

Lawson Brigham
Arctic Research Commission

Date

Terry Thompson
Kachemak Bay Research Reserve

Date

William Seitz
USGS
U.S. Department of the Interior

Date

John Calder
NOAA Office of Arctic Programs

Date

J. C. Olson
Commander, Seventeenth Coast Guard District

10/12/04
Date

RICHARD LEFEBVRE
ALASKA DEPARTMENT OF NATURAL RESOURCES

July 20, 2007
Date

Date

COAST GUARD ADDENDUM TO THE MEMORANDUM OF AGREEMENT TO ESTABLISH AN ALASKA OCEAN OBSERVING SYSTEM

Commander, Coast Guard District Seventeen agrees to sign the Memorandum of Agreement To Establish an Alaska Ocean Observing System (AOOS) with the following modifications:

Section A . Authority

This Agreement is authorized under the provisions of 14 U.S.C. § 93(d), which authorizes the Coast Guard to cooperate with federal and private agencies. The statutory authority for the National Oceanographic Partnership Program is contained in 10 U.S.C 7901, *et. seq.*

Section B. Functions & Responsibilities

This undertaking requires active participation of the involved parties in promoting collaboration between agencies and in ensuring compatibility and interoperability. Coast Guard District Seventeen will support the AOOS Office by 1) designating representative(s) to serve as active members of committees as available.

J. C. Olson — 10/12/04

J. C. Olson
Commander, Seventeenth Coast Guard District

Date