

24 May 2010

**Memorandum of Agreement
To Establish and Implement the
Northwest Association of Networked Ocean Observing Systems**

Section I. Parties

This Memorandum of Agreement (MOA) establishes the Northwest Association of Networked Ocean Observing Systems (NANOOS) as the Pacific Northwest Regional Association of the Integrated Ocean Observing System (IOOS). This MOA is entered into and is implemented by the signatories as representatives of their institution, government agency, tribal government, incorporated organization, or division thereof (the “Parties”).

Section II. Non-Binding

This MOA does not create or affect any legal rights or any legal obligations between or upon the Parties, or the organizations they represent, including, without limitation, any duty to negotiate, fund, or implement recommended actions.

Section III. Purpose, Intent, and Mission

This MOA establishes the NANOOS Regional Association. This MOA articulates the current form of NANOOS governance. Parts of it may be adopted into the Bylaws of an incorporated NANOOS, should this occur in the future. Through this MOA, the Parties intend to cooperatively accomplish their common mission and enhance broad user access to ocean knowledge, data, tools, and products.

For NANOOS, the Pacific Northwest region encompasses the waters from the U.S.-Canadian border in Washington to northern California and from the saltwater intrusion extent within bays and estuaries to the seaward extent of the U.S. Exclusive Economic Zone. NANOOS will represent the Pacific Northwest region in the National Federation of Regional Associations and be the regional node for integrated coastal and ocean observing activities.

The mission of NANOOS is to coordinate and support the development, implementation, and operation of a regional coastal ocean observing system (RCOOS), as part of the U.S. Integrated Ocean Observing System (IOOS), and to provide data and data products regarding the ocean to a diversity of end users in a timely fashion, on spatial and temporal scales appropriate for their needs. The RCOOS that NANOOS proposes to initiate, capitalize, manage and improve over time is meant to supplement the coastal backbone observing capabilities provided by various federal agencies in the Pacific Northwest (e.g., NOAA buoys and CMAN stations, USGS stream gauges, USACE wave stations, etc.) and to integrate a variety of other regional observing assets and capabilities.

Section IV. Background

a. Ocean Observing Systems

Regional ocean observing systems comprised of networks of observations, data management, analyses and product development - being developed in complement to the U.S. IOOS - will systematically acquire and disseminate data and information on past, present, and future states of the oceans in the nation's Exclusive Economic Zone. In turn, IOOS is the U.S. network that will coordinate with the Global Ocean Observing System (GOOS). 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:

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

The currently constituted Northwest Association of Networked Ocean Observing Systems (NANOOS), established by a Charter agreement signed October 24, 2003 in Portland, Oregon (see www.nanoos.org), is a Regional Association for the development, operation, and improvement of a Pacific Northwest regional coastal ocean observing system (RCOOS).

There are eleven Regional Associations of IOOS, each operating a regional coastal ocean observing system within a section of the United States. NANOOS will coordinate with all of the Regional Associations as part of the National Federation of Regional Associations (NFRA). With a focus on the Pacific coast in particular, NANOOS will coordinate with the Alaska Ocean Observing System (AOOS), Central and Northern California Ocean Observing System (CeNCOOS), and Southern California Coastal Ocean Observing System (SCCOOS). Similarly, although Canada has no directly analogous program to NANOOS or IOOS, the ocean systems know no boundaries, thus NANOOS specifically intends to coordinate and work with like-minded colleagues and institutions in Canada to further the network and ensure its success.

b. Environmental Justification

The dynamics of the coastal ocean of the Pacific Northwest region are controlled by upwelling and downwelling favorable winds, interaction of shelf flows with topography and freshwater input (e.g., Columbia River, Strait of Juan de Fuca, etc), the branching of the North Pacific Current southward to form the northern extent of the California Current System, as well as the large-scale physical and biological variability due to El Nino Southern Oscillation (ENSO) and longer-term multi-

decadal cycles. These factors interact to produce a highly productive coastal environment, as well as to feed numerous biologically rich estuaries.

This region includes the Olympic Coast National Marine Sanctuary, two National Estuarine Research Reserves (Padilla Bay, Puget Sound; South Slough, Coos Bay), and three National Estuary Programs (Puget Sound; Columbia River; Tillamook Bay). This region is also home to a collaborative group of public, private, federal, tribal, and state marine institutions and agencies. A number of these institutions have been developing, maintaining, and operating coastal observing systems, that deliver data in near real-time, for several years. These efforts began with individual institutions, but have begun to be interdisciplinary and increasingly multi-institutional/organizational.

There must be a concerted effort and commitment to maintain, monitor, and protect the long-term sustainability and health of this marine ecosystem, its habitats, functions and abundant resources. This can be accomplished, in part, through collaborative, sustained efforts by the Parties to this MOA, each of which has an interest in the coastal and ocean environment of the Pacific Northwest.

Section V. Findings

The Parties agree that:

- more rapid detection and timely prediction of a broad spectrum of ocean and atmospheric conditions is needed, and,
- changes in those conditions impact society, and,
- priorities for detecting and predicting changes in the marine and coastal systems vary among regions in the United States, and, regional associations, responsible for the development and operation of regional observing systems, provide the most effective means for identifying and developing useful products, and,
- a regional association needs to exist specifically for the Pacific Northwest due to its unique and wide-ranging marine environments.

Section VI. Definitions

a. Members

Each entity, or division thereof, whose representative is party to this MOA, will be considered a member of NANOOS. Members may include, but are not limited to federal science and management organizations or agencies, state and local agencies, Native American organizations, tribal governments, private industries, research organizations, academic institutions, non-governmental organizations, and non-profit organizations. No dues will be collected from Members though voluntary donations will be accepted. If at some future time, NANOOS chooses to incorporate as a non profit 501 (c)(3), NANOOS Members by means of this MOA are not obligated to continue as such.

b. Regional Coastal Ocean Observing System (RCOOS)

For NANOOS, the region is defined as the waters from the U.S.-Canadian border in Washington to northern California and from the saltwater intrusion extent within bays and estuaries to the seaward extent of the U.S. Exclusive Economic Zone.

Supplementing existing and future backbone observing elements provided by federal agencies, and integrating observing elements from a variety of other sources, the RCOOS will be a heterogeneous, distributed system of linked elements, servers, platforms, and sensors, originally based on existing ocean observing and monitoring efforts, with organizational structures and interfaces developed where common good is identified. NANOOS will coordinate the observing system within the region and will complement the national IOOS. NANOOS will establish and provide for operating the observing system components under its direct control and, when beneficial to the NANOOS system and as deemed appropriate by the Parties, will provide support for the operation of other individual elements or subsystems of the observing system having separate ownership or operational responsibility. NANOOS will integrate and coordinate assigned elements to provide the following capabilities:

- Observations on spatial and temporal scales appropriate for a diversity of end users' needs,
- User interface and support, including outreach,
- Data and information management,
- Models, including data-assimilation,
- Long-term research to advance the observing system,
- Technology development to support NANOOS objectives,
- Open access to data and information products such as nowcasts, forecasts and maps to meet a diversity of user needs.

Further, NANOOS may foster and integrate linkages among any other member elements related to these capabilities.

c. Fiscal Structure

Unless it formally incorporates, NANOOS will not have fiduciary authority. Accordingly, NANOOS will utilize existing institutional structures having such authority (we term these "Fiscal Agents") through which NANOOS will apply for grants and implement grant proposals. These Fiscal Agents may also accept any other funds from NANOOS parties.

Any Fiscal Agent of NANOOS will be an organization having a signatory to this agreement. The Fiscal Agent(s) shall account for money due and payable to NANOOS, and in general perform or cause to be performed all duties incident to a financial agent.

Through the Fiscal Agent(s), NANOOS will receive and distribute NANOOS-related funding and other resources from federal, state, other public agencies, foundation sources, corporations, and private donors, according to the NANOOS identified

priorities. Funds contributed directly from NANOOS Parties for the overall coordination and administration of NANOOS will not be used for other purposes.

Section VII. NANOOS Governance: Governing Council, Board, and Committees

a. NANOOS Governing Council

Qualifications

Each Member organization may appoint one employee or officer to be a member of the NANOOS Governing Council (Council). A Member organization (Party) may choose not to have a representative member on the Council.

Powers and Duties

The Governing Council will provide oversight, policy guidance, and ensure sustained support by the Parties for NANOOS. The Governing Council will have the authority to:

- Provide strategic guidance and advice to the Executive Director of NANOOS (See Section VIII).
- Adopt and carry out a business plan, including a budget for development and operation of a Regional Coastal Ocean Observing System;
- Authorize the execution of grants and contracts (through the Fiscal Agent), as well as through cooperative agreements;
- Determine the distribution of funds provided to, or raised by, NANOOS for the purposes of an ocean observing system using a well-defined system for measuring performance and setting priorities for funding;
- Establish the policies and priorities of the NANOOS;
- Operate a Regional Coastal Ocean Observing System, as defined by IOOS;
- Amend this MOA or other implementing documents;
- Carry out other such powers and responsibilities designated by terms of agreement(s) between or among the parties comprising NANOOS;
- Provide NANOOS representation to the National Federation of Regional Associations;
- Draft and propose further incorporation documents for NANOOS.

It is the function of each Council member to:

- Attend NANOOS meetings;
- Support the intent of the NANOOS MOA; and
- Actively promote NANOOS, both within and beyond the region.

Manner of Acting

Each Council member shall be entitled to one vote upon any matter properly submitted to the Council, except non-voting members. Unless specifically identified below, all actions shall require a majority vote of those present and eligible to vote at a meeting duly held in which a quorum is present. Abstentions shall constitute presence of a Council member in determination of a quorum. All meetings or the

Council, or any Committee thereof, will proceed according to Robert's Rules of Order.

Terms of Office

Council members may serve indefinitely at the will of the member organization they represent.

b. Governing Council Board

NANOOS shall establish a Governing Council Board, who shall be composed of Governing Council members with the following representational membership, at a minimum: three members from academia (to include UW, OSU, OHSU); two members from tribes (with representation from diverse regions); two members from federal agencies (with representation from Oregon and Washington); two members from state/local agencies (with representation from Oregon and Washington); two members from industry; two members from non-governmental groups and two At-Large members.

Terms of Office

The Governing Council Board will be elected every four years, except for the At-Large member who is elected every two years.

The Governing Council Board will elect or select its Chair and Vice Chair, to serve four years. The Chair and/or Vice Chair may serve consecutive terms. The Vice Chair does not become the Chair unless the Chair cannot perform for a specified time within their term or cannot serve the remainder of their term. The Governing Council Board will elect or select replacements in case of within-term vacancies in the Board.

Governing Council Board Chair (Chair)

The Chair shall be responsible to the Governing Council. The Chair shall be the principal officer of NANOOS, presiding at all meetings thereof. The Chair shall execute any instruments the Council authorizes, except in cases where signing and execution thereof is expressly delegated by the Council to another representative or agent of NANOOS. The Chair will actively promote NANOOS within and outside of the region.

Governing Council Board Vice Chair (Vice Chair)

The Vice Chair shall be responsible to the Chair and shall exercise such authority as may be delegated by the Chair, including acting as meeting chair in the absence of the Chair.

Terms of Office

The Chair and Vice Chair will serve four years. Every four years the Executive Director will poll the Board to determine if an election for Chair and Vice Chair is desired. If an election is requested, the Executive Director shall provide staffing for an election among Board members for Chair and Vice Chair.

c. Standing Committees

Each committee may create subcommittees. Committee decisions will be made by simple majority vote of those present. Quorum is established as a majority of registered members of the committee. Committee meetings will proceed according to Robert's Rules of Order. Committees shall ensure appropriate representation of the NANOOS member organizations; however committee members do not need to be Council members or employees/officers of the Parties. Committees shall respond to assignments from the Council or Executive Committee, make recommendations to the Council via the Executive Committee, identify NANOOS priorities, identify funding opportunities for NANOOS or the systems that comprise it, implement NANOOS projects, and attend other committee meetings as appropriate to ensure coordination.

Chairs

Each committee shall be chaired, with the committee selecting or electing its Chair. The Chairs of the DMAC, UPC, and E&O standing committees, and any other standing committee established by the Governing Council and so designated, are appointed to the Executive Committee.

Data/Information Management and Communications Committee (DMAC)

This committee will design and oversee the NANOOS regional data and information delivery, management, and communications system as outlined in the IOOS DMAC Plan for Coordination of the national backbone. It will recommend the adoption of standards consistent with national and international practices for data/information management and communications. It will make recommendations to the Council on the issue of liability for data and model forecast publication.

User Product Committee

This committee will design and prioritize the data analysis products NANOOS develops for its users. It will oversee the regional component of the data analysis subsystem. It will consider forecast, nowcast, and hindcast models. This committee will be ultimately responsible for product development for end users, but will fully coordinate with the other committees in doing so.

Education and Outreach Committee

This committee will provide guidance and assistance in matters of education, outreach and public awareness. It will play the lead role in developing, implementing and evaluating the Education and Outreach Plan for NANOOS.

d. Executive Committee

The Executive Committee shall be comprised of Governing Council Board, the Chairs of the Standing Committees and the NANOOS Executive Director (Figure 1). If a person in this committee occupies more than one position (e.g., on the Governing Council Board and also a Standing Committee Chair), they will have only one vote.

The Governing Council Board Chair will chair the Executive Committee. The Executive Committee shall act only in the intervals between meetings of the Governing Council and shall, except as provided herein or determined by the Governing Council, have all the authority of the Council other than: a) to amend or repeal any resolution of the Governing Council; b) to amend or modify this MOA.

The Governing Council Board Chair, the Executive Director, or any two other members of the Executive Committee may call a meeting of the Executive Committee by giving written notice to each member of the date, time, place, and purpose of the meeting at least three business days beforehand. Meetings may be either in person or conducted electronically. A majority of members of the Executive Committee shall constitute a quorum for the transaction of business at any meeting thereof, and a majority vote of those present constitutes action or decision.

The Executive Committee may delegate execution of decisions or action to other committees or the NANOOS staff. The Secretary shall keep, or cause to be kept, full and complete records of all Executive Committee meetings and actions, which shall be reported to and open to inspection by the Governing Council.

e. Other NANOOS positions

Secretary

The Executive Director will assure that a Secretary is appointed for NANOOS. The Secretary shall be responsible to the Governing Council. The Secretary may or may not be a member of the Governing Council. The Secretary shall keep, or cause to be kept, minutes of the proceedings of the Council and see that all notices are duly given in accordance with the provisions of this MOA or as required by law. The Secretary shall be custodian of all records, including the mailing address of each Council and committee member, and generally perform all duties incident to the office of Secretary. In the event the Secretary is absent from a meeting of the Council, the Executive Director shall designate a Secretary pro tempore.

Treasurer

The Fiscal Agent(s) of NANOOS shall be the responsible party(ies) that keep accurate financial records of all grants or contributions that sustain NANOOS activities. The Executive Director and the Governing Council Board Chair will have access to this information through the Fiscal Agent(s).

Executive Committee:

Governing Council Board (4 y term)

Provides sector representation

Academic

1. UW
2. OSU
3. OHSU

State

4. WA agency
5. OR agency

Tribes

- 6.
- 7.

Federal

8. WA office
9. OR office

Industry

- 10.
- 11.

NGO

- 12.
- 13.

At Large (2 y term)

- 14.
- 15.

Standing Committee Chairs (4 y term)

Provides functional representation

16. DMAC
17. User Products
18. Education and Outreach

Staff (no term)

Provides operational representation

19. NANOOS Executive Director

Figure 1. Composition of the NANOOS Executive Committee

f. Additional Committees

Tri-Committee

At least once a year, a minimum of the DMAC, UPC and E&O standing committees shall meet to provide updates on accomplishments and plans, and to collectively establish priorities for the coming year.

Nominating Committee

The Executive Director shall chair this committee and appoint its members from within the Council. It will provide nominations for the Governing Council Board, as described below in "Elections". Nominations may also be accepted from the floor.

No present Board member or Chair may be a member of this committee.

NANOOS RCOOS PIs

The Executive Director will call a meeting of the Principal Investigators of the NANOOS RCOOS at least once a year. It is the responsibility of the Principal Investigators of the NANOOS RCOOS, working with the Executive Director and other staff, as appropriate, to provide the following functions for NANOOS:

- Identify research and development needs relevant to NANOOS, including new technologies, and ensure coordination with other ocean research initiatives.
- Design and oversee the physical operations of the observing systems that comprise NANOOS. This includes safety, permitting, and other in-situ and field aspects of the observing systems including measurement quality standards and operational system standards.

If the NANOOS RCOOS PIs decide that committees should be established to accomplish these or other functions, then they shall recommend this to the Executive Director. It is the duty of the Executive Director to inform the Governing Council of this activity and of the Governing Council Board to offer advice regarding the establishment of any new committee(s). The Governing Council will approve any new committees.

The Governing Council may, but is not required to, designate one or more Council members and such other persons as they may choose to form one or more additional committees (e.g., finance), which shall act to advise and inform the Governing Council. Each additional committee shall serve at the pleasure of the Governing Council and shall have such duties and responsibilities as designated by the Governing Council in the resolution establishing it, but in no event shall it exercise any authority denied to the Executive Committee. Meetings of additional committees shall be held at such time and place as shall be fixed by the chair of each respective committee. A majority of all the members of any committee shall constitute a quorum for the transaction of business, and the vote of a majority of all the members of the committee shall be the act of the committee.

g. Elections

Approximately one month before every other Annual Meeting, the Executive Director will assemble a Nominating Committee to provide a list of candidates for the Board positions. The four-year terms of the Board members will be staggered, such that half of the Board will be elected every two years. To permit this staggering to occur, at the 2011 Governing Council Meeting, half the Board will be elected to two year terms and the other half to four year terms. The “At-Large” Board position will be elected every two years. The Executive Director will cause ballots with those names, and other such information as may be pertinent, to be delivered to the members of the Governing Council before the Annual Meeting. Completed ballots must be received before the Annual Meeting for tally by the Executive Director. At the Annual Meeting, the Executive Director will provide the election results to the Board Chair who will announce the results for the Board to the Governing Council.

h. Resignation or vacancies

Resignation

A Board Member or Standing Committee Chair may resign his/her position at any time upon written notice to the Chair of the Governing Council Board and the Executive Director.

Vacancies

A vacancy by a Board member, occurring by reason of resignation, or otherwise, shall be filled by majority vote of the Council at any duly constituted meeting. A vacancy may be filled with an “acting” member until such time as that occurs, but that member will be ex officio. The acting member will be chosen by the Board. The Executive Director shall provide assistance for this process, if needed.

A vacancy by a Standing Committee Chair, occurring by reason of resignation, or otherwise, shall be filled by a vote within the committee where the vacancy has occurred.

Individuals filling vacancies in accordance with this section shall serve for the remainder of the term vacated.

Section VIII. NANOOS Executive Director and Staff

a. Executive Director

The Executive Director of NANOOS is a salaried position whose occupant reports to and receives guidance from the Governing Council. Specific duties of the Executive Director include:

- Management and execution of the Northwest Association of Networked Ocean Observing System enterprise.
- Organization of NANOOS planning workshops, as needed, and service as

- Presiding Officer at these workshops.
- Coordination of all official NANOOS correspondence.
- Preparation or cause the preparation of plans and policy documents for NANOOS including the Business Plan, Operation Plan, etc.
- Performance of other functions, as directed by the Council.

b. NANOOS Staff

Additional NANOOS staff will facilitate the work of the regional association and regional coastal ocean observing system, as needed and as funds permit. NANOOS staff will be responsible to the NANOOS Executive Director.

Section IX. Functions and Responsibilities

NANOOS will:

- Identify, engage, and support a broad base of stakeholders – both data users and data providers – capitalizing on existing and new assets.
- Operate the NANOOS regional coastal ocean observing system responsive to users’ needs; provide access to data at spatial and temporal scales appropriate for users’ needs
- Provide leadership in the design, implementation and improvement of an integrated ocean observing system for the NANOOS region that takes advantage, as appropriate, of ocean observing and modeling activities in the region and that maximizes the collective ability to meet regional and national goals.
- Coordinate with IOOS and other regional associations in the National Federation of Regional Associations, particularly the Alaska Ocean Observing System (AOOS) and the Central and Northern California Ocean Observing System (CeNCOOS).
- Coordinate observing system efforts with scientists and agencies in Canada, particularly those in British Columbia.
- Adopt and carry out a business plan, including a budget.
- Coordinate the development of priorities for NANOOS resource allocation consistent with national and regional goals.
- Seek resources to address the priorities.
- Serve as member to the National Federation of Regional Associations.
- Identify and make recommendations to the appropriate federal entities on ways to improve the national backbone in the NANOOS region, as well as how to help address issues such as data management, assimilation, modeling, education, etc.
- Contribute to the development of standards, conventions, and protocols for data management and communications.
- Encourage Parties to adhere to national standards, conventions, and protocols for data management and communications.
- Develop and coordinate outreach and education programs.
- Plan and host meetings and workshops.

- Develop and implement a transition plan to guide NANOOS toward independent incorporation if that is desired by the Governing Council.
- To assess NANOOS' performance, the Governing Council will provide advice on suitable indicators and targets and for the following categories: satisfaction of user groups; provision of data and information; coordination and collaboration with other IOOS partners.

Section X. Business Plan

The Governing Council will establish fiscal policy for NANOOS, approve and publish the NANOOS Business Plan and provide advice on fiscal and policy plans. The NANOOS Executive Director will support preparation of such plans and associated budgets and will facilitate their dissemination to the Parties. The Parties will review and comment on the plans and budgets. The Governing Council, or their designee, will provide the final approval. The Business Plan shall be posted on the NANOOS website.

Funds from state and federal Parties will be kept separate from funds from other Parties and will not be spent on any lobbying activities or other activities that conflict with their agencies' policies or guidelines. Advocacy efforts will be supported by private (non-governmental) Parties or other private funds.

Section XI. 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 but only as resources permit.

Section XII. Data Communications and Availability

To enhance communications and availability of data and information, the Parties agree to, as resources permit:

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

Section XIII. Intellectual Property

In general terms the parties intend that ownership of intellectual property will remain with the developer of the intellectual property. Intellectual property rights will be addressed more specifically in subsequent agreements.

Section XIV. Membership Meetings

The Parties agree to meet annually, as a Governing Council, or as often as needed, in addition to meetings of any committees they may belong to. 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 XV. 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:

- Recognize and promote the participation of other organizations that may contribute to the shared interests of monitoring and research in the Pacific Northwest's ocean and related watersheds.

Section XVI. General provisions

a. Effective date. This is the first revision of the NANOOS MOA and supersedes the original NANOOS MOA dated 24 March 2005. This version was authorized by Governing Council vote on 24 May 2010, with minor revisions to be conducted by the Executive Committee and posted on the NANOOS website. It carries over all original Parties. It is subject to availability of funds. This MOA may be executed in counterparts, each of which will be considered an original document.

b. Withdrawal. Any Party to this MOA may withdraw at any time. Written notice to the Executive Director is requested.

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

d. Dispute Resolution. Disputes among the parties will be resolved by majority vote of the Governing Council.

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

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

g. Amendment. This MOA may be amended in writing by the written agreement of a majority of the voting Parties.

h. 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.

i. 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.

j. Notice. Any notice, request, order, or communication to the Parties pursuant to this MOA shall be in writing to the Executive Director at the address that follows: Applied Physics Lab, University of Washington, 1013 NE 40th St., Seattle, WA 98105-6698 or to such other addresses as any Party may designate in writing.

k. This Agreement does not constitute a waiver of sovereign immunity of any governmental party hereto.

By signature below, the entity so named agrees to this MOA and becomes a Member of NANOOS:

Name

Institution Representing

Signature

Date